E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit.** If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from physical address. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

I would like to expedite the shipping of the permit. I can provide a return Fed Ex envelope with a computer generated FedEx label.

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

Dan Adams 864-580-8587 or 864-672-8400 danadams@thecapitalcorp.com

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

X No ___ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Loxodonta Africana - African Elephant

b. Sex (if known).

Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Zimbabwe, Tsholotsho Main Camp / Tsholotsho South Campfire Concession. Nearest town is Tsholotsho

b. Date wildlife was hunted: June 22, 2015 - July 25, 2015

c. Approximate age of animal: 55

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:
Lodzi Hunters, Tsholotsho South Campfire Hunting Concession and Professional Hunter Thys Devries

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

It is currently located at Life-Form Taxidermy, 7 Aluminium Road, White River, 1240, Mpumalanga, South Africa. It was exported from Matabeleland Taxidermy, PO Box 9252 Hillside, Bulawayo, Zimbabwe to Life-Form Taxidermy.

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so). Cites Permit #167028 and Hunting Return Form TRAS2 is enclosed

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	Life-Form Taxidermy
Business Name:	7 Aluminium Road, PO Box 763
Address:	White River, 1240
City:	Mpumalanga
State/Province:	South Africa
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.
See attached report from this concession in lieu of this questionnaire

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
N/A

11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Lodzi Hunters, Tsholotsho South Campfire Hunting Concession and Professional Hunter Thys Devries
E-mail:	lde@netconnect.co.zw
Phone number:	jacques@chapungusafaris.com +27(0)82-554-2304

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result**

    Applicant's signature: [redacted] Date: 12-30-2020

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

OMB Control No. 1018-0093
Expires 08/31/2023

ANNEX I
OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: _____
b. Years in business: _____
c. Name of company conducting hunt: _____
d. Country: _____

Concession

a. Name of Concession: _____
b. Area in km^2: _____
c. Land tenure:
   _____ Government Lease
   _____ Community
   _____ Private Ranch
   _____ Private Conservancy
d. Length of concession agreement:_____
e. Can the concession be renewed? _____
f. Length of renewal, if applicable: _____
g. Estimated trophy fees: _____
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: _____
   _____
i. Provide concession location and nearest city: _____
j. Please attach a map or maps with marked boundaries and nearest city
k. If the concession borders a National Park, provide park name: _____
l. Describe general and distinctive habitat/water features: _____
   _____
   _____

Communities in the Concession

a. Are there any communities living in the concession? Yes____ No ____
b. If so, estimated number of people/villages in the concession: _____
c. Are there communities bordering this concession? Yes ____ No ____
d. If so, estimated number of peoples/villages around the concession: _____

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant				
Lion				
Prey Species (if applicable)				
Other: _____				

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____
b. Total employment in the off-season:_____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters			
Trackers			
Anti-poaching Scouts/Rangers			
Other Anti-poaching			
Cooks/Housekeepers			
Community Coordinators			
Managers			
Biologists			
Others: _____			

Anti-Poaching Efforts

a. Number of anti-poaching staff: _____
b. Are patrols conducted during the hunting season, off-season, or both? _____
c. Months patrols are conducted: _____
d. Number of patrols per month: _____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: _____
f. Description of anti-poaching equipment, vehicles, gear, etc. _____
_____
_____
g. Do government-sponsored game scouts conduct patrols? _____
h. If so, do they have the ability to arrest? _____
i. Do you offer rewards to poaching informants leading to arrest? Yes ____ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes____ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (_____) Spending	Year 2 (_____) Spending	Year 3 (_____) Spending	Remarks
Scout Salaries				
Equipment				
Vehicles				
Fuel				
Rewards				
Others:_____				
Totals				

l. What currency are the expenditures given in? _____

Anti-Poaching Results

Type	Year 1 (____)	Year 2 (____)	Year 3 (____)	Remarks
Poaching Incidents Discovered				
Elephant Carcasses Observed				
Lion Carcasses Observed				
Leopard Carcasses Observed				
Ivory Poachers Observed				
Bush Meat Poachers Observed				
Illegal Logging Observed				
Other Poachers Observed				
Poachers Convicted				
Snares/Traps Collected				
Firearms Confiscated				
Vehicles Confiscated				
Bicycles Confiscated				
Boats/Nets Confiscated				
Tusks Recovered				
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes ____ No ____
b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? _____
c. Does the company provide game meat to nearby communities? Yes ____ No ____
d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: _____
e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. _____
_____
f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks
Elephant					
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? _____
h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (____)	Spending, Year 2 (____)	Spending, Year 3 (____)	Remarks
Education (classrooms, offices)				
Education (supplies, fees)				
Health (clinics, offices)				
Health (equipment, salaries)				

Product/Service	Spending, Year 1 (____)	Spending, Year 2 (____)	Spending, Year 3 (____)	Remarks
Community Scout Salaries				
Community Anti-Poaching				
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded				
Construction Materials Donated				
Other: _____				
Other: _____				
TOTALS				

i. What currency are the expenditures reported in? _____

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients			
Percentage of Clients from the U.S.			
Trophy Fees Paid by U.S. Clients			

b. Approximate amount/percentage of company's revenue from U.S. clientele: _____

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):

_____

_____

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): _____

_____

c. Are there hunt return forms that must be reported to officials? If so, please include a copuy of these forms or confirmation of their receipt for the past 3 years.

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct.

X

Sign Name and Date

X

Print Name and Title

Lodzi Hunters
Zimbabwe

LUSULU CAMPFIRE HUNTING CONCESSION, BINGA RDC
AND
TSHOLOTSHO SOUTH CAMPFIRE HUNTING CONCESSIO, THSOLOTSHO RDC
P.O. Box 9366, Bulawayo
Zimbabwe
Tel No: 0712 216674 / 0712 629312 / 077 5582026

We the concession holders of Tsholotsho South CAMPFIRE hunting concession here by confirm that the client below are formally invited to hunt with our safari company from:

22 June to 25 July 2015 he will be accommodated at our Tsholotso South hunting camp Zimbabwe

Client Details:
Mr Carey Daniel Adams
Passport: (b) (6) [Expire: 18.04.2020)

We thank you for your assistance and wish for your favourable assistance.

Thys de Vries

PERMIT / CERTIFICATE 167028

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

	EXPORT
	RE-EXPORT
X	IMPORT
	OTHER

ORIGINAL

2. Valid until 02 July 2018

3. Importer (name and address)
Mrs Carey Daniel Adams
c/o Lifeform Taxidermy
7 Aluminium Road
Box 763
White River

4. Exporter / Re-exporter (name, address and country)
Matabeleland Taxidermy
PO Box 9252 Hillside
Bulawayo
ZIMBABWE

3a. Country of import SOUTH AFRICA

5. Special conditions (invalid without attached condition(s) on next page)
Zimbabwe Permit ZW/4661/2017 dd. 08-06-2017
Tusks: ZW 2015 23039 33 ; ZW 2015 23040 30

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse) H

5b. Security stamp No. 1361785

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 Elephant *Loxodonta africana*	9. Tusks	10. IIw	11. 2(two)	11a. 89-500-2017
B	7.8	9.	10.	11.	11a.
C	7.8	9.	10.	11.	11a.
D	7.8	9.	10.	11.	11a.

	12. Country of origin*	Permit No.	Date	12a. Country of last re-export	Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
A							
B							
C							
D							

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY: K Dwakanye

MPUMALANGA TOURISM & PARKS AGENCY
P/BAG X 11283 NELSPRUIT
TEL 013 759 5300
2017 -07- 03
WILDLIFE PROTECTION SERVICES
PERMITS

Nelspruit — Place
03 July 2017 — Date
Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export | Date | Signature | Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE 167028

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES AND NON-CITES SPECIES AND ANY PRODUCTS THEREOF; NON-CITES LIVE WILD ANIMALS, LIVE EXOTIC ANIMALS, HUNTING TROPHIES, WILD ANIMAL PRODUCTS, PROTECTED PLANTS AND LIVE FISH

OR Tambo International Airport is the only port designated for International Imports, Exports and Re-Exports of CITES and Non-CITES species and any products thereof; live wild animals, live exotic animals, hunting trophies, wild animal products, protected plants and live fish by aircraft within the Gauteng Province.

Import permits are not valid unless the imported consignment is accompanied by a valid ***(original)*** export permit from the country of origin ***(if required),*** which must be handed to the authorized Environmental Management Inspector on inspection.

THE FOLLOWING CONDITIONS ARE APPLICABLE TO:

(A) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS OF CITES AND NON-CITES SPECIES AND ANY PRODUCTS THEREOF; LIVE WILD ANIMALS, LIVE EXOTIC ANIMALS, HUNTING TROPHIES, WILD ANIMAL PRODUCTS, PROTECTED PLANTS AND LIVE FISH (INCLUDING AIR, MAIL, RAIL, ROAD, AND SEA)

THIS PERMIT

1. a) Shall not be transferable;
   b) Shall be invalid until the signature of the holder thereof been appended thereto;
   c) This permit is not valid unless it has been endorsed and released by an authorized Environmental Management Inspectorate official prior to the import, export or re-export taking place. In cases of importation of live animals, which are to be querantined at OR Tambo International Airport's Quarantine Station, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Management Inspectorate officials, per telephone ***and*** confirm per fax a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection (the inspection booking must be requested a minimum of 48 hours prior to the intended inspection), applicable for shipments done over weekends and public holidays, with the following information:
   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection will take place;
   c) Date and Time of Import / Export / Re-Export;
   d) Date and Time of intended inspection (subject to approval);
   e) Agents particulars (if applicable), Carrier Name, Flight Number, Flight Time and Waybill Number;
   f) The applicable permit number/s and relevant expiry dates; and
   g) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental Management Inspectorate official may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30):***
   Office: +27 (11) 390-3687/ 2311
   Fax: +27 (11) 390-1720

4. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Management Inspectorate officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s.

5. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

6. Detailed packing list/s, that are signed and dated must accompany the consignment/s, with the following information:
   a) Details of Importer and Exporter (Names, addresses and contact numbers);
   b) Waybill number/s and name of carrier, flight number, date and time;
   c) Transport container number/s;
   d) Scientific name of species (in full) with relevant transponder / tag / ring numbers; a detailed description of specimen / product and the origin thereof;
   e) Common name of species (in full);
   f) Number per species per container (actual number exported / imported); and
   g) Applicable permit number/s

7. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the issuing authority within ***14 working*** days after expiry thereof. Import permits must be returned to the issuing authority within ***14 working days*** after use. Export permits must be handed to a Management Authority of the importing country within ***14 working days*** after use.

8. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Permit office with the application.

9. A person authorized thereto by the Premier may only make any alteration on the permit.

10. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

11. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

12. Permit holders or their delegated agents must inform the Environmental Management Inspectorate official if an inspection is cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

.....	.....	.....	.....
Signature of Issuing Officer	Date	Signature of Recipient	Date
DOROTHY MAKARINGE		.....	
Full Name		Full Name	

JADU WILDLIFE CRIME & ENVIRONMENTAL CRIME UNIT
FAX: 013 759 5490
2017 -07- 03
WILDLIFE PROTECTION SERVICES
PERMITS

Conditions to this permit are subject to the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Regulations & the National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004).

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000073708
HUNT_FUNDS_CAPTURED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Lodzi Hunters (Pvt) Ltd	Client's Full Name	Carey Daniel Adams
ZTA (HOP) No.	HOP0181	Passport Number	(b) (6)
		Country of Issue	UNITED STATES
Address	KABUBA CAMP, KARIANGWE MISSION LUSULU CAMPFIRE CONCESSION BINGA lodzi@outlook.com	Address	(b) (6) Greenville South Carolina 29615 USA
Name of Professional Hunter	Thysdevries	Licence No.	089
Telephone		Fax	n/a
Number of Accompanying Guests		0	
Are the trophies being exported after tanning and mounting?			
Are the trophies being exported after primary treatment?			
Name of Processing Agent or Taxidermist	MATABELELAND TAXIDERMIST	Address	16 BIRMINGHAM RD BELMONT BULAWAYO
Name of Shipping Agent	FREIGHT CONSULTANTS	Address	3 TROJAN STREET BELMONT, BULAWAYO
Name of Foreign Agent	TWO DEES ENT	Address	P.O. BOX 785 FRANCISTOWN BOTSWANA

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1	KUSILE	Bulawayo	
2	Binga District Area 2 - Lusulu	Matabeleland North	
3	Binga District Area 1 - Songo	Matabeleland North	
4	Tsholotsho District Area 2 - South	Matabeleland North	
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Date of Safari From	01-07-2015
Date of Safari To	15-07-2015
Daily Rate Charged For Big Game USD	1,350.00
Daily Rate Charged For Plains Game USD	.00
Daily Rate Charged for Non hunting guests USD	.00
Number of Accompanying Guests	0

ZIMBABWE REVENUE AUTHORITY
17 OCT 2017
ZPWMA
Date Stamp
P.O. BOX 599, BULAWAYO

3. DETAILS OF DEPOSITS

(All inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other Incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1	23-OCT-2014	MEP/21802	03-DEC-2015	USD	61,935	60,411.4
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate	20,250.00	Total Guests rate	.00
Less Commission	1,523.61	Total Trophy fees	34,500.00
Other fees (incidentals)	7,185.00	Grand Total USD	60,411.40
Percentage Commission Charged	2.46	Total Processing Fees	

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	W/K	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	CROCODILE	M	Killed	KUSILE	35k0555623/7936070	09-JUL-2015	9 feet	4,500
2	ELEPHANT - WITH TUSKS	M	Killed	Tsholotsho District Area 2 - South	35k0484113/7839841	05-JUL-2015	30/33kg	25,000
3	LEOPARD	M	Killed	Tsholotsho District Area 2 - South	35k0489314/7856226	10-JUL-2015	14inch	5,000
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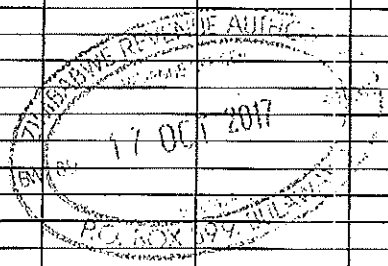

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Zimbabwe National Elephant Management Plan (2015-2020)

By Zimbabwe Parks and Wildlife Management Authority - The Zambezi Societuy Reports

Zimbabwe Parks and Wildlife Management Authority

ACRONYMS AND ABBREVIATIONS

AM Area Manager

CA CAMPFIRE Association

CE Chief Ecologist

DC Conservation Director

DG Director General

EM Elephant Manager

HEC Human Elephant Conflict

HMS Head Management Services

HRM Head Human Resources

IM Investigations Manager

NGO Non Governmental Organisation

PRM Public Relations Manager

RDC Rural District Council

RM Regional Manager

SOAZ Safari Operators Association Zimbabwe

ZHA Zimbabwe Hunters Association

ZPGHA Zimbabwe Professional Guides and Hunters Association

ZRP Zimbabwe Republic Police

TFCA Transfrontier Conservation Area

INTRODUCTION AND BACKGROUND

By any standards Zimbabwe has a proud history of successful elephant conservation. Elephant populations in most of Africa were reduced to very low numbers by the late 19th Century. In 1897 approximately 100,000 tonnes of ivory was exported from Africa [42]. In 1900 it was feared that elephant might become extinct south of the Zambezi River [6]. Using historical accounts of elephant numbers, backwards extrapolations based on population growth rates, and known levels of elephant kills it is unlikely that Zimbabwe held more about 4,000 elephants in 1900 [8,10,14,16]. More than one hundred years later, in 2014, this number had increased twenty-fold to nearly 83,000 elephants (Fig. 1 and Table 1) despite attempts to limit elephant population growth between 1960 and 1989 by culling 45,000 elephant in tsetse control areas and state protected areas (Fig. 1) [5,32]. The primary rationale for limiting elephant numbers in protected areas was to reduce their impact on woodland habitats and the loss of plant and animal species as result of elephant-induced habitat change [9,12,44]. Elephant impacts on woodlands and associated and biodiversity is still a concern today [15, 46,47].

Between 1990 and 2006 elephant populations grew exponentially but growth has since been limited by an escalation of illegal killing [18]. However, the overall population in the country remains at more than 80,000 elephants (Table 1), which is more than twice the national target population envisaged in the 1908s.

Figure 1. Growth of elephant population in Zimbabwe between 1900 and 2001, number of elephant killed (lower graph), and aerial census estimates (triangular point) in those years in which the entire elephant range was covered. The numbers killed before 1960 are based on the amount of ivory exported from the country. The high numbers killed in the 1980s represent the large-scale culls that were carried out during that period in an effort to reduce their environmental impact.

Zimbabwe is one of the key elephant range states and home to the second largest estimated elephant population of nearly 83,000 individuals following Botswana, which is estimated to hold Zimbabwe Elephant Management Plan: 2015-2020 4 more than 130,000 elephants. Zimbabwe thus has a clear obligation to ensure the survival of the species for the benefit of present and future generations of all stakeholders1.

Zimbabwe first adopted a specific Policy and Plan for Elephant Management in 1997 [33] with the long term vision to "Conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage."

As a matter of policy the plan required that at least four demographically and genetically viable populations of elephants be maintained, that elephant densities be kept below the levels at which they might compromise biodiversity, and that elephant range remain at or above the 1996 level. At the time illegal killing of elephants was at a very low level and the plan placed little emphasis on law enforcement. That situation has since changed drastically, with poaching at a crisis state in some countries, although not to the same extent in Zimbabwe.

Furthermore, elephant range has been constrained by increasing human population densities in many rural areas. Accordingly, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) convened a participatory workshop in Hwange Safari Lodge (from 2nd to 4th December 2014) to develop an agreed "Strategic Elephant Conservation Policy and Management Plan Framework". The policy and primary objectives of the 1997 plan were incorporated into the December 2014 framework, and the objectives and action items were updated to reflect new challenges to elephant management that were not in focus in 1997.

The framework developed at the December 2014 workshop, together with input from the two-day CAMPFIRE Association workshop held in November 2014, form the basis of the current elephant management plan. The national workshop included stakeholders with varied interests from the wildlife and tourism industry, conservation NGOs, technical experts from Zimbabwe and the international community, and government representatives from wildlife agencies in neighbouring countries that share elephant populations with Zimbabwe.

At the Hwange workshop, participants agreed that each of the four primary elephant ranges needed a regional plan to address the specific challenges and advantages of elephant in that area. Accordingly, from 30 April to 2 May, 2015, a workshop was held to discuss an antipoaching strategy for Mana Pools National Park, which was later expanded to cover the midZambezi Valley region. Similarly, in May and September 2015, workshops were held in the Sebungwe and the South East Lowveld, respectively, to develop action plans for each region. An anti-poaching strategy workshop for Hwange National Park was held in June 2015 and, together the management plan for the park, provided a basis for completing an action plan for Northwest Matabeleland. These action plans are appended in Annexes 9.4 to 9.7.

The current conservation status of African elephants is that they are listed as Vulnerable under the IUCN Red List, as Endangered in CITES Appendix I, apart from the populations of Botswana, Namibia, South Africa and Zimbabwe that are listed under CITES Appendix II. In Zimbabwe, African elephant are not included on the list of "specially protected animals" because their population is so large. However, they are listed on the "Schedule of Animals with High Economic Value."

1.1 Numbers, distribution and regional trends of elephant in Zimbabwe

Elephants are distributed in four main regional populations in Zimbabwe, namely, Northwest Matabeleland, the Sebungwe, the mid-Zambezi Valley, and the South East Lowveld (Fig. 2). Crude ecological densities vary between 2.16 elephant/km2 in Northwest Matabeleland and

1 Note that the African elephant comprises two species, namely the forest elephant and the savanna elephant. Given the high proportion of the continent's savanna elephants that occur in Zimbabwe this places increasing responsibility for their conservation on the country.

* The survey did not include Bubye Valley Conservancy or the Tuli Safari Area and some other small populations that likely add another 1,000 elephants to the estimated total for the country. The area surveyed in Mozambique is not included in the national total or in the South East Lowveld total area

The elephant range in Northwest Matabeleland covers an area of approximately 25,000 km2 and includes national parks, safari areas, forest areas, commercial farmland, and communal land – mostly on Kalahari sands (Fig. 2). The population of some 54,000 elephants is part of the larger regional population of about 250,000 in south-eastern Angola, Botswana, Namibia and south- western Zambia. The major component of 45,000 elephants is found in Hwange National Park. At the onset of the rains some elephants disperse from Zimbabwe into Botswana resulting in a shared population between the two countries.

The elephant population in Hwange National Park was approximately 2,000 animals when it was first declared a Game Reserve in 1928 [10]. Elephant impacts on vegetation reached alarming levels by 1964 and a representative of WWF-US advised the then minister of natural resources to act on what was perceived to be an over-population of elephants. The first major cull of elephants took place in the park in 1965 [10]. A major factor contributing to the growth of the elephant population (with a current density of 3/km2 in 2014), and of other species, was the provision of artificial water supplies through the dry season [10,37]. The Matetsi Safari Area to the north of Hwange National Park was established in 1972, on what had been a commercial farming area, and the complex, that includes two national parks, carries a lower density of elephant (1.1/km2). Estimated growth of the elephant population since 1980 in Northwest Matabeleland is shown in Fig. 3 below.

Following the large culls of the 1980s the elephant population of Hwange National Park grew rapidly from 13,000 in 1986 to about 35,000 in the early 1990s and appeared to stabilise at about this number [7]. However, the 2001, 2007 and 2014 dry season estimates of between c. 35,000 and 45,000 [23] suggest that the elephant population in the park may now have stabilised at about this number (or a density of 2 to 3 elephants/km2), with rainfall and water supplies acting as limiting factors.

The Sebungwe region covers an arc of 15,000 km2 to the south of Lake Kariba. Historically the area was demarcated by tsetse control fences that ran from Binga on the lakeshore in the west southwards to the Sengwa Wildlife Research Area and then north-eastwards to the Kanayati River and Matusadona National Park (Fig. 2). The Parks and Wildlife Estate covers 6,234 km2 and includes two national parks and two safari areas. There is a single forest area within the region and the remaining area of c. 9,000 km2 is communal land. As in the other regions the elephant population grew from about 2,000 elephant in the 1920s to c. 15,000 in 2006 [9,17]. It was recently reduced to an estimated population of 3,500 in 2014 [23] (Fig. 4). The human population in the three districts of the Sebungwe has increased from 45,000 in 1950 to some 700,000 in 2013 with population densities of more than 30 per km2 in Gokwe North and Gokwe South. The threshold human density at which elephants disappear from settled areas is approximately 15 people/km2 [27].

The mid-Zambezi Valley area of 11,000 km2 includes Mana Pools National Park, six safari areas and small, adjacent areas of communal land. Returns from hunting leases and quotas provide an important source of revenue for ZPWLMA. Unlike the Sebungwe the protected areas are contiguous. The elephant population reached a high of 19,000 in 2001 and between 2001 and 2014 was reduced to 11,000 elephants [22] (Fig. 5). Culling took place in the escarpment areas of Charara, Nyakasanga and Mana Pools during the 1980s. As in North West Matabeleland, the elephant population in the mid-Zambezi Valley is shared with Zambia in the Lower Zambezi National Park and with Mozambique.

Recent estimates of elephant in the adjacent 16,500 km2 in Mozambique south of Cabora Bassa are 1,985 elephants in 2010 [19], and 1,600 in 2014 – a decline of 19%. In Zambia, an aerial survey of the Chiawa Game Management Area and of the Lower Zambezi National Park in Zambia in October 2013 [45] estimated elephant populations of 405 and 1,795 in the two areas respectively. The elephant density in Chiawa GMA was 0.16/km2 and in the Lower Zambezi National Park was 0.41/km2.

The South East Lowveld elephant population is centred on the Gonarezhou National Park population of c. 11,000 elephant in 5,000 km2 that has been growing at about 5% per annum for the last 20 years (Fig. 6). The population falls within the Great Limpopo Transfrontier Conservation Area (TFCA) and there is some movement of elephant between Gonarezhou and Kruger National Park and across the park boundary into Mozambique. Separate elephant populations occur in the Malilangwe, Savé Valley, and Bubye Valley conservancies. There is also a small population in the Tuli Safari Area that is shared with South Africa and Botswana in the Mapungubwe TFCA. Overall there are about 13,000 elephant in this range [25]. The 2014 survey recorded no live elephants in the Mozambique blocks adjacent to Gonarezhou National Park but returned an estimate of more than 160 elephant carcasses [25].

Summary Comment. Law enforcement, mitigating human-elephant conflict [27,35,36], and building supportive and beneficial relationships between protected areas and their neighbours [41] are key issues in all regions. In the Sebungwe, rapid human population growth and settlement in previously uninhabited areas is reducing the range available to elephants and limiting movement between protected areas. Here, rehabilitating protected areas and implementing strong incentives [43] for elephant conservation in the communal lands will be strategically important steps for that region. For all of the four elephant ranges in the country further key specific issues and actions to tackle them will be tackled through the action plans that have been developed for each region (Annexes 9.4 – 9.7). The development of regional action plans and the devolution this involves will also serve to reduce the risk of scale mismatches between institutional/social and ecological scales [17].

1.2 Targets for elephant numbers in relation to conserving biodiversity

Specifying a positive target figure for the number of elephants a country wishes to conserve is entirely appropriate where an elephant population has been greatly reduced as, in the Sebungwe region. In countries, or areas of countries, where there may be an over-population of elephant a legitimate objective may be to reduce their number. The three targets that were adopted as a matter of policy in 1997 by the Zimbabwe Government are:

1. To maintain at least four demographically and genetically viable elephant populations in Zimbabwe

2. To maintain or increase core protected area range of elephant in Zimbabwe
3. To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe

Maintaining four regional populations each of between 5,000 and 10,000 elephants would meet the first target of maintaining four demographically and genetically viable populations [2]. However, the third target is not likely to be met unless there is sufficient range, in each of the four regions, in which to hold these numbers without compromising the range of biodiversity that the country is committed to protecting in terms of its policy and legislation. The core state protected area (National Parks and Safari Areas) of elephant range in Zimbabwe is close to 42,000 km2. At present this area is carrying more than 70,000 elephants (Table 1) or a crude density of about 1.75 elephants/km2, a density at which woodlands and biodiversity are compromised [1,3,9,12,15,31,46]. At densities as low as 0.3 elephants/km2 woody plant species can be lost and species diversity of birds and invertebrates reduced [15,34]. In miombo woodlands, which form the predominant type of protected habitat in the Zambezi Valley, woody plant species and some animal species will be lost at elephant densities as low as one elephant to 10 km2 [31]. As an example, in a miombo woodland area in the Sengwa Wildlife Research Area (southern Chris) elephants at a density of < 1/km2 were responsible for removing 45% of the woody biomass in just four years [26]. In Chizarira National Park, with elephant densities in excess of 1 per km2 tree canopy cover declined from 75% in 1979 to less than 10% in 1993 [44,11]. The only tall trees remaining with dead wood to provide refuges for hole-using birds were found on large termitaria [28].

These examples highlight the dilemma that arises between attempting to protect as many elephants as possible at all costs on the one hand, and to preserve a full range of plant and animal species in protected areas on the other hand [14]. These examples also highlight the consequences of making single resource decisions (e.g. preserve all elephants) that can result in multiple resource consequences (e.g. loss of large trees, plant species, and animal diversity). Recent work in Addo Elephant National Park in South Africa shows that high elephant densities do not increase eco-tourism opportunities and their associated ecological costs are not a requirement for eco- tourism financial sustainability [30].

It is clear that the choice of target elephant population size and density for a particular area or country depends on peoples' values and the values of decision-makers involved [4]. Ecological science can only provide guidance on the likely consequences of the targets that are chosen. For Zimbabwe the current elephant population is considerably higher than was envisaged in the 1980s when the target was to maintain a countrywide population of about 35,000 elephants [13,15]. Elephants are clearly a keystone species and primary ecological engineers in savanna ecosystems [12], and particularly so at high densities in confined ranges. A sensible strategy, therefore, would be to match targets to different areas and habitats and to vary these targets adaptively in time and space depending on long term trends and the results of appropriate programs monitoring the impacts of elephants on ecosystem structure, function and species diversity.

As a result of the above considerations a decision on a target number of elephant for the country is expressed in terms of an upper and lower limit of elephant density that is presently set at between one and two or three square kilometres per elephant (i.e. 0.3 to 0.5 elephants per km2). However, ZPWMA recognises that density is only one factor to be considered as part of population target setting. All the regional population densities except Sebungwe already exceed these density limits, and this will be taken into account in each regional action plan in establishing thresholds of potential concern relating to ecological, economic and social impacts of elephants.

A series of regional action plans has been developed and in the Sebungwe a tentative target of 5,000 elephant has been set where the present population is approximately 3,000 in about 7,000 km2 of available habitat. This is based on the likelihood that a population of 5,000 will be both genetically and demographically viable[2] and attainable given the land presently available to elephants. The elephant populations in the remaining regions are well above the thresholds established in the 1980s. An important component of the regional management plans is to carry 2 / This concept arose following the re-introduction of wolves into Yellowstone National Park in the USA. Elk avoided habitats in which they were likely to be killed by wolves and this allowed a rapid regeneration of woody plant species that had been over-browsed for years [29, 39].

Zimbabwe Elephant Management Plan: 2015-2020 11 out the necessary research on the ecological, economic and social impacts of elephants and to develop appropriate, spatially nuanced thresholds, for the management of these populations

Management approaches to maintain elephant populations within the still to be set acceptable upper and lower limits will vary with each region but will, in all areas, focus on improved protection and minimising the illegal killing of elephant. In some areas the management of water supplies may be used and the protection of sensitive habitats may require creating a "landscape or ecology of fear"2 through appropriate disturbance of elephants visiting such areas. The most straightforward method of dealing with over-population of a species is culling. However, because the sale of ivory was previously required to cover the costs of large-scale population reductions this option was effectively closed in 1989 by the CITES listing of elephant on Appendix I. Despite the listing of Zimbabwe's elephant on Appendix II in 1997 and the subsequent sales of stockpiled ivory in 1998 and 2008 trade in ivory has since continued to be constrained by a nine-year moratorium on the sale of ivory. The moratorium is unlikely to be lifted in 2017. The present poaching crisis affecting elephant populations in central and eastern Africa and associated public sentiment also militates against the introduction of culling to manage elephant populations in Zimbabwe.

1.3 Implementation of the Strategy

1.3.1 Institutions and Roles
i) Zimbabwe Parks and Wildlife Management Authority

ZPWMA, through the Parks and Wildlife Act Chapter 20:14, has a national mandate to manage wildlife in the country. By the same instrument it is the lead agency in elephant management, i.e. protection, research, monitoring and sustainable utilization. It forms collaborative arrangements with other institutions to manage elephants in the country.

ii) Intra-governmental institutions

ZPWMA works jointly with security organizations such as Zimbabwe Republic Police (ZRP), Zimbabwe Defence Forces, and the President's Office to protect the elephant and curb illegal trade in elephant products. ZPWMA works with these institutions through the Joint Operation Command and also on bilateral arrangements. ZPWMA also works with Customs at ports of exit and entry to improve control of the illegal movement of wildlife products across boundaries. iii) Intergovernmental organizations

ZPWMA works closely with sister organizations from neighbouring countries such as Zambia, Mozambique, South Africa and Botswana in wildlife protection, information sharing and elephant monitoring through bilateral and regional arrangements (SADC). At international levels, ZPWMA is both the CITES Management Authority and CITES Scientific Authority and works with other countries through CITES and other inter-governmental agreements to control trade in elephants and to protect elephants.

iv) Non-governmental organizations

Both local and international organizations partner with ZPWMA in elephant management. They mobilize resources for protection, research and monitoring, and assist with elephant monitoring and research, information sharing and advocacy.

v) Private sector

The corporate community participates in elephant management mainly through resource mobilization. Safari operators report poaching and assist in anti-poaching patrols. Through lease and trophy fees they provide revenue to ZPWMA. They help develop infrastructure, provide funds to communities and supplement diets with meat from trophy animals.

Zimbabwe subscribes to the principle of sustainable utilisation of wildlife resources including elephants. Sport hunting is the principal form of wildlife utilisation whereby offtakes are adaptively managed and monitored through a participatory and science based process. This process allows for sustainable offtakes, and rigorous resource monitoring programmes that allow recruitment within a population to ensure the continued survival of the population in the wild. The high economic value conferred to the elephant through consumptive utilisation has also resulted in increased tolerance by local communities.

BOX 1: The Role of Sport Hunting in Elephant Conservation

Elephants are a charismatic species but can also be destructive when tbey destroy crops, threaten livestock and even human lives.

To have a future, elephants must have value. Value to the governing authorities and to the local people. The greater the value, the greater the tolerance of them is likely to be. The local people who live closest to them will determine the long-term survival of species like elephant.

Regulated sport hunting converts wildlife into assets for the benefit of local people and the country as a whole. Wildlife can be a most valuable asset and in turn empower local communities and provide basic necessities. When it is viewed as a valuable asset, wildlife becomes an economically competitive land use in Zimbabwe, which leads to habitat preservation instead of habitat destruction and conversion to agriculture or livestock production. Game animals have a survival advantage because of user-pay stewardship systems where use revenue generated from tourist hunters is paid through to wildlife authorities and local communities.

The presence of regulated hunting can also reduce illegal activities. Many hunting operators in Zimbabwe have specialised anti-poaching units. Private operators' lease agreements are being reviewed to include anti-poaching as an obligation of the concessionaire. Regulated hunting is the opposite of poaching. One is a lawful activity designed by government wildlife authorities and experts to perpetuate resources and the other is prohibited thievery outside of and away from the system. The first is like making a bank deposit and the second is like a bank robbery, without sustainable limits.

Trophy hunting revenues are vital because there are not enough tourists to otherwise generate income to support all protected areas. Eco-tourism revenues are typically sufficient to cover the costs of only some of the parks and certainly not to justify wildlife as a land use outside of protected areas. Hunting is able to generate revenues under a wider range of scenarios than eco-tourism, including in remote areas lacking infra-structure, attractive scenery, or high densities of viewable wildlife.

Consequently, elephant and other wildlife populations will be negatively affected through reduced conservation efforts arising from low funding and reduced goodwill from the communities, when in reality the elephant has the economic potential to raise adequate funds to support itself and other species. For these reasons, Zimbabwe confirms its commitment to the sustainable use of elephant and other wildlife in this Action Plan.

vi) Local communities

Local communities are involved in elephant management in CAMPFIRE areas, through sharing

BOX 2: The Importance of Community Based Conservation to the Future of Elephant Management in Zimbabwe

The Community Areas Management Programme for Indigenous Resources (CAMPFIRE) of Zimbabwe has been widely regarded as one of Africa's most successful contemporary conservation initiatives. It permits the residents of communal lands – basically the poor rural communities – to share in the benefits generated by wildlife utilization on those lands by granting Appropriate Authority to Rural District Councils (RDCs) to manage wildlife on communal lands and requiring a certain percentage of revenue to be paid to the wards and councils.

CAMPFIRE operates in about 50,000 km2 (12.7%) of land in Zimbabwe. This is roughly equivalent landmass to the Parks and Wildlife Estate. CAMPFIRE encompasses about 777,000 households with an average family size of five, who face food insecurity and deep poverty (average income $1 a day).

Between 1994 and 2012, CAMPFIRE generated $39 million of which $21.5 million was allocated to communities and used for resource management (22%), household benefits (26%), and community projects (52%). About 90% of CAMPFIRE's revenue comes from hunting, with elephant hunting contributing more than 70% of annual revenue.

Based on the Constitution of the CAMPFIRE Association as amended in 2007, all major hunting RDCs use CAMPFIRE revenue-sharing guidelines. In these districts safari operators pay revenue directly into community-controlled bank accounts using the following breakdown: CAMPFIRE community share (55%), RDC fees (41%), CAMPFIRE Association levy (4%).

Despite its achievements CAMPFIRE still faces fundamental challenges. In particular, the development strategies of households in CAMPFIRE areas focus on land uses that are incompatible with wildlife such as human immigration to rural areas, the extension of basic agricultural schemes and increased livestock numbers. Other CAMPFIRE challenges include: (i) the downturn in Zimbabwe's economy and tourism sector post-2000, (ii) great reliance on consumptive trophy hunting and less focus on other uses and non-consumptive uses of natural resources, (iii) increasing human populations averaging

16-20 people per km2 in some key wildlife districts, and (iv) lack of re-investment in development, fixed assets, human capital, and management and protection of wildlife in CAMPFIRE areas.

Despite these challenges, CAMPFIRE stands very high in the agenda of Zimbabwe's Government, and a review dedicated to improving the programme , including greater devolution of ownership of wildlife to communities, is ongoing and should be finalized by the end of 2015. Zimbabwe's Government recognizes that the survival of wild animals depends entirely on those among whom they live. Unless local people want to save them, wildlife will be poached to the point where just a few remain in fortified reserves. CAMPFIRE is meant to avoid this and the future of wildlife in communal areas rests on the success of this programme.

of information, advocacy and wildlife protection. They report human-elephant conflicts and carryout some of the conflict management activities.

1.3.2 Funding and resource mobilization

Adequate and sustainable funding and provision of other resources are important to effective protection of the elephant and curbing illegal trade in elephant products. Resources are mobilized from within ZPWMA, by the private sector, and by intergovernmental and nongovernmental organizations. Partnerships between ZPWMA and other stakeholders are some of the innovative measures being developed to secure funding for elephant conservation. There may be a need for the Government to provide additional support to the conservation of elephants given the present poaching crisis affecting the species continentally.

1.3.3 Coordination i) ZPWMA

ZPWMA takes the lead in coordinating other institutions in elephant conservation activities in the country. It will convene and chair the Elephant Management Committee meetings. ii)

Elephant Manager

This Action Plan provides for the appointment of an Elephant Manager within ZPWMA who will be responsible for coordinating elephant management in the country. The Elephant Manager will primarily work through various Elephant Management Committees that will be established pursuant to this Action Plan. The Elephant Manager will liaise with the International Conservation Office on international matters affecting elephant conservation and also liaise with the CAMPFIRE office for matters affecting the conservation of elephants in CAMPFIRE districts. The draft Terms of Reference for the Elephant Manager are provided in Annex 9.7. iii) Elephant Management Committees

A National Elephant Management Committee and four Regional Elephant Management Committees (Zambezi Valley, Sebungwe, Northwest Matabeleland and South East Lowveld) will be established. The National Elephant Management Committee will meet at least once annually to review progress in implementing the Action Plan. The National Committee will document that progress in implementing and any suggested revisions to the Action Plan, and make their report available to the Director General of ZPWMA.

The four Regional Elephant Management Committees will meet at least twice in a year to review the implementation of each regional plan. The Committees will strengthen links with various bodies at national and regional levels including within the TFCA framework. ZPWMA will convene and chair the regional Committee meetings. The draft Terms of Reference for the Elephant Management Committees are provided in Annex 9.5.

1.3.4 Monitoring and evaluation

Monitoring implementation of this Action Plan will be done using the Key Performance Indicators contained in Section 4. Monitoring the implementation will be done and reported on by the Elephant Manager on a monthly and annual basis. A major evaluation of progress will be done every five years. Monitoring and evaluation will be done at each area level in a given elephant region, at the regional level and at the national level.

1.3.5 Links with continental (African Elephant Action Plan / SADC) and other regional initiatives

This Action Plan recognizes the existence of the African Elephant Action Plan and initiatives that are currently taking place at a continental level, including by the African Union. These include the development of the Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa. At the SADC level initiatives involve developing a Plan of Action and implementing the SADC Protocol on Wildlife Conservation and Law Enforcement. This Action Plan will be reviewed periodically in the light of developments that are taking place in the SADC Region, Africa and beyond.

1.3.6 Regional strategies within Zimbabwe

The devolution of management oversight to regional levels, with more detailed action plans within the national plan, provides the basis for effective adaptive management at regional and local levels.

As set forth in the framework below (Sections 3 and 4), four regional plans have been drafted to address the unique challenges of each region, and will implement the broader goals of this national Action Plan at a more specific level.

In addition, Park-level plans for specific protected areas (including Hwange National Park, Mana Pools National Park, and Gonarezhou National Park) contribute to this Action Plan and govern the management of elephant within those protected areas.

BOX 3: Towards Greater Coordination with the AEAP

The African Elephant Action Plan (AEAP) was finalized and approved as a consensus document by all 37 African elephant range states in the margins of the 15th meeting of the Conference of the Parties to CITES (Doha, Qatar 13-25 March 2010).

The AEAP contains eight prioritised objectives identified as the most important measures required to protect African elephants across their range.

OBJECTIVE 1: Reducing illegal killing of elephants and illegal trade in elephant products OBJECTIVE 2: Maintaining elephant habitats and restoring connectivity

OBJECTIVE 3: Reducing human-elephant conflict

OBJECTIVE 4: Increasing awareness on elephant conservation and management of key stakeholders (e.g. policy makers and local communities among other interest groups)

OBJECTIVE 5: Strengthening range states' knowledge on African elephant management

OBJECTIVE 6: Strengthening cooperation and understanding among range states

OBJECTIVE 7: Improving local communities cooperation and collaboration on African elephant conservation

OBJECTIVE 8: Implementing the AEAP

The objectives of the AEAP were considered and included in drafting this action plan. ZPWMA has been careful to address its international obligations in this Action Plan§.

1.3.7 Protecting elephant for the future

Poaching and the illegal wildlife trade are serious concerns for all range states. Poaching has decimated elephant populations in central and eastern Africa, and in Mozambique. Although the 1997 Policy and Plan for Elephant Management in Zimbabwe did not need to prioritise law enforcement, protecting elephant for the future has become a primary objective of this Action Plan, and will be a primary focus of resource utilisation by ZPWMA.

1.3.8 Human elephant conflict

As Zimbabwe's human population grows, elephant are being restricted to smaller areas and as their populations expand they increasingly move out of their designated habitat, and raid crops and sometimes threaten human lives. As a result in many rural areas where elephants exist in Zimbabwe, human-elephant conflicts are increasing, creating substantial negative attitudes to the conservation efforts of elephants. These are often among the poorest rural farmers, which makes the issue complex in social and economic terms. Unresolved conflicts stimulate poaching or retaliation. Poachers or retaliators can be seen as "local heroes" because they provide meat to the communities and resolve the conflict. A major challenge for elephant management is keeping human-elephant conflicts to a minimum.

Developing a Social, Economic, and Cultural Framework has been identified as a Key Component of this Action Plan in an effort to address and reduce human-elephant conflicts.

BOX 4: Towards a Comprehensive Strategy to Reduce Human-Elephant Conflict

Some methods of reducing human-elephant conflict focus on curing the effects, not the cause. Such methods include chilli sprays, fences, and evening patrols to scare off marauding elephants. However, these are not necessarily longterm solutions. Long-term solutions require growing the tolerance of local communities for elephant by ensuring the communities benefit from having elephant on their lands. Tolerance is likely to increase if communities realise and appreciate economic returns earned from the sustainable use of elephant. Economic returns may be generated by consumptive and non-consumptive tourism. The devolution of decision-making on aspects of problem animal control to communities may result in better outcomes for the management of the costs and benefits of this activity.

Problem animal control includes disturbing, removing, translocating, or ultimately killing those elephant that persist in damaging crops or threatening human life. Clearly, no one management option will successfully deal with all problem elephants and conflict situations. As part of this Action Plan, ZPWMA will undertake additional research on problem animal control and minimizing conflict, and will develop new solutions and a more comprehensive response to these issues.

2. LOGIC AND STRUCTURE OF THE PLAN

The strategic framework developed at the Hwange workshop in December was based on the Logical Framework structure and the development of clearly stated objectives, outputs and the necessary and sufficient activities (or actions) required to achieve the outputs within a specified time frame (Table 2). The structure requires a set of key performance indicators that are intended, as far as possible, to be SMART, i.e. Specific, Measurable, Achievable, Realistic and Time- bound. The five key components of the plan are:

1. Protection and law enforcement
2. Biological monitoring and management
3. Socio-economic and cultural sustainability
4. Building conservation capacity
5. Coordination, collaboration and programme management

Table 2. Structure of the Action Plan for Elephant Conservation and Management in Zimbabwe

Long-term Vision	The Long-term Vision has retained the essential components of the 1997 plan and remains applicable to the period of this plan.
Targets	The three Targets included in the 1997 plan are retained but the provision to maintain or increase elephant range is not linked to a specific national benchmark as it was in 1997 because this will vary in the four elephant ranges or regions
Key Components	The five Key Components are the primary themes or headings of the strategy under which the framework is organised. The ten policy and management objectives included in the 1997 plan fall within these headings.
Strategic Objectives	The Strategic Objectives reflect briefly but more explicitly the policy intention for the respective components.
Outputs (expected outcomes)	The Outputs are statements that reflect the expected results that will be realised during the time frame of the Action Plan. Outputs are therefore expressed in the past tense.

Key Activities (actions)	Key Activities represent the necessary and sufficient actions that need to be completed to achieve the Outputs. They are the actions on which the major emphasis should be placed. National level Activities can be cast as Outputs at the regional level, with more detailed time specific activities, KPIs and budgets at that level.
Key Performance Indicators (KPIs)	The KPIs provide a basis on which to measure and monitor the success or otherwise of the Strategic Objectives, Outputs and Activities.
Means of Verifying the KPIs	It is clearly necessary for the verification and monitoring of KPIs that the manner in which they can be tracked and verified need to be clearly established. Equally important is the need for monitoring protocols to be standardised across local and regional levels so that national and regional level KPIs and statistics can be compiled. This will then allow valid comparisons of performance across regions and local areas to be made.
Implementation Strategy	ZPWMA, the Elephant Manager and the Elephant Management Committees will interact and collaborate with a wide range of agencies and stakeholders in the implementation of this Action Plan.

The top-level strategic components of the Action Plan encompassing the Long-term Vision, Targets, Key Components, Strategic Objectives and Outputs are summarised on page 17 in Section 3 below. The top-level components of the plan are then followed by a set of tables in Section 4 (page 18) that provide action plans for the expected Outputs (or outcomes) of each the five strategic components of the plan. The Activities and KPIs within these tables are set at a national strategic level. They will be taken up, as appropriate, during the development of

Regional Action Plans for each of the four regional elephant populations in the country. Aetivities listed at the national level will, for the most part, form Outputs at the regional level. These Outputs have generated more detailed regional and local specific activities and actions with specific KPIs and means of verification.

The four regional Elephant Action Plans that have been developed as part of the National Action Plan are included in Annexes 9.1 to 9.4.

3. VISION, TARGETS, AND KEY COMPONENTS

Long-term Vision: To conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage

Targets: 1. To maintain at least four demographically and genetically viable elephant populations in Zimbabwe
2. To maintain or increase core proteeted range of elephant in Zimbabwe
3. To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe

Key Components	1. Protection and Law Enforcement	2. Biological Monitoring and Management	3. Social, Economic and Cultural Framework	4. Building Conservation Capacity	5. Coordination, Collaboration and Programme Management

Strategic Objectives	Objective 1. Ensuring effective protection of all populations of elephant in Zimbabwe	Objective 2. Implementing effective biological and ecological management to achieve populations that are within upper and lower acceptable limits in numbers and distribution	Objective 3. Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development	Objective 4. Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and used efficiently and effectively	Objective 5. Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives
Outputs	Output #1: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented	Output #2: Adaptive management to achieve viable populations in all four sub-populations implemented	Output #3: Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased	Output #4: Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational	Output#5: Coordination mechanisms to assess and review adaptive elephant population management and strategic planning established and operating

4. ACTION PLANS

4.1 Protection and Law Enforcement – Ensuring effective protection of all populations of elephant in Zimbabwe
Output: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented KPI: Illegal losses of elephant from at least 90% of elephant populations reduced to less than 5% by 2020, and less than 5% of elephant habitats encroached by settlements by 2020
MV: National level monitoring data on illegal activity, successful convictions, carcass records, status and trends of all elephant populations; verified data on extent of encroachment and of available elephant habitat

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
1. For each key population establish a highly trained rapid response anti-poaching unit for deployment to areas under threat	1. An equipped rapid response unit established and operating jointly with ZRP in each region by June 2016	Inception report for each unit Monthly reports of operation from each unit Number of joint operations	By June 2016	ZPWA / ZRP DG, DC, RMs

2. Informer systems enhanced and supported at national, regional, national and local levels	1. An active informer system/network operating within each region at both regional and local levels by Jan. 2016 2. National level informer system targeting middle men and higher crime syndicates operating by Jan. 2016	Operational reports Records of arrests and successful prosecutions resulting from informer reports Records of payments for information	By January 2016 [	DG, IM, RMs
3. Improve investigation and prosecution of crimes	1. At least two of law enforcement staff trained in scene of crime collection and preservation of evidence, ballistics evidence, etc. in each area/station level 2. Percentage of investigations resulting in successful prosecutions from each region greater than in 2014 3. Monthly liaison sessions on wildlife crime and law enforcement held with members of the judiciary	Staff training records Monthly reports Court records Minutes of meetings with judiciary (prosecutors and magistrates)	Immediate and ongoing	IM, RMs, AMs
Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
4. Set up and maintain national and local intelligence databases	1. National, regional and local databases recording and analysing illegal activity (nature, time and locality of activity and profiles of those involved if known)	Inspection of operating databases	Immediate and ongoing	IM, RMs, AMs
5. Enhance social (community) involvement in law enforcement through incentive schemes and introduction	1. Incentive schemes (see Section 4.3) that encourage the public and members of rural communities to contribute to law enforcement (e.g.	Record and analysis of operating incentive schemes and hotline reports Record and	Immediate and ongoing	RMs and AMs

of hotlines for reporting wildlife crime	through informer hotline) established in each region 2. Larger number of incidents of community contribution to law enforcement (e.g. whistle blowers) by Dec. 2017 3. Number of hotlines established and assessment of their performance	analysis of performance of hotlines		
6. Reduce illegal settlement in all wildlife areas	1. Illegal settlements reduced to less than 5% of wildlife areas by 2020 (i.e. state and community protected areas)	Records and maps of illegal settlements and of wildlife land recovered	Ongoing to 2020	DG, AMs, CE, CAMPFIRE Assoc. RDCs
7. Ensure full compliance with hunting and guiding regulations and quotas set	1. Quota setting models reviewed and, if necessary, revised models implemented by Dec. 2015 annum by Dec. 2016	Proceedings of workshop and revised models Record of infringements and penalties and analysis of trends	Immediate and ongoing	DG, DC, RMs, IM, and SOAZ, ZHA, ZPGHA
8. Revisit the appointment of honorary officers to assist in law enforcement	1. Proposed revision to the Parks and Wildlife Act drafted and submitted to Ministry EWC by Dec. 2015	Draft of proposed revision to the Act and letters to Ministry	Dec. 2015	DG, legal officer in ZPWMA
9. Enhance international and transboundary collaboration in law enforcement	1. Quarterly meetings on law enforcement collaboration and activities between law enforcement agencies of neighbouring countries established at regional / transboundary park level by Oct. 2015 2. Broader collaboration with Interpol, TRAFFIC, TWENS,	Minutes of meetings Record of joint cross border law enforcement activities Records of participation in workshops, TWENS, etc.	Oct. 2015 Immediate and ongoing	DC, RMs,IM, AMs, TFCA Coordinator

	and other international law enforcement entities			

An example of a National level Activity being used as an Output at the regional level is provided on below. The example is drawn from the Action plan for the Sebungwe region. It can be seen that what was an Activity (#2 in the table above) at the national strategic level can be defined more specifically to suit the local situation and in much greater detail at this level than is appropriate in the national Action Plan.

Read full report here: http://www.zamsoc.org/wp-content/uploads/2016/04/ZIMBABWE-ELEPHANT-MANAGEMENT-PLAN-APPROVED-FINAL-1.pdf

[redacted]

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The CAMPFIRE Program in Zimbabwe

By Charles Jonga and George Pangeti

Zimbabwe's Communal Areas Management Program for Indigenous Resources (CAMPFIRE) is highly regarded in the conservation community. From CAMPFIRE's inception in the 1980's, the program has encouraged rural communities on communal lands to conserve local wildlife populations. Prior to the program, Zimbabwe did not have a system where landowners and rural residents could manage the wildlife for their own benefit. Like other African countries, upon independence Zimbabwe inherited a system of State ownership of wildlife. But, in 1975, the Parks and Wildlife Act was passed that gave private landholders the right to manage wildlife for their own benefit. This change in policy facilitated the recovery of wildlife on private lands. In 1982, the legal provisions of the Act were extended to Rural District Councils (RDCs), which was the beginning of the CAMPFIRE program.

The RDCs administer communal areas in Zimbabwe, and have become a mechanism for the implementation of government's policy of sustainable use of natural resources in these areas. The majority of the Zimbabwe's people reside on communal lands. Many of the communal lands are marginal environments characterized by low rainfall and poor soils. The major land uses in these areas are subsistence farming of crops and livestock, and wildlife conservation. Many inhabitants in these areas are poor, and otherwise depend on subsistence farming.

The CAMPFIRE framework established an innovative rural development strategy to compliment economic benefits from subsistence farming in the marginal districts of Zimbabwe. Economic benefits are generated through non consumptive and consumptive tourism, but especially safari hunting. Since its inception, CAMPFIRE has been very successful. The US federal government has invested resources in CAMPFIRE, principally through USAID. A recent WWF study estimated that households participating in CAMPFIRE increased their incomes by 15-25%.

The CAMPFIRE program depends on hunting to generate the economic benefits to local communities to supplement their subsistence farming. Elephants are the major species producing the revenue stream that creates these benefits. CAMPFIRE communities suffer most from elephant crop damage, so elephant hunting creates benefits that encourage the local communities to value the elephants instead of viewing them as a dangerous nuisance. The United States of America brings the highest number of sport hunters to Zimbabwe; about 76% of hunters in CAMPFIRE areas for all animals hunted each year.

The USFWS suspended the import of elephants into the United States in 2014, and has extended this ban into 2015. CAMPFIRE's total income from hunting revenues in 2013 was $2.2 million, but more than half of the elephant hunts were cancelled in 2014 due to the U.S. importation ban. The import suspension has caused a massive disruption of hunting revenue to the CAMPFIRE communities.

The suspension has not only negatively affected investment into the protection of wildlife, but has also removed direct incentives at the community level to protect elephants. There were 412 human-elephant conflict cases in CAMPFIRE districts in 2013, but by November 2014 there were already more than 597 documented conflicts. In the Beitbridge district an average of 12 cases a day of human-elephant conflict were reported in 2014. Disgruntled CAMPFIRE communities will turn to pastoralism and agriculture, thereby reducing wildlife habitat. While well-intentioned, the U.S. government's suspension of elephant importation could mean the end of the CAMPFIRE communities as we know them.

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Sources of Revenue

What is CAMPFIRE revenue?
Under the 2002 Guidelines CAMPFIRE revenue is defined as, "the gross revenue that accrues directly or indirectly out of a community-managed, natural resource". The gross revenue from the following activities should be treated as CAMPFIRE revenue and be disbursed according to the 2002 CAMPFIRE Revenue Guidelines.

Resource Activities Sources of Revenue

- Wildlife Tourism - trophy hunting Lease fees, Daily rates, Trophy fees Percentage of gross revenue
- Tourism – photographic Lease fees, Daily rates, Percentage of gross revenue
- Other - Ivory sales, Hide sales, Meat sales Crocodile egg collection
- Forestry Commercial logging Lease fees, Logging fees
- Non-timber forest products, Bee-keeping, Mopane worms, Fruit sales
- Fisheries, Sport fishing, Lease fees, Daily rates
- Grass Grazing Grazing fees
- Thatching User fees
- Other Sand extraction User fees

How is CAMPFIRE revenue generated?
The general CAMPFIRE model is that the RDCs, or community trust, lease out business opportunities based on natural resources, to private sector partners. Most of the revenue earned is from wildlife-based activities. Of the wildlife-based activities, over 90% of the revenue is from trophy or sport hunting leases with commercial safari operators. The balance of the revenue is from leases for other forms of tourism, the sale of hides, ivory and other animal products. Since the year 2001 CAMPFIRE has actively sought to diversify the programme to include revenue from other sources.

How much revenue has been earned so far?
Between 1989 and 2001 (inclusive) the income earned by RDCs with Appropriate Authority has been Z$454 million or US$20 million. The highest income achieved was in 1999 when districts received additional revenue from CITES approved ivory sales.

How should RDCs choose a private sector partner?
There are a number of different methods for selecting a private sector partner. These are:

Negotiation and Roll-Over:
Where the RDC, the producer community and the private sector partner (safari operator) are happy with an existing arrangement, at the end of the contract period all parties may simply agree to extend the period of the contract. This is called a "roll-over". The RDC, in consultation with the producer community, must first analyse the financial performance of the contract and assess what changes need to be made in terms of lease fees to accommodate changing economic circumstances. All parties then need to sit down and negotiate any changes to the specifics of the contract.

Advantages – when a contract is "rolled-over" all parties have the opportunity to build on the trust and good working relationship already established, instead of having to start developing new relationships with new partners. It is also less expensive, in terms of time and money, as no further research has to be undertaken to find a new partner.

Disadvantages – Negotiations between all parties for the roll-over must be completely open and transparent to avoid accusations of corruption. Unless charges are reviewed producer communities could also lose out on earning more from their natural resources.

Postal Tender Only:
Potential private sector partners are required to complete a standard tender document, which is returned to the RDC by post before a stated closing date. These tender documents are then opened and examined by a "tender selection committee" to assess which tender response is the most competitive. The lease is then awarded to the most competitive operator. There is no contact between the RDC selection committee and the potential safari operators.

Advantages – If the postal tenders are well thought out and well designed they can be an excellent tool for gathering all information on potential operators effectively. Good postal tenders also help speed up the selection process.

Disadvantages – Postal tenders can be too simplistic and do not allow for a well-judged evaluation of the tenders. This can lead to allegations of corruption, as not all the relevant facts are available.

Postal Tender and Interview:
This is a combination of the postal tender method whereby tenders are submitted by post and the tender selection committee then draws up a shortlist of potential private sector partners to be interviewed by the committee. This allows the committee to assess the potential partner at face value as well as through studying of the submitted proposal.

Advantages – A more thorough assessment of potential private sector partners is possible through prior background checks and the interviews. The applicant's character can be determined and all parties have the opportunity to discuss details of their plans and proposals. Sometimes during the interview process potential private sector partners have increased their bid in order to become more competitive.

Disadvantages – There is a time and money cost to having the extra step of the interview. Producer communities are not directly involved in interviews and final selection often leads to accusations of corruption and imposed choices.

Public Auction:
The lease of the natural resources to a private sector partner is offered to the highest bidder at a public auction. An auction needs to be organised by the RDC and the producer community in a public place. All potential private sector partners must receive notification of the auction well in advance in order to ensure good attendance at the auction. The potential private sector partners then compete against each other to offer the highest price.

Advantage – The public auction is a highly transparent means of selecting a private sector partner. All bids are made known publicly. It is efficient, in terms of time, and is a very effective way of maximizing income from a lease.

Disadvantages – There is always the risk of the highest bidder then being unable to come up with the money for the lease by the due date. In other words, the winner "defaults" on his payment and the whole selection process has to start again. The public auction does not allow for a good evaluation of the technical capabilities or character of the auction participants. Furthermore, it does not allow the producer communities to participate in the process, except as spectators.

There are four principles that RDCs and/or producer communities should follow when establishing a relationship with a private sector partner. These are:

- Competition : Do not accept the first offer that is made. Creating competition between potential private sector partners will increase the revenue to RDCs and producer communities.
- Active Participation : The decisions over which partner to select should be made by those most affected by the decision. This means that members of the producer communities should be well represented in the decision making process.
- Openness : To avoid any suspicion of corruption, the process must be conducted openly. This means that procedures laid out in the RDCs' Financial

and Administrative Handbooks should be followed. Outside agencies, such as the CAMPFIRE Association, service providers or even other RDCs, can be used as independent monitors.

- Planning : It is very important that RDCs and the respective producer communities jointly plan the process from start to finish. They must then allow themselves enough time to complete each stage of the process. Too often important stages are missed or only partially completed because of poor planning. This reduces revenue.

Why is a written contract important?
The written contract is the foundation of the relationship between the RDC, its producer communities and the private sector

What needs to be covered in the contract?
Before starting to look for a partner, RDCs and producers should agree on the broad outline of the contract. Key issues that must be included in the contract are:

- The financial structure
- The duration of the contract
- The activities to be undertaken
- Community development services such as training, employment, etc
- Monitoring and reporting systems
- Frequency and type of reporting required
- Relationships with other private sector activities
- Relationships with leaders
- Penalties for non-compliance/non-performance
- Termination, renewal and close out procedures

Above all, RDCs are strongly advised to get technical and legal advice before concluding a contract, especially if the revenue involved is significant. A standard contract has been developed for use by RDCs.

There are four basic types of contract. These are:

Single lease fee: This is a single sum paid per annum. It is not dependent on the quantity of the resource that has been used. Although simple to administer, it will probably not maximise revenue to the RDC and producer communities.

User fees: Under this option, the private sector partner pays for each unit of the natural resource used - for example a trophy fee or logging fees. This is a simple system to administer and makes a direct link between the producer community and the natural resource.

Percentage of gross revenue: Under this option the RDC receives a fixed percentage of the gross revenue earned by the private sector partner. The contract must be based on gross revenue rather than net income, which will be affected by the partner's costs and efficiency. It is important to very clearly define exactly how gross revenue is calculated, so that at the end of the year there are no arguments. In addition, the contract should always include a minimum annual payment. This will provide the RDC and producer communities with a guaranteed income annually.

Joint ventures: There is no standard model for joint ventures and these are negotiated on a case-by-case basis. A joint venture is where two parties come together in a unique partnership. Under this partnership there is generally a profit incentive for the RDC. However, there is also the chance to make a loss. Experience with joint ventures has been that they take a long time to negotiate and are not necessarily more rewarding than conventional lease agreements.

There is also the option of combining the basic types of contract as outlined above. Further details can be found in the Wildlife Management Series Manual on Marketing Wildlife Leases .

How should RDCs deal with unstable economic conditions?
Over the last 12 years, CAMPFIRE has had to operate within different and difficult economic frameworks. In times of hyper-inflation and fixed exchange rates, RDCs, their producer communities and the private sector partners receive fixed (or in some cases declining) income, while costs are rising dramatically. This results in fewer incentives to manage natural resources and wildlife. The following options are presented as a menu to the producer communities and the RDCs. All RDCs should ensure that they are abreast of the prevailing economic policy and know the legal implications of the choices that they are making. Some of the financial options are:

Option One: All fees are set in US$ in the contract. The private sector partner pays all the fees to the RDC in Z$ at the official exchange rate. This option works extremely well when the local currency is stable and there is no fixed exchange rate policy. Under conditions of fixed exchange rates and high inflation this is not a good option.

Option Two: All the fees are set in US$ in the contract. The private sector partner pays all the fees to the RDC in Z $ using the most favourable exchange rate on the day of payment or an average for the period. This option works well when there is an official parallel exchange rate.

Option Three: Under most of the contracts between RDCs and private sector partners

most of the payment has been in the form of 'user fees' and the lease fee has been considered as a minimum guaranteed payment. Under difficult economic conditions RDCs are advised to restructure their contracts so that the lease fee forms between 75% and 90% of the total payment. The payment should be made in Zimbabwe dollars, based on gross earnings from previous years using a favourable exchange rate. User fees can be set in US$ payable at the official exchange rate. Contracts structured like this should allow RDCs and their producer communities to retain real gross income from the use of natural resources.

Option Four: All the fees are set in US$ and paid into a US$ foreign currency deposit account negotiated with the Reserve Bank of Zimbabwe to ensure that the RDC sells its foreign currency to its best advantage.

In these situations it is very important that RDCs keep themselves informed about changes in the economic policy. In addition, RDCs should seek advice on the best option for maximising revenue in the existing economic climate. For example, advice can be obtained from chartered accountants, lawyers, government departments, the CAMPFIRE Association and CAMPFIRE Service Providers.

Note: Since 2009, Zimbabwe has adopted the use of multiple currencies which means that all payments are now made in US dollars.

Why is it important to monitor the contract?

The contract is the basis of the relationship between the private sector and the RDC. The monitoring system should be able to:

- Record the amount of the resource that has been used at any time. For example, the number of animals killed and/or wounded.
- Record the payments received and revenue due. (RDCs need to charge interest on late payments).

Who are the private sector?

One of the important lessons learned from CAMPFIRE has been that commercial activities are best carried out by a private sector partner. However, there has always been a myth that private sector partners must be urban business people. While these might be the only people who have the financial resources and skills to negotiate large leases, there are opportunities for other kinds of investors. For example, local residents can also be a private sector partner in a natural resource based project or activity. In these cases the principles of marketing the lease and the broad contract

Guidelines are still appropriate.

Summary:
It is important that RDCs maximise CAMPFIRE revenue. In choosing a private sector partner the RDC should receive bids from more than one potential partner to create competition. Representatives of the producer communities must be involved in the final choice of the partner. The process should be conducted in an open and transparent manner. It is important to have a legally binding contract with the private sector partner. Leases should not be abnormally long fixing RDC/producer communities to an agreed income that will become irrelevant over the duration of the lease. Leases also cannot be too short so as to avoid private sector partner investment in the area (See lease renewal).

Time and planning must be given to this whole process.

CAMPFIRE and Government Policy

Zimbabwe's Wildlife Policy of January 1992 states that while the executive responsibility for all wildlife rests with the Parks and Wildlife Management Authority, the Minister responsible for the Environment will allow for the management and use of wildlife as a privilege to Appropriate Authorities (AA) for various categories of land outside the Parks and Wildlife Estate, i.e. Forest Land (Forestry Commission), Communal Land (Rural District Councils), and freehold land (owner/occupier). The policy also recognizes that the conservation of wildlife and habitats outside the Parks and Wildlife estate requires the cooperation of rural communities in communal and resettlement areas, and that these must be the primary beneficiaries. The policy was informed by the success and demonstrated benefits of wildlife proprietorship conferred on private land owners in the commercial farming sector from before independence in 1975.

According to the country's statues, wildlife belongs to the state, and wildlife is res nullius. This means that a wild animal is entitled to natural freedom of movement from one place to another and does not belong to an individual. Therefore government grants landholders custodianship and privileges regarding use of wildlife that is on one's land, and such rights are automatically lost when the wildlife moves to another area. Rural people under CAMPFIRE occupy Communal land that has wildlife on it, but there has been no mechanism to constitute these communities into legal sub-district institutions at village or ward level that meet the conditions for the granting of AA status, as is the case for individuals on freehold land (game farms, private conservancies). Communities are represented in RDCs through Councilors whom they

elect as prescribed in statutes. AA for the management of wildlife on communal land is therefore granted to RDCs as the lowest accountable level of government, on behalf of communities. There is provision that AA status will be reviewed and or revoked if producer communities do not benefit directly.

CAMPFIRE Guidelines

The objectives of the CAMPFIRE programme are outlined in the original Guidelines for CAMPFIRE issued to local authorities in 1992 by the then Department of National Parks and Wildlife Management (DNPWM), now Zimbabwe Parks and Wildlife Management Authority (PWMA). The purpose of local government in rural areas is clear. It is to enable democratic local decision-making and action by, and on behalf of, communities; and to meet the needs of communities for local infrastructure, local public services and the performance of regulatory functions. The sharing of CAMPFIRE Revenue based on the original guidelines, and as reviewed in 2002 is; 55% of income is allocated to communities, 26% to the RDC to support costs attributable to CAMPFIRE activities, 15% for general RDC administration, and 4% as a levy to the Association. 55% of income to communities is the minimum limit, which has exceeded 60% in Tsholotsho in the recent past, as an example. RDCs are also required to produce acceptable institutional plans which outline clearly the methods by which Councils a) involve wildlife producer communities in district level management, and b) devolve the decision-taking process in local wildlife management and the distribution of wildlife benefits to producer communities. The plans are being reviewed to take into consideration demographic and other socio-economic imperatives over time.

The amendment of the Rural District Councils Act [Chapter 29:13], necessitated by the Environmental Management Act [Chapter 20:27] of 2006, provides for the establishment of an Environment Committee responsible for the management and protection of the environment in a Council area. This replaced the Natural Resources and Agriculture/Conservation Committee in RDCs. The Environment Committee is assisted by Environment Subcommittees in the exercise of functions relating to the environment and natural resources within one or more wards or one or more villages in the council area. In 2009, the Ministry of Local Government gazetted guidelines for the establishment of Environment Subcommittees. Some CAMPFIRE districts now have functional Environment Subcommittees, and the CAMPFIRE Association has assisted with capacity building (e.g. Hwange and Tsholotsho).

Besides the Councilor, Environment Subcommittees are made up of elected community representatives from every ward or village which falls within the area for

which the subcommittee is established. With the authority of the Minister of Local Government, RDCs may delegate all or any of the functions of an Environment Committee to these Subcommittees. Equally, the Minister may designate a Ward Development Committee or a Village Development Committee as an Environment Subcommittee for purposes of managing a specific natural resource. Environment Subcommittees provide for greater involvement of Traditional Leaders in community level CAMPFIRE activities. Currently, Rural District Councils (RDCs), through the Communal Land Act [Chapter 20:04], are the planning and land allocating authorities within their respective areas of jurisdiction, with traditional leaders being custodians.

Implementation of Campfire

CAMPFIRE's success over the years is the result of collaborative efforts by CAMPFIRE Service Providers, which include the Zimbabwean government's wildlife, natural resources and local government ministries and departments, and selected local environmental NGOs, with support from major donors such as USAID.

Despite the programme lacking sufficient legal provision for the predominant or exclusive control and management of natural resources by communities, the CAMPFIRE programme has been able to demonstrate that it is a legitimate form of biodiversity conservation.

Through flexible guidelines and principles for conservation developed over time, CAMPFIRE has to date established effective conservation communities at district, ward and village level managing wildlife, controlling grass burning and tree cutting, and other community based activities whose operations are not supported by donor funding. In major wildlife districts, the functionalty of these local level institutions has been enhanced by direct payments of income from private sector partners since 2007.

In its attempt to sustain the ability of rural communities to participate in the economy through wise and sustainable use of natural resources and to contribute to the alleviation of poverty, CAMPFIRE Association is guided by the following strategic objectives:

- Facilitating community-based natural resource management activities in rural areas;
- Setting and maintaining standards for both community and RDC performance under CAMPFIRE principles;

- Creating opportunities for the participation and involvement of both public and private sector actors in the implementation of CAMPFIRE.
- Advocating for natural resources conservation and utilisation locally and internationally

CAMPFIRE, being a programme that helps rural communities manage natural resources for their own local development, is guided by one main objective: to enhance voluntary participation of communities in a flexible programme of natural resources management through a system of group ownership/decision making, with defined rights of access for communities residing in natural resource rich areas.

The CAMPFIRE model (for wildlife management purposes) is based on three main criteria:

- Voluntary interest in participation by defined communities and their RDCs (communal wildlife areas exist at the pleasure of specific communities; they are not mandatory or gazetted by any law)
- Presence of wildlife populations capable of producing sustainable and economically significant income. Communities survive on subsistence farming and have the right to determine diversity and levels of wildlife which are acceptable to them on their land.
- Income sharing between communities and their RDC, based on the number of animals harvested within an area each hunting season.

Management of other natural resources that are not wildlife equally requires the voluntary participation of defined communities. It has been legally possible for some communities to establish special purpose vehicles such as Community Trusts to drive business ventures for these resources, usually in partnership with the private sector and the RDCs. A typical example is the Gairezi Eco-Tourism project in Nyanga.

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit.** If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from physical address. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

I would like to expedite the shipping of the permit. I can provide a return Fed Ex envelope with a computer generated FedEx label.

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

Dan Adams (b) (6) [redacted]

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

X No ___ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Loxodonta Africana - African Elephant

b. Sex (if known).

Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Zimbabwe, Tsholotsho Main Camp / Tsholotsho South Campfire Concession. Nearest town is Tsholotsho

b. Date wildlife was hunted: June 22, 2015 - July 25, 2015

c. Approximate age of animal: 54

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:
Lodzi Hunters, Tsholotsho South Campfire Hunting Concession and Professional Hunter Thys Devries

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

It is currently located at Life-Form Taxidermy, 7 Aluminium Road, White River, 1240, Mpumalanga, South Africa. It was exported from Matabeleland Taxidermy, PO Box 9252 Hillside, Bulawayo, Zimbabwe to Life-Form Taxidermy.

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).
Cites Permit number 167027 and Hunting Return Form TRAS2 is enclosed

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	Life-Form Taxidermy
Business Name:	7 Aluminium Road, PO Box 763
Address:	White River, 1240
City:	Mpumalanga
State/Province:	South Africa
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.
See attached report from this concession in lieu of this questionnaire

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
N/A

11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Lodzi Hunters, Tsholotsho South Campfire Hunting Concession and Professional Hunter Thys Devries
E-mail:	lde@netconnect.co.zw
Phone number:	jacques@chapungusafaris.com
	+27(0)82-554-2304

OMB Control No. 1018-0093
Expires 08/31/2023

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**).

    Applicant's signature: (b) (6) Date: 12-30-2020

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

OMB Control No. 1018-0093
Expires 08/31/2023

ANNEX I
OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: _____
b. Years in business: _____
c. Name of company conducting hunt: _____
d. Country: _____

Concession

a. Name of Concession: _____
b. Area in km^2: _____
c. Land tenure:
   _____ Government Lease
   _____ Community
   _____ Private Ranch
   _____ Private Conservancy
d. Length of concession agreement:_____
e. Can the concession be renewed? _____
f. Length of renewal, if applicable: _____
g. Estimated trophy fees: _____
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: _____
   _____
i. Provide concession location and nearest city: _____
j. Please attach a map or maps with marked boundaries and nearest city
k. If the concession borders a National Park, provide park name: _____
l. Describe general and distinctive habitat/water features: _____
   _____
   _____

Communities in the Concession

a. Are there any communities living in the concession? Yes_____ No _____
b. If so, estimated number of people/villages in the concession: _____
c. Are there communities bordering this concession? Yes _____ No _____
d. If so, estimated number of peoples/villages around the concession: _____

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant				
Lion				
Prey Species (if applicable)				
Other: _____				

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____
b. Total employment in the off-season: _____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters			
Trackers			
Anti-poaching Scouts/Rangers			
Other Anti-poaching			
Cooks/Housekeepers			
Community Coordinators			
Managers			
Biologists			
Others: _____			

Anti-Poaching Efforts

a. Number of anti-poaching staff: _____
b. Are patrols conducted during the hunting season, off-season, or both? _____
c. Months patrols are conducted: _____
d. Number of patrols per month: _____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: _____
f. Description of anti-poaching equipment, vehicles, gear, etc. _____
_____
_____
g. Do government-sponsored game scouts conduct patrols? _____
h. If so, do they have the ability to arrest? _____
i. Do you offer rewards to poaching informants leading to arrest? Yes ____ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes____ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (_____) Spending	Year 2 (_____) Spending	Year 3 (_____) Spending	Remarks
Scout Salaries				
Equipment				
Vehicles				
Fuel				
Rewards				
Others:_____				
Totals				

l. What currency are the expenditures given in? _____

Anti-Poaching Results

Type	Year 1 (____)	Year 2 (____)	Year 3 (____)	Remarks
Poaching Incidents Discovered				
Elephant Carcasses Observed				
Lion Carcasses Observed				
Leopard Carcasses Observed				
Ivory Poachers Observed				
Bush Meat Poachers Observed				
Illegal Logging Observed				
Other Poachers Observed				
Poachers Convicted				
Snares/Traps Collected				
Firearms Confiscated				
Vehicles Confiscated				
Bicycles Confiscated				
Boats/Nets Confiscated				
Tusks Recovered				
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes ____ No ____
b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? _____
c. Does the company provide game meat to nearby communities? Yes ____ No ____
d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: _____
e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. _____
_____
f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks
Elephant					
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? _____
h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (____)	Spending, Year 2 (____)	Spending, Year 3 (____)	Remarks
Education (classrooms, offices)				
Education (supplies, fees)				
Health (clinics, offices)				
Health (equipment, salaries)				

Product/Service	Spending, Year 1 (____)	Spending, Year 2 (____)	Spending, Year 3 (____)	Remarks
Community Scout Salaries				
Community Anti-Poaching				
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded				
Construction Materials Donated				
Other: _____				
Other: _____				
TOTALS				

i. What currency are the expenditures reported in? _____

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients			
Percentage of Clients from the U.S.			
Trophy Fees Paid by U.S. Clients			

b. Approximate amount/percentage of company's revenue from U.S. clientele: _____

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):

_____

_____

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): _____

_____

c. Are there hunt return forms that must be reported to officials? If so, please include a copuy of these forms or confirmation of their receipt for the past 3 years.

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct.

X

Sign Name and Date

X

Print Name and Title

LUSULU CAMPFIRE HUNTING CONCESSION, BINGA RDC
AND
TSHOLOTSHO SOUTH CAMPFIRE HUNTING CONCESSIO, THSOLOTSHO RDC
P.O. Box 9366, Bulawayo
Zimbabwe
Tel No: 0712 216674 / 0712 629312 / 077 5582026

We the concession holders of Tsholotsho South CAMPFIRE hunting concession here by confirm that the client below are formally invited to hunt with our safari company from:

22 June to 25 July 2015 he will be accommodated at our Tsholotso South hunting camp Zimbabwe

Client Details:
Mr Carey Daniel Adams
Passport: (b) (6) (Expire: 18.04.2020)

We thank you for your assistance and wish for your favourable assistance.

Thys de Vries

PERMIT / CERTIFICATE 167027

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

- [ ] EXPORT
- [ ] RE-EXPORT
- [X] IMPORT
- [ ] OTHER

ORIGINAL

2. Valid until 02 July 2018

3. Importer (name and address)
Ms. Tammie Adams
c/o Lifeform Taxidermy
7 Aluminium Road
Box 763
White River

4. Exporter / Re-exporter (name, address and country)
Matabeleland Taxidermy
P O Box 9252 Hillside
Bulawayo
ZIMBABWE

3a. Country of import: SOUTH AFRICA

5. Special conditions (invalid without attached Condition Annex B page 1) Zimbabwe Permit ZW/4662/2017 dd. 08-06-2017 Tusks ZW 2015 23037.22 ; ZW 2015 23038.25

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1361784

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 Elephant *Loxodonta africana*	9. Tusks	10. IIw	11. 2(two)	11a. 90-500-2017
	12. Country of origin* / Permit No. / Date / 12a. Country of last re-export / Certificate No. / Date			12b. No. of the operation ** or date of acquisition ***	
B	7.8	9.	10.	11.	11a.
	12. Country of origin* / Permit No. / Date / 12a. Country of last re-export / Certificate No. / Date			12b. No. of the operation ** or date of acquisition ***	
C	7.8	9.	10.	11.	11a.
	12. Country of origin* / Permit No. / Date / 12a. Country of last re-export / Certificate No. / Date			12b. No. of the operation ** or date of acquisition ***	
D	7.8	9.	10.	11.	11a.
	12. Country of origin* / Permit No. / Date / 12a. Country of last re-export / Certificate No / Date			12b. No. of the operation ** or date of acquisition ***	

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY: K Dhlakama

MPUMALANGA TOURISM & PARKS AGENCY
P/BAG X 11338, NELSPRUIT 1200
TEL: 013 759 5400
2017 -07- 03
FAX: 013 759 5440
WILDLIFE PROTECTION SERVICES
PERMITS

Nelspruit — Place
03 July 2017 — Date
Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export | Date | Signature | Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE 167027

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES AND NON-CITES SPECIES AND ANY PRODUCTS THEREOF; NON-CITES LIVE WILD ANIMALS, LIVE EXOTIC ANIMALS, HUNTING TROPHIES, WILD ANIMAL PRODUCTS, PROTECTED PLANTS AND LIVE FISH

OR Tambo International Airport is the only port designated for International Imports, Exports and Re-Exports of CITES and Non-CITES species and any products thereof, live wild animals, live exotic animals, hunting trophies, wild animal products, protected plants and live fish by aircraft within the Gauteng Province.

Import permits are not valid unless the imported consignment is accompanied by a valid ***(original)*** export permit from the country of origin ***(if required),*** which must be handed to the authorized Environmental Management Inspector on inspection.

THE FOLLOWING CONDITIONS ARE APPLICABLE TO:

(A) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS OF CITES AND NON-CITES SPECIES AND ANY PRODUCTS THEREOF; LIVE WILD ANIMALS, LIVE EXOTIC ANIMALS, HUNTING TROPHIES, WILD ANIMAL PRODUCTS, PROTECTED PLANTS AND LIVE FISH (INCLUDING AIR, MAIL, RAIL, ROAD, AND SEA)

THIS PERMIT

1. a) Shall not be transferable;
   b) Shall be invalid until the signature of the holder thereof been appended thereto;
   c) This permit is not valid unless it has been endorsed and released by an authorized Environmental Management Inspectorate official prior to the import, export or re-export taking place. In cases of importation of live animals, which are to be quarantined at OR Tambo International Airport's Quarantine Station, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Management Inspectorate officials, per telephone ***and*** confirm per fax a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection (the inspection booking must be requested a minimum of 48 hours prior to the intended inspection), applicable for shipments done over weekends and public holidays, with the following information:
   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection will take place;
   c) Date and Time of Import / Export / Re-Export;
   d) Date and Time of intended inspection (subject to approval);
   e) Agents particulars (if applicable), Carrier Name, Flight Number, Flight Time and Waybill Number;
   f) The applicable permit number/s and relevant expiry dates; and
   g) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental Management Inspectorate official may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30):***
   Office: +27 (11) 390-3687/ 2311
   Fax: +27 (11) 390-1720

4. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Management Inspectorate officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s.

5. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

6. Detailed packing list/s, that are signed and dated must accompany the consignment/s, with the following information:
   a) Details of Importer and Exporter (Names, addresses and contact numbers);
   b) Waybill number/s and name of carrier, flight number, date and time;
   c) Transport container number/s;
   d) Scientific name of species (in full) with relevant transponder / tag / ring numbers; a detailed description of specimen / product and the origin thereof;
   e) Common name of species (in full);
   f) Number per species per container (actual number exported / imported); and
   g) Applicable permit number/s

7. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the issuing authority within ***14 working*** days after expiry thereof. Import permits must be returned to the issuing authority within ***14 working days*** after use. Export permits must be handed to a Management Authority of the importing country within ***14 working days*** after use.

8. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Permit office with the application.

9. A person authorized thereto by the Premier may only make any alteration on the permit.

10. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

11. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

12. Permit holders or their delegated agents must inform the Environmental Management Inspectorate official if an inspection is cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

Signature of Issuing Officer	Date	Signature of Recipient	Date
DOROTHY MAKARINGE			
Full Name		Full Name	

MP PARKS AGENCY
P/BAG X 1358, NELSPRUIT 1200
TEL: 013 759 6390/1
FAX: 013 759 6390
2017-07-03

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000073707
HUNT_FUNDS_CAPTURED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Lodzi Hunters (Pvt) Ltd	Client's Full Name	Tammie(b) (6)r Adams
ZTA (HOP) No.	HOP0181	Passport Number	(b) (6)
		Country of Issue	UNITED STATES
Address	KABUBA CAMP, KARIANGWE MISSION LUSULU CAMPFIRE CONCESSION BINGA lodzi@outlook.com	Address	(b) (6) Greenville South Carolina 29615 USA
Name of Professional Hunter	Thysdevries	Licence No.	089
Telephone		Fax	n/a
Number of Accompanying Guests		0	
Are the trophies being exported after tanning and mounting?			
Are the trophies being exported after primary treatment?			
Name of Processing Agent or Taxidermist	MATABELELAND TAXIDERMIST	Address	16 BIRMINGHAM RD BELMONT BULAWAYO
Name of Shipping Agent	FREIGHT CONSULTANTS	Address	3 TROJAN STREET BELMONT, BULAWAYO
Name of Foreign Agent	TWO DEES ENT	Address	P.O. BOX 785 FRANCISTOWN BOTSWANA

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1	KUSILE	Bulawayo	
2	Binga District Area 2 - Lusulu	Matabeleland North	
3	Binga District Area 1 - Songo	Matabeleland North	
4	Tsholotsho District Area 2 - South	Matabeleland North	
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Date of Safari From	01-07-2015
Date of Safari To	15-07-2015
Daily Rate Charged For Big Game USD	1,350.00
Daily Rate Charged For Plains Game USD	.00
Daily Rate Charged for Non hunting guests USD	.00
Number of Accompanying Guests	0

REVENUE AUTHO
17 OCT 2017
ZPWMA
Date Stamp

3. DETAILS OF DEPOSITS

(All Inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1	23-OCT-2014	MEP/21802	03-DEC-2015	USD	51,635	50,116.94
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate	20,250.00	Total Guests rate	.00
Less Commission	1,518.07	Total Trophy fees	29,500.00
Other fees (Incidentals)	1,885.00	Grand Total USD	50,116.94
Percentage Commission Charged	2.94	Total Processing Fees	

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	W/K	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	CROCODILE	M	Killed	KUSILE	35k0556360/7935706	09-JUL-2015	9.5 feet	4,500
2	ELEPHANT - WITH TUSKS	M	Killed	Tsholotsho District Area 2 - South	35k0482477/7837498	03-JUL-2015	22/26kg	25,000
3								
4								
5								
6								
7								
8								
9								
10								
11								
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Zimbabwe National Elephant Management Plan (2015-2020)

By Zimbabwe Parks and Wildlife Management Authority - The Zambezi Society Reports

Zimbabwe Parks and Wildlife Management Authority

ACRONYMS AND ABBREVIATIONS

AM Area Manager

CA CAMPFIRE Association

CE Chief Ecologist

DC Conservation Director

DG Director General

EM Elephant Manager

HEC Human Elephant Conflict

HMS Head Management Services

HRM Head Human Resources

IM Investigations Manager

NGO Non Governmental Organisation

PRM Public Relations Manager

RDC Rural District Council

RM Regional Manager

SOAZ Safari Operators Association Zimbabwe

ZHA Zimbabwe Hunters Association

ZPGHA Zimbabwe Professional Guides and Hunters Association

ZRP Zimbabwe Republic Police

TFCA Transfrontier Conservation Area

INTRODUCTION AND BACKGROUND

By any standards Zimbabwe has a proud history of successful elephant conservation. Elephant populations in most of Africa were reduced to very low numbers by the late 19th Century. In 1897 approximately 100,000 tonnes of ivory was exported from Africa [42]. In 1900 it was feared that elephant might become extinct south of the Zambezi River [6]. Using historical aceounts of elephant numbers, backwards extrapolations based on population growth rates, and known levels of elephant kills it is unlikely that Zimbabwe held more about 4,000 elephants in 1900 [8,10,14,16]. More than one hundred years later, in 2014, this number had increased twenty-fold to nearly 83,000 elephants (Fig. 1 and Table 1) despite attempts to limit elephant population growth between 1960 and 1989 by culling 45,000 elephant in tsetse control areas and state protected areas (Fig. 1) [5,32]. The primary rationale for limiting elephant numbers in protected areas was to reduce their impact on woodland habitats and the loss of plant and animal species as result of elephant-induced habitat change [9,12,44]. Elephant impacts on woodlands and associated and biodiversity is still a concern today [15, 46,47].

Between 1990 and 2006 elephant populations grew exponentially but growth has since been limited by an escalation of illegal killing [18]. However, the overall population in the country remains at more than 80,000 elephants (Table 1), which is more than twice the national target population envisaged in the 1908s.

Figure 1. Growth of elephant population in Zimbabwe between 1900 and 2001, number of elephant killed (lower graph), and aerial census estimates (triangular point) in those years in which the entire elephant range was covered. The numbers killed before 1960 are based on the amount of ivory exported from the country. The high numbers killed in the 1980s represent the large-scale culls that were carried out during that period in an effort to reduce their environmental impact.

Zimbabwe is one of the key elephant range states and home to the second largest estimated elephant population of nearly 83,000 individuals following Botswana, which is estimated to hold Zimbabwe Elephant Management Plan: 2015-2020 4 more than 130,000 elephants. Zimbabwe thus has a clear obligation to ensure the survival of the species for the benefit of present and future generations of all stakeholders1.

Zimbabwe first adopted a specific Policy and Plan for Elephant Management in 1997 [33] with the long term vision to "Conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage."

As a matter of policy the plan required that at least four demographically and genetically viable populations of elephants be maintained, that elephant densities be kept below the levels at which they might compromise biodiversity, and that elephant range remain at or above the 1996 level. At the time illegal killing of elephants was at a very low level and the plan placed little emphasis on law enforcement. That situation has since changed drastically, with poaching at a crisis state in some countries, although not to the same extent in Zimbabwe.

Furthermore, elephant range has been constrained by increasing human population densities in many rural areas. Accordingly, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) convened a participatory workshop in Hwange Safari Lodge (from 2nd to 4th December 2014) to develop an agreed "Strategic Elephant Conservation Policy and Management Plan Framework". The policy and primary objectives of the 1997 plan were incorporated into the December 2014 framework, and the objectives and action items were updated to reflect new challenges to elephant management that were not in focus in 1997.

The framework developed at the December 2014 workshop, together with input from the two-day CAMPFIRE Association workshop held in November 2014, form the basis of the current elephant management plan. The national workshop included stakeholders with varied interests from the wildlife and tourism industry, conservation NGOs, technical experts from Zimbabwe and the international community, and government representatives from wildlife agencies in neighbouring countries that share elephant populations with Zimbabwe.

At the Hwange workshop, participants agreed that each of the four primary elephant ranges needed a regional plan to address the specific challenges and advantages of elephant in that area. Accordingly, from 30 April to 2 May, 2015, a workshop was held to discuss an antipoaching strategy for Mana Pools National Park, which was later expanded to cover the midZambezi Valley region. Similarly, in May and September 2015, workshops were held in the Sebungwe and the South East Lowveld, respectively, to develop action plans for each region. An anti-poaching strategy workshop for Hwange National Park was held in June 2015 and, together the management plan for the park, provided a basis for completing an action plan for Northwest Matabeleland. These action plans are appended in Annexes 9.4 to 9.7.

The current conservation status of African elephants is that they are listed as Vulnerable under the IUCN Red List, as Endangered in CITES Appendix I, apart from the populations of Botswana, Namibia, South Africa and Zimbabwe that are listed under CITES Appendix II. In Zimbabwe, African elephant are not included on the list of "specially protected animals" because their population is so large. However, they are listed on the "Schedule of Animals with High Economic Value."

1.1 Numbers, distribution and regional trends of elephant in Zimbabwe

Elephants are distributed in four main regional populations in Zimbabwe, namely, Northwest Matabeleland, the Sebungwe, the mid-Zambezi Valley, and the South East Lowveld (Fig. 2). Crnde ecological densities vary between 2.16 elephant/km2 in Northwest Matabeleland and

1 Note that the African elephant comprises two species, namely the forest elephant and the savanna elephant. Given the high proportion of the continent's savanna elephants that occur in Zimbabwe this places increasing responsibility for their conservation on the country.

* The survey did not include Bubye Valley Conservancy or the Tuli Safari Area and some other small populations that likely add another 1,000 elephants to the estimated total for the country. The area surveyed in Mozambique is not included in the national total or in the South East Lowveld total area

The elephant range in Northwest Matabeleland covers an area of approximately 25,000 km2 and includes national parks, safari areas, forest areas, commercial farmland, and communal land – mostly on Kalahari sands (Fig. 2). The population of some 54,000 elephants is part of the larger regional population of about 250,000 in south-eastern Angola, Botswana, Namibia and south- western Zambia. The major component of 45,000 elephants is found in Hwange National Park. At the onset of the rains some elephants disperse from Zimbabwe into Botswana resulting in a shared population between the two countries.

The elephant population in Hwange National Park was approximately 2,000 animals when it was first declared a Game Reserve in 1928 [10]. Elephant impacts on vegetation reached alarming levels by 1964 and a representative of WWF-US advised the then minister of natural resources to act on what was perceived to be an over-population of elephants. The first major cull of elephants took place in the park in 1965 [10]. A major factor contributing to the growth of the elephant population (with a current density of 3/km2 in 2014), and of other species, was the provision of artificial water supplies through the dry season [10,37]. The Matetsi Safari Area to the north of Hwange National Park was established in 1972, on what had been a commercial farming area, and the complex, that includes two national parks, carries a lower density of elephant (1.1/km2). Estimated growth of the elephant population since 1980 in Northwest Matabeleland is shown in Fig. 3 below.

Following the large culls of the 1980s the elephant population of Hwange National Park grew rapidly from 13,000 in 1986 to about 35,000 in the early 1990s and appeared to stabilise at about this number [7]. However, the 2001, 2007 and 2014 dry season estimates of between c. 35,000 and 45,000 [23] suggest that the elephant population in the park may now have stabilised at about this number (or a density of 2 to 3 elephants/km2), with rainfall and water supplies acting as limiting factors.

The Sebungwe region covers an arc of 15,000 km2 to the south of Lake Kariba. Historically the area was demarcated by tsetse control fences that ran from Binga on the lakeshore in the west southwards to the Sengwa Wildlife Research Area and then north-eastwards to the Kanayati River and Matusadona National Park (Fig. 2). The Parks and Wildlife Estate covers 6,234 km2 and includes two national parks and two safari areas. There is a single forest area within the region and the remaining area of e. 9,000 km2 is communal land. As in the other regions the elephant population grew from about 2,000 elephant in the 1920s to c. 15,000 in 2006 [9,17]. It was recently reduced to an estimated population of 3,500 in 2014 [23] (Fig. 4). The human population in the three districts of the Sebungwe has increased from 45,000 in 1950 to some 700,000 in 2013 with population densities of more than 30 per km2 in Gokwe North and Gokwe South. The threshold human density at which elephants disappear from settled areas is approximately 15 people/km2 [27].

The mid-Zambezi Valley area of 11,000 km2 includes Mana Pools National Park, six safari areas and small, adjacent areas of communal land. Returns from hunting leases and quotas provide an important source of revenue for ZPWLMA. Unlike the Sebungwe the protected areas are contiguous. The elephant population reached a high of 19,000 in 2001 and between 2001 and 2014 was reduced to 11,000 elephants [22] (Fig. 5). Culling took place in the escarpment areas of Charara, Nyakasanga and Mana Pools during the 1980s. As in North West Matabeleland, the elephant population in the mid-Zambezi Valley is shared with Zambia in the Lower Zambezi National Park and with Mozambique.

Recent estimates of elephant in the adjacent 16,500 km2 in Mozambique south of Cabora Bassa are 1,985 elephants in 2010 [19], and 1,600 in 2014 – a decline of 19%. In Zambia, an aerial survey of the Chiawa Game Management Area and of the Lower Zambezi National Park in Zambia in October 2013 [45] estimated elephant populations of 405 and 1,795 in the two areas respectively. The elephant density in Chiawa GMA was 0.16/km2 and in the Lower Zambezi National Park was 0.41/km2.

The South East Lowveld elephant population is centred on the Gonarezhou National Park population of c. 11,000 elephant in 5,000 km2 that has been growing at about 5% per annum for the last 20 years (Fig. 6). The population falls within the Great Limpopo Transfrontier Conservation Area (TFCA) and there is some movement of elephant between Gonarezhou and Kruger National Park and across the park boundary into Mozambique. Separate elephant populations occur in the Malilangwe, Savé Valley, and Bubye Valley conservancies. There is also a small population in the Tuli Safari Area that is shared with South Africa and Botswana in the Mapungubwe TFCA. Overall there are about 13,000 elephant in this range [25]. The 2014 survey recorded no live elephants in the Mozambique blocks adjacent to Gonarezhou National Park but returned an estimate of more than 160 elephant carcasses [25].

Summary Comment. Law enforcement, mitigating human-elephant conflict [27,35,36], and building supportive and beneficial relationships between protected areas and their neighbours [41] are key issues in all regions. In the Sebungwe, rapid human population growth and settlement in previously uninhabited areas is reducing the range available to elephants and limiting movement between protected areas. Here, rehabilitating protected areas and implementing strong incentives [43] for elephant conservation in the communal lands will be strategically important steps for that region. For all of the four elephant ranges in the country further key specific issues and actions to tackle them will be tackled through the action plans that have been developed for each region (Annexes 9.4 – 9.7). The development of regional action plans and the devolution this involves will also serve to reduce the risk of scale mismatches between institutional/social and ecological scales [17].

1.2 Targets for elephant numbers in relation to conserving biodiversity

Specifying a positive target figure for the number of elephants a country wishes to conserve is entirely appropriate where an elephant population has been greatly reduced as, in the Sebungwe region. In countries, or areas of countries, where there may be an over-population of elephant a legitimate objective may be to reduce their number. The three targets that were adopted as a matter of policy in 1997 by the Zimbabwe Government are:

1. To maintain at least four demographically and genetically viable elephant populations in Zimbabwe

2. To maintain or increase core protected area range of elephant in Zimbabwe
3. To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe

Maintaining four regional populations each of between 5,000 and 10,000 elephants would meet the first target of maintaining four demographically and genetically viable populations [2]. However, the third target is not likely to be met unless there is sufficient range, in each of the four regions, in which to hold these numbers without compromising the range of biodiversity that the country is committed to protecting in terms of its policy and legislation. The core state protected area (National Parks and Safari Areas) of elephant range in Zimbabwe is close to 42,000 km2. At present this area is carrying more than 70,000 elephants (Table 1) or a crude density of about 1.75 elephants/km2, a density at which woodlands and biodiversity are compromised [1,3,9,12,15,31,46]. At densities as low as 0.3 elephants/km2 woody plant species can be lost and species diversity of birds and invertebrates reduced [15,34]. In miombo woodlands, which form the predominant type of protected habitat in the Zambezi Valley, woody plant species and some animal species will be lost at elephant densities as low as one elephant to 10 km2 [31]. As an example, in a miombo woodland area in the Sengwa Wildlife Research Area (southern Chris) elephants at a density of < 1/km2 were responsible for removing 45% of the woody biomass in just four years [26]. In Chizarira National Park, with elephant densities in excess of 1 per km2 tree canopy cover declined from 75% in 1979 to less than 10% in 1993 [44,11]. The only tall trees remaining with dead wood to provide refuges for hole-using birds were found on large termitaria [28].

These examples highlight the dilemma that arises between attempting to protect as many elephants as possible at all costs on the one hand, and to preserve a full range of plant and animal species in protected areas on the other hand [14]. These examples also highlight the consequences of making single resource decisions (e.g. preserve all elephants) that can result in multiple resource consequences (e.g. loss of large trees, plant species, and animal diversity). Recent work in Addo Elephant National Park in South Africa shows that high elephant densities do not increase eco-tourism opportunities and their associated ecological costs are not a requirement for eco- tourism financial sustainability [30].

It is clear that the choice of target elephant population size and density for a particular area or country depends on peoples' values and the values of decision-makers involved [4]. Ecological science can only provide guidance on the likely consequences of the targets that are chosen. For Zimbabwe the current elephant population is considerably higher than was envisaged in the 1980s when the target was to maintain a countrywide population of about 35,000 elephants [13,15]. Elephants are clearly a keystone species and primary ecological engineers in savanna ecosystems [12], and particularly so at high densities in confined ranges. A sensible strategy, therefore, would be to match targets to different areas and habitats and to vary these targets adaptively in time and space depending on long term trends and the results of appropriate programs monitoring the impacts of elephants on ecosystem structure, function and species diversity.

As a result of the above considerations a decision on a target number of elephant for the country is expressed in terms of an upper and lower limit of elephant density that is presently set at between one and two or three square kilometres per elephant (i.e. 0.3 to 0.5 elephants per km2). However, ZPWMA recognises that density is only one factor to be considered as part of population target setting. All the regional population densities except Sebungwe already exceed these density limits, and this will be taken into account in each regional action plan in establishing thresholds of potential concern relating to ecological, economic and social impacts of elephants.

A series of regional action plans has been developed and in the Sebungwe a tentative target of 5,000 elephant has been set where the present population is approximately 3,000 in about 7,000 km2 of available habitat. This is based on the likelihood that a population of 5,000 will be both genetically and demographically viable[2] and attainable given the land presently available to elephants. The elephant populations in the remaining regions are well above the thresholds established in the 1980s. An important component of the regional management plans is to carry 2 / This concept arose following the re-introduction of wolves into Yellowstone National Park in the USA. Elk avoided habitats in which they were likely to be killed by wolves and this allowed a rapid regeneration of woody plant species that had been over-browsed for years [29, 39].

Zimbabwe Elephant Management Plan: 2015-2020 11 out the necessary research on the ecological, economic and social impacts of elephants and to develop appropriate, spatially nuanced thresholds, for the management of these populations

Management approaches to maintain elephant populations within the still to be set acceptable upper and lower limits will vary with each region but will, in all areas, focus on improved protection and minimising the illegal killing of elephant. In some areas the management of water supplies may be used and the protection of sensitive habitats may require creating a "landscape or ecology of fear"2 through appropriate disturbance of elephants visiting such areas. The most straightforward method of dealing with over-population of a species is culling. However, because the sale of ivory was previously required to cover the costs of large-scale population reductions this option was effectively closed in 1989 by the CITES listing of elephant on Appendix I. Despite the listing of Zimbabwe's elephant on Appendix II in 1997 and the subsequent sales of stockpiled ivory in 1998 and 2008 trade in ivory has since continued to be constrained by a nine-year moratorium on the sale of ivory. The moratorium is unlikely to be lifted in 2017. The present poaching crisis affecting elephant populations in central and eastern Africa and associated public sentiment also militates against the introduction of culling to manage elephant populations in Zimbabwe.

1.3 Implementation of the Strategy

1.3.1 Institutions and Roles
i) Zimbabwe Parks and Wildlife Management Authority

ZPWMA, through the Parks and Wildlife Act Chapter 20:14, has a national mandate to manage wildlife in the country. By the same instrument it is the lead agency in elephant management, i.e. protection, research, monitoring and sustainable utilization. It forms collaborative arrangements with other institutions to manage elephants in the country.

ii) Intra-governmental institutions

ZPWMA works jointly with security organizations such as Zimbabwe Republic Police (ZRP), Zimbabwe Defence Forces, and the President's Office to protect the elephant and curb illegal trade in elephant products. ZPWMA works with these institutions through the Joint Operation Command and also on bilateral arrangements. ZPWMA also works with Customs at ports of exit and entry to improve control of the illegal movement of wildlife products across boundaries. iii) Intergovernmental organizations

ZPWMA works closely with sister organizations from neighbouring countries such as Zambia, Mozambique, South Africa and Botswana in wildlife protection, information sharing and elephant monitoring through bilateral and regional arrangements (SADC). At international levels, ZPWMA is both the CITES Management Authority and CITES Scientific Authority and works with other countries through CITES and other inter-governmental agreements to control trade in elephants and to protect elephants.

iv) Non-governmental organizations

Both local and international organizations partner with ZPWMA in elephant management. They mobilize resources for protection, research and monitoring, and assist with elephant monitoring and research, information sharing and advocacy.

v) Private sector

The corporate community participates in elephant management mainly through resource mobilization. Safari operators report poaching and assist in anti-poaching patrols. Through lease and trophy fees they provide revenue to ZPWMA. They help develop infrastructure, provide funds to communities and supplement diets with meat from trophy animals.

Zimbabwe subscribes to the principle of sustainable utilisation of wildlife resources including elephants. Sport hunting is the principal form of wildlife utilisation whereby offtakes are adaptively managed and monitored through a participatory and science based process. This process allows for sustainable offtakes, and rigorous resource monitoring programmes that allow recruitment within a population to ensure the continued survival of the population in the wild. The high economic value conferred to the elephant through consumptive utilisation has also resulted in increased tolerance by local communities.

BOX 1: The Role of Sport Hunting in Elephant Conservation

Elephants are a charismatic species but can also be destructive when they destroy crops, threaten livestock and even human lives.

To have a future, elephants must have value. Value to the governing authorities and to the local people. The greater the value, the greater the tolerance of them is likely to be. The local people who live closest to them will determine the long-term survival of species like elephant.

Regulated sport hunting converts wildlife into assets for the benefit of local people and the country as a whole. Wildlife can be a most valuable asset and in turn empower local communities and provide basic necessities. When it is viewed as a valuable asset, wildlife becomes an economically competitive land use in Zimbabwe, which leads to habitat preservation instead of habitat destruction and conversion to agriculture or livestock production. Game animals have a survival advantage because of user-pay stewardship systems where use revenue generated from tourist hunters is paid through to wildlife authorities and local communities.

The presence of regulated hunting can also reduce illegal activities. Many hunting operators in Zimbabwe have specialised anti-poaching units. Private operators' lease agreements are being reviewed to include anti-poaching as an obligation of the concessionaire. Regulated hunting is the opposite of poaching. One is a lawful activity designed by government wildlife authorities and experts to perpetuate resources and the other is prohibited thievery outside of and away from the system. The first is like making a bank deposit and the second is like a bank robbery, without sustainable limits.

Trophy hunting revenues are vital because there are not enough tourists to otherwise generate income to support all protected areas. Eco-tourism revenues are typically sufficient to cover the costs of only some of the parks and certainly not to justify wildlife as a land use outside of protected areas. Hunting is able to generate revenues under a wider range of scenarios than eco-tourism, including in remote areas lacking infra-structure, attractive scenery, or high densities of viewable wildlife.

Consequently, elephant and other wildlife populations will be negatively affected through reduced conservation efforts arising from low funding and reduced goodwill from the communities, when in reality the elephant has the economic potential to raise adequate funds to support itself and other species. For these reasons, Zimbabwe confirms its commitment to the sustainable use of elephant and other wildlife in this Action Plan.

vi) Local communities

Local communities are involved in elephant management in CAMPFIRE areas, through sharing

BOX 2: The Importance of Community Based Conservation to the Future of Elephant Management in Zimbabwe

The Community Areas Management Programme for Indigenous Resources (CAMPFIRE) of Zimbabwe has been widely regarded as one of Africa's most successful contemporary conservation initiatives. It permits the residents of communal lands – basically the poor rural communities – to share in the benefits generated by wildlife utilization on those lands by granting Appropriate Authority to Rural District Councils (RDCs) to manage wildlife on communal lands and requiring a certain percentage of revenue to be paid to the wards and councils.

CAMPFIRE operates in about 50,000 km2 (12.7%) of land in Zimbabwe. This is roughly equivalent landmass to the Parks and Wildlife Estate. CAMPFIRE encompasses about 777,000 households with an average family size of five, who face food insecurity and deep poverty (average income $1 a day).

Between 1994 and 2012, CAMPFIRE generated $39 million of which $21.5 million was allocated to communities and used for resource management (22%), household benefits (26%), and community projects (52%). About 90% of CAMPFIRE's revenue comes from hunting, with elephant hunting contributing more than 70% of annual revenue.

Based on the Constitution of the CAMPFIRE Association as amended in 2007, all major hunting RDCs use CAMPFIRE revenue-sharing guidelines. In these districts safari operators pay revenue directly into community-controlled bank accounts using the following breakdown: CAMPFIRE community share (55%), RDC fees (41%), CAMPFIRE Association levy (4%).

Despite its achievements CAMPFIRE still faces fundamental challenges. In particular, the development strategies of households in CAMPFIRE areas focus on land uses that are incompatible with wildlife such as human immigration to rural areas, the extension of basic agricultural schemes and increased livestock numbers. Other CAMPFIRE challenges include: (i) the downturn in Zimbabwe's economy and tourism sector post-2000, (ii) great reliance on consumptive trophy hunting and less focus on other uses and non-consumptive uses of natural resources, (iii) increasing human populations averaging

16-20 people per km2 in some key wildlife districts, and (iv) lack of re-investment in development, fixed assets, human capital, and management and protection of wildlife in CAMPFIRE areas.

Despite these challenges, CAMPFIRE stands very high in the agenda of Zimbabwe's Government, and a review dedicated to improving the programme , including greater devolution of ownership of wildlife to communities, is ongoing and should be finalized by the end of 2015. Zimbabwe's Government recognizes that the survival of wild animals depends entirely on those among whom they live. Unless local people want to save them, wildlife will be poached to the point where just a few remain in fortified reserves. CAMPFIRE is meant to avoid this and the future of wildlife in communal areas rests on the success of this programme.

of information, advocacy and wildlife protection. They report human-elephant conflicts and carryout some of the conflict management activities.

1.3.2 Funding and resource mobilization

Adequate and sustainable funding and provision of other resources are important to effective protection of the elephant and curbing illegal trade in elephant products. Resources are mobilized from within ZPWMA, by the private sector, and by intergovernmental and nongovernmental organizations. Partnerships between ZPWMA and other stakeholders are some of the innovative measures being developed to secure funding for elephant conservation. There may be a need for the Government to provide additional support to the conservation of elephants given the present poaching crisis affecting the species continentally.

1.3.3 Coordination i) ZPWMA

ZPWMA takes the lead in coordinating other institutions in elephant conservation activities in the country. It will convene and chair the Elephant Management Committee meetings. ii)

Elephant Manager

This Action Plan provides for the appointment of an Elephant Manager within ZPWMA who will be responsible for coordinating elephant management in the country. The Elephant Manager will primarily work through various Elephant Management Committees that will be established pursuant to this Action Plan. The Elephant Manager will liaise with the International Conservation Office on international matters affecting elephant conservation and also liaise with the CAMPFIRE office for matters affecting the conservation of elephants in CAMPFIRE districts. The draft Terms of Reference for the Elephant Manager are provided in Annex 9.7. iii) Elephant Management Committees

A National Elephant Management Committee and four Regional Elephant Management Committees (Zambezi Valley, Sebungwe, Northwest Matabeleland and South East Lowveld) will be established. The National Elephant Management Committee will meet at least once annually to review progress in implementing the Action Plan. The National Committee will document that progress in implementing and any suggested revisions to the Action Plan, and make their report available to the Director General of ZPWMA.

The four Regional Elephant Management Committees will meet at least twice in a year to review the implementation of each regional plan. The Committees will strengthen links with various bodies at national and regional levels including within the TFCA framework. ZPWMA will convene and chair the regional Committee meetings. The draft Terms of Reference for the Elephant Management Committees are provided in Annex 9.5.

1.3.4 Monitoring and evaluation

Monitoring implementation of this Action Plan will be done using the Key Performance Indicators contained in Section 4. Monitoring the implementation will be done and reported on by the Elephant Manager on a monthly and annual basis. A major evaluation of progress will be done every five years. Monitoring and evaluation will be done at each area level in a given elephant region, at the regional level and at the national level.

1.3.5 Links with continental (African Elephant Action Plan / SADC) and other regional initiatives

This Action Plan recognizes the existence of the African Elephant Action Plan and initiatives that are currently taking place at a continental level, including by the African Union. These include the development of the Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa. At the SADC level initiatives involve developing a Plan of Action and implementing the SADC Protocol on Wildlife Conservation and Law Enforcement. This Action Plan will be reviewed periodically in the light of developments that are taking place in the SADC Region, Africa and beyond.

1.3.6 Regional strategies within Zimbabwe

The devolution of management oversight to regional levels, with more detailed action plans within the national plan, provides the basis for effective adaptive management at regional and local levels.

As set forth in the framework below (Sections 3 and 4), four regional plans have been drafted to address the unique challenges of each region, and will implement the broader goals of this national Action Plan at a more specific level.

In addition, Park-level plans for specific protected areas (including Hwange National Park, Mana Pools National Park, and Gonarezhou National Park) contribute to this Action Plan and govern the management of elephant within those protected areas.

BOX 3: Towards Greater Coordination with the AEAP

The African Elephant Action Plan (AEAP) was finalized and approved as a consensus document by all 37 African elephant range states in the margins of the 15th meeting of the Conference of the Parties to CITES (Doha, Qatar 13-25 March 2010).

The AEAP contains eight prioritised objectives identified as the most important measures required to protect African elephants across their range.

OBJECTIVE 1: Reducing illegal killing of elephants and illegal trade in elephant products OBJECTIVE 2: Maintaining elephant habitats and restoring connectivity

OBJECTIVE 3: Reducing human-elephant conflict

OBJECTIVE 4: Increasing awareness on elephant conservation and management of key stakeholders (e.g. policy makers and local communities among other interest groups)

OBJECTIVE 5: Strengthening range states' knowledge on African elephant management

OBJECTIVE 6: Strengthening cooperation and understanding among range states

OBJECTIVE 7: Improving local communities cooperation and collaboration on African elephant conservation

OBJECTIVE 8: Implementing the AEAP

The objectives of the AEAP were considered and included in drafting this action plan. ZPWMA has been careful to address its international obligations in this Action Plan§.

1.3.7 Protecting elephant for the future

Poaching and the illegal wildlife trade are serious concerns for all range states. Poaching has decimated elephant populations in central and eastern Africa, and in Mozambique. Although the 1997 Policy and Plan for Elephant Management in Zimbabwe did not need to prioritise law enforcement, protecting elephant for the future has become a primary objective of this Action Plan, and will be a primary focus of resource utilisation by ZPWMA.

1.3.8 Human elephant conflict

As Zimbabwe's human population grows, elephant are being restricted to smaller areas and as their populations expand they increasingly move out of their designated habitat, and raid crops and sometimes threaten human lives. As a result in many rural areas where elephants exist in Zimbabwe, human-elephant conflicts are increasing, creating substantial negative attitudes to the conservation efforts of elephants. These are often among the poorest rural farmers, which makes the issue complex in social and economic terms. Unresolved conflicts stimulate poaching or retaliation. Poachers or retaliators can be seen as "local heroes" because they provide meat to the communities and resolve the conflict. A major challenge for elephant management is keeping human-elephant conflicts to a minimum.

Developing a Social, Economic, and Cultural Framework has been identified as a Key Component of this Action Plan in an effort to address and reduce human-elephant conflicts.

BOX 4: Towards a Comprehensive Strategy to Reduce Human-Elephant Conflict

Some methods of reducing human-elephant conflict focus on curing the effects, not the cause. Such methods include chilli sprays, fences, and evening patrols to scare off marauding elephants. However, these are not necessarily longterm solutions. Long-term solutions require growing the tolerance of local communities for elephant by ensuring the communities benefit from having elephant on their lands. Tolerance is likely to increase if communities realise and appreciate economic returns earned from the sustainable use of elephant. Economic returns may be generated by consumptive and non-consumptive tourism. The devolution of decision-making on aspects of problem animal control to communities may result in better outcomes for the management of the costs and benefits of this activity.

Problem animal control includes disturbing, removing, translocating, or ultimately killing those elephant that persist in damaging crops or threatening human life. Clearly, no one management option will successfully deal with all problem elephants and conflict situations. As part of this Action Plan, ZPWMA will undertake additional research on problem animal control and minimizing conflict, and will develop new solutions and a more comprehensive response to these issues.

2. LOGIC AND STRUCTURE OF THE PLAN

The strategic framework developed at the Hwange workshop in December was based on the Logical Framework structure and the development of clearly stated objectives, outputs and the necessary and sufficient activities (or actions) required to achieve the outputs within a specified time frame (Table 2). The structure requires a set of key performance indicators that are intended, as far as possible, to be SMART, i.e. Specific, Measurable, Achievable, Realistic and Time- bound. The five key components of the plan are:

1. Protection and law enforcement
2. Biological monitoring and management
3. Socio-economic and cultural sustainability
4. Building conservation capacity
5. Coordination, collaboration and programme management

Table 2. Structure of the Action Plan for Elephant Conservation and Management in Zimbabwe

Long-term Vision	The Long-term Vision has retained the essential components of the 1997 plan and remains applicable to the period of this plan.
Targets	The three Targets included in the 1997 plan are retained but the provision to maintain or increase elephant range is not linked to a specific national benchmark as it was in 1997 because this will vary in the four elephant ranges or regions
Key Components	The five Key Components are the primary themes or headings of the strategy under which the framework is organised. The ten policy and management objectives included in the 1997 plan fall within these headings.
Strategic Objectives	The Strategic Objectives reflect briefly but more explicitly the policy intention for the respective components.
Outputs (expected outcomes)	The Outputs are statements that reflect the expected results that will be realised during the time frame of the Action Plan. Outputs are therefore expressed in the past tense.

Key Activities (actions)	Key Activities represent the necessary and sufficient actions that need to be completed to achieve the Outputs. They are the actions on which the major emphasis should be placed. National level Activities can be cast as Outputs at the regional level, with more detailed time specific activities, KPIs and budgets at that level.
Key Performance Indicators (KPIs)	The KPIs provide a basis on which to measure and monitor the success or otherwise of the Strategic Objectives, Outputs and Activities.
Means of Verifying the KPIs	It is clearly necessary for the verification and monitoring of KPIs that the manner in which they can be tracked and verified need to be clearly established. Equally important is the need for monitoring protocols to be standardised across local and regional levels so that national and regional level KPIs and statistics can be compiled. This will then allow valid comparisons of performance across regions and local areas to be made.
Implementation Strategy	ZPWMA, the Elephant Manager and the Elephant Management Committees will interact and collaborate with a wide range of agencies and stakeholders in the implementation of this Action Plan.

The top-level strategic components of the Action Plan encompassing the Long-term Vision, Targets, Key Components, Strategic Objectives and Outputs are summarised on page 17 in Section 3 below. The top-level components of the plan are then followed by a set of tables in Section 4 (page 18) that provide action plans for the expected Outputs (or outcomes) of each the five strategic components of the plan. The Activities and KPIs within these tables are set at a national strategic level. They will be taken up, as appropriate, during the development of

Regional Action Plans for each of the four regional elephant populations in the country. Activities listed at the national level will, for the most part, form Outputs at the regional level. These Outputs have generated more detailed regional and local specific activities and actions with specific KPIs and means of verification.

The four regional Elephant Action Plans that have been developed as part of the National Action Plan are included in Annexes 9.1 to 9.4.

3. VISION, TARGETS, AND KEY COMPONENTS

Long-term Vision: To conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage

Targets: 1. To maintain at least four demographically and genetically viable elephant populations in Zimbabwe
2. To maintain or increase core protected range of elephant in Zimbabwe
3. To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe.

Key Components	1. Protection and Law Enforcement	2. Biological Monitoring and Management	3. Social, Economic and Cultural Framework	4. Building Conservation Capacity	5. Coordination, Collaboration and Programme Management

Strategic Objectives	Objective 1. Ensuring effective protection of all populations of elephant in Zimbabwe	Objective 2. Implementing effective biological and ecological management to achieve populations that are within upper and lower acceptable limits in numbers and distribution	Objective 3. Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development	Objective 4. Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and used efficiently and effectively	Objective 5. Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives
Outputs	Output #1: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented	Output #2: Adaptive management to achieve viable populations in all four sub-populations implemented	Output #3: Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased	Output #4: Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational	Output#5: Coordination meehanisms to assess and review adaptive elephant population management and strategic planning established and operating

4. ACTION PLANS

4.1 Protection and Law Enforcement – Ensuring effective protection of all populations of elephant in Zimbabwe
Output: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented KPI: Illegal losses of elephant from at least 90% of elephant populations reduced to less than 5% by 2020, and less than 5% of elephant habitats encroached by settlements by 2020
MV: National level monitoring data on illegal activity, successful convictions, carcass records, status and trends of all elephant populations; verified data on extent of encroachment and of available elephant habitat

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
1. For each key population establish a highly trained rapid response anti-poaching unit for deployment to areas under threat	1. An equipped rapid response unit established and operating jointly with ZRP in each region by June 2016	Inception report for each unit Monthly reports of operation from each unit Number of joint operations	By June 2016	ZPWA / ZRP DG, DC, RMs

2. Informer systems enhanced and supported at national, regional, national and local levels	1. An active informer system/network operating within each region at both regional and local levels by Jan. 2016 2. National level informer system targeting middle men and higher crime syndicates operating by Jan. 2016	Operational reports Records of arrests and successful prosecutions resulting from informer reports Records of payments for information	By January 2016 [	DG, IM, RMs
3. Improve investigation and prosecution of crimes	1. At least two of law enforcement staff trained in scene of crime collection and preservation of evidence, ballistics evidence, etc. in each area/station level 2. Percentage of investigations resulting in successful prosecutions from each region greater than in 2014 3. Monthly liaison sessions on wildlife crime and law enforcement held with members of the judiciary	Staff training records Monthly reports Court records Minutes of meetings with judiciary (prosecutors and magistrates)	Immediate and ongoing	IM, RMs, AMs
Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
4. Set up and maintain national and local intelligence databases	1. National, regional and local databases recording and analysing illegal activity (nature, time and locality of activity and profiles of those involved if known)	Inspection of operating databases	Immediate and ongoing	IM, RMs, AMs
5. Enhance social (community) involvement in law enforcement through incentive schemes and introduction	1. Incentive schemes (see Section 4.3) that encourage the public and members of rural communities to contribute to law enforcement (e.g.	Record and analysis of operating incentive schemes and hotline reports Record and	Immediate and ongoing	RMs and AMs

of hotlines for reporting wildlife crime	through informer hotline) established in each region 2. Larger number of incidents of community contribution to law enforcement (e.g. whistle blowers) by Dec. 2017 3. Number of hotlines established and assessment of their performance	analysis of performance of hotlines		
6. Reduce illegal settlement in all wildlife areas	1. Illegal settlements reduced to less than 5% of wildlife areas by 2020 (i.e. state and community protected areas)	Records and maps of illegal settlements and of wildlife land recovered	Ongoing to 2020	DG, AMs, CE, CAMPFIRE Assoc. RDCs
7. Ensure full compliance with hunting and guiding regulations and quotas set	1. Quota setting models reviewed and, if necessary, revised models implemented by Dec. 2015 annum by Dec. 2016	Proceedings of workshop and revised models Record of infringements and penalties and analysis of trends	Immediate and ongoing	DG, DC, RMs, IM, and SOAZ, ZHA, ZPGHA
8. Revisit the appointment of honorary officers to assist in law enforcement	1. Proposed revision to the Parks and Wildlife Act drafted and submitted to Ministry EWC by Dec. 2015	Draft of proposed revision to the Act and letters to Ministry	Dec. 2015	DG, legal officer in ZPWMA
9. Enhance international and transboundary collaboration in law enforcement	1. Quarterly meetings on law enforcement collaboration and activities between law enforcement agencies of neighbouring countries established at regional / transboundary park level by Oct. 2015 2. Broader collaboration with Interpol, TRAFFIC, TWENS,	Minutes of meetings Record of joint cross border law enforcement activities Records of participation in workshops, TWENS, etc.	Oct. 2015 Immediate and ongoing	DC, RMs,IM, AMs, TFCA Coordinator

	and other international law enforcement entities				

An example of a National level Activity being used as an Output at the regional level is provided on below. The example is drawn from the Action plan for the Sebungwe region. It can be seen that what was an Activity (#2 in the table above) at the national strategic level ean be defined more specifically to suit the local situation and in much greater detail at this level than is appropriate in the national Action Plan.

Read full report here: http://www.zamsoc.org/wp-content/uploads/2016/04/ZIMBABWE-ELEPHANT-MANAGEMENT-PLAN-APPROVED-FINAL-1.pdf

AUGUST 18, 2015AUGUST 25, 2015 BY FIRSTFORWILDLIFE

The CAMPFIRE Program in Zimbabwe

By Charles Jonga and George Pangeti

Zimbabwe's Communal Areas Management Program for Indigenous Resources (CAMPFIRE) is highly regarded in the conservation community. From CAMPFIRE's inception in the 1980's, the program has encouraged rural communities on communal lands to conserve local wildlife populations. Prior to the program, Zimbabwe did not have a system where landowners and rural residents could manage the wildlife for their own benefit. Like other African countries, upon independence Zimbabwe inherited a system of State ownership of wildlife. But, in 1975, the Parks and Wildlife Act was passed that gave private landholders the right to manage wildlife for their own benefit. This change in policy facilitated the recovery of wildlife on private lands. In 1982, the legal provisions of the Act were extended to Rural District Councils (RDCs), which was the beginning of the CAMPFIRE program.

The RDCs administer communal areas in Zimbabwe, and have become a mechanism for the implementation of government's policy of sustainable use of natural resources in these areas. The majority of the Zimbabwe's people reside on communal lands. Many of the communal lands are marginal environments characterized by low rainfall and poor soils. The major land uses in these areas are subsistence farming of crops and livestock, and wildlife conservation. Many inhabitants in these areas are poor, and otherwise depend on subsistence farming.

The CAMPFIRE framework established an innovative rural development strategy to compliment economic benefits from subsistence farming in the marginal districts of Zimbabwe. Economic benefits are generated through non consumptive and consumptive tourism, but especially safari hunting. Since its inception, CAMPFIRE has been very successful. The US federal government has invested resources in CAMPFIRE, principally through USAID. A recent WWF study estimated that households participating in CAMPFIRE increased their incomes by 15-25%.

The CAMPFIRE program depends on hunting to generate the economic benefits to local communities to supplement their subsistence farming. Elephants are the major species producing the revenue stream that creates these benefits. CAMPFIRE communities suffer most from elephant crop damage, so elephant hunting creates benefits that encourage the local communities to value the elephants instead of viewing them as a dangerous nuisance. The United States of America brings the highest number of sport hunters to Zimbabwe; about 76% of hunters in CAMPFIRE areas for all animals hunted each year.

The USFWS suspended the import of elephants into the United States in 2014, and has extended this ban into 2015. CAMPFIRE's total income from hunting revenues in 2013 was $2.2 million, but more than half of the elephant hunts were cancelled in 2014 due to the U.S. importation ban. The import suspension has caused a massive disruption of hunting revenue to the CAMPFIRE communities.

The suspension has not only negatively affected investment into the protection of wildlife, but has also removed direct incentives at the community level to protect elephants. There were 412 human-elephant conflict cases in CAMPFIRE districts in 2013, but by November 2014 there were already more than 597 documented conflicts. In the Beitbridge district an average of 12 cases a day of human-elephant conflict were reported in 2014. Disgruntled CAMPFIRE communities will turn to pastoralism and agriculture, thereby reducing wildlife habitat. While well-intentioned, the U.S. government's suspension of elephant importation could mean the end of the CAMPFIRE communities as we know them.

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Sources of Revenue

What is CAMPFIRE revenue?
Under the 2002 Guidelines CAMPFIRE revenue is defined as, "the gross revenue that accrues directly or indirectly out of a community-managed, natural resource". The gross revenue from the following activities should be treated as CAMPFIRE revenue and be disbursed according to the 2002 CAMPFIRE Revenue Guidelines.

Resource Activities Sources of Revenue

- Wildlife Tourism - trophy hunting Lease fees, Daily rates, Trophy fees Percentage of gross revenue
- Tourism – photographic Lease fees, Daily rates, Percentage of gross revenue
- Other - Ivory sales, Hide sales, Meat sales Crocodile egg collection
- Forestry Commercial logging Lease fees, Logging fees
- Non-timber forest products, Bee-keeping, Mopane worms, Fruit sales
- Fisheries, Sport fishing, Lease fees, Daily rates
- Grass Grazing Grazing fees
- Thatching User fees
- Other Sand extraction User fees

How is CAMPFIRE revenue generated?
The general CAMPFIRE model is that the RDCs, or community trust, lease out business opportunities based on natural resources, to private sector partners. Most of the revenue earned is from wildlife-based activities. Of the wildlife-based activities, over 90% of the revenue is from trophy or sport hunting leases with commercial safari operators. The balance of the revenue is from leases for other forms of tourism, the sale of hides, ivory and other animal products. Since the year 2001 CAMPFIRE has actively sought to diversify the programme to include revenue from other sources.

How much revenue has been earned so far?
Between 1989 and 2001 (inclusive) the income earned by RDCs with Appropriate Authority has been Z$454 million or US$20 million. The highest income achieved was in 1999 when districts received additional revenue from CITES approved ivory sales.

How should RDCs choose a private sector partner?
There are a number of different methods for selecting a private sector partner. These are:

Negotiation and Roll-Over:
Where the RDC, the producer community and the private sector partner (safari operator) are happy with an existing arrangement, at the end of the contract period all parties may simply agree to extend the period of the contract. This is called a "roll-over". The RDC, in consultation with the producer community, must first analyse the financial performance of the contract and assess what changes need to be made in terms of lease fees to accommodate changing economic circumstances. All parties then need to sit down and negotiate any changes to the specifics of the contract.

Advantages – when a contract is "rolled-over" all parties have the opportunity to build on the trust and good working relationship already established, instead of having to start developing new relationships with new partners. It is also less expensive, in terms of time and money, as no further research has to be undertaken to find a new partner.

Disadvantages – Negotiations between all parties for the roll-over must be completely open and transparent to avoid accusations of corruption. Unless charges are reviewed producer communities could also lose out on earning more from their natural resources.

Postal Tender Only:
Potential private sector partners are required to complete a standard tender document, which is returned to the RDC by post before a stated closing date. These tender documents are then opened and examined by a "tender selection committee" to assess which tender response is the most competitive. The lease is then awarded to the most competitive operator. There is no contact between the RDC selection committee and the potential safari operators.

Advantages – If the postal tenders are well thought out and well designed they can be an excellent tool for gathering all information on potential operators effectively. Good postal tenders also help speed up the selection process.

Disadvantages – Postal tenders can be too simplistic and do not allow for a well-judged evaluation of the tenders. This can lead to allegations of corruption, as not all the relevant facts are available.

Postal Tender and Interview:
This is a combination of the postal tender method whereby tenders are submitted by post and the tender selection committee then draws up a shortlist of potential private sector partners to be interviewed by the committee. This allows the committee to assess the potential partner at face value as well as through studying of the submitted proposal.

Advantages – A more thorough assessment of potential private sector partners is possible through prior background checks and the interviews. The applicant's character can be determined and all parties have the opportunity to discuss details of their plans and proposals. Sometimes during the interview process potential private sector partners have increased their bid in order to become more competitive.

Disadvantages – There is a time and money cost to having the extra step of the interview. Producer communities are not directly involved in interviews and final selection often leads to accusations of corruption and imposed choices.

Public Auction:
The lease of the natural resources to a private sector partner is offered to the highest bidder at a public auction. An auction needs to be organised by the RDC and the producer community in a public place. All potential private sector partners must receive notification of the auction well in advance in order to ensure good attendance at the auction. The potential private sector partners then compete against each other to offer the highest price.

Advantage – The public auction is a highly transparent means of selecting a private sector partner. All bids are made known publicly. It is efficient, in terms of time, and is a very effective way of maximizing income from a lease.

Disadvantages – There is always the risk of the highest bidder then being unable to come up with the money for the lease by the due date. In other words, the winner "defaults" on his payment and the whole selection process has to start again. The public auction does not allow for a good evaluation of the technical capabilities or character of the auction participants. Furthermore, it does not allow the producer communities to participate in the process, except as spectators.

There are four principles that RDCs and/or producer communities should follow when establishing a relationship with a private sector partner. These are:

- Competition : Do not accept the first offer that is made. Creating competition between potential private sector partners will increase the revenue to RDCs and producer communities.
- Active Participation : The decisions over which partner to select should be made by those most affected by the decision. This means that members of the producer communities should be well represented in the decision making process.
- Openness : To avoid any suspicion of corruption, the process must be conducted openly. This means that procedures laid out in the RDCs' Financial

and Administrative Handbooks should be followed. Outside agencies, such as the CAMPFIRE Association, service providers or even other RDCs, can be used as independent monitors.

- Planning : It is very important that RDCs and the respective producer communities jointly plan the process from start to finish. They must then allow themselves enough time to complete each stage of the process. Too often important stages are missed or only partially completed because of poor planning. This reduces revenue.

Why is a written contract important?
The written contract is the foundation of the relationship between the RDC, its producer communities and the private sector

What needs to be covered in the contract?
Before starting to look for a partner, RDCs and producers should agree on the broad outline of the contract. Key issues that must be included in the contract are:

- The financial structure
- The duration of the contract
- The activities to be undertaken
- Community development services such as training, employment, etc
- Monitoring and reporting systems
- Frequency and type of reporting required
- Relationships with other private sector activities
- Relationships with leaders
- Penalties for non-compliance/non-performance
- Termination, renewal and close out procedures

Above all, RDCs are strongly advised to get technical and legal advice before concluding a contract, especially if the revenue involved is significant. A standard contract has been developed for use by RDCs.

There are four basic types of contract. These are:

Single lease fee: This is a single sum paid per annum. It is not dependent on the quantity of the resource that has been used. Although simple to administer, it will probably not maximise revenue to the RDC and producer communities.

User fees: Under this option, the private sector partner pays for each unit of the natural resource used - for example a trophy fee or logging fees. This is a simple system to administer and makes a direct link between the producer community and the natural resource.

Percentage of gross revenue: Under this option the RDC receives a fixed percentage of the gross revenue earned by the private sector partner. The contract must be based on gross revenue rather than net income, which will be affected by the partner's costs and efficiency. It is important to very clearly define exactly how gross revenue is calculated, so that at the end of the year there are no arguments. In addition, the contract should always include a minimum annual payment. This will provide the RDC and producer communities with a guaranteed income annually.

Joint ventures: There is no standard model for joint ventures and these are negotiated on a case-by-case basis. A joint venture is where two parties come together in a unique partnership. Under this partnership there is generally a profit incentive for the RDC. However, there is also the chance to make a loss. Experience with joint ventures has been that they take a long time to negotiate and are not necessarily more rewarding than conventional lease agreements.

There is also the option of combining the basic types of contract as outlined above. Further details can be found in the Wildlife Management Series Manual on Marketing Wildlife Leases .

How should RDCs deal with unstable economic conditions?
Over the last 12 years, CAMPFIRE has had to operate within different and difficult economic frameworks. In times of hyper-inflation and fixed exchange rates, RDCs, their producer communities and the private sector partners receive fixed (or in some cases declining) income, while costs are rising dramatically. This results in fewer incentives to manage natural resources and wildlife. The following options are presented as a menu to the producer communities and the RDCs. All RDCs should ensure that they are abreast of the prevailing economic policy and know the legal implications of the choices that they are making. Some of the financial options are:

Option One: All fees are set in US$ in the contract. The private sector partner pays all the fees to the RDC in Z$ at the official exchange rate. This option works extremely well when the local currency is stable and there is no fixed exchange rate policy. Under conditions of fixed exchange rates and high inflation this is not a good option.

Option Two: All the fees are set in US$ in the contract. The private sector partner pays all the fees to the RDC in Z $ using the most favourable exchange rate on the day of payment or an average for the period. This option works well when there is an official parallel exchange rate.

Option Three: Under most of the contracts between RDCs and private sector partners

most of the payment has been in the form of 'user fees' and the lease fee has been considered as a minimum guaranteed payment. Under difficult economic conditions RDCs are advised to restructure their contracts so that the lease fee forms between 75% and 90% of the total payment. The payment should be made in Zimbabwe dollars, based on gross earnings from previous years using a favourable exchange rate. User fees can be set in US$ payable at the official exchange rate. Contracts structured like this should allow RDCs and their producer communities to retain real gross income from the use of natural resources.

Option Four: All the fees are set in US$ and paid into a US$ foreign currency deposit account negotiated with the Reserve Bank of Zimbabwe to ensure that the RDC sells its foreign currency to its best advantage.

In these situations it is very important that RDCs keep themselves informed about changes in the economic policy. In addition, RDCs should seek advice on the best option for maximising revenue in the existing economic climate. For example, advice can be obtained from chartered accountants, lawyers, government departments, the CAMPFIRE Association and CAMPFIRE Service Providers.

Note: Since 2009, Zimbabwe has adopted the use of multiple currencies which means that all payments are now made in US dollars.

Why is it important to monitor the contract?

The contract is the basis of the relationship between the private sector and the RDC. The monitoring system should be able to:

- Record the amount of the resource that has been used at any time. For example, the number of animals killed and/or wounded.
- Record the payments received and revenue due. (RDCs need to charge interest on late payments).

Who are the private sector?

One of the important lessons learned from CAMPFIRE has been that commercial activities are best carried out by a private sector partner. However, there has always been a myth that private sector partners must be urban business people. While these might be the only people who have the financial resources and skills to negotiate large leases, there are opportunities for other kinds of investors. For example, local residents can also be a private sector partner in a natural resource based project or activity. In these cases the principles of marketing the lease and the broad contract

Guidelines are still appropriate.

Summary:
It is important that RDCs maximise CAMPFIRE revenue. In choosing a private sector partner the RDC should receive bids from more than one potential partner to create competition. Representatives of the producer communities must be involved in the final choice of the partner. The process should be conducted in an open and transparent manner. It is important to have a legally binding contract with the private sector partner. Leases should not be abnormally long fixing RDC/producer communities to an agreed income that will become irrelevant over the duration of the lease. Leases also cannot be too short so as to avoid private sector partner investment in the area (See lease renewal).

Time and planning must be given to this whole process.

CAMPFIRE and Government Policy

Zimbabwe's Wildlife Policy of January 1992 states that while the executive responsibility for all wildlife rests with the Parks and Wildlife Management Authority, the Minister responsible for the Environment will allow for the management and use of wildlife as a privilege to Appropriate Authorities (AA) for various categories of land outside the Parks and Wildlife Estate, i.e. Forest Land (Forestry Commission), Communal Land (Rural District Councils), and freehold land (owner/occupier). The policy also recognizes that the conservation of wildlife and habitats outside the Parks and Wildlife estate requires the cooperation of rural communities in communal and resettlement areas, and that these must be the primary beneficiaries. The policy was informed by the success and demonstrated benefits of wildlife proprietorship conferred on private land owners in the commercial farming sector from before independence in 1975.

According to the country's statues, wildlife belongs to the state, and wildlife is res nullius. This means that a wild animal is entitled to natural freedom of movement from one place to another and does not belong to an individual. Therefore government grants landholders custodianship and privileges regarding use of wildlife that is on one's land, and such rights are automatically lost when the wildlife moves to another area. Rural people under CAMPFIRE occupy Communal land that has wildlife on it, but there has been no mechanism to constitute these communities into legal sub-district institutions at village or ward level that meet the conditions for the granting of AA status, as is the case for individuals on freehold land (game farms, private conservancies). Communities are represented in RDCs through Councilors whom they

elect as prescribed in statutes. AA for the management of wildlife on communal land is therefore granted to RDCs as the lowest accountable level of government, on behalf of communities. There is provision that AA status will be reviewed and or revoked if producer communities do not benefit directly.

CAMPFIRE Guidelines

The objectives of the CAMPFIRE programme are outlined in the original Guidelines for CAMPFIRE issued to local authorities in 1992 by the then Department of National Parks and Wildlife Management (DNPWM), now Zimbabwe Parks and Wildlife Management Authority (PWMA). The purpose of local government in rural areas is clear. It is to enable democratic local decision-making and action by, and on behalf of, communities; and to meet the needs of communities for local infrastructure, local public services and the performance of regulatory functions. The sharing of CAMPFIRE Revenue based on the original guidelines, and as reviewed in 2002 is; 55% of income is allocated to communities, 26% to the RDC to support costs attributable to CAMPFIRE activities, 15% for general RDC administration, and 4% as a levy to the Association. 55% of income to communities is the minimum limit, which has exceeded 60% in Tsholotsho in the recent past, as an example. RDCs are also required to produce acceptable institutional plans which outline clearly the methods by which Councils a) involve wildlife producer communities in district level management, and b) devolve the decision-taking process in local wildlife management and the distribution of wildlife benefits to producer communities. The plans are being reviewed to take into consideration demographic and other socio-economic imperatives over time.

The amendment of the Rural District Councils Act [Chapter 29:13], necessitated by the Environmental Management Act [Chapter 20:27] of 2006, provides for the establishment of an Environment Committee responsible for the management and protection of the environment in a Council area. This replaced the Natural Resources and Agriculture/Conservation Committee in RDCs. The Environment Committee is assisted by Environment Subcommittees in the exercise of functions relating to the environment and natural resources within one or more wards or one or more villages in the council area. In 2009, the Ministry of Local Government gazetted guidelines for the establishment of Environment Subcommittees. Some CAMPFIRE districts now have functional Environment Subcommittees, and the CAMPFIRE Association has assisted with capacity building (e.g. Hwange and Tsholotsho).

Besides the Councilor, Environment Subcommittees are made up of elected community representatives from every ward or village which falls within the area for

which the subcommittee is established. With the authority of the Minister of Local Government, RDCs may delegate all or any of the functions of an Environment Committee to these Subcommittees. Equally, the Minister may designate a Ward Development Committee or a Village Development Committee as an Environment Subcommittee for purposes of managing a specific natural resource. Environment Subcommittees provide for greater involvement of Traditional Leaders in community level CAMPFIRE activities. Currently, Rural District Councils (RDCs), through the Communal Land Act [Chapter 20:04], are the planning and land allocating authorities within their respective areas of jurisdiction, with traditional leaders being custodians.

Implementation of Campfire

CAMPFIRE's success over the years is the result of collaborative efforts by CAMPFIRE Service Providers, which include the Zimbabwean government's wildlife, natural resources and local government ministries and departments, and selected local environmental NGOs, with support from major donors such as USAID.

Despite the programme lacking sufficient legal provision for the predominant or exclusive control and management of natural resources by communities, the CAMPFIRE programme has been able to demonstrate that it is a legitimate form of biodiversity conservation.

Through flexible guidelines and principles for conservation developed over time, CAMPFIRE has to date established effective conservation communities at district, ward and village level managing wildlife, controlling grass burning and tree cutting, and other community based activities whose operations are not supported by donor funding. In major wildlife districts, the functionalty of these local level institutions has been enhanced by direct payments of income from private sector partners since 2007.

In its attempt to sustain the ability of rural communities to participate in the economy through wise and sustainable use of natural resources and to contribute to the alleviation of poverty, CAMPFIRE Association is guided by the following strategic objectives:

- Facilitating community-based natural resource management activities in rural areas;
- Setting and maintaining standards for both community and RDC performance under CAMPFIRE principles;

- Creating opportunities for the participation and involvement of both public and private sector actors in the implementation of CAMPFIRE.
- Advocating for natural resources conservation and utilisation locally and internationally

CAMPFIRE, being a programme that helps rural communities manage natural resources for their own local development, is guided by one main objective: to enhance voluntary participation of communities in a flexible programme of natural resources management through a system of group ownership/decision making, with defined rights of access for communities residing in natural resource rich areas.

The CAMPFIRE model (for wildlife management purposes) is based on three main criteria:

- Voluntary interest in participation by defined communities and their RDCs (communal wildlife areas exist at the pleasure of specific communities; they are not mandatory or gazetted by any law)
- Presence of wildlife populations capable of producing sustainable and economically significant income. Communities survive on subsistence farming and have the right to determine diversity and levels of wildlife which are acceptable to them on their land.
- Income sharing between communities and their RDC, based on the number of animals harvested within an area each hunting season.

Management of other natural resources that are not wildlife equally requires the voluntary participation of defined communities. It has been legally possible for some communities to establish special purpose vehicles such as Community Trusts to drive business ventures for these resources, usually in partnership with the private sector and the RDCs. A typical example is the Gairezi Eco-Tourism project in Nyanga.

COLTON PAYNE

Form 3-200-20

OMB Control No. 1018-0093
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E. IMPORT OF SPORT-HUNTED TROPHIES *(Appendix I of CITES and/or ESA)*

Note 1: This form should be used to request authorization to import trophies of species listed on Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND SOUTHERN WHITE RHINOCEROS TROPHIES TAKEN IN NAMIBIA.

Note 2: If you hold an import permit for a trophy that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

Please provide the following information. Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you are submitting; please indicate the application question number you are addressing. If applying for more than one trophy, be sure to answer questions 4-6 for each trophy addressed in this application. If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

PRO CARGO- attn.: Cindi ---- FED EX ticket enclosed -----
15619 Morales Rd.
Houston, Texas 77032

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

PRO CARGO- ATTN: Cindi-- 281-220-3176 -- cindi.rulon@procargousa.com

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3. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court; and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Elephant- Loxodonta Africana

b. Sex (if known). Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

b. Date wildlife is to be hunted:

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

6. **IF THE TROPHY HAS ALREADY BEEN TAKEN**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife was removed from the wild:

Matabeleland North, Matetsi Safari Area- Unit 3, Zimbabwe

b. Date wildlife was hunted:

July, 2017

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c. Name of hunting outfitter, safari company, or professional hunter you hunted with:

Vexford Investments-- PH- Fidelis Muchenje

d. The current location of the trophy (address and country) [the U.S. import permit will identify this country as the country of export/re-export and must match with the foreign export/re-export document]:

Matabeleland Taxidermist
16 Birmingham Road
Belmont,Bulawayo,Zimbabwe

7. Please provide a copy of any applicable foreign government permits or licenses that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so). ---Hunt license attached ---

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you must provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Matabeleland Taxidermist
Address:	16 Birmingham Road
City:	Belmont
State/Province:	Bulawayo
Country, Postal Code:	Zimbabwe

9. For species listed under the U.S. Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service (Service) must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or hunted when making the required findings, if you have any information that could support this finding, it would be helpful for our review if you could provide it. Please submit such information on a separate page with your application.

a. Do you have any information regarding the population status or trend data on the species hunted?

------See attached Hunter Report-------

b. In order to hunt, you likely paid for licenses or trophy fees. What were those fees and do you have any information on how those funds were used by either the landowner, local community, or government?

$40,000. --- see attached Hunter Report----

c. Do you have information on other funding activities that are being carried out, or were carried out, by the safari outfitter, professional hunter, concession holder, or landowner that provide a conservation benefit to the species being hunted/species hunted?

----See attached Hunter Report----

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CERTIFICATION STATEMENT (original signature must be provided for either 10 or 11 below)

10. If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national, provide documentation to show you have a Power of Attorney to act on your client's behalf and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying for the import of an elephant trophy, I understand that my client may import no more than two elephant trophies in one calendar year.

Taxidermist/Broker's signature: _____ Date: 02/27/2020

11. If you are the hunter applying to import your own trophy, please read and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying to import an elephant trophy, I understand that I may import no more than two elephant trophies in one calendar year.

Applicant's signature: _____ Date: _____

Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign governments to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

12. All international shipments must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000079277
COMPLETED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Vexford Investments (Pvt) Ltd	Client's Full Name	Colton Payne
ZTA (HOP) No.	HOP0305	Passport Number	(b) (6)
		Country of Issue	UNITED STATES
Address	Plot 1 Tarquinnia farm Karoi vexfordsafari@gmail.com	Address	(b) (6) Rosharon,TX 77583 USA
Name of Professional Hunter	FIDELIS MUCHENJE	Licence No.	197
Telephone		Fax	0
Number of Accompanying Guests		0	
Are the trophies being exported after tanning and mounting?			
Are the trophies being exported after primary treatment?			
Name of Processing Agent or Taxidermist	MATABELELAND TAXIDERMIST	Address	16 BIRMINGHAM RD BELMONT BULAWAYO
Name of Shipping Agent		Address	
Name of Foreign Agent	CHATTARONGA SAFARIS	Address	FARM CONCONDIA LIMPOPO R.A P.O. BOX 32 ALLDAYS LIMPOPO R.S.A 0909

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1	Matetsi Safari Area - Unit 4	Matabeleland North	
2	Matetsi Safari Area - Unit 3	Matabeleland North	
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Date of Safari From	18-07-2017
Date of Safari To	31-07-2017
Daily Rate Charged For Big Game USD	350.00
Daily Rate Charged For Plains Game USD	350.00
Daily Rate Charged for Non hunting guests USD	350.00
Number of Accompanying Guests	0

ZPWMA
Date Stamp

3. DETAILS OF DEPOSITS

(All inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate	4,550.00	Total Guests rate	.00
Less Commission	.00	Total Trophy fees	27,005.00
Other fees (Incidentals)	.00	Grand Total USD	31,555.00
Percentage Commission Charged	.00	Total Processing Fees	

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	WIK	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	518'36.889E25'46.326	21-JUL-2017		80
2	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	518	23-JUL-2017		80
3	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	518.0274E25542810	24-JUL-2017		80
4	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	518.371406e2550417	29-JUL-2017		80
5	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	518.371406e2550417	26-JUL-2017		80
6	WATERBUCK	M	Killed	Matetsi Safari Area - Unit 3	518	25-JUL-2017		300
7	BABOON	M	Killed	Matetsi Safari Area - Unit 3	518'36.889E25'46.326	31-JUL-2017		5
8	SABLE ANTELOPE	M	Killed	Matetsi Safari Area - Unit 3	518 33.26.25.4464	26-JUL-2017		1,500
9	REEDBUCK	M	Killed	Matetsi Safari Area - Unit 3	518 31883E25 423	21-JUL-2017		300
10	CIVET	M	Killed	Matetsi Safari Area - Unit 3	518.304972E2549253 5	24-JUL-2017		100
11	BUFFALO	M	Killed	Matetsi Safari Area - Unit 3	518 31883E25 423	28-JUL-2017		3,500
12	BUFFALO	M	Killed	Matetsi Safari Area - Unit 3	518	28-JUL-2017		3,500
13	GIRAFFE	M	Killed	Matetsi Safari Area - Unit 3	518'25.870E026'12.72 3	18-JUL-2017		850
14	GIRAFFE	M	Killed	Matetsi Safari Area - Unit 3	518	21-JUL-2017		850
15	LION	M	Killed	Matetsi Safari Area - Unit 3	518.304972E2549253 5	26-JUL-2017		5,000
16	WARTHOG	M	Killed	Matetsi Safari Area - Unit 3	518'36.889E25'46.326	18-JUL-2017		300
17	KUDU	M	Killed	Matetsi Safari Area - Unit 3	518'25.870E026'12.72 3	18-JUL-2017		500
18	KUDU	M	Killed	Matetsi Safari Area - Unit 3	518.0274E25542810	21-JUL-2017		500
19	ELEPHANT - WITH TUSKS	M	Killed	Matetsi Safari Area - Unit 3	518.3271E25532601	24-JUL-2017		9,200
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

2017 Hunters Observation Report by Colton Payne

On July 17, 2017 I arrived in Victoria Falls, Zimbabwe. I was visiting the country with PH Fidelis Muchenje, Owner of Vexford Safari's. This safari brought me to Matesi Safari Area, and I was staying at Unit 3 within the safari area. As we were driving down the dirt road heading towards unit 3, I saw more wild game then I had ever seen in my entire life. Just when I was driving into camp on the first evening, I saw a group of 15-20 elephants, 8-10 giraffe, and a sable. I witnessed all of this wildlife within the first hour of driving on the main road to Unit 3. After a couple of hours on this dirt road we finally arrived. I was greeted by many local people, who were all employed by Vexford, who introduced themselves and began preparation for the upcoming safari.

We were at the Matetsi Unit 3 for ten days. The population of lions was incredible. As we left camp, on the very first day, I witnessed a lioness chasing a baboon down into a drainage around 6 in the morning. This was probably 200 meters outside of camp where this happened. Throughout the rest of my trip, we witnessed over 10 lioness' and 7 male lions. On one occasion, we drove up to a water hole where we saw three lionesses getting a drink out of a water pan. On another site one evening, we saw 3 more lionesses walk in and drink water from a large pond; all the lions I witnessed on this safari were very healthy and in great population. Throughout the rest of the safari area we saw many male lions, too. This proved to me that the area was well maintained and properly managed by the Zim Parks.

Aside from the abundant lion numbers, one afternoon we also saw a leopard. We witnessed a pack of wild dogs that were living about a mile away from camp. The wild dogs were super cool to witness and seemed like locals. They were not scared of our presence as we drove by to see

them. The elephant population in Matetsi is very high, every single time we drove around Unit 3, we would see large groups of elephants wandering the prairie. These groups ranged from 20-30 in certain places, all the way up to 100+ in the big open areas. One morning, a group of about 400 cape buffalo moved through Matetsi. I had only seen pictures of the large groups of buffalo, so it was super cool to see something like that in person. Every day we got to see many different species of plains game. The species varied from kudu and sable, to waterbuck, reedbuck and warthogs. The numbers of Kudu seen per day was average of over 30. This would include males and females. We would see an average of 2-3 herds of zebra a day and all of the herds seemed to be healthy. Throughout the ten days of hunting, I saw about 6 herds of sable, the herds averaged about 25-35 animals per herd. There honestly is not anyway to express the unbelievable amount of wildlife I saw while hunting Matetsi Unit 3.

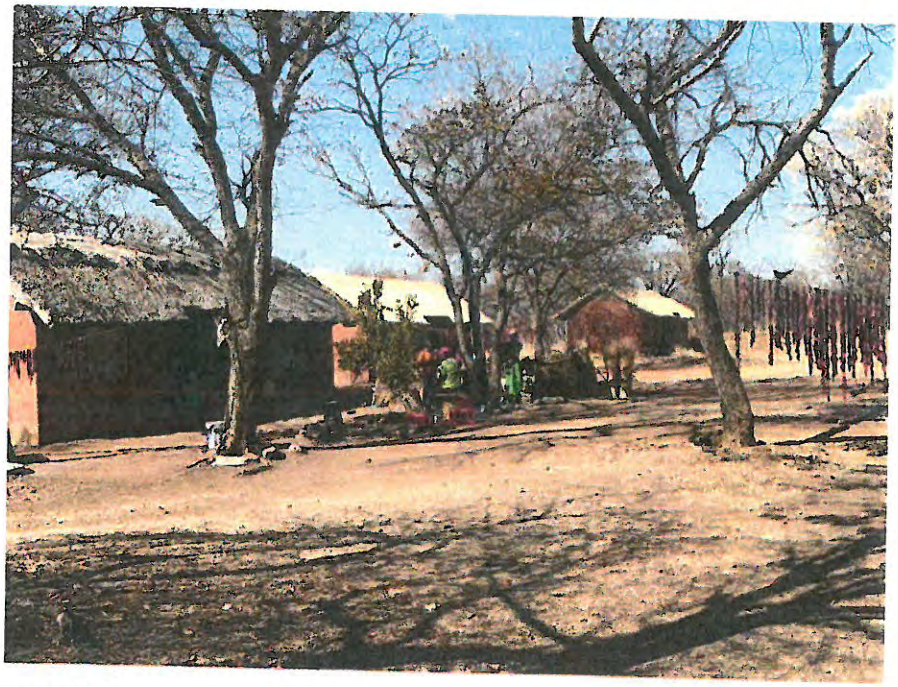
An African safari is like no other excursion on the planet. Conservation of the native African wildlife is the country's top priority no matter what. Zimbabwe heavily relies on having a healthy wildlife population because that is what attracts people to their country. Every year, Zim Parks gives Vexford Safari's a quota that must be filled. Not only do hunters pay large amounts of money to come hunt, but we are also helping Zimbabwe manage the wildlife numbers.

While being on this hunt, you can literally watch your money work and how much it does for the complete nourishment of the people and for the wildlife. Every day each hunter had a licensed Zimbabwe driver, a professional Hunter, a park ranger, two trackers, and two scouts for each vehicle which held one hunter and an observer. Back at camp, there are two cooks, two maids, a gardener, one main skinner with 2 apprentices, and one mechanic. These are the

people who support the operation while we are out hunting every day. One hunter alone is employing roughly 15 people per each hunt. The fees we pay for each animal harvested, along with the daily park ranger fees are all efforts that are directed toward conservation and management of the abundant amount of species we observe on a daily basis. I know the average monthly salary for these people in Zimbabwe is less than $150 per month. My Dad and I were fortunate enough to be able to provide additional tips to these hard working and gracious people as they assisted to make our safari the best experience possible. Our gift of $500. per person will go so far to give them a better life.

I spoke with many of the local people, along with the park rangers and park staff about what hunting does for them in terms of conservation. My money is where they get the revenue needed to keep the wildlife maintained and the ecosystem thriving. Our dollars go directly to things such as improving water pans, paying salaries to the many employees, donation of all protein, and most importantly pays for anti-poaching units who keep the area safe. Water pans are used to provide nourishment to the animals, as well as keep wildlife in the area. I kept a team of roughly 15 people busy for over two weeks while on this hunt. Every night we would consume what we could of the animals we harvested for supper at night and lunch the next day. The remaining amounts of protein all gets donated to the local tribes, so people don't have to worry about starving for the upcoming months. Anti-poaching patrols are one of the most important roles in the longevity of the wildlife. Poachers are cruel and fearless when it comes to killing wild game. Hunters dollars fund organizations that keep poachers out of the natural areas.

Young male lion.



Protein for a local village.

A group of elephants.

These are all photos taken of wildlife from Matetsi Unit 3.

Operator Enhancement Questionnaire

Operator Information

a. Name of Area Operator: **Vex Ford Safaris**
b. Years in business: 10
c. Name of company conducting hunt: **Vex Ford Safaris**
d. Country: **Republic of Zimbabwe**

Concession

a. Name of Concession: **Matetsi Unit 3**
b. Area in Km^2: **355**
c. Land tenure:

___x_Government Lease ____Community ____Private Ranch ____ Private Conservancy

d. Length of concession agreement: **10 years**
e. Can it be renewed? **Yes**
f. Length of renewal, if applicable: **5 years**
g. Estimated trophy fees: **$350 000**
h. Are there any special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed):

No

i. Provide concession location and nearest city: Victoria Falls Town
j. Please attach a map or maps with marked boundaries and nearest city
k. If the concession border a National Park, provide park name: Hwange National Park
l. Describe general and distinctive habitat/water features:

Matetsi Unit 3 is dominated by open Mopane woodland on basalt soils, stands of teak woodland on Kalahari sand, Combretum, mixed miombo and open savanna grassland. The area has numerous natural semi-permanent water sources for wildlife in the form of rivers springs and wet-grassland. These are supplanted by artificial pumped water from solar powered boreholes.

Communities in the concession

a. Are there any communities living in the concession? ____Yes __x__No
b. If so, estimated number of people/villages in the concession: No
c. Are there communities bordering this concession? ___ Yes __x__ No
d. If so, estimated number of people/villages around the concession: Not bordered by communities

Relevant Game Populations in the Concession

Species	Relative Abundance			Estimated Population	3-Year Trend			How is it Monitored?
	Dense	Avg.	Sparse		Up	Down	Stable	
Elephant	x			324	x			Aerial counts
Lion		x		35	x			Camera trap survey and spoor
Leopard		x		20			x	
Prey Species (if applicable)								
Other: _____								
Impala	x			241	x			Road strip counts and ranger sightings
Guinea Fowl	x			618	x			Aerial survey
Buffalo	x			54	x			Road strip counts and ranger sightings
Zebra		x		851	x			Road strip counts and ranger sightings
Kudu	x			260	x			Road strip counts and ranger sightings
Chacma baboon	x			315	x			Road strip counts and water hole counts
Waterbuck		x		224		x		Road strip counts

If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.

Reference Aerial Survey:

Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: 12
b. Total employment in off-season: 6
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	3	2	nil
Trackers	6	6	2
Anti-poaching Scouts/Rangers	n/a		
Other Anti-poaching	n/a		
Cooks/Housekeepers	2	2	1
Community Coordinators			
Managers	1	1	1
Biologists			
Others: _____			

Anti-Poaching Efforts

a. Number of anti-poaching staff: 23 National Parks Rangers dedicated for law enforcement
b. Are patrols conducted during the hunting season, off season or both? Both
c. Months patrols are conducted: Through the year
d. Number of patrols per month: 270 Extended patrols and 30 local patrols with ad hoc Strategic patrols
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: Nil, Zimparks handles that
f. Description of anti-poaching equipment, vehicles, gear, etc. 4x4 Vehicle for Ranger deployments
g. Do government-sponsored game scouts conduct patrols? Yes
h. If so, do they have the ability to arrest? Ye. They have arresting powers
i. Do you offer rewards to poaching informants leading to arrest? __x__ Yes ____ No
____ No
j. Do you offer rewards to poaching informants upon conviction? __x__ Yes

k. Please describe the operator's anti-poaching expenditures for the past 3 years below:

Type of Expense	Year 1 (__2018___) Spending	Year 2 (__2019___) Spending	Year 3 (__2020___) Spending	Remarks
Scout Salaries				
Equipment			US 13,244.67	Tents and sleeping bags
Vehicles	$20 000	$15 000	Yes	For deployments
Fuel				
Rewards				
Others:_____	$1 500	$2500		Service Equipment Matetsi Administration and operations Vehicle
Totals				

1. What currency are the expenditures given in? USD

Anti-Poaching Results

Type	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)	Remarks
Poaching Incidents Discovered	-	-	1	
Elephant Carcasses Observed	-	-	-	Nil
Lion Carcasses Observed	-	-	-	
Leopard Carcasses Observed	-	-	-	Nil
Ivory Poachers Observed	-	-	-	Nil
Bush Meat Poachers Observed	-	-	-	
Illegal Logging Observed	-	-	-	Nil
Other Poachers Observed	-	-	7	Escaped

Poachers Convicted	-	-	-	
Snares/Traps Collected				
Firearms Confiscated	-	-	1	Contact with poachers
Vehicles Confiscated	-	-	-	Nil
Bicycles Confiscated	-	-	-	
Boats/Nets Confiscated				
Tusks Recovered	-	-	-	Nil
Others: _____				

NB: there are no communities bordering the concession hence no incidences of bush meat poaching. The concession however, is strongly involved in anti-poaching support for the Matetsi and Hwange national park landscape.

Community Investment

a. Does the company contribute money or goods/services to local communities?

___**Yes**____Yes _____No

b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e., more than required by law)? All cash donated is voluntary and distributed as per rising need. There is no set percentage. The community requests for assistance and mainly drought relief funds are extended.

c. Does the company provide game meat to nearby communities?

___**Yes**_____ Yes _____No

d. If so, estimate the amount/value of meat contributed in the last year and describe the distribution program: around $ 15 000. The meat distribution is done through community leaders who have registers of the inhabitants. Settlement areas are allocated meat on a rotational basis

e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling fields during harvest, PAC hunts, insurance programs); please describe.
This is mainly the task of ZimParks

f. Describe any consolation payments made to local residents that have incurred damage by game species: No consolations were paid. The wildlife policy has no provision for any compensation or consolation. N/a

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks

Elephant					
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? N/A

h. Describe any community projects paid for by the company:

Product	Spending, Year 1 (____)	Spending, Year 2 (____)	Spending, Year 3 (____)	Remarks
Education (classrooms, offices)		1500		
Education (supplies, fees)			3000	
Health (clinics, offices)		2000		
Health (equipment, salaries)				
Community Scout Salaries				
Community Anti-Poaching		1000	1000	
Local Government Activities				
Infrastructure Improvements		1000	1000	
Sports Teams Funded		1500	2500	
Construction Materials Donated			2000	
Other: _____Water Tanks_____			1000	
Other: _____				
TOTALS		$7,000	$10,500	

i. What currency are the expenditures reported in? usd

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years, what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species

Number of U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (2):
	Year 2 (____):	Year 2 (____):	Year 2 (26):
	Year 3 (____):	Year 3 (____):	Year 3 (9):
Percentage of U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (16%):
	Year 2 (____):	Year 2 (____):	Year 2 (65%):
	Year 3 (____):	Year 3 (____):	Year 3 (42.8%):
Trophy Fees Paid by U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (_$240 000___):
	Year 2 (____):	Year 2 (____):	Year 2 (_$200 000___):
	Year 3 (____):	Year 3 (____):	Year 3 (__$180 000__):

b. Approximate amount/percentage of company's revenue from U.S. clientele: 80%

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):
Bush-craft, Firearm handling and Ballistics, and Ethical hunting standards as well as experience of taking down the big and dangerous game

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology if available):

Sex and trophy requirements for hunted animals

- Old non-breeding male individuals are taken off as trophy animals
- No female lions are hunted or taken as trophy animals

Methodology for Lions and leopards age/sex requirements

Photographs of a hunted trophy animal are taken from different angles of the animal body for later age and trophy quality determination (See attached Leopard and Lion Hunt Return Form)

POINTS SYSTEM FOR ADAPTIVELY MANAGING LION QUOTAS IN ZIMBABWE

The points system used to adaptively manage lion quotas has been developed following similar systems that have been implemented in countries such as Tanzania and northern Mozambique. The lion quotas are set per the age of the lions harvested during the previous hunting season. This adaptive quota management system for lion hunting based on the ages of lions hunted was agreed on in July 2013 in Harare, Zimbabwe, during a meeting hosted Non-Detrimental and Enhancement Finding: Conservation and Management of Lion by the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) and an independent non-governmental conservation organization. The approach adopted by Zimbabwe re cognizes four as opposed to three key age categories as shown in

the example below:

	≥6 years	No trophy	5 years' old	4 years' old	<4 years	Failure to submit hunt return/incomplete hunt returns
For quotas of 3/more	4	3	3	2	-3	0
For quotas of 2	4	3	3	2	0	0
For quotas of 1	6	3	3	2	0	0
Quota setting process	These points are added up and divided by 3 to yield the quota for next year					

Lions are aged by triangulating multiple different aging characteristics, including:

- The degree of facial scarring;
- The teeth colour and degree of wear;
- The mane development (particularly regarding the shape around the ear and the mohawk);
- Through post mortem analysis of the width of the pulp cavity of the second premolar (which becomes narrower with age).

c. Are there hunt return forms that must be reported to officials? If so, please include a copy of these forms or confirmation of their receipt for the past 3 years.

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

Hunting in Zimbabwe Matetsi Safari Area is strictly regulated and monitored in line with national hunting laws, regulations and ethics. All hunting activity are monitored to verify that quotas and sex/age restrictions of harvested animals are being met.

The legal and regulation framework applicable to the hunting, conservation and protection of all species includes:

- Parks and Wildlife Act; Chapter 20:14 (1996) as amended in 2001.
- Environmental Management Act; Chapter 20:27.
- Forest Act; Chapter 19:05.
- Statutory Instrument 362 of 1990: Parks and Wildlife (General) Regulations, 1990.
- Statutory Instrument 76 of 1998: Import and Export of Wildlife Products.
- Statutory Instrument 40 of 1994: Parks and Wildlife Act (General) Amendments.
- Statutory Instrument 26 of 1998: Parks & Wildlife Act (General) Amendment.
- Statutory Instrument 92 of 2009: Compensation Values for Wildlife.
- Statutory Instrument 93 of 2009: Compensation Values for Trapping of Animals.
- Trapping of Animals Control Act 20.16.

Further conservation strategies for individual and groups of similar species are available to guide conservation of species of conservation concern. These include the Lion Conservation strategy of 2006 and the National Elephant management Plan (2015-2020) which is reviewed every five years.

Maintenance of the concession

Law enforcement

Local, mobile (vehicle), extended and strategic patrols are conducted by ZPWMA rangers. The rangers use of Spatial Monitoring Reporting Tool (SMART) technology to collect and capture and produce reports on law enforcement activities which enhances effectiveness and coverage of all concession area. Ranger support in the form of vehicle for deployment enhances timeous response to incursions across the concession which significantly reduce illegal offtake by poachers.

The concession undertakes fire management activities to: manage fuel load, improve habitat heterogeneity, control parasites and stimulate forage production and suppress unplanned veld fires during the dry season. Fire breaks along concession boundaries are carried out by ZPWMA in conjunction with the concession. The concession has an annual target of 50km^2 of early block burning, minimum of 50km target of road grading and fire breaks.

Game water management is also a critical are of management given the high elephant numbers. Supplementary artificial game water is provided by means of solar power during the dry season. Care is taken to prevent the unplanned game water provisioning through guidance from Area Ecologist in order to maintain area integrity through limiting impact of high elephant densities during the drought months from surrounding protected area network (parks and forest estates). Veterinary matters such as diseases outbreak are managed and monitored by the ZPWMA Area Veterinary Doctor in conjunction with private wildlife veterinary institutions.

Research

Research in fire and habitat management, animal's survey is done by Area Ecologist and external researchers. The ZPWMA office at Matetsi Safari Area is involved in measuring, monitoring and analyzing trophy quality and offtakes of all hunted animals. This is done to ensure that Safari hunting does not substantially alter natural selection or ecosystem processes. The limited quota, as further limited by age restrictions, ensures that hunting offtakes do not negatively affect natural processes. This age-based policy for lions (*Panthera leo*) and *Panthera pardus* (leopard) was adopted in part to mitigate any social or population impacts from limited safari hunting.

Community involvement and out reach

The company support community involvement and outreach initiatives which are spear headed by ZPWMA through its Interpretation and Education Officers. This is done throughout the year. Awareness involve human wildlife conflict mitigation measures as well as co-existence, veld fire effects and management and zoonotic diseases.

I declare that the foregoing is true and correct

Fidelis

Signature

28/09/2020

Date

Fidelis Muchewle

Print-Full Name

Director

Title

Scanned with CamScanner

John Rulon CHB

15619 Morales Rd. Houston, Texas 77032 281-220-3158

BELOW IS A POWER OF ATTORNEY FORM WHICH IS REQUIRED BY U.S. CUSTOMS, TO ALLOW US TO TRANSACT U.S. CUSTOMS CLEARANCE ON YOUR BEHALF.

U.S. Customs Services 141.32 C.R.

CUSTOMS POWER OF ATTORNEY

SS# (b) (6)

Cell Phone

Email address:

x Individual

KNOW ALL MEN BY THESE PRESENTS: That x Colton Payne (Full Name of Person), residing at x (b) (6) Rosharon, TX 77583 hereby constitutes and appoints each of the following persons - John Rulon CHB

may act through any of its offices or any employees with Power of Attorney on file with this licensed broker as required by the Regional Commission of Customs as a true and lawful agent and attorney of the grantor named above for and in the name, place, steed of said grantor from this date and in all Customs Districts, and in no other name, to make, endorse, sign, declare, or swear to any entry, withdrawal, declaration, certificate, bill of lading, or other document required by law or regulation in connection with the importation, transportation, or exportation of any merchandize shipped or cosigned by or to said grantor; to perform any act or condition which may be required by law or regulation in connection with such merchandize; to receive any merchandize deliverable to said grantor: To make endorsements on bills of lading conferring authority to transfer title, make entry or collect drawback, and to make, sign, declare, or swear to any statement, supplemental statement, schedule,, supplemental schedule, certificate of delivery, certificate of manufacture, certificate, and delivery abstract of manufacturing records, declaration of proprietor on drawback entry, declaration of exporter on drawback entry, or any other affidavit or document which may be required by law or regulation for drawback purposes, regardless of whether such bill of lading, sworn statement, schedule, certificate, abstract, declaration, or other affidavit or document is intended for filling in any customs district. To sign, seal, and deliver for and as the act of said grantor any bond required by law or regulation in connection with the entry or withdrawal of imported merchandise or merchandise exported with or without benefit of drawback, or in connection with the entry, clearance, lading, unlading or navigation of any vessel or other means of conveyance owned or operated by said grantor, and any and all bonds which may be voluntarily given and accepted under applicable laws and regulations, consignee's and owners declarations provided for in section 485, Tariff Act of 1930, as amended, or affidavits in connection with the entry of merchandise: To sign and swear to any document, and to perform any act that may be necessary or required by law or regulation in connection with the entering, clearing, lading, unlading, or operation of any vessel or other means of conveyance owned or operated said grantor. To authorize other Customs Brokers to act as grantor's agent; to receive, endorse and collect checks issued for Customs duty refunds in grantors name drawn on the Treasurer of the United States; if the grantor is a nonresident of the United States, to accept service of process on behalf of the grantor. And generally to transact at the customhouses in said district any and all customs business, including making, signing, and filling of protests under section 514 of the Tariff Act of 1930. In which said grantor is or may or may be concerned or interested and which may properly be transacted or performed by an agent and attorney, giving to said agent attorney full power and authority to do anything whatever requisite and necessary to be done in the premises as fully as said grantor could do if present and acting, hereby ratifying and confirming all that the said agent and attorney shall lawfully do by virtue of these presents; the forgoing power of attorney to remain in full force and effect until notice of revocation in writing is duly given to and received by the District Director of customs of the district aforesaid. If the donor of this power of attorney is a partnership, the said the power shall in no case have any force or effect after the expiration of 2 years from the date of its execution. Or until revoked. Pursuant to 19 CFR 111.36(a), election is made waiving the right to receive invoices, supporting documents and correspondences from John Rulon CHB , who is directed to forward all documents and inquiries concerning our imports to their customs brokerage services, to our freight forwarder, who will pay John Rulon CHB, for duties, and services performed on our behalf. It is understood the right to revoke said waiver is continuing.

Customs Rules on Discharge of Importers Liability for Duties

The U.S. Customs Service has issued a final amendment of the regulations to provide an alternative procedure for an Importer record to pay duties on imported merchandise through a licensed customhouse broker. Present rules provide for the payment of duties to Customs by a broker on behalf of the importer. Under the alternative procedure, the Importer may elect to submit to the broker a separate check or bank draft for the duties payable to the "U.S. Customs Service". The broker would then deliver the Importer's check or bank draft to Customs. The new rule also requires brokers to provide written notification to their clients, advising that if I the client is an Importer of record, payment to the broker will not relieve the client of liability for Customs charges in the event that the charges are not paid by the broker. Brokers will be required to provide this notification to all active clients annually during the month of February. Additionally, brokers will be required to provide such information on a power of attorney executed on or after the effective date of the new rule. These amendments are effective as of September 27, 1982

(Print name) x Colton Payne

has caused these presents to be sealed and signed:

(Signature) x (b) (6)

((Date) x 1/15/20

APPLICANT:

JAMES PONDER

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

OMB Control No. 1018-0093
Expires 08/31/2023

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

James M. Ponder [redacted] Antioch, IL 60002

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta africana, African elephant

b. Sex (if known).

male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Lower Lupande Hunting Block, Zambia. Nearest City Mfuwe

b. Date wildlife was hunted:

October 30th, 2020

c. Approximate age of animal:

35-40 years in age

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Kwalata Safaris. P.H. - WH van Noordwyk

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Kwalata Safaris - 6980 Katanga Road, Lusaka Zambia

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

Please see provided

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Kwalata Safaris
Address:	6980 Katanga Road
City:	Lusaka
State/Province:	Zambia
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
See attached
11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	WH van Noordwyk
E-mail:	werner@vannoordwyksafaris.com
Phone number:	+ 27 824927362

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to res[redacted]efit).**

    Applicant's signature: [redacted] Date: 1-16-2021

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
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January 25, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803
ATTN: Darcy Vargas

Applicant:	James Mike Ponder
RE:	USFWS Import Permit Application 3.200.20
Date of Hunt:	October 30th, 2020
Species/Country:	Elephant/ Zambia

Ms. Vargas,

Enclosed please find an application to import a sport-hunted elephant trophy for Mr. Mike Ponder. Mr. Ponder took his elephant, that was approximately 35-40 years in age, in the Lower Lupande GMA, located in the southern Luangwa area of Zambia in October of 2020.

The Lupande Game Management Area has one of the largest populations of elephants in Zambia. The number of elephants in this area have been so abundant in the past that Lupande had been one of the only GMA's that allowed hunting for a long period of time to curtail the human-wildlife conflict. Currently, the elephant population continues to be steady. In the operator enhancement report provided you will find that Kwalata Safaris reported an estimated population of over 600 elephants within just the Lower Lupande. Many communities surround this area and Kwalata Safaris compensates villages for any damage done by elephants, as well as sharing hunting revenues with the community and donating edible meat. Kwalata Safaris holds a government lease for their hunting land where they are required to pay community obligations of ZMK 180,000 annually. They must also pay for bore-holes, law enforcement compensation, village scout salaries, fire management, infrastructure repairs, and resource monitoring. Trophy fees go towards anti-poaching, where they have a year-round patrol staff. The trophy fee for this elephant was $13,500 US dollars.

The government of Zambia formally approved the new policy for National Parks and Wildlife in 2018. Which has been a guiding force for the conservation of wildlife. In the Great Elephant Census, it notes that "we need to replicate Luangwa and Kafue's success across all of Zambia's and Africa's national parks (pg. 5)".

We have also provided a document entitled, "Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia". In this research article the author, Paula White, gives insight into the lease agreements of sport hunting operators with the Zambia Wildlife Authority that require them to annually provide local communities a percentage of the meat obtained through sport hunting free of charge. It is estimated that about 129,771 kgs of fresh game meat is provisioned annually by the sport hunting industry to rural communities in Zambia at an approximate value of $600,000 US Dollars (1). In Zambia, 48% percent of the population were undernourished in 2012-2014 (2). Without the addition of game meat into these communities, most residents would rarely meet the recommended protein requirements. The positive benefits of sport hunting to Zambia and its people have literally been lifesaving.

It is clear Zambia is invested in the future of its wildlife resources and does not approve of western interference in the country. The Zambia Wildlife Authority wrote an open letter explaining why they lifted the hunting ban that had been in place for several years. They detail the over-abundance of elephants that were in the Lupande region, creating real human-wildlife conflict and as opposed to controlling the animals by killing them they made the decision to have a controlled paid safari hunt. As a result of opening up safari hunting, incomes ploughed back into the region helping the surrounding communities- as we have detailed above. Without the substantial incomes from safari hunting, surrounding communities and the future of the wildlife that live among them will be in jeopardy. So much has already been lost in Zambia due to the global pandemic of COVID-19 that deterring trophy hunting in addition could mean catastrophic loss for many already struggling communities.

Please refer to the documents and responses included and previously submitted to the DMA by Conservation Force, Zambia's wildlife authorities, professional hunters, and Safari operators. We hope that you will consider these documents and the others provided when making a positive enhancement decision for this import permit application.

If you have any questions about this import application, please do not hesitate to contact us.

Sincerely,

Aimee Korver
Permits Paralegal Conservation Force

Cc: Mr. Mike Ponder W/ attachments

Enclosures:

a. FWS Permit Application Form for Import of Sport-Hunted Trophy
b. Notice of Representation
c. Copy of Hunting Permits/Licenses
d. Operator Enhancement Report – Kwalata Safaris
e. Report on the 2015 Aerial Census of Elephants and Other large mammals in Zambia
   ZAWA explains hunting ban lift.
f. The Great Elephant Census Zambia
g. Provisioning of game meat to Rural Communities as a Benefit of Sport-Hunting in Zambia

APPLICANT:

JAMES PONDER

THE GREAT ELEPHANT CENSUS

ZAMBIA RESULTS

Elephant Census (/blog?author=52f283dee4b0d3acccdd2fa6) · March 3, 2016 (/blog/2016/3/2/zambia-census-announced-luangwa-and-kafue-stable-lower-zambezi-and-sioma-ngwezi-see-decline) · Flyover Milestones (/blog/category/Flyover+Milestones), Photos (/blog/category/Photos), News (/blog/category/News)

CATEGORIES

Naledi (/blog/?category=Naledi)

Results (/blog/?category=Results)

Slideshows (/blog/?category=Slideshows)

Special sightings (/blog/?category=Special+sightings)

The Zambia Department of National Parks and Wildlife (DNPW) released today the Great Elephant Census results. While the results are optimistic, continued efforts are needed to tackle poaching and align conservation with community benefits. Our incredible partners at The Nature Conservancy (http://www.nature.org/ourinitiatives/regions/africa/index.htm) facilitated the training of DNPW ecologists on data collection, consulted on data analysis, and organized the 250 hours of survey flight time.

Zambia is one of 20 countries to participate in the Great Elephant Census, which launched in 2013 with continent-wide results due out this year. It is the first pan-African elephant census in 40 years, and researchers used a standardized method of data collection to create an up-to-date picture of the status of African elephants. The insights revealed through this survey can help create tailored management plans to more effectively protect elephants and deploy the limited conservation resources and dedicated rangers where they will be able to make the most impact. The census also pinpoints opportunities for countries to collaborate across borders and close security gaps. For example, a staggering loss of over 60% of their elephants in Tanzania motivated a new focus on conservation and wildlife management (http://www.greatelephantcensus.com/blog/2015/

Researcher Notes (/blog/?category=Researcher+Notes)

Quests / Expeditions (/blog/?category=Quests+%2F+Expeditions)

Videos (/blog/?category=Videos)

SXSW Eco (/blog/?category=SXSW+Eco)

Technology (/blog/?category=Technology)

Coordination (/blog/?category=Coordination)

Flyover Milestones (/blog/?category=Flyover+Milestones)

Data / Infographics (/blog/?category=Data+%2F+Infographics)

Photos (/blog/?category=Photos)

News (/blog/?category=News)

6/2/government-of-tanzania-response) in what was once the home of one of the largest elephant populations in Africa.

The aerial survey was conducted from September 4-26, 2015, over 21 million acres of Zambia. The survey area comprised national parks and some game management areas with focal areas that included Kafue and Sioma Ngwezi National Parks, and the Luangwa Valley and Lower Zambezi systems.

The results show that, overall, the elephant population in Zambia may be stable, but with large differences between different parts of the country. Turning first to numbers of live elephants, the censuses suggested that **elephant numbers are stable (or possibly even increasing) in the two largest elephant landscapes, Luangwa and Kafue.** In the third landscape, **Lower Zambezi, numbers are declining**. And in the fourth landscape, **Sioma Ngwezi National Park, on the border with Angola and Namibia, elephant numbers are declining catastrophically**, with the species almost extirpated.

"Poaching is like water – it moves to the path of least resistance. When one area is better patrolled, poachers go elsewhere so we have to keep the pressure on." Photo, Kenneth C. Coe

The ecologists were not only counting live elephants, but elephant carcasses and the approximate age of those carcasses. A "carcass ratio" — the ratio of dead elephants to all elephants (alive and dead) — of 2 percent to 8 percent is considered normal for a stable or increasing population. The overall carcass ration for Zambia was estimated at 4.2%, meaning that the observed deaths were within sustainable levels and that the country's population of elephants was stable to increasing, corroborating the live elephant counts. However, Sioma Ngwezi had a carcass ratio of a staggering 85%, alerting conservationists and government officials where the poaching problem is most dire.

"These results are a great example of what we hope to achieve through the Great Elephant Census by informing future efforts," said James Deutsch, Director of Wildlife conservation, Vulcan Inc. "In Luangwa and even Kafue, the existing elephant protection efforts seem to be successful in controlling poaching and stabilizing elephant populations, while elephants are

declining in Lower Zambezi and Sioma Ngwezi. The census results tell us that we need to replicate Luangwa and Kafue's success across all of Zambia's, and Africa's, national parks."

"This survey provides the data we need to direct resources where they can have the biggest impact for both conservation and improving people's livelihoods," said Matt Brown (http://www.nature.org/science-in-action/our-scientists/our-scientists-matthew-brown.xml), Africa Conservation Director, The Nature Conservancy. "The numbers overall appear more positive than expected, suggesting that front line protection is making a difference. This doesn't mean we can rest now. Poaching is like water – it moves to the path of least resistance. When one area is better patrolled, poachers go elsewhere so we have to keep the pressure on."

A ranger from Zambia's Department of National Parks and Wildlife, the boots on the ground protecting elephants from poachers.

"The Nature Conservancy is cautiously optimistic about the findings from the aerial surveys. The results clearly show that the work that has been put in place by the Zambia Department of National Parks and Wildlife and other partners like Game Rangers International, South Luangwa Conservation Society, and Frankfurt Zoological Society are yielding positive results," said Victor Siamudaala, Zambia Program Director, The Nature Conservancy.

For example, The Nature Conservancy has been supporting Game Rangers International's (GRI) anti-poaching efforts in Kafue National Park for the last three years. This increased enforcement has effectively reduced poaching numbers in the park, which is especially evident in areas where GRI has an active presence.

The Nature Conservancy also works in Zambia (http://www.nature.org/ourinitiatives/regions/africa/wherewework/zambia.xml) to fund and facilitate ranger operations, establish community-led conservation programs, and with the Zambian government to create wildlife laws to stop poaching and ensure that communities share the benefits of conservation.

"This census is helping to bring more people to the table and to prioritize the conversation around elephant protection initiatives. Protection

initiatives may need to be intensified in areas where the elephant population is facing more significant threats," said Brown.

The government has indicated that they will launch a working group to develop a way forward. The Nature Conservancy will participate along with other stakeholders to determine not only how we can continue to secure this population, but how we could build on our successful initiatives to see the elephant population grow.

This announcement was originally posted by our partners The Nature Conservancy here (http://www.nature.org/ourinitiatives/regions/africa/explore/documenting-zambias-elephants.xml). Photos were provided by The Nature Conservancy, more here (https://www.flickr.com/photos/131730546@N07/). Thanks to everyone at TNC for being a fantastic census partner, and for working not only to count Zambia's elephants, but to facilitate protection efforts locally and support community driven conservation.

Tagged: Zambia (/blog/tag/Zambia), Results (/blog/tag/Results), Kafue (/blog/tag/Kafue), Luangwa (/blog/tag/Luangwa)

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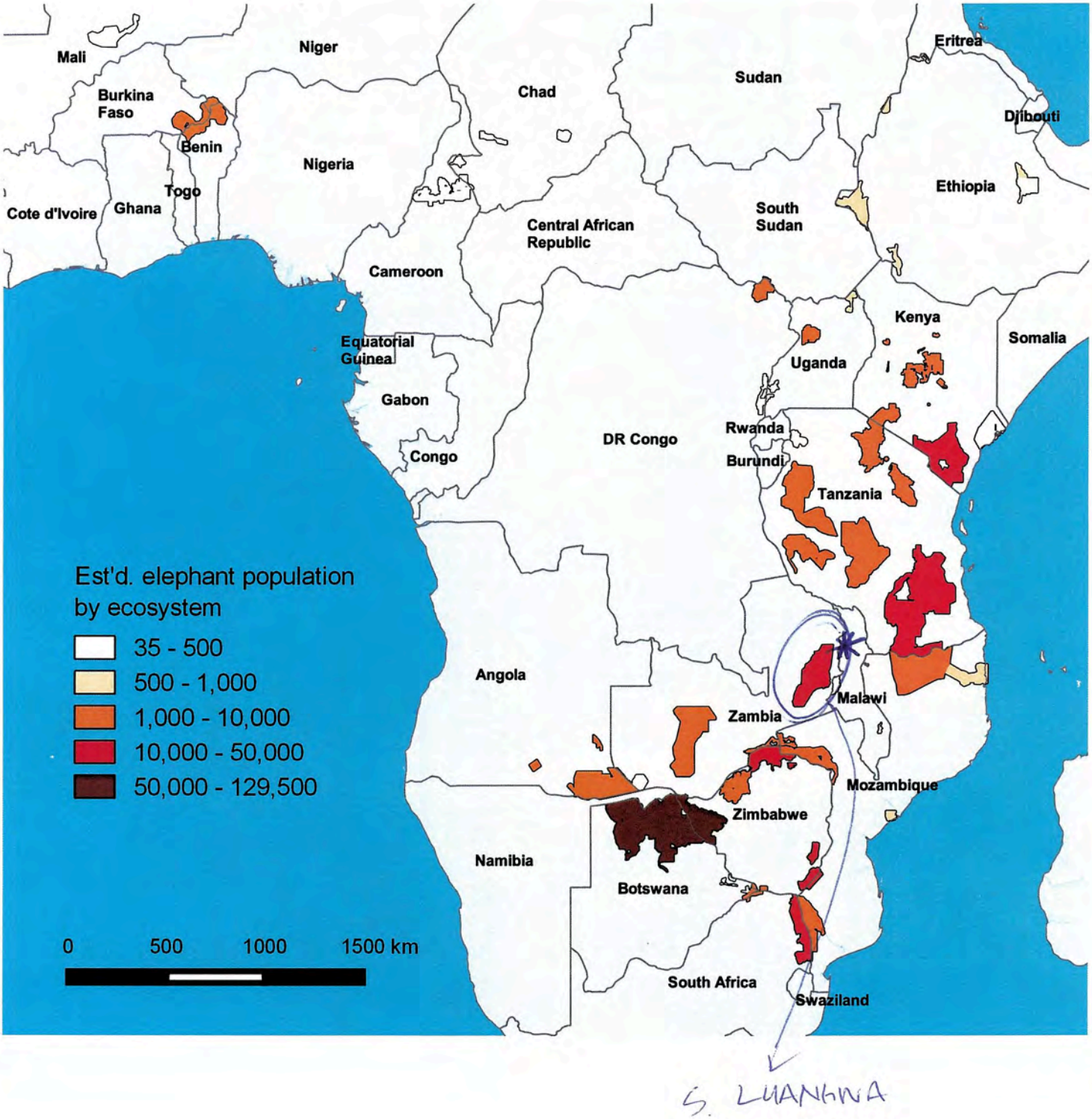

S. LUANGWA & LUPANDE

APPLICANT:

JAMES PONDER

HUNTING PERMITS

NPW FORM 7

Original

REPUBLIC OF ZAMBIA

S/No.: 0005313

THE ZAMBIA WILDLIFE ACT
(ACT NO. 14 of 2015)
THE ZAMBIA WILDLIFE
(LICENCES AND FEES) REGULATIONS, 2007)
Regulation 5(2)
BIRD HUNTING LICENCE

Station of issue: Chilanga Date of issue: 08/10/2020

DETAILS OF LICENSEE

Full Name: Porter James Michael NRC/Passport No: (b) (6)

Tel/Mobile No: E-mail address:

Postal Address: Kwelata Safaris Residential Address: USA

DETAILS OF FIREARM(S)

Firearm Licence No(s) 1. 891 2. 3.

Calibre of Firearm(s) 1. 500 2. 416 3. 7mm

The above named licensee is authorized to hunt birds of species specified in column 1 except during the seasons specified in column 2.

Common Name (Column 1)	Closed season (Column 2)
Fulvous Whistling Duck	1st January to 31st May
White-faced Whistling Duck	1st January to 31st May
White-Backed Duck	1st January to 31st May
Egyptian Goose	1st January to 31st October
Spur-Winged Goose	1st January to 31st May
Knob Billed Duck	1st January to 31st May
African Pygmy Goose	1st January to 31st May
African Black Duck	1st January to 31st May
Yellow-Billed Duck	1st January to 31st May
Cape Teal	1st January to 31st May
Pintail	1st January to 31st May
Red-Billed Teal	1st January to 31st May
Hottentot Teal	1st January to 31st May
Garganey	1st January to 31st May
Northern Shoveler	1st January to 31st May
Cape Shoveler	1st January to 31st May
Southern Pochard	1st January to 31st May
Coqui Francolin	1st February to 30th June
White throated Francolin	1st February to 30th June
Crested Francolin	1st February to 30th June
Shelley's Francolin	1st February to 30th June
Red-winged Francolin	1st February to 30th June
Red-billed Francolin	1st February to 30th June
Natal Francolin	1st February to 30th June
Hildebrandits Francolin	1st February to 30th June
Swaisons' Francolin	1st February to 30th June
Red-necked Francolin	1st February to 30th June
Common quail	1st October to 31st March
Harlequin Quail	1st October to 31st March
Blue Quail	1st October to 31st March
Crested Guinea fowl	1st December to 3tht April
Helmeted Guinea fowl	1st December to 3tht April

Note: A maximum of six birds to be hunted within 21 days under Non-Resident Hunting.

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
- 8 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

Bird Hunting Licence Fees $100

Application Fees Paid —

Total Fees Paid $100

GRZ Receipt No. 0069349

Official Stamp

Chairperson, Committee

Note: Original copy to Applicant - Duplicate to Accounts - Triplicate to Commercial - Quadruplicate to be retained in the book

Original

NPW FORM 2

0006406

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue..... Chitanga ..... Date of Issue..... 14·10·2020 .....

DETAILS OF LICENSEE

Full Name..... James M Pander ..... NRC No./Passport No. (b) (6) .....

Nationality..... USA ..... Age.....

Tel/Mobile No:..... E-mail.....

Full Name of Safari Company: Kwaloda Safaris .....

Certificate of Incorporation No. ..... Date of Incorporation.....

Postal Address... Box 30220 Lusaka ..... Residential Address.....

Firearm Licence/Tourist Firearm Import No.: 891 ..... Calibre of Firearm... 500, 416, 7mm .....

Type of Hunt..... Classic .....

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Hippo	1st	M	Lower Luangwa	2020	1,600·00

Total Animals fees paid the kwacha equivalent of US$..... 1,600·00

Concession Fees paid the kwacha equivalent of US$.....

Grand Total the kwacha equivalent of US$..... 1,600·00

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
14 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

Official Stamp..... Chairperson of the Committee

*Note: Original copy to Licensee ***Duplicate to Accounts***Triplicate to Commercial*** Quadruplicate to be retained in the book*

Original

NPW FORM 2

0006444

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue..... Chilanga ..... Date of Issue..... 16/10/2020

DETAILS OF LICENSEE

Full Name..... James M Ponder ..... NRC No./Passport No. (b) (6) .....

Nationality..... USA ..... Age.....

Tel/Mobile No:..... E-mail.....

Full Name of Safari Company: Kwalala Safaris .....

Certificate of Incorporation No. ..... Date of Incorporation.....

Postal Address Box 35225 Lsk ..... Residential Address.....

Firearm Licence/Tourist Firearm Import No..... 891 ..... Calibre of Firearm..... 500, 416, 7mm .....

Type of Hunt..... Classic .....

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Kudu	1	M	Lower Lupande	2020	1600

Total Animals fees paid - the kwacha equivalent of US$ 1600
Concession Fees paid - the kwacha equivalent of US$ —
Grand Total the kwacha equivalent of US$ 1600

Official Stamp

Chairperson of the Committee

16 OCT 2020
COMMERCIAL OFFICER

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Original

NPW FORM 2

0006560

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue: Chilanga Date of Issue: 29/10/2020

DETAILS OF LICENSEE

Full Name: Ponder James Micheal NRC No./Passport No.: (b) (6)

Nationality: American Age:

Tel/Mobile No: E-mail:

Full Name of Safari Company: Kwalata Sfr

Certificate of Incorporation No. Date of Incorporation:

Postal Address: Box 35225 LSK Residential Address: USA

Firearm Licence/Tourist Firearm Import No.: 891 Calibre of Firearm: 416

Type of Hunt: Classical

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Elephant	15	M	Lolesa-Lupanda	2020	10000
with Tusks					
			0173684		

Total Animals fees paid - the kwacha equivalent of US$ 10,000
Concession Fees paid - the kwacha equivalent of US$ 3,500
Grand Total the kwacha equivalent of US$ 13,500

.....

.....
Chairperson of the Committee

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
29 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

30-10-20

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NPW FORM 12

ORIGINAL

S/No. 0000320

REPUBLIC OF ZAMBIA

The Zambia Wildlife Act

(No. 14 of 2015)

(Licences and Fees) Regulations, 2007

(Regulation 7(5))

RECORD OF GAME AND/OR PROTECTED ANIMALS KILLED OR WOUNDED

Name of Professional Hunter: Wtt van Noordwyk NRC/Passport No. 998733/11/2.

Residential Address: Plot 2414 Freedom Way, Lusaka.

Name of Safari Company on behalf of which the Professional Hunter is submitting this return: Kwalata Safaris.

DETAILS OF CLIENT

Name of client: James M Ponder NRC/Passport No: (b) (6)

Tel/Mobile No. Nationality: USA.

Postal Address. Residential Address: (b) (6) Illinois.

Type of Licence: Classic Licence No: 0006448.

Date of Issue: 8/10/2020 Place of Issue. Chilanga.

Name of Hunting Block where hunting was conducted: Lower Lupande.

Hunting Period From 10/10/2020. To.

Date Killed or wounded	Species	Sex	Number killed	Number Wounded	GPS Location	Trophy for export Yes	Trophy for export No	Foreign currency value charged to client
18/10/20	Kudu	M	1		[illegible]	✓		
19/10/20	Hippo.	M	1		[illegible]	✓		
30/10/20	Elephant	M	1		[illegible]	✓		

DETAILS OF TROPHY MEASUREMENTS

Species	Length of Skin	Length of Tusk	Average length of horn	Length of Skull
Kudu			53 inch.	
Hippo			24 inch	
Elephant.				

Certification by -

(a) Client

I certify that the animals listed on this return were hunted or wounded by me during the period stated and that the total amount of foreign currency stated and paid by me to the safari company is the full amount I was charged.

(b) Professional Hunter

I certify that the animals listed in this return were actually hunted by the client in accordance with the terms and conditions of the Safari Hunting Licence and that the total foreign currency stated above is the full amount paid by the client for the hunt.

Date 30/10/20 Signature of Client (b) (6)

Date 30/10/20 Signature of Professional Hunter

Date 30/10/20 Name of Wildlife Police Officer Kenneth Siwale

Employment No. of W.P.O. 00273727

Signature of W.P.O.

Copies: Original copy to Committee ** Duplicate to Safari Company ** Triplicate to Commercial ** Quadruplicate to be retained in the book

Serial No. 555555

NPW FORM 5B

S/No.: .....

0006498

REPUBLIC OF ZAMBIA

THE ZAMBIA WILDLIFE ACT
(ACT NO. 14 OF 2015)

THE ZAMBIA WILDLIFE
(LICENCES AND FEES) REGULATION, 2007

Appendix 2 Second Schedule(3)

PERMIT TO HUNT IN A GAME MANAGEMENT AREA

Station of issue..... Chilanga ..... Date of Issue..... 08/10/2020 .....

DETAILS OF PERMIT HOLDER

Full name:..... Ponder James Michael ..... NRC/Passport No. (b) (6) .....

Tel/Mobile No.:..... E-mail address.....

Postal Address:..... Rwdata Safaris ..... Residential Address: ..... USA .....

DETAILS OF FIREARMS

Firearm Licence No(s) 1.: ..... 891 ..... 2. ..... 3.....

Calibre(s) 1.: ..... 500 ..... 2. ..... 416 ..... 3. ..... 7mm .....

DETAILS OF LICENCES, HUNTING AREA & HUNTING TYPE

Resident/Non Resident Hunting Licence No (s) .....

Bird Hunting Licence No.....

Hunting Type..... Non-Resident .....

is hereby authorised to hunt in ..... Lupande ..... Game Management Area,

..... Lower Lupande ..... Hunting block for ..... days from 10/10/2020

to..... 27/10/2020 ..... (Dates inclusive)

Amount Paid..... $ 150 - ..... GRZ Receipt No. 0069349

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
- 8 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

..... Official Stamp

..... Chairperson of the Committee

Note: Original copy to Permit Holder - Duplicate copy to Accounts - Triplicate to Commercial - Quadruplicate to be retained in the Book

APPLICANT:

JAMES PONDER

NOTICE

OF

REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed ELEPHANT Trophy from ZAMBIA.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

(b) (6) [redacted]

SIGNATURE

James Michael Ponder

PRINT FULL NAME

1-16-2021

DATE

APPLICANT:

JAMES PONDER

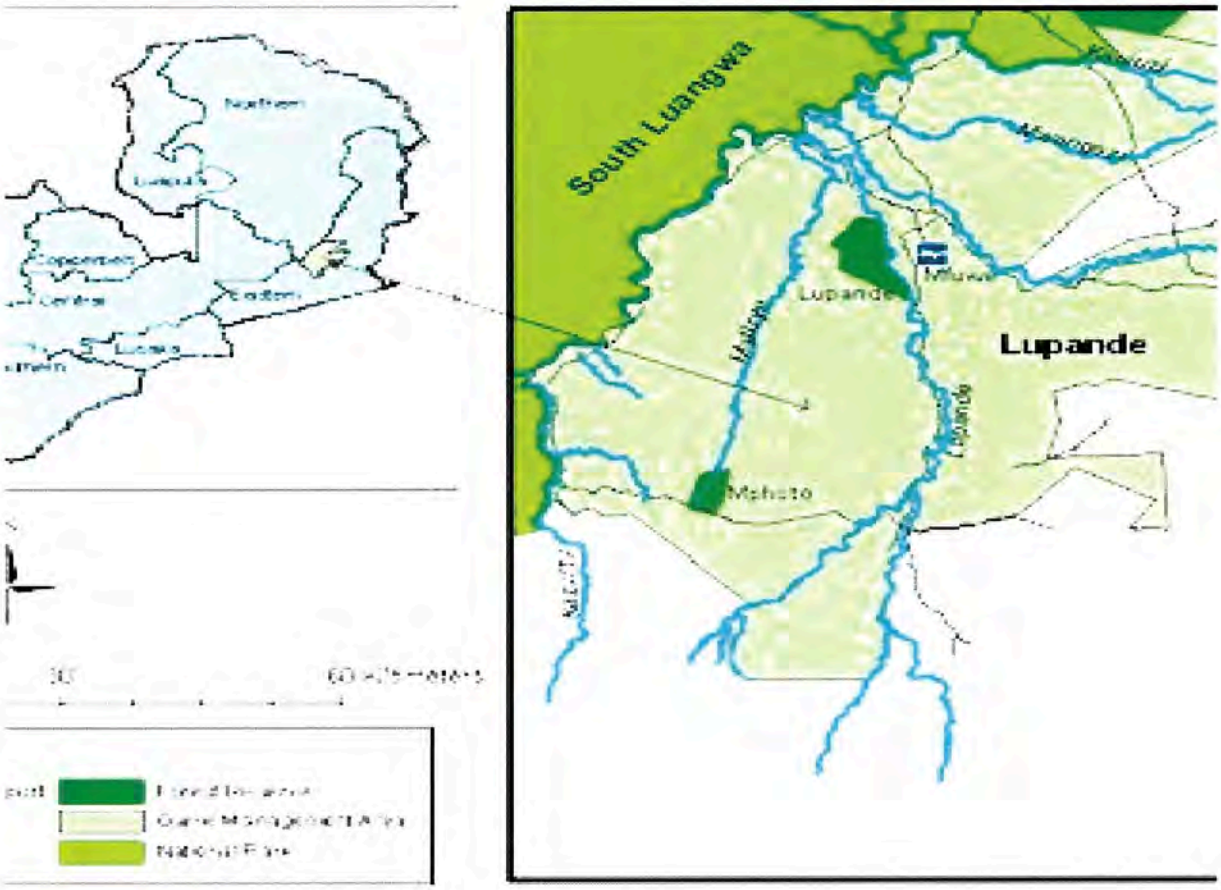
OPERATOR ENHANCEMENT REPORT

ANNEX I OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: ____**KWALATA SAFARIS**_____
b. Years in business: _____**SIX YEARS**_____
c. Name of company conducting hunt: _____**KWALATA SAFARIS**_____
d. Country: _____**ZAMBIA**_____ Concession

a. Name of Concession: ____**LOWER LUPANDE**_____
b. Area in km^2: _____**1511KM2**_____
c. Land tenure:
__X__ Government Lease
_____ Community
_____ Private Ranch
_____ Private Conservancy
d. Length of concession agreement:__**SEVEN YEARS**_____
e. Can the concession be renewed? _____**YES**_____
f. Length of renewal, if applicable: _____**SEVEN YEARS**_____
g. Estimated trophy fees: _____
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: ____
YES, WE NEED TO PAY COMMUNITY OBLIGATIONS OF ZMK 180,000 PER ANNUM_AND OTHER PAYMENTS LISTED BELOW___
ZMK 100,000 BOREHOLES FOR THE CONCESSION PERIOD
ZMK 97,000 PER ANNUM TOWARDS LAW ENFORCEMENT
ZMK 45,000 PER ANNUM TOWARDS VILLAGE SCOUTS SALARIES
ZMK 10,000 PER ANNUM TOWARDS FIRE MANAGEMENT
ZMK 70,000 PER ANNUM TOWARDS INFRASTRUCTURE
ZMK 20,000 PER ANNUM TOWARDS RESOURCE MONITORING
_____
i. Provide concession location and nearest city: _____**NEAREST TOWN IS MFUWE**_____
j. Please attach a map or maps with marked boundaries and nearest city



k. If the concession borders a National Park, provide park name: __**SOUTH LUANGWA NATIONAL PARK**___

l. Describe general and distinctive habitat/water features: _____
__LAGOONS,MOUNTAINS,RIVERS-THE LUANGWA RIVER FLOWS THROUGH THE CONCESSION_____
_____

Communities in the Concession

a. Are there any communities living in the concession? Yes_**X**___ No ____
b. If so, estimated number of people/villages in the concession: ____**APPROXIMATELY 300**_____
c. Are there communities bordering this concession? Yes __**X**__ No ____
d. If so, estimated number of peoples/villages around the concession: __**SPARSE**_____

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant		**600 and above**	**up**	**Patrol data and observations**

Lion	**sparse**		**up**	**Trail cameras,Patrol Data and Observations**
Prey Species (if applicable)	**DENSE**			
Other: _____			**10,000 AND MORE**	**Patrol data and observations**

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____33_____
b. Total employment in the off-season:___17_____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	4		
Trackers	3	3	
Anti-poaching Scouts/Rangers	4	4	4
Other Anti-poaching	12	12	12
Cooks/Housekeepers	5	5	
Community Coordinators	1	1	1
Managers	1	1	
Biologists	0		
Others: _____	3	3	3

Anti-Poaching Efforts

a. Number of anti-poaching staff: _____**18**_____
b. Are patrols conducted during the hunting season, off-season, or both? _____**BOTH**_____
c. Months patrols are conducted: ____**JANAUARY TO DECEMBER**_____
d. Number of patrols per month: _____**THREE PATROLS**_____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: ___**50%**_____
f. Description of anti-poaching equipment, vehicles, gear, etc. _____
_____**TWO 4X4 LANDCRUISERS, SATELLITE PHONES AND FIREARMS**_____
_____
g. Do government-sponsored game scouts conduct patrols? ____YES_____
h. If so, do they have the ability to arrest? _**YES, WE WORK IN COLLABORATION WITH THEM**_____
i. Do you offer rewards to poaching informants leading to arrest? Yes __**X**__ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes__**X**__ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (__2017___) Spending	Year 2 (_2018____) Spending	Year 3 (___2019__) Spending	Remarks
Scout Salaries	157,500	157,500	157,500	
Equipment	50,000	50,000	50,000	
Vehicles				
Fuel	63,000	61,080	59,030	
Rewards	40,222	38,700	30,200	
Others:_____				
Totals	**310,722**	**307,280**	**296730**	

I. What currency are the expenditures given in? _____**ZAMBIAN KWACHA**_____

Anti-Poaching Results

Type	Year 1 (_2017___)	Year 2 (_2018___)	Year 3 (_2019___)	Remarks
Poaching Incidents Discovered	87	98	77	THIS INCLUDES STATISTICS FROM AUTHORITIES AND GUN SHOTS HEARD IN CAMP
Elephant Carcasses Observed	2	1	0	THESE DIED AFTER BEING TRAPPED IN SNARES AND TUSKS REMOVED
Lion Carcasses Observed	NIL	NIL	NIL	
Leopard Carcasses Observed	NIL	NIL	NIL	
Ivory Poachers Observed	3	3	0	THESE WERE SPOTTED WITH IVORY TUSKS,WE APPREHENDED SOME
Bush Meat Poachers Observed	62	51	58	THESE WANTED MEAT FOR MEAT
Illegal Logging Observed	113	205	98	PEOPLE ARE LOOKING FOR MUKULA TO SELL IN CHINA
Other Poachers Observed	2	8	0	THESE WERE DOING IT FOR FUN
Poachers Convicted	1	0	0	THE JUDICIAL PROCESS IS SLOW.

Snares/Traps Collected	289	277	276	NUMBERS ARE REDUCING BECAUSE OF OUR ROBUST PATROLS
Firearms Confiscated	7	12	3	THESE WERE GIVEN TO THE AUTHORITIES
Vehicles Confiscated	0	0	0	
Bicycles Confiscated	3	3	1	THESE ARE THE COMMON MODE OF TRANSPORT
Boats/Nets Confiscated	0	0	0	
Tusks Recovered	0	1		ITS HARD TO RECEOVER BECAUSE THEY CUT THEM INTO SMALLER PIECES.
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes **_X___** No ____
b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? **__10% OF THE TOTAL REVENUE FROM THE SAFARI IS SHARED WITH THE COMMUNITY___**
c. Does the company provide game meat to nearby communities? Yes **__X__** No ____
d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: **__50% OF EADIBLE MEAT WAS GIVEN TO THE COMMUNITY**_____
e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. **_WE COMPENSATE VILLAGERS IF THEIR FIELDS HAVE BEEN DAMAGED BY ELEPHANTS.**_____
_____
f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (__2017__)	Consolation Paid, Year 2 (__2018__)	Consolation Paid, Year 3 (_2019___)	Remarks
Elephant	VEGETABLE FIELDS WERE DESTROYED	47,000	33,700	41,000	
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? _____**ZAMBIAN KWACHA**_____
h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (_2017___)	Spending, Year 2 (_2018___)	Spending, Year 3 (_2019___)	Remarks
Education (classrooms, offices)	120,000	98,000	105,000	RENOVATIONS WERE DONE TO SCHOOLS
Education (supplies, fees)	50,000			WE SCHOOL FEES FOR THE UNDERPRIVILEDGED
Health (clinics, offices)	47,500			BOUGHT MATTRESSES FOR THE HEALTH POST IN THE GMA
Health (equipment, salaries)				
Product/Service	**Spending, Year 1 (__2017__)**	**Spending, Year 2 (_2018___)**	**Spending, Year 3 (__2019__)**	**Remarks**
Community Scout Salaries	157,500	157,500	157,500	
Community Anti-Poaching	58,000	71,000	71,200	FUNDS WERE USED FOR RATIONS AND INCENTIVES AFTER VILLAGERS CATCH A POACHER
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded				
Construction Materials Donated				
Other: _____				
Other: _____				
TOTALS	**433,000**	**326,500**	**228,700**	

i. What currency are the expenditures reported in? **ZAMBIAN KWACHA**

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients	2017(2) 2018(2) 2019(2)	2017(2) 2018(2) 2019(0)	2017(3) 2018(3) 2014(4)

Percentage of Clients from the U.S.	2017(75%) 2018 (75%) 2019(50%)	2017(75%) 2018 (75%) 2019(50%)	2017(75%) 2018 (75%) 2019(50%)
Trophy Fees Paid by U.S. Clients			

b. Approximate amount/percentage of company's revenue from U.S. clientele: __67%_____

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):
__NEED TO HAVE PASSED PROFESSIONAL HUNTERS EXAM FROM THE AUTHORITIES_____

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): _____
_____LION ITS 7 YEARS. ELEPHANT THE TUSKS SHOULD BE ATLEAST MINIMUM 15KGS._____

c. Are there hunt return forms that must be reported to officials? If so, please include a copuy of these forms or confirmation of their receipt for the past 3 years.

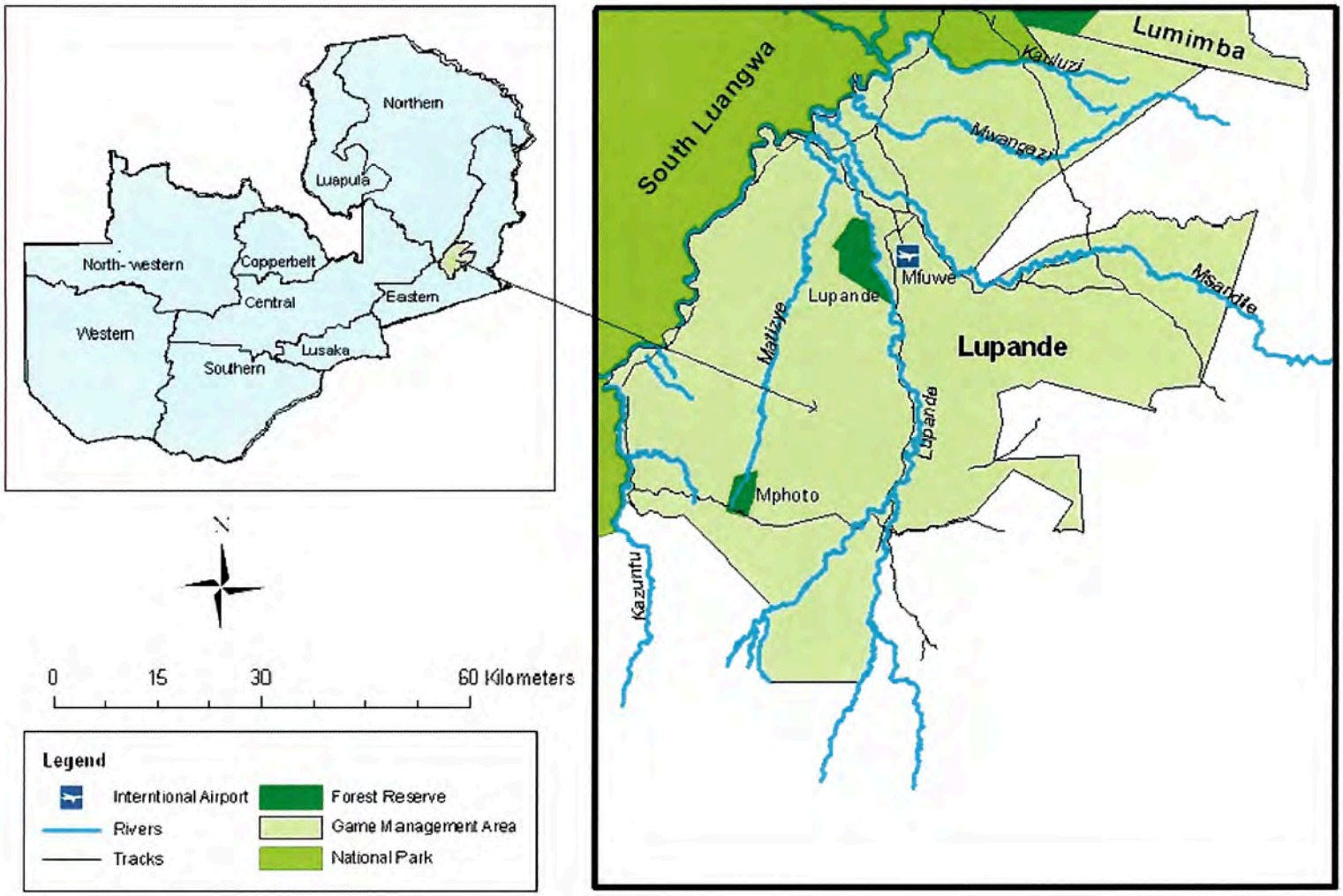
Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct.

X _____
Sign Name and Date

PETER CHIPMAN-DIRECTOR Name and Title


Northern
Luapula
North- western
Copperbelt
Central
Eastern
Western
Lusaka
Southern
South Luangwa
Lumimba
Kanluzi
Mwangazi
Mfuwe
Lupande
Msandile
Lupande
Matizye
Lupande
Mphoto
Kazuntu
N
0
15
30
60 Kilometers
Legend
Interntional Airport
Rivers
Tracks
Forest Reserve
Game Management Area
National Park

APPLICANT:

MIKE PONDER

PROVISIONING OF GAME MEAT TO RURAL COMMUNITIES AS A BENEFIT OF SPORT HUNTING IN ZAMBIA

PLOS | ONE

RESEARCH ARTICLE

Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia

Paula A. White[1]*, **Jerrold L. Belant**[2]

1 Center for Tropical Research, Institute of the Environment and Sustainability, University of California Los Angeles, Los Angeles, California, United States of America, **2** Carnivore Ecology Laboratory, Forest and Wildlife Research Center, Mississippi State University, Starkville, Mississippi, United States of America

* paw@carnivoreconservation.com

Abstract

Sport hunting has reportedly multiple benefits to economies and local communities; however, few of these benefits have been quantified. As part of their lease agreements with the Zambia Wildlife Authority, sport hunting operators in Zambia are required to provide annually to local communities free of charge i.e., provision a percentage of the meat obtained through sport hunting. We characterized provisioning of game meat to rural communities by the sport hunting industry in Zambia for three game management areas (GMAs) during 2004–2011. Rural communities located within GMAs where sport hunting occurred received on average > 6,000 kgs per GMA of fresh game meat annually from hunting operators. To assess hunting industry compliance, we also compared the amount of meat expected as per the lease agreements versus observed amounts of meat provisioned from three GMAs during 2007–2009. In seven of eight annual comparisons of these GMAs, provisioning of meat exceeded what was required in the lease agreements. Provisioning occurred throughout the hunting season and peaked during the end of the dry season (September–October) coincident with when rural Zambians are most likely to encounter food shortages. We extrapolated our results across all GMAs and estimated 129,771 kgs of fresh game meat provisioned annually by the sport hunting industry to rural communities in Zambia at an approximate value for the meat alone of >US$600,000 exclusive of distribution costs. During the hunting moratorium (2013–2014), this supply of meat has halted, likely adversely affecting rural communities previously reliant on this food source. Proposed alternatives to sport hunting should consider protein provisioning in addition to other benefits (e.g., employment, community pledges, anti-poaching funds) that rural Zambian communities receive from the sport hunting industry.

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OPEN ACCESS

Citation: White PA, Belant JL (2015) Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia. PLoS ONE 10(2): e0117237. doi:10.1371/journal.pone.0117237

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Data Availability Statement: All relevant data are within the paper.

Funding: These authors have no support or funding to report.

Competing Interests: The authors have declared that no competing interests exist.

Introduction

Sport hunting in Africa represents an important form of revenue-generating tourism [1],[2]. Additional reported benefits include conservation of biodiversity through protection of large tracts of land that might otherwise be converted to agricultural or domestic livestock use [3–7] and selective hunting of potentially dangerous or destructive species that can increase local people's tolerance for coexistence [8–10]. However, others report that sport hunting contributes little to rural economies or livelihoods [11].

Employment, revenues from hunting fees and licenses, contributions to community capital projects, and funding of anti-poaching scouts are potential benefits that rural communities may receive from sport hunting [12],[13]. Access to game meat has been described as the most tangible benefit to rural communities [14]; however, comparatively little effort has been made to characterize meat provisioning. Notable exceptions are Namibian communal conservancies that report annually on game meat revenues attributable to sport hunting [15], and the comprehensive summary of game meat distributions in Africa compiled by TRAFFIC which considered sport hunting in addition to game ranching and culling [14]. In Zambia, a 1971 report based on household surveys estimated that sport hunting provided 112 tonnes of dressed game meat to rural Zambians countrywide [16] (cited in [12]). We are unaware of more recent studies in Zambia, including studies that quantified provisioning at the GMA scale. In addition, we found no record of previous attempts to examine the patterns or scope of meat distributions.

Food security in developing nations is a primary focus of aide organizations worldwide [17–21]. In Zambia, 48% of the population was undernourished in 2012–2014 [22] and 19% of Zambian households were recently classified as chronically food insecure [20] defined as a continuously inadequate diet caused by the inability to acquire food [23]. Food shortage is defined as an individual receiving less than 2,200 kilocalories per day [18]. Donor aide programs provide supplemental food typically consisting of maize, sorghum, or other cereals. Although high-protein cereals are being developed [24], at present recommended daily protein requirements (50 gm/day)[25] are rarely met in Zambia [22],[26].

As part of their official lease agreements with the Zambia Wildlife Authority (ZAWA), sport hunting operators in Zambia are required to provide to rural communities a proportion of game animals harvested by clients each year. This meat is distributed free of charge to villages that reside within game management areas (GMAs) where sport hunting occurs. To legally obtain protein outside of GMAs, rural Zambians must raise their own livestock, fish, or purchase meat. Livestock husbandry is costly and precluded in some areas due to diseases [27], inadequate grazing, or presence of tsetse flies *Glossina* spp. [28]. To fish legally requires purchasing a permit and access to lakes, rivers, or seasonal ponds. Purchasing meat is expensive: about US$10/kg for beef, US$7/kg for chicken, and US$15/kg for dried fish (i.e., kapenta *Limnothrisa* sp.). Most (64%) Zambians live on less than US$1.00/day [29]. Thus, high expense makes obtaining animal protein cost prohibitive for most rural Zambians.

Obtaining sufficient amounts of protein is a widespread problem faced by rural people in many parts of Africa. Alternatives for meeting the protein requirements are being explored in other countries. In particular, game ranching, communal conservancies [30],[31], and other forms of community-based wildlife conservation programs [32] show promise. However, despite a few earlier attempts, these programs in Zambia are limited in scope, highly localized, and poorly developed [14], meaning that currently most rural Zambians do not have access to meat through these means.

Presently, the only other alternative for rural Zambians to obtain meat is illegally through poaching of wild animals or purchase of poached meat (herein referred to as bushmeat). Global concerns over the prevalence and extent of bushmeat poaching are increasing rapidly [33],[34].

Studies cite the unsustainable nature of the bushmeat trade [34] and the loss of potential income that results from poaching compared to the value of the same animals to photographic tourism or sport hunting [35].

We quantified the annual provisioning of fresh game meat by the sport hunting industry to rural communities in Zambia. Specifically, we characterized the expected and observed amounts of meat provisioned and the timing and spatial extent of meat distributions to rural communities. Finally, we discuss meat provisioning in the context of rural livelihoods, in particular food security and bushmeat poaching, in relation to Zambia's 2013–2014 hunting moratorium.

Methods

Zambia Wildlife Authority ranks GMAs as prime, secondary, or understocked based on species occurrence and animal abundance [36]. Prime GMAs include species that are fairly abundant and include highly valued trophies (e.g., African lion *Panthera leo*, leopard *P. pardus*, roan antelope *Hippotragus equinus*, and sable antelope *H. niger*) and that can accommodate five or more classical safaris and seven or more mini safaris per hunting season. Secondary GMAs include species less abundant but that generally can sustain three to four classical safaris and a minimum of five mini safaris per hunting season. Understocked GMAs contain species assemblages that are intact but with populations low enough that no hunting quota or only a minimum hunting quota is allowed [37]. Quotas are set annually for each GMA based on their ranking, an evaluation of the hunting operators' performance in the GMA during the previous season, and input from regional ZAWA scouts, ZAWA ecologists and representatives of the rural communities located within the GMAs. We obtained quotas from 2007 to 2009 from ZAWA for each of 30 GMAs in Zambia where sport hunting occurred. These 30 GMAs cover 84,033km^2 and represent 11% of Zambia's total land area. We excluded non-edible trophy species (African lion, leopard, spotted hyena *Crocuta crocuta*, Nile crocodile *Crocodylus niloticus*, small carnivores, and primates) from all calculations.

Sport hunting operators in each GMA are mandated by their lease agreements to utilize (i.e., hunt) $\geq$ 60% of their annual quota and distribute $\geq$ 50% of all game animals harvested each year to rural communities located in the GMA where the hunting occurred. Thus, 60% of the allocated quota of game species represents the estimated minimum number of edible animals harvested annually by sport hunters in Zambia; half of which represents the minimum amount of game meat that communities may expect to receive in a given year.

We collected data on meat provisioning from three GMAs (1 prime, 1 secondary, 1 understocked). During the study, each GMA was operated by individual hunting companies under a ten-year (2002–2012) lease agreement with ZAWA and the local communities. Zambia's sport hunting season occurred each year from 1 May to 31 December; however, sport hunting declines during the hottest months (mid-October to early November) and is typically discontinued when the rainy season begins in late November (P. White, personal observation).

We used reported live [38] and dressed weights [25] of game species to estimate harvested biomass. We used body weights for subspecies that occurred in Zambia when available. For species whose dressed weights were not available, we used conversion rates from a closely related species within the same genus. Reported dressed weights excluded offal; however, rural Zambians routinely consume organ meats (e.g., heart, liver, kidneys) in addition to skeletal muscle and bones which are boiled for additional nutrition (P. White, personal observation). Thus, dressed carcass weights represent minimum estimates of the amount of edible meat.

For each of the three GMAs sampled, we calculated the annual amount of meat expected through provisioning during 2007–2009 (data for 2008–2009 only were available for the

understocked GMA). We converted the number and species of animals represented by 50% of the utilized quota to kgs using the same dressed weight calculations as were applied to meat distribution logs (below). We also estimated the expected mean annual amount of meat provisioned in all GMAs where sport hunting occurred during 2007–2009. We excluded GMAs not hunted during the previous lease period, specialized GMAs, private game ranches, and conservancies. We used 60% of the allocated quotas at 50% distribution and converted these values to dressed weights to estimate the total kgs of meat expected to be provisioned countrywide.

We estimated the amount of meat provisioned annually during the 2005–2011 hunting seasons for the sampled prime and secondary GMAs and for five seasons during 2004–2011 for the understocked GMA. We obtained this information from meat distribution logs provided to ZAWA by hunting operators. Logs included date, species, portion of carcass distributed (e.g., half, whole), and generally a description of the recipient location (e.g., name of village, clinic, school, game scout post). Each log entry represented one animal or portion of an animal distributed to one location as verified by signature of the receiving party. We calculated dressed weights (kgs) from species and amount of provisioned meat as described previously.

To assess performance of the sport hunting industry in meeting its meat provisioning requirements, we compared annual expected and observed amounts (kgs) of provisioned meat in the three sampled GMAs during 2007–2009. We also summarized the amount (kgs) of meat provisioned and number of distribution events by month and year. When possible, we determined locations of distribution events using Google Earth, survey charts, and 1:250,000 scale topographic maps (Surveyor General, Lusaka, Zambia) and estimated distances from the recipients' locations to the provisioning hunting camp to determine the spatial extent of meat provisioning.

We used generalized linear mixed-effects models in program R (version 3.0.2; R Development Core Team 2013) [39] to estimate differences in response variables among GMAs and months. Response variables were the amount of meat provisioned and number of distribution events; explanatory variables were GMA and month. We included year as a random effect. We used least-squares difference means tests to compare differences among GMAs and months. We report means with ± 1 standard deviation and set statistical significance at $\alpha = 0.05$.

Results

Mean expected annual amount (kgs) of meat distributed countrywide was 129,771 ± 15,862 kgs during 2007–2009, representing 2,359 ± 320 individual animals of 20 species (Table 1). The mean expected annual amount of meat provisioned from 2007 to 2009 was greater for the prime (6187.3 ± 262.1 kgs) and secondary (5810.0 ± 248.6 kgs) GMAs than for the understocked (1204.0 ± 0 kgs) GMA. Similarly, the observed amount of meat provisioned annually during 2004–2011 varied among GMAs ($F_{2,16} = 21.97$, $P < 0.001$), with the prime (5832.1 ± 1579.9 kgs; $n = 7$) and secondary (6495.0 ± 1876.1 kgs; $n = 7$) GMAs provisioning greater ($P < 0.05$) amounts of meat than the understocked (973.4 ± 390.3 kgs; $n = 5$) GMA. Considering paired 2007–2009 data only, the observed amounts (kgs) of meat provisioned in prime and secondary GMAs exceeded what was expected each year (Fig. 1). In the understocked GMA, observed amounts exceeded expectations in one of two years.

The mean annual number of distribution events varied among GMAs ($F_{2,16} = 17.32$, $P < 0.001$), with more distribution events ($P < 0.05$) in the prime GMA (39.3 ± 8.7) than in the secondary (24.9± 8.9) and understocked (13.8 ± 8.1) GMAs. Annual number of distribution events in the secondary and understocked GMAs were similar ($P > 0.05$). The timing of distributions varied across months ($F_{5,95} = 7.13$, $P < 0.001$) with more distribution events during

Table 1. Mean (± SD) annual harvest quotas and expected amounts (kgs) of dressed meat provisioned during normal hunting seasons in Zambia, 2007–2009.

	Allocated Quota Countrywide		Mandatory 60% Utilization of Allocated Quota		Mandatory 50% Distribution of Utilized Quota		Expected Dressed Meat Provisioned (kg)	
Species	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Cape buffalo (*Syncerus caffer*)	295.3	20.6	177.2	12.4	88.6	6.2	31,718.8	2217.6
Bushbuck (*Tragelaphus scriptus*)	160.0	24.3	96.0	14.6	48.0	7.3	1344	204.4
Bush pig (*Potamochoerus larvatus*)	56.7	21.1	34.0	12.7	17.0	6.3	629	234.5
Common duiker (*Sylvicapra grimmia*)	95.7	22.3	57.4	13.4	28.7	6.7	315.7	73.6
Eland (*Taurotragus oryx*)	46.3	15.5	27.8	9.3	13.9	4.7	5740.7	1920.8
Lichtenstein's hartebeest (*Alcelaphus buselaphus*)	89.3	17.2	53.6	10.3	26.8	5.2	2572.8	496.6
Hippopotamus (*Hippopotamus amphibious*)	206.3	23.2	123.8	13.9	61.9	7.0	53853	6067.0
Impala (*Aepyceros melampus*)	344.7	18.9	206.8	11.3	103.4	5.7	3308.8	181.2
Greater kudu (*Tragelaphus strepsiceros*)	117.0	21.4	70.2	12.8	35.1	6.4	4598.1	840.1
Red lechwe (*Kobus leche*)	15.7	4.6	9.4	2.8	4.7	1.4	324.3	95.6
Oribi (*Ourebia ourebi*)	48.3	9.5	29.0	5.7	14.5	2.8	116	22.7
Puku (*Kobus vardoni*)	191.7	10.3	115.0	6.2	57.5	3.1	2357.5	126.2
Southern reedbuck (*Redunca arundinum*)	67.3	11.0	40.4	6.6	20.2	3.3	585.8	95.8
Roan (*Hippotragus equinus*)	45.7	13.6	27.4	8.2	13.7	4.1	2041.3	608.5
Sable (*Hippotragus niger*)	61.3	11.9	36.8	7.2	18.4	3.6	2318.4	451.0
Sitatunga (*Tragelaphus spekei*)	24.3	2.3	14.6	1.4	7.3	0.7	459.9	43.6
Warthog (*Phacochoerus africanus*)	182.0	30.1	109.2	18.1	54.6	9.0	2948.4	487.9
Waterbuck (*Kobus ellipsiprymnus*)	102.0	25.0	61.2	15.0	30.6	7.5	4375.8	1071.6
Wildebeest (*Connochaetes taurinus*)	74.3	18.0	44.6	10.8	22.3	5.4	3122	756.4
Zebra (*Equus quagga*)	135.7	19.6	81.4	11.8	40.7	5.9	7041.1	1017.5
Totals	2359.7	320.6	1415.8	192.4	707.9	96.2	129,771.4	15,861.5

Expected dressed meat provisioned calculated using live and dressed weights of game species after Skinner & Smithers (1990) and Bothma & du Toit (2010), respectively.

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July and September and fewer during May (Fig. 2). There was no interaction between GMA and month ($F_{10,95} = 1.32$, $P = 0.233$).

The observed amount (kgs) of meat provisioned each month varied among GMAs ($F_{10,95} = 1.24$, $P = 0.277$) with greater amounts of meat provisioned from the prime and secondary

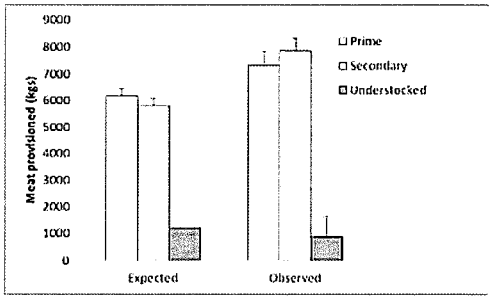

Fig 1. Expected versus observed amounts (kgs) of meat provisioned in each of three Game Management Areas (GMA), Zambia.

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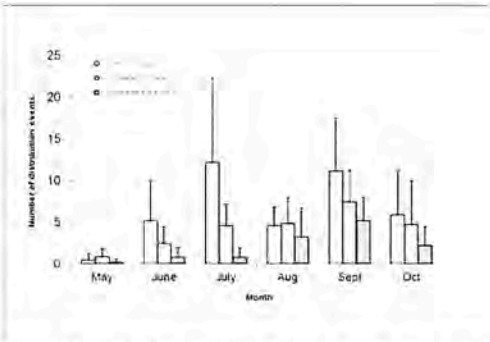

Fig 2. Mean (± SD) number of meat distribution events by month for three Game Management Areas, Zambia.

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GMAs than from the understocked GMA ($P < 0.05$; Fig. 3). Overall, mean total amounts (kgs) of meat provisioned were greatest in September and least in May ($F_{5,95} = 6.15$, $P < 0.001$). There was no interaction between GMA and month ($F_{10,95} = 1.32$, $P = 0.233$). In the prime GMA, mean meat provisioning in July and September exceeded 1,700 kgs/month. In the secondary GMA, mean monthly provisioning was 1,800 kgs in September and exceeded 1,250 kgs/month during July–October. The greatest mean monthly amount of meat provisioned in the understocked GMA was in September (> 400 kgs).

Distribution logs contained locations of meat recipients in 62% ($n = 518$) of entries, including 63% ($n = 275$) in the prime GMA, 78% ($n = 174$) in the secondary GMA, and 16% ($n = 69$) in the understocked GMA. Remaining entries were received by community-appointed liason officers who oversaw onward distribution. To assess the spatial extent of meat provisioning, we determined specific locations for 336 distribution events in relation to the locations of hunting camps that supplied the meat. Meat provisioning extended to > 50 km from sport hunting camps with most (70%) occurring within 20 km of camps (Fig. 4).

Discussion

In Zambia, provisioning of fresh game meat by sport hunting operators constituted an important source of protein for rural communities, with actual meat provisioned exceeding 6,000 kgs annually in the sampled prime and secondary GMAs. Meat provisioning by the hunting industry appeared reliable across years and exceeded expectation in each GMA and in every year

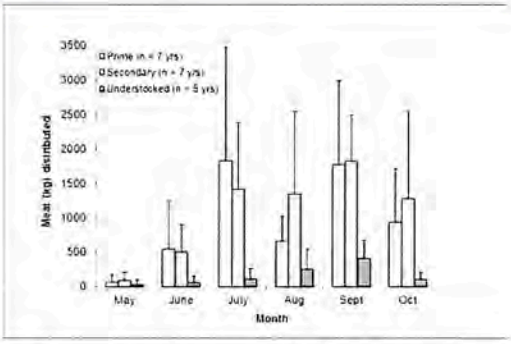

Fig 3. Mean (±SD) amount (kgs) of meat distributed by month for three Game Management Areas, Zambia.

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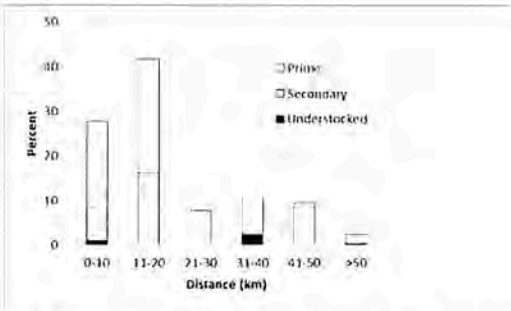

Fig 4. Distances from sport hunting camps of meat provisioned from three Game Management Areas, Zambia.

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except one (understocked GMA in 2009). Variations in the amount and timing of distributions appeared influenced in part by unpredictable short-term perturbations. For example, eruption of the Icelandic volcano and subsequent disruption to international flights in 2010 [40] caused the abrupt cancellation of numerous hunts and lowered the amount of meat distributed in some months that year (PHAZ, personal communication).

The provisioning of greater amounts of meat than expected resulted when operators successfully hunted more than the minimum 60% required of their annually allocated quota (P. White, unpublished data). These results illustrate a potential conflict of interest; ZAWA receives revenues based on GMA ranking (prime GMAs carry the highest fees) as well as the number of animal licenses sold. Therefore, ZAWA could be motivated to rank GMAs as high as possible and to allocate larger quotas in order to receive greater revenues from hunting operators [37]. Local communities also receive a portion of each animal license fee, and receive more meat when allocated quotas are high, especially for large-bodied species. Thus, community representatives engaged in quota setting exercises may also be motivated to support high quotas.

Likewise, hunting operators may be motivated to sell as many hunts as possible each year to maximize profits, especially in prime GMAs where fees are greater. However, an operator's future success is gauged on quality of trophies obtained in previous years. Trophy quality is judged on size and age rather than number of animals shot [41]. Further, lease periods of $\geq$ 10 years help promote good stewardship because holders of longer-term leases have a vested interest in conserving wildlife populations [42]. Zambian Wildlife Authority requirements of a minimum annual harvest could promote shooting of immature animals if allocated quotas are excessive. Despite existing protocols for post-season meetings designed to set quotas in accordance with best available information, allocated quotas are subject to later change by ZAWA's head office sometimes without consulting regional ecologists, hunting operators, or local communities. Subsequently, hunting operators occasionally request reduced quotas for certain species if they believe the allocated quota to be excessive in their GMA (PHAZ, personal communication). A more standardized methodololgy for monitoring trends in game population abundance, preferably including estimates of precision, could simplify setting of quotas and help ensure sustainable harvest.

The amount of meat and frequency of meat distributions was generally greater during months (e.g., September) when rural people are most likely to experience food shortages i.e., when alternative sources of food are exhausted and prior to annual crop production [43]. With a hunting moratorium in place since January 2013 throughout most of Zambia's GMAs, game meat supplied by the sport hunting industry has been almost eliminated. Over 60% of Zambia's

human population was classified as rural in 2013 and 83% of rural Zambian households are poor [44]. Most (20 of 30) of the GMAs analyzed in this study are in three of Zambia's poorest and most remote provinces (Northwestern, Eastern, and Southern) [44]. Zambia's poorest families whose crop production is insufficient to support themselves rely on income from casual labor to purchase food during shortages [43]. Food is the largest expenditure for Zambia's rural poor [45] for whom casual labor constitutes a major source of income [46]. However, most employment opportunities provided by sport hunting camps each year were lost during the current moratorium. This included casual work (road clearing, camp building) as well as seasonal jobs that lasted throughout the hunting season (camp staff, trackers and skinners, drivers and mechanics, etc.). In addition, commodities normally purchased by hunting camps from local communities (e.g., thatching grass, vegetables, maize meal) were not needed (P. White, unpublished data). Thus, in addition to the loss of provisioned meat, many rural people may lack the financial resources to legally purchase meat. During the similar time period (February 2013–February 2014) inflation in Zambia increased 7.6% [47]. The rate of inflation has since increased to 8.1% (November 2013–November 2014) with the cost of food contributing the most to the annual increase [48]. Zambia's poorest provinces have experienced the highest inflation rates countrywide [48].

In the absence of sport hunting, rural communities need alternatives to reliably and legally obtain meat. Solutions must be appropriate to local situations however [34], and consider the needs of humans and wildlife to avoid adverse effects [49–51]. Domestic livestock are excluded from many parts of Zambia due to tsetse flies [28] and can cause habitat degradation if overstocked [52]. Game ranching can provide a source of meat and African game meat has a greater protein content ($>$ 20% per 100g) than domestic species ($<$ 20% per 100g) [25]. But whereas sport hunting operators provision free meat as part of their lease agreements, ranchers may expect fair or subsidized prices for their product [53]. A shift to greater reliance on wild fisheries can result in depletion of fish stocks [33]; Zambia's native fish stocks are showing evidence of severe depletion [54],[55]. Communal conservancies that incorporate game and domestic stock could provide rural people with protein and income. These programs require considerable start-up investment and maintenance and a sport hunting component is often needed to ensure success, especially in the early stages [56],[57]. The most profitable conservancies include a sport hunting component [7],[15]; however, the income received by individuals is inversely related to human population density [10]. Benefits to residents diminish when conservation-benefit programs result in an influx of immigrants seeking to share in returns [58],[59].

Where alternative sources of food and income are not available, incidents of bushmeat poaching increase during the late dry season [35],[60],[61]. Many hunters sell bushmeat to obtain cash to purchase other foods [34], material goods [60], or to enhance their farming efforts thereby increasing the income potential of their crops [62]. Whether hunting for food or cash, expanding human populations coupled with the unsustainable hunting methods favored by bushmeat poachers have caused widespread concerns for the viability of wildlife populations and entire species [34],[63],[64]. Studies of bushmeat hunters in Zambia [60] and buyers in Zimbabwe [53] concluded that increasing the supply of free meat would help reduce bushmeat poaching.

Those most dependent on bushmeat for food are often the most remote and marginalized groups [33],[34],[49]. In Zambia, poor families are more likely to live $\geq$ 20 km from the nearest markets than families that are not poor [45]. Most of Zambia's GMAs are located in the poorest and most remote provinces [44]. Sport hunting operators in Zambia provisioned meat to at least 50 km from their hunting camps, which were situated in remote areas on average 84 km from the nearest towns (N = 32 camps). While the price of bushmeat can vary with distance to

source [65], average cost of bushmeat in Zambia in 2012 was US$4.75/kg of fresh game meat (P. White, unpublished data). Thus, the estimated replacement cost of game meat exceeds US $27,700/year for each prime GMA, US$30,850/year for each secondary GMA, and US$4,620/year for each understocked GMA. Countrywide, the estimated annual cost to purchase the equivalent of 129,771 kgs of fresh game meat is US$616,412, excluding butchering and delivery costs. At > 20% protein per 100g game meat, this is equivalent to 519,084 people days of protein per year. This figure is based on the recommended daily protein requirement of 50 gm/day [25] being fulfilled entirely by animal protein. In fact, Zambians on average obtain less than 20% of their dietary energy from animal protein [66]. Thus, although meat provisioned by sport hunting operators represents a small percentage of protein requirements for Zambians, it appears an effective means of distributing fresh, high quality meat to some of the most remote areas of the country with the greatest protein needs, thereby partially alleviating protein deficiencies in rural Africans. Elsewhere in Africa (e.g., Selous Game Reserve, Tanzania) where communities may be located too far from sport hunting camps to facilitate distribution of fresh meat, alternative sources of protein may be required.

The recent moratorium on sport hunting throughout much of Zambia created a crisis situation [67]. Bushmeat poaching is a serious problem in Zambia [14],[37] and the severity and rate of poaching has escalated during the current hunting closure [68]. Similarly, accelerated loss of wildlife occurred during previous (2000–2002) hunting closures in Zambia [4] and elsewhere (Kenya [9],[69]). Zambia's human population continues to increase (2.8% in 2010) [70]. From 1987–1997, Zambia's wildlife sector underperformed with regards its potential to supply game meat to rural people [14]. This included game ranching and cropping schemes in addition to sport hunting.

We characterized and quantified meat provisioning in Zambia. Large-scale sport hunting also occurs in the African countries of Namibia, Mozambique, Tanzania and Zimbabwe. In all five countries, over 60% of the total population is rural, with at least 25% of the population in each country categorized as undernourished [22]. With the exception of Namibia, each of these countries has lower than average GDPs compared to the mean for all African countries [71]. Globally, Zambia, Mozambique and Tanzania each rank in the bottom 20 of food supply of meat [66]. As in Zambia, most hunting areas in these other four countries are located in rural regions [72]. National governments and wildlife authorities are responsible for establishing hunting quotas and lease agreements including meat distribution requirements, thus extrapolation of meat provisioning in Zambia to other countries would be speculative, and wider-scale estimates are beyond the scope of this paper. However, the detailed information we provide for Zambia may serve as a template for future investigations of expected meat distributions in other countries or regions where hunting occurs.

While the amount of game meat provisioned annually by Zambia's sport hunting industry is substantial, a multi-use approach that incorporates sport hunting, game ranching, and communal conservancies for additional sources of protein and income in rural areas will likely be required to keep pace with the growing demand for meat and jobs. It is vital that Zambia's GMAs be afforded sound custody unless and until viable alternatives offering the same or greater benefits than sport hunting provided can be implemented.

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Author Contributions

Conceived and designed the experiments: PAW. Performed the experiments: PAW. Analyzed the data: PAW JLB. Contributed reagents/materials/analysis tools: JLB. Wrote the paper: PAW JLB.

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REPORT ON THE 2015 AERIAL CENSUS OF ELEPHANTS AND OTHER LARGE MAMMALS IN ZAMBIA

REPUBLIC OF ZAMBIA

MINISTRY OF TOURISM AND ARTS

REPORT ON THE 2015 AERIAL CENSUS OF ELEPHANTS AND OTHER LARGE MAMMALS IN ZAMBIA

Volume II: Population Estimates and Statistics for other large mammals and birds

MARCH 2016

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VOLUME II

POPULATION ESTIMATES AND STATISTICS FOR OTHER LARGE MAMMALS AND BIRDS IN ZAMBIA

SUMMARY

During September 2015 the Zambia Wildlife Authority carried out an aerial survey of elephants and other large herbivores, wild and domestic, in four Zambian ecosystems. A total area of 84,859 km^2, representing 37% of Zambia's protected area network was sampled at an average intensity of 8%. Fixed-wing aircraft were used to conduct transect surveys over the entire survey area.

The main objective was to estimate numbers and distribution of African elephants and the associated elephant carcasses, but other large wild mammals and birds within the survey area were recorded. This report presents the estimates of the other large mammals and birds counted during the survey. Population estimates of elephants are presented in volume I.

Some large herbivores are not easily seen from the air and their numbers were undoubtedly underestimated. Nevertheless, population estimates are given for these species, because the estimates provide useful indices of abundance (with measures of precision) that can be used to determine spatial distribution, as well as temporal trends in population number. No corrections have been applied to any of the estimates to compensate for any undercounting or missed animals.

The areas covered during the surveys are:-

- Luangwa ecosystem (32,819 km^2), comprising the North and South Luangwa, Luambe and Lukusuzi National Parks, Mukungule, Musalangu, Munyamadzi, Lumimba, Lupande and Sandwe Game Management Areas (GMAs);
- Kafue ecosystem (45,030 km^2) comprising the Kafue National Park and the 9 surrounding GMAs except Bbilili.
- Sioma Ngwezi National Park (4,482 km^2)
- Lower Zambezi Valley (2,528 km^2) comprising the valley sections of the Lower Zambezi National Park, Chiawa and Rufunsa GMAs.

Mosi-au-tunya, Liuwa Plains, West Lunga, Kafue flats, Blue Lagoon, Nsumbu, Mweru Wa Ntipa, Lusenga Plains, Isangano, Lavushi Manda, Kasanka and Nyika National Parks with their surrounding Game Management Areas were not covered. Therefore, the total estimates of wild large herbivores presented in this report do not necessarily represent the total for the whole country.

The estimated population numbers of the primary large herbivores in the country were; Buffalo 43715 (95% confidence Interval (CI) 26877 – 60554); Eland 2530 (CI 283 - 4777); Hartebeest 6957 (CI 4753 - 9162); Kudu 3383 (CI 2448 - 4318); Roan 6261 (CI 4121 - 8401); Sable 14874 (CI 11061 - 18686); waterbuck 9927 (CI 6287 - 13567); blue wildebeest 2955 (CI 630 - 5280); cookson's wildebeest 3753 (CI 1558-5948); zebra 10768 (CI 6426 - 15110).

Of the seven national parks surveyed domestic livestock were only recorded in the Kafue and Sioma Ngwezi National Parks.

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1.0 INTRODUCTION

This report presents the results of the 2015 dry season aerial survey of large herbivores and selected large birds in Zambia's protected area network. The survey was conducted between 4th and 26th September 2015 and covered 36.6 % (84, 859.3 km^2) of Zambia's protected area network. The areas covered in the survey included: (1) the Luangwa ecosystem – comprising the South Luangwa, North Luangwa, Luambe and Lukusuzi National Parks and adjoining Game Management Areas; (2) Kafue ecosystem comprising the Kafue National Park and its surrounding Game Management Areas (GMAs); (3) the Lower Zambezi valley and (4) Sioma Ngwezi National Parks (Figure 1). The survey was part of the Great Elephant Census covering the main elephant range in East, Central and Southern Africa funded by the Paul G. Allen Family Foundation through the Vulcan Philanthropy.

2.0 METHODS

2.1 Survey Design

The survey procedure was based on a well-established standardized wildlife aerial survey approach as described by Norton-Griffiths 1978. This survey was optimised for counting elephants in their known range in Zambia. Thus, counting and estimation of other large mammals and large birds were limited to areas of high elephant densities. However, the range of other large mammals far exceeds the elephant range and thus estimates of large mammals are underrepresented in this current design. Other elephant range areas such as Nsumbu and West Lunga NPs and surrounding GMAs were not included in the survey due to budgetary limitations. The Liuwa Plain National Park, Bangweulu wetlands and Kafue flats which hold significant numbers of blue wildebeest, black lechwe, Kafue lechwe, and plains zebra were not included in the surveys. Therefore, the estimates of large mammals do not necessarily represent the total for the whole country.

Flights were in Cessna 182 and 206 aircraft at a nominal height of 300 feet above the ground, with a total nominal transect strip-width of 300m. Details of methods are provided in Appendix I.

2.2 Stratification

Strata were selected to cover known elephant densities illustrated in previous survey reports (Dunham & Simwanza, 2002; Dunham, 2004; Masonde & Simpamba, 2006; Viljoen, 2007; Chase & Griffin, 2008; Simukonda, 2008; WCS, 2009; Frederick, 2011; Simukonda, 2011; Chase, Nyirenda & Sitali, 2013; Viljoen, 2013; Frederick, 2013). The strata comprised the core elephant range, and the marginal wildlife areas which were expected to contain other wildlife species and few elephants (Figure 1). It was considered important to include the marginal areas to confirm that most of the elephant range was covered by the survey. It is for this reason that protected area boundaries were not used as a basis for stratification.

2.3 Data Analysis

Population estimates and confidence intervals for each stratum were calculated based on Jolly's (II) 1969 method for unequal-sized sampling units (Norton-Griffiths 1978). Population estimates for each ecosystem was further calculated as the sum of the estimates for the individual strata within the ecosystem.

Although protected area boundaries were not the basis for stratification, GIS analysis was used to present population estimates for the national parks within the areas surveyed. This was done

by determining in which national park that each sighting occurred and separating data sets for each area, then re-analysing with the same strata and transects as mentioned in the above paragraph. By re-analysing the data in this way the total for the ecosystems did not change because the sampling intensities remained the same.

To evaluate population trends for large herbivores in each of the ecosystems, a literature search was done to collect data on population estimates from the 2002 to date. The data was analyzed by linear regression where the population estimates taken as the dependent variable and the time as the independent variable. The analysis was done in program R (R Development Core Team, 2013).

A detailed description of the design, implementation and technical details of this aerial survey are extensively elaborated in Part 1 of the report on the 2015 Aerial survey in Zambia (DNPW, 2016).

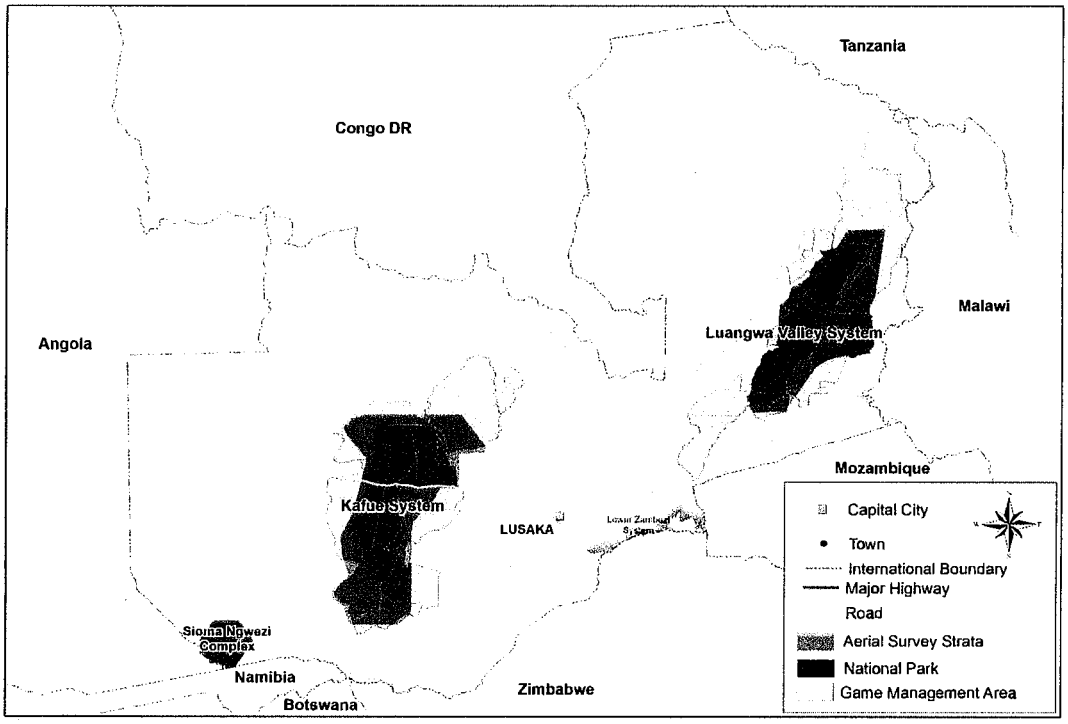

Figure 1. Survey Areas

3.0 RESULTS AND DISCUSSION

3.1 General

The results are presented by ecosystem, with the overall ecosystem estimates presented first (Tables 2, 5 & 12), followed by a breakdown according to the parks and a combined estimate for the Game Management Areas. The results tables provide the estimated number per stratum with the 95% confidence interval indicating the lower limit and the upper limit. The numbers actually seen within the sampling strips by observers are labelled as "No. seen". In deriving the population estimate only the number of animals seen within the sampling strips were used, for species seen outside the sampling strip, the information is used to show species occurrence and distribution.

The presentation of results by park enabled us to make trend comparisons with previous aerial surveys where park only results have been reported. Given the wide and often overlapping confidence

intervals associated with aerial survey population estimates, we did not expect significant differences between estimates considering the short time frame (10 - 12 years) and number of estimates (4 - 6). Thus the assumption that the relationship between population size and time is linear over the short term. For the purpose of comparison we wanted to know how areas we consider core areas i.e., National Parks compare to areas we consider marginal areas i.e., Game Management Areas. Tables 3, 5 and 10 compare the estimates between the NPs and GMAs in the Kafue and Luangwa Ecosystems. For each of the Kafue, Luangwa and Lower Zambezi ecosystems combined estimates are also given the Game Management Areas. Complete population estimates and statistics by strata as flown during the surveys are presented in Appendix I.

3.2 Countrywide Estimates

The estimated population numbers of the primary herbivores in the four ecosystems surveyed were: Buffalo 43715, duiker 4025, eland 2530, giraffe 618, hartebeest 6957, impala 52369, kudu 3383, puku 23538, roan 6261, sable 14874, warthog 12626, waterbuck 9927, blue wildebeest 2955, Cookson's wildebeest 3753 and zebra 10768. Liuwa plain National Park Zambia's stronghold for blue wildebeest was not part of the surveys and as such the estimate presented here is an underestimate of the species in Zambia. Table 1, below gives population estimates and statistics for the primary herbivores counted.

Table 1. Population estimates and statistics for large herbivores in Surveyed Area

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	43715	26877	-	60554	4724	51.52
Bushbuck	335	170	-	500	27	0.39
Bushpig	775	291	-	1260	61	0.91
Duiker	4025	3439	-	4612	330	4.74
Eland	2530	283	-	4777	225	2.98
Giraffe	618	331	-	906	73	0.73
Grysbok	28	2	-	67	2	0.03
Hartebeest	6957	4753	-	9162	596	8.2
Impala	52369	42982	-	61756	5257	61.71
Kudu	3383	2448	-	4318	283	3.99
Red Lechwe	12290	1934	-	22646	1372	14.48
Oribi	166	74	-	257	19	0.2
Puku	23538	15294	-	31782	2478	27.74
Reedbuck	981	272	-	1690	73	1.16
Roan	6261	4121	-	8401	474	7.38
Sable	14874	11061	-	18686	1241	17.53
Sitatunga	101	6	-	262	6	0.12
Warthog	12626	10762	-	14490	1182	14.88
Waterbuck	9927	6287	-	13567	581	11.7
Blue wildebeest	2955	630	-	5280	233	3.48
Cookson's wildebeest	3753	1558	-	5948	368	11.44
Zebra	10768	6426	-	15110	927	12.69

3.3 Kafue Ecosystem

At 45030 km^2, the Kafue ecosystem accounted for 53% of the total surveyed area. The surveys covered approximately 68% of the protected area network in the Kafue ecosystem. This was made up of the entire park and 52% of the Game Management Areas.

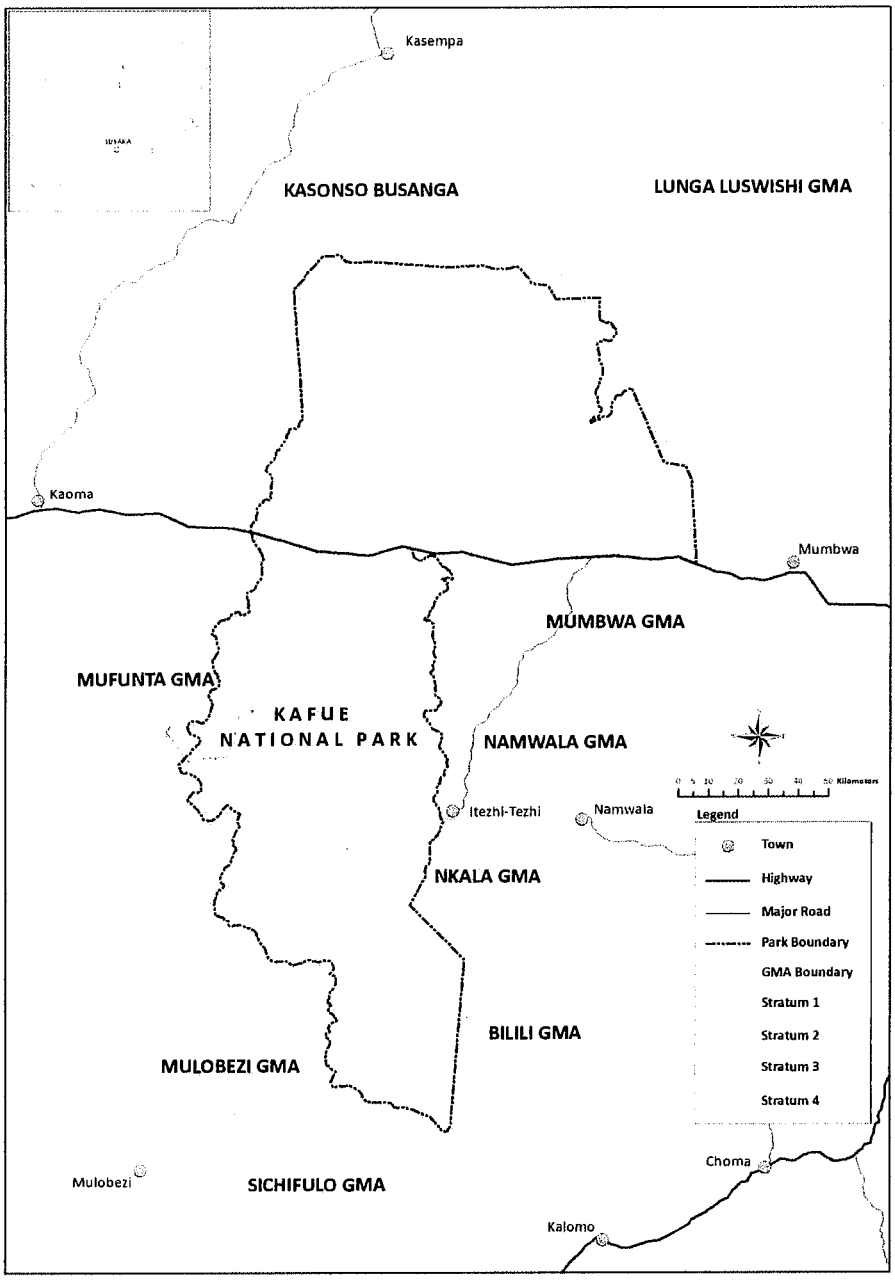

Figure 2. Kafue ecosystem survey strata

The Kafue ecosystem accounted for all the grysbok, red lechwe and sitatunga estimated countrywide, while 90 % or more of hartebeest, oribi, reedbuck and sable was counted from the

ecosystem. The population estimates of the primary large herbivore species in the ecosystem were: Buffalo 8534, eland 1156, hartebeest 6265, impala 25847, kudu 1251, red lechwe 12290, puku 16470, roan 2978 and sable 14314. Complete population estimates and associated statistics for the ecosystem are given in table 2 below.

Table 2. Overall population estimates and statistics for the Kafue Ecosystem

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	8534	864	-	16993	864	18.95
Bushbuck	211	77	-	345	17	0.47
Bushpig	385	112	-	658	33	0.86
Duiker	1877	1425	-	2330	128	4.17
Eland	1156	68	-	2764	68	2.57
Grysbok	28	2	-	67	2	0.06
Hartebeest	6265	4090	-	8440	542	13.91
Impala	25847	18776	-	32918	2381	57.4
Kudu	1251	695	-	1806	102	2.78
Lechwe	12290	1923	-	22657	1372	27.29
Oribi	149	60	-	237	17	0.33
Puku	16470	8489	-	24450	1694	36.57
Reedbuck	973	263	-	1682	72	2.16
Roan	2978	1272	-	4685	220	6.61
Sable	14314	10520	-	18109	1176	31.79
Sitatunga	101	6	-	262	6	0.22
Warthog	9143	7463	-	10823	841	20.3
Waterbuck	7261	3702	-	10820	605	16.13
Wildebeest	2896	562	-	5231	226	6.43
Zebra	5211	1109	-	9313	371	11.57

3.3.1 Kafue National Park

The estimated population numbers of the primary herbivores in the Kafue National Park were: Impala 14859, red lechwe 12206, sable 9695, buffalo 8219, waterbuck 5000, hartebeest 4640, zebra 1269 and eland 771.

In comparison to the surrounding Game Management Areas, the Kafue National Park had a higher density of all the species apart from zebra, common duiker and reedbuck (Figure 1). Nkala Game Management Area had the highest concentration of zebra among the GMAs in the ecosystem (Figure 8). Sable was uniformly distributed in the ecosystem with a higher concentration in the southern parts, the distribution of hartebeest in the KNP was concentrated in the central parts of the park, and almost absent on the western boundary. Of the twelve species considered for population trends (Fig. 4), only zebra showed a decreasing trend for the period 2006 – 2015 in the Kafue National Park. The park also accounted for more than 95 per cent of the buffalo and lechwe population in this ecosystem (Figure 7).Table 3 and 4, below gives the population estimates and statistics for the primary herbivore species in the Kafue National Park and Community areas respectively.

Table 3. Population estimates and statistics of large herbivores in KNP and GMAs

	Kafue National Park				Kafue Ecosystem Game Management Areas			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	8219	830 - 16658	830	36.97	315	34 - 900	34	1.38
Bushbuck	105	17 - 192	10	0.47	106	7 - 209	7	0.47
Bushpig	200	24 - 377	20	0.9	185	13 - 393	13	0.81
Duiker	631	432 - 830	54	2.84	1246	832 - 1661	74	5.48
Eland	771	47 - 2216	47	3.47	385	21 - 1090	21	1.69
Grysbok	9	1 - 27	1	0.04	18	1 - 54	1	0.08
Hartebeest	4640	2948 - 6333	443	20.87	1625	325 - 2924	99	7.14
Impala	14859	10623 - 19095	1565	66.84	10988	5530 - 16446	816	48.29
Kudu	698	382 - 1015	68	3.14	552	89 - 1015	34	2.43
Lechwe	12206	1840 - 22573	1367	54.91	84	5 - 240	5	0.37
Oribi	98	24 - 171	12	0.44	51	5 - 105	5	0.22
Puku	12224	6140 - 18308	1359	54.99	4246	335 - 8915	335	18.66
Reedbuck	419	163 - 676	40	1.88	553	32 - 1217	32	2.43
Roan	2454	1021 - 3887	189	11.04	524	31 - 1434	31	2.3
Sable	9695	6534 - 12856	898	43.61	4619	2294 - 6944	278	20.3
Sitatunga	84	5 - 244	5	0.38	17	1 - 48	1	0.07
Warthog	6240	4905 - 7574	628	28.07	2903	1842 - 3964	213	12.76
Waterbuck	5000	2351 - 7649	479	22.49	2507	353 - 4661	151	11.02
Wildebeest	1631	332 - 2930	157	7.34	1265	69 - 3167	69	5.56
Zebra	1269	435 - 2104	145	5.71	3942	226 - 7964	226	17.32

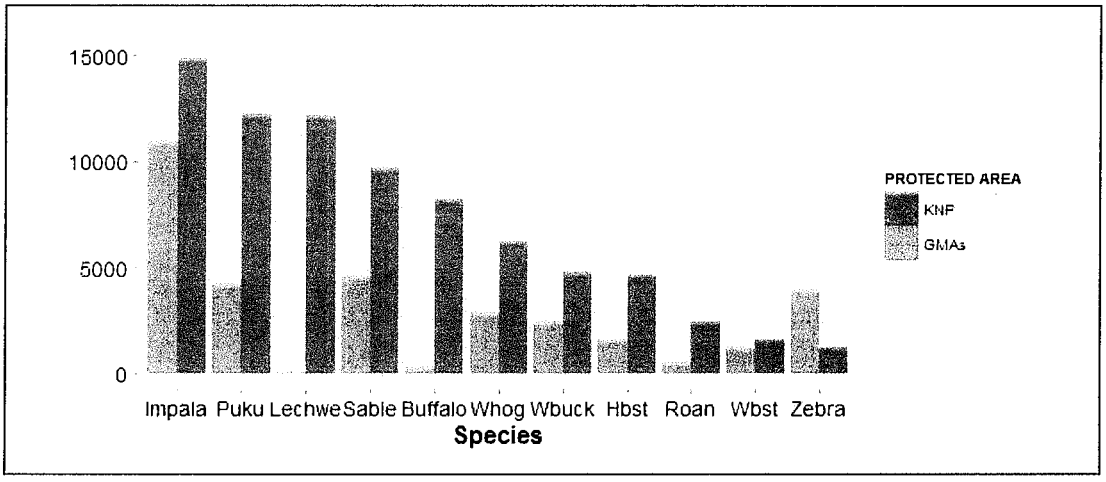

Figure 3. Comparison of species abundance between Kafue National Park and the GMAs in the Kafue ecosystem

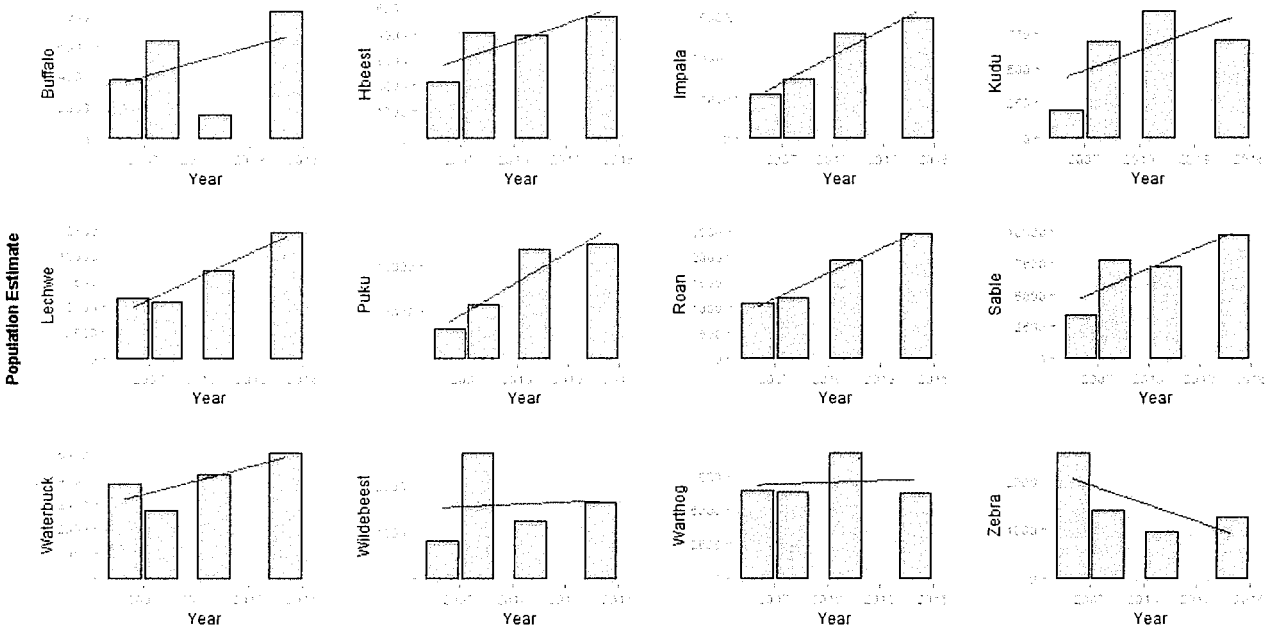

Figure 4. Population trends for selected species in the Kafue National Park for the period 2006 - 2015

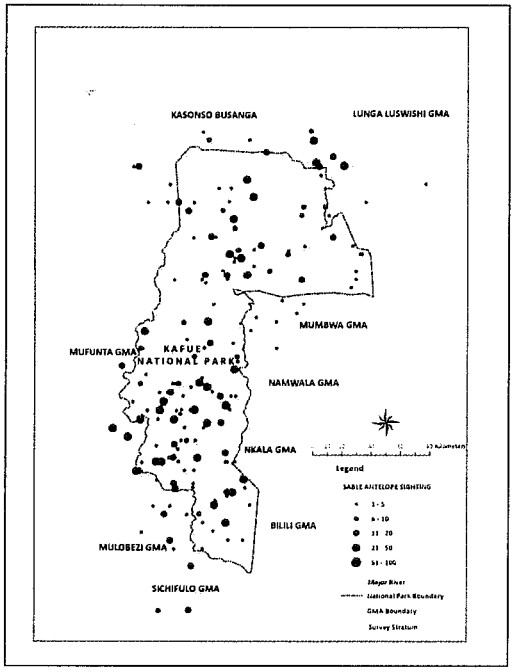

Figure 5. Sable distribution in the Kafue ecosystem

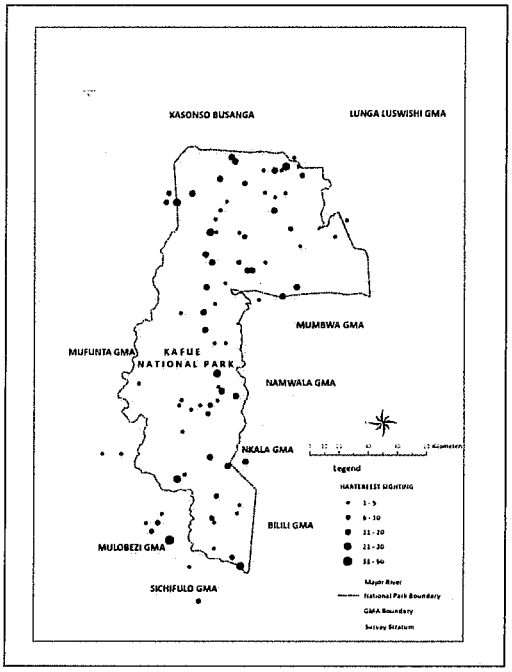

Figure 6. Hartebeest distribution in the Kafue ecosystem

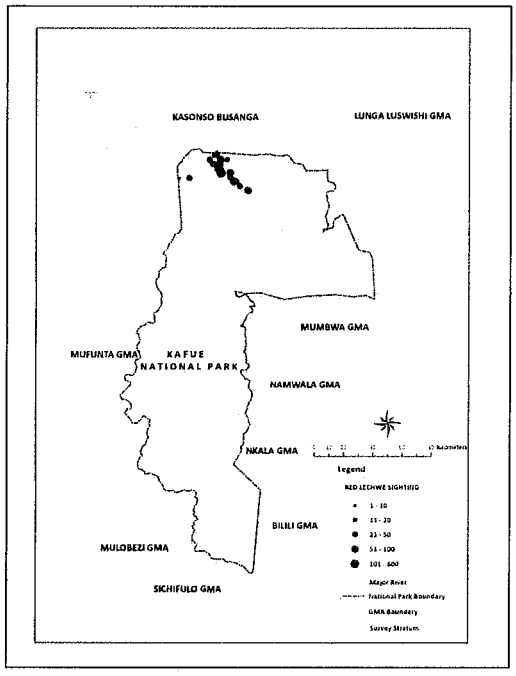

Figure 7: Red lechwe distribution in the Kafue ecosystem

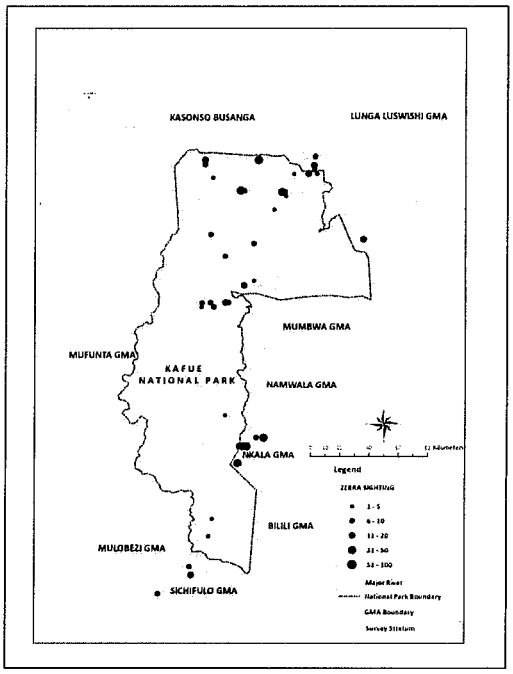

Figure 8: Zebra distribution in the Kafue ecosystem

3.4 Luangwa Ecosystem

The estimated population of the primary herbivores in the Luangwa ecosystem were: Buffalo 30082, duiker 962, eland 237, giraffe 99, hartebeest 692, impala 22502, kudu 1655, puku 7068, roan 2457, sable 56, warthog 3208, waterbuck 1773, wildebeest 3753, and zebra 4883. Complete population estimates and statistics for the ecosystem are given in table 5 below.

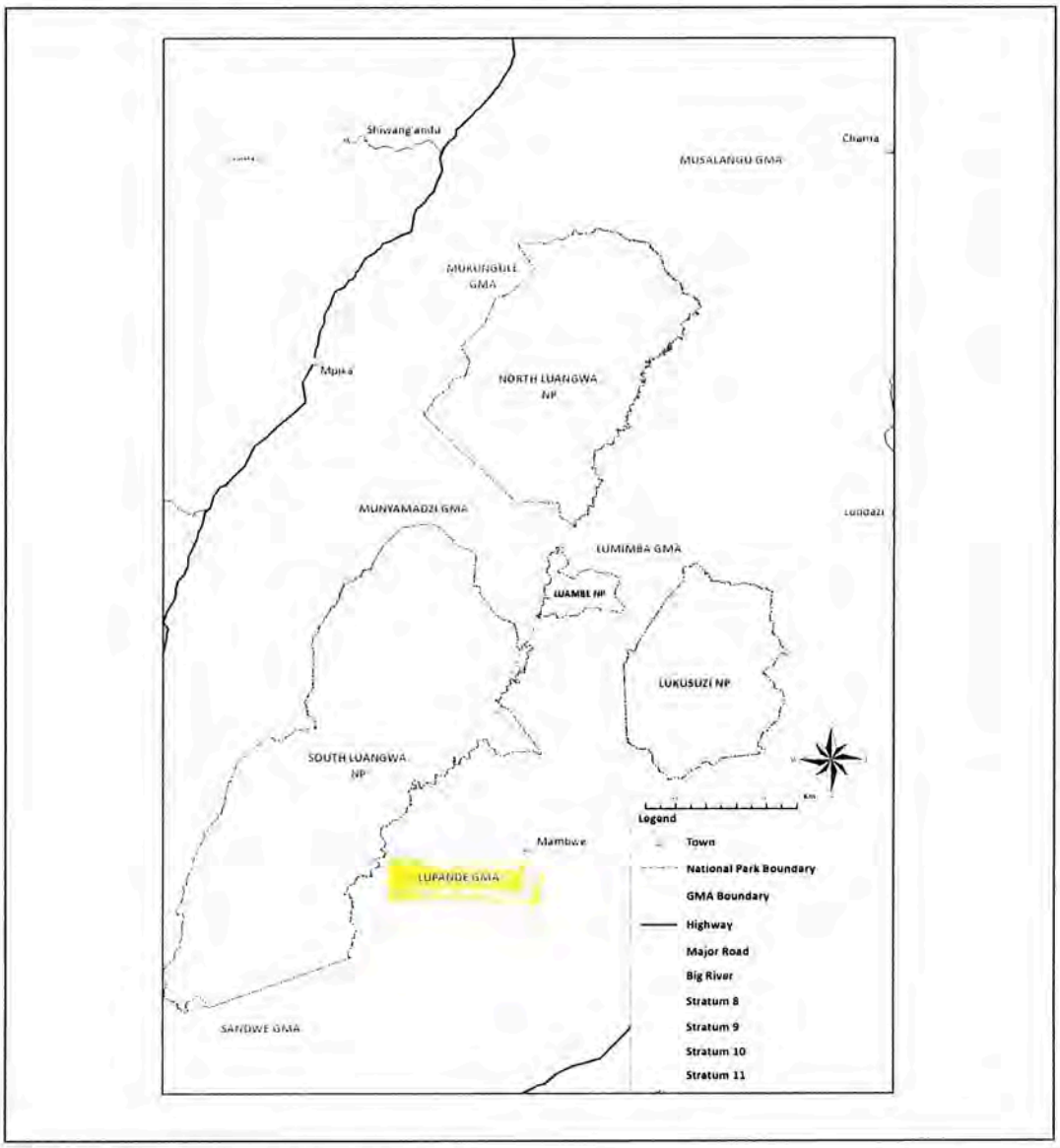

Figure 7. Luangwa Ecosystem survey strata

The Luangwa ecosystem accounted for 70% of the national total of buffalo. Approximately to 60% of the estimated buffalo population in the ecosystem was counted from GMAs (Table 6 & 7). The GMAs also had higher estimates of roan (73%), Cookson's wildebeest (65%), kudu (64%), common duiker (54%), and hartebeest (52%) (Figure 10 and table 7). Sable was only sighted in the Lukusuzi National Park.

Table 4. Overall population estimates for the Luangwa ecosystem

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	30082	16392	-	43772	3321	91.66
Bushbuck	124	27	-	222	10	0.38
Bushpig	390	28	-	792	28	1.19
Duiker	962	652	-	1273	58	2.93
Eland	237	21	-	454	21	0.72
Giraffe	99	30	-	169	11	0.3
Hartebeest	692	318	-	1066	54	2.11
Impala	22502	16664	-	28340	2453	68.56
Kudu	1655	932	-	2378	124	5.04
Puku	7068	4963	-	9173	784	21.54
Reedbuck	8	1	-	24	1	0.03
Roan	2457	1323	-	3591	155	7.49
Sable	56	3	-	130	3	0.17
Warthog	3208	2412	-	4003	310	9.77
Waterbuck	1773	729	-	2817	169	5.4
Wildebeest	3753	1558	-	5948	368	11.44
Zebra	4883	3540	-	6227	481	14.88

Table 5. Population estimates and statistics for large herbivores in Luangwa Ecosystem Parks and GMAs

	Luangwa Ecosystem Parks				Luangwa Ecosystem GMAs			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km^2**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km^2**
Buffalo	12750	3518 - 21981	1420	78.34	17332	7145 - 27520	1901	124.4
Bushbuck	72	5 - 157	5	0.44	53	6 - 99	5	0.38
Bushpig	339	22 - 735	22	2.08	51	6 - 120	6	0.37
Duiker	442	241 - 643	26	2.72	520	279 - 761	32	3.73
Eland	220	19 - 434	19	1.35	17	2 - 49	2	0.12
Giraffe	81	15 - 146	9	0.5	19	2 - 44	2	0.14
Hartebeest	330	82 - 578	27	2.03	363	94 - 631	27	2.61
Impala	13662	8980 - 18345	1560	83.94	8840	5631 - 12049	893	63.45
Kudu	589	191 - 988	49	3.62	1066	445 - 1687	75	7.65
Puku	5145	3137 - 7153	577	31.61	1923	1033 - 2813	207	13.8
Reedbuck	8	1 - 24	1	0.05	0	0 - 0	0	0
Roan	663	84 - 1243	42	4.07	1794	823 - 2765	113	12.88
Sable	56	3 - 130	3	0.34	0	0 - 0	0	0
Warthog	1671	1229 - 2113	158	10.27	1536	829 - 2243	152	11.02
Waterbuck	1142	280 - 2005	116	7.02	631	113 - 1150	53	4.53
Wildebeest	1304	307 - 2302	143	8.01	2449	689 - 4209	225	17.58
Zebra	3742	2615 - 4869	383	22.99	1142	532 - 1752	98	8.2

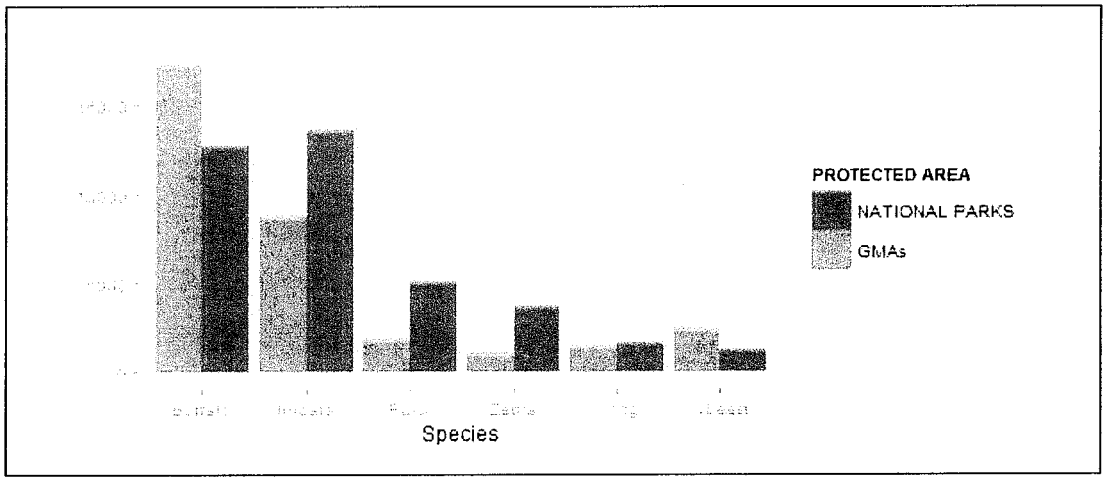

Figure 8. Species abundance in the Luangwa ecosystem. National Parks vs GMAs

3.4.1 South Luangwa National Park

The most abundant species in the South Luangwa National Park was impala 10873, followed by puku 4146, buffalo 3808, zebra 2767, waterbuck 1106 and warthog 1029. Complete population estimates and statistics for South Luangwa National Park are given in table 6 below. Population trends in the South Luangwa National Park have largely been stable to decreasing over the period 2002 to 2015. Of concern is the population of Thornicroft's giraffe which has reduced from an estimated 187 in 2002 (Dunham & Simwanza 2002) to 72 in 2015. A reduction of 61%. In contrast Berry and Bercovitch (2016), using an index method estimate between 500 & 600 Thornicroft giraffe along the Luangwa River. The huge differences in estimates call for more robust methods for estimating the population of this endemic sub species of giraffe.

Table 6. Population estimates for South and North Luangwa National Parks

	SLNP				NLNP			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	3808	404 - 7496	404	44.04	7030	812 - 14799	812	150.34
Bushbuck	35	3 - 75	3	0.4	0	0 - 0	0	0
Bushpig	178	10 - 520	10	2.06	51	6 - 145	6	1.09
Duiker	240	77 - 403	14	2.78	35	3 - 75	3	0.75
Eland	118	13 - 240	13	1.36	9	1 - 27	1	0.19
Giraffe	72	8 - 136	8	0.83	0	0 - 0	0	0
Hartebeest	73	6 - 171	6	0.84	127	14 - 266	14	2.72
Impala	10873	6398 - 15348	1242	125.76	1853	635 - 3071	214	39.63
Kudu	362	92 - 632	32	4.19	60	7 - 119	7	1.28
Puku	4146	2265 - 6028	468	47.95	543	129 - 957	60	11.61
Reedbuck	8	1 - 24	1	0.09	0	0 - 0	0	0
Roan	445	28 - 971	28	5.15	17	2 - 39	2	0.36
Warthog	1029	685 - 1373	94	11.9	563	304 - 822	59	12.04
Waterbuck	1106	242 - 1969	112	12.79	37	4 - 91	4	0.79
Wildebeest	903	100 - 1742	100	10.44	401	43 - 949	43	8.58
Zebra	2767	1767 - 3766	285	32	732	282 - 1182	72	15.65

3.4.2 Luambe National Park

Buffalo 1,911 and impala 936 were the most abundant species in Luambe National Park (Table 9). The density of buffalo (555.52/100km^2) was the highest recorded in the country during the 2015 surveys (Figure 8). The density of impala (272.09/100km^2) was only second to that of the Lower Zambezi National Park. Population trends for impala, puku and zebra, the three species for which there has been consistent sightings in previous surveys (Simukonda, 2009; Simukonda 2011; WCS, 2012) have largely been stable for the park (Figure 11). The lack of consistent buffalo estimates in the area from previous surveys may indicate that the buffalo population in Luambe is transient between the park and the surrounding Game Management Areas.

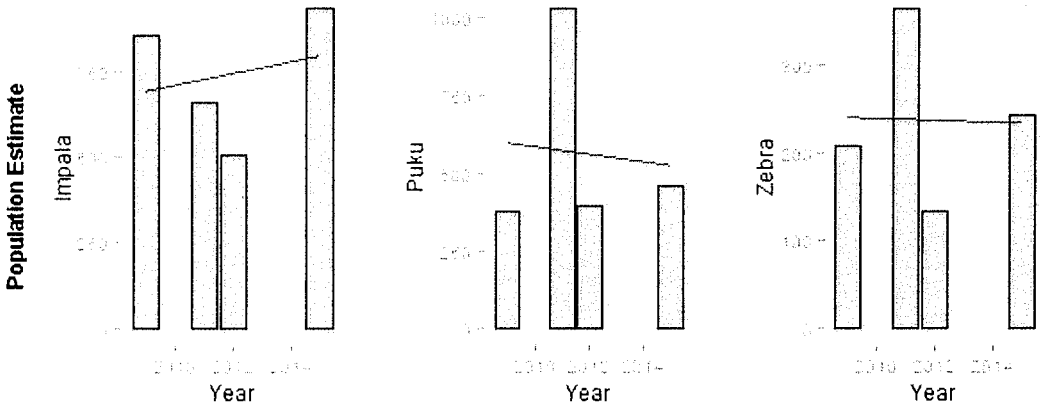

Figure 9. Impala, puku and zebra populations trends in Luambe National Park for the period 2009 - 2015

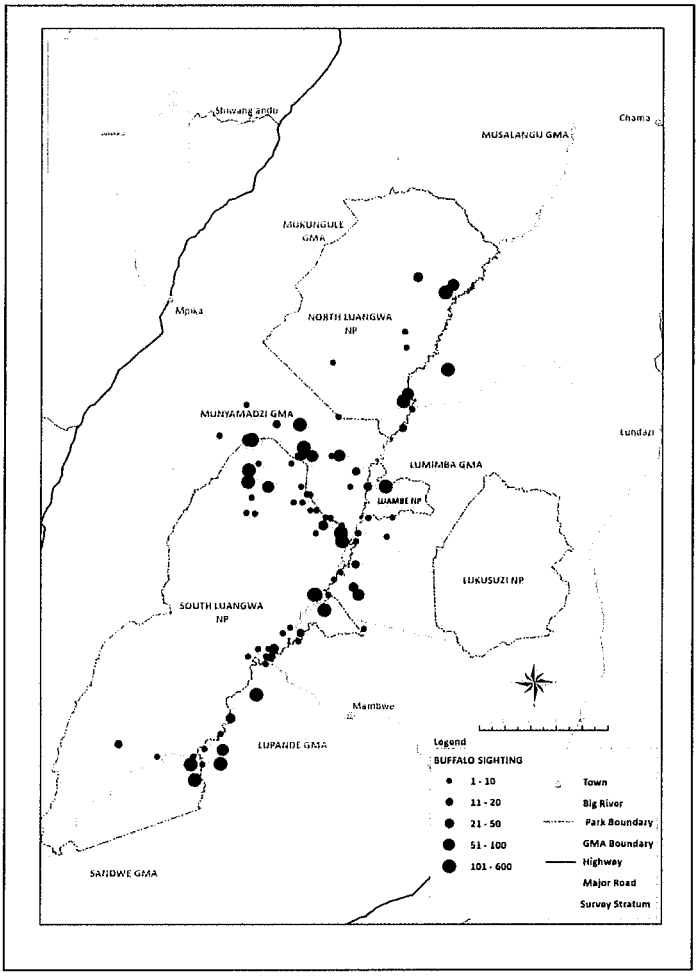

Figure 10. Buffalo distribution in the Luangwa valley

Table 7. Population estimates for Luambe and Lukusuzi National Parks

	LUAMBE				LUKUSUZI			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	1911	204 - 5398	204	555.52	**0**	0 - 0	**0**	**0**
Bushbuck	0	0 - 0	0	0	37	2 - 122	2	1.42
Bushpig	17	1 - 51	1	4.94	93	5 - 289	5	3.56
Duiker	0	0 - 0	0	0	167	42 - 292	9	6.4
Eland	0	0 - 0	0	0	93	5 - 289	5	3.56
Giraffe	8	1 - 24	1	2.33	0	0 - 0	0	0
Hartebeest	0	0 - 0	0	0	130	7 - 332	7	4.98
Impala	936	187 - 1685	104	272.09	0	0 - 0	0	0
Kudu	19	2 - 54	2	5.52	149	8 - 469	8	5.69
Puku	455	49 - 1045	49	132.27	0	0 - 0	0	0
Reedbuck	0	0 - 0	0	0	0	0 - 0	0	0
Roan	34	3 - 80	3	9.88	167	9 - 436	9	6.4
Sable	0	0 - 0	0	0	56	3 - 139	3	2.13
Warthog	60	4 - 162	4	17.44	19	1 - 57	1	0.71
Waterbuck	0	0 - 0	0	0	0	0 - 0	0	0
Wildebeest	0	0 - 0	0	0	0	0 - 0	0	0
Zebra	243	26 - 522	26	70.64	0	0 - 0	0	0

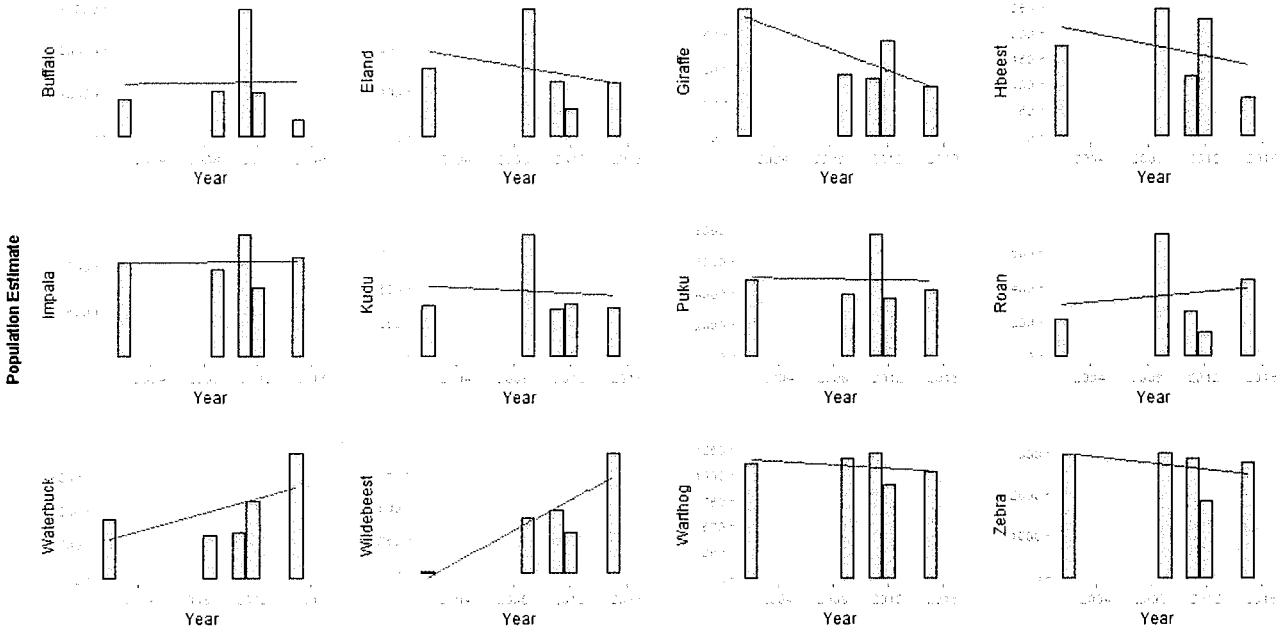

Figure 11. Population trends for selected species in the South Luangwa National Park 2002 - 2015

3.4.3 North Luangwa National Park

The most abundant herbivores in North Luangwa National Park were buffalo 7030, impala 1853, zebra 732, warthog 563 and puku 543 (Table 10). Other species counted included bushpig, duiker, hartebeest, kudu, roan and wildebeest. Population trends for North Luangwa are given in figure 15 below. Apart from buffalo, hartebeest and warthog, most other species in the North Luangwa National Park showed a declining trend.

3.4.4 Lukusuzi National Park

Nine herbivore species were observed in the Lukusuzi National Park and of these only duiker 167, hartebeest 130, kudu 149 and roan 167 were estimated above a hundred individuals (Table 5). Lukusuzi National Park is the only park that recorded Sable Antelope in the Luangwa ecosystem. Previous surveys have considered the number of sightings in Lukusuzi National Park to be too low to warrant statistical analysis, and have only provided absolute numbers (e.g., WCS, 2009, 2012). It is evident from the associated confidence intervals (table 7), which are too wide that the estimates from Lukusuzi are unreliable due to the few sightings recorded. As such caution should be taken when interpreting the estimates. Lukusuzi National Park recorded human activities (mining) right in the interior of the park (Figure 14). The abundance of these activities could be having an effect on the abundance, diversity and distribution of the animal species in the park.

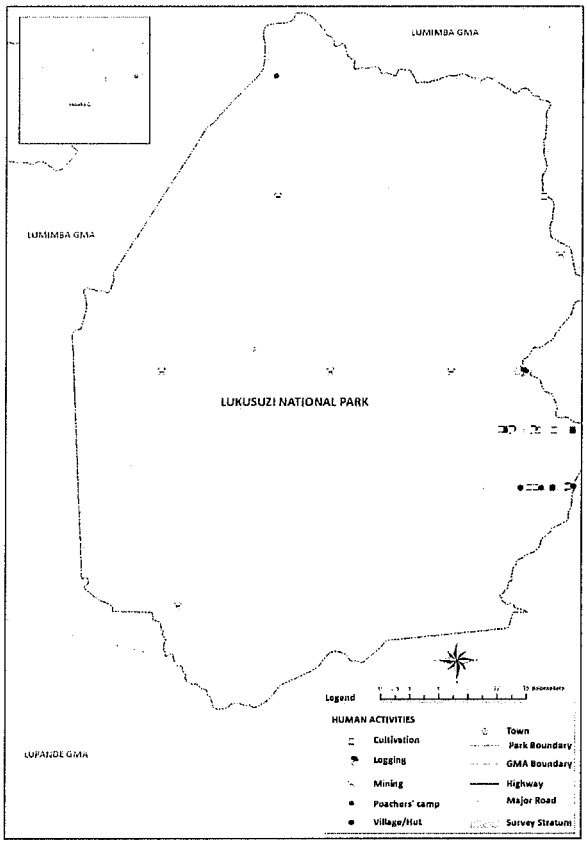

Figure 12. Human activities in Lukusuzi National Park

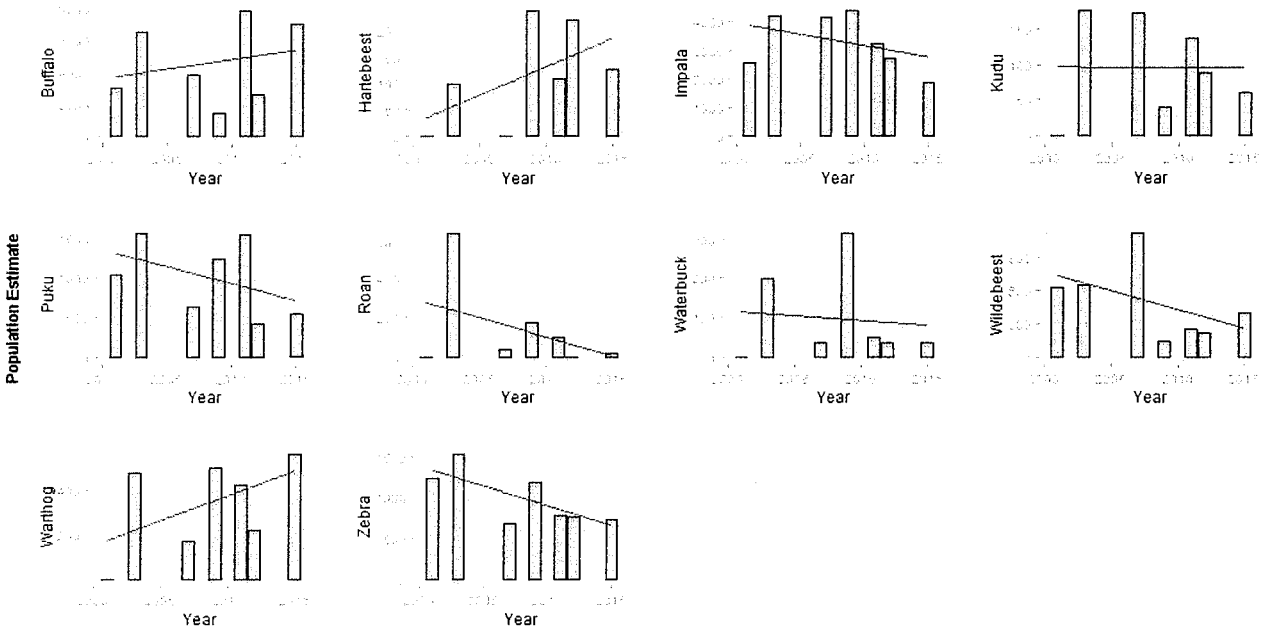

Figure 13. Population trends for selected species in NLNP

3.5 Lower Zambezi Valley

The estimated population of the primary herbivores in the Zambezi valley were: Buffalo 4806, impala 3947, waterbuck 658, zebra 400, warthog 162, kudu 67, and duiker 19 (Table 12).

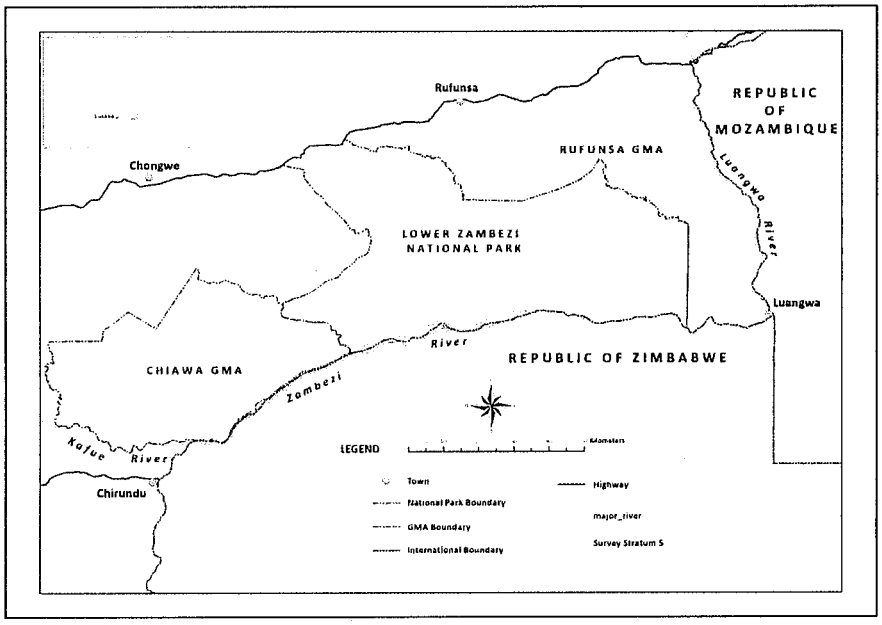

Figure 14. Lower Zambezi Valley Survey Strata

Buffalo was the most abundant herbivore in the Zambezi valley, however, about 81% of this population was found in the Game Management Areas, which accounted for 55% of the surveyed area.

Table 8. Overall population estimates and statistics for the Lower Zambezi Valley

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	4806	504	-	9912	504	190.1
Duiker	19	2	-	44	2	0.75
Impala	3947	1845	-	6050	414	156.15
Kudu	67	7	-	129	7	2.64
Warthog	162	17	-	307	17	6.41
Waterbuck	658	69	-	1347	69	26.03
Zebra	400	42	-	833	42	15.84

3.5.1 Lower Zambezi National Park

The Lower Zambezi National Park recorded the highest density (282.27/100km^2) of impala in the country (Table 13).The distribution of impala in the Zambezi Valley is in direct contrast to the distribution of buffalo (Figure 6). Eighty-two per cent of the impala population in the Lower Zambezi Valley was found in the LZNP. Previous studies using ground counts have found similar high densities of impala in the Lower Zambezi National Park (Leigh, 2005). The LZNP recorded the lowest species

diversity in primary large herbivores of the 7 parks surveyed. Apart from waterbuck, the populations of buffalo, Impala, and warthog have seen a downward trend in the period 2003 – 2015 (Figure 6).

Table 9. Population estimates for LZNP and GMAs

	LZNP				Lower Zambezi GMAs			
Species	Pop. Est	95% Range	No. seen	No./ 100km²	Pop. Est	95% Range	No. seen	No./ 100km²
Buffalo	887	93 - 2276	93	77.47	3919	411 - 8835	411	283.37
Duiker	10	1 - 28	1	0.87	10	1 - 28	1	0.72
Impala	3232	1244 - 5220	339	282.27	715	146 - 1284	75	51.7
Kudu	48	5 - 101	5	4.19	19	2 - 55	2	1.37
Warthog	114	12 - 247	12	9.96	48	5 - 111	5	3.47
Waterbuck	200	21 - 417	21	17.47	458	48 - 1072	48	33.12
Zebra	362	38 - 792	38	31.62	38	4 - 109	4	2.75

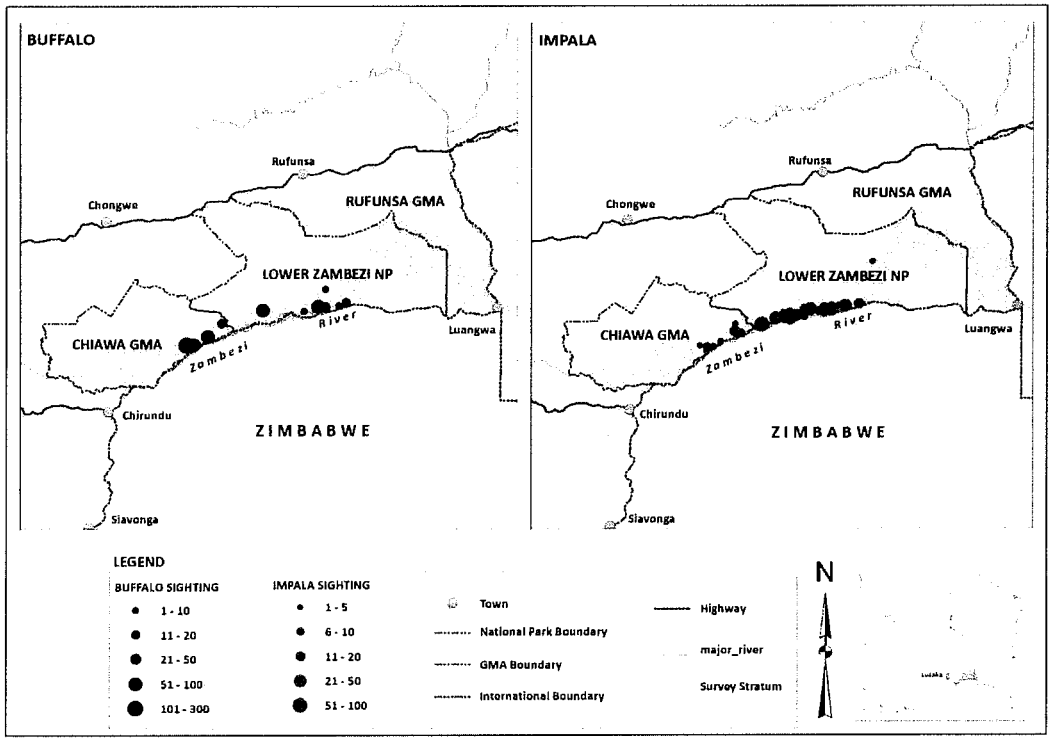

Figure 15. Buffalo and Impala distribution in the Lower Zambezi Valley. Note the difference in the distribution of the two species.

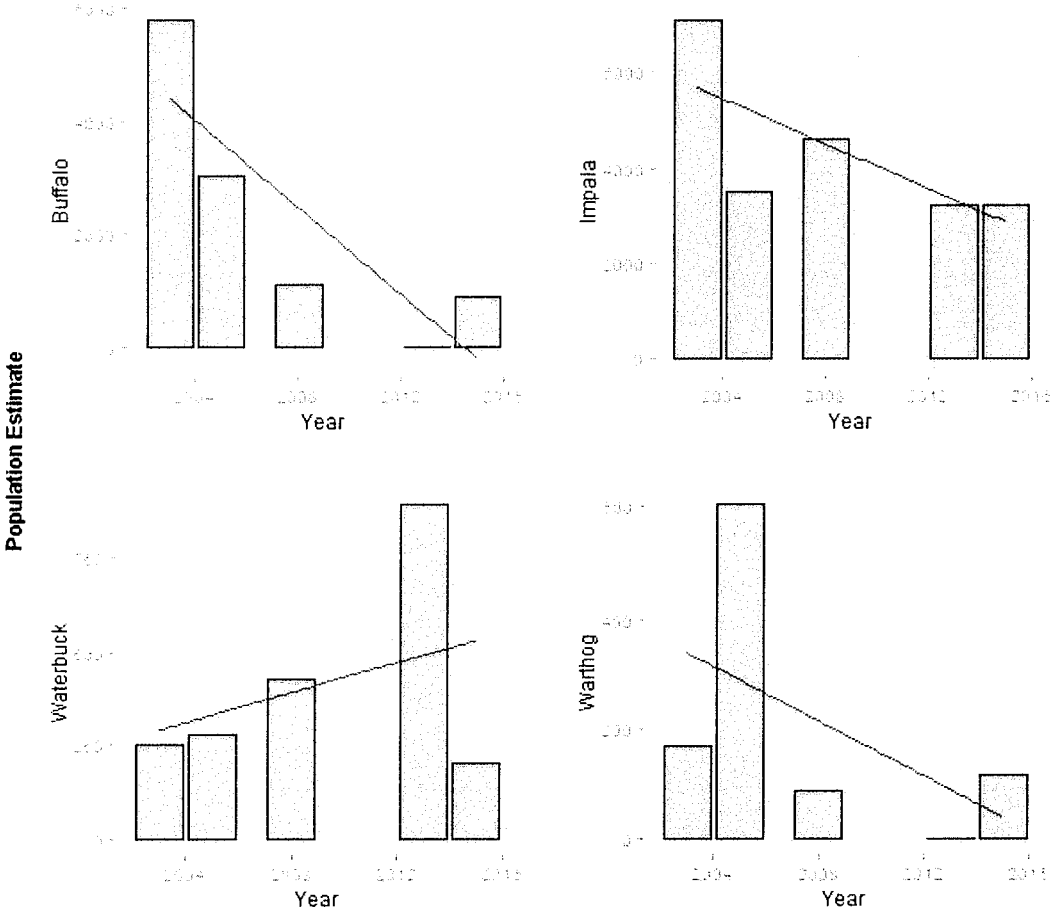

Figure 16. Population trends for selected species in the Lower Zambezi National Park 2003 - 2015

3.6 Sioma Ngwezi National Park

Sioma Ngwezi National Park recorded the highest density of eland (25.37/100km2), duiker (26.02/100km2) and roan (18.41/100km2) in the country. The population estimate (1137) for eland in Sioma Ngwezi National Park was the highest in the country during the 2015 surveys, whilst the estimate for duiker (1166) was only second to Kafue National Park.

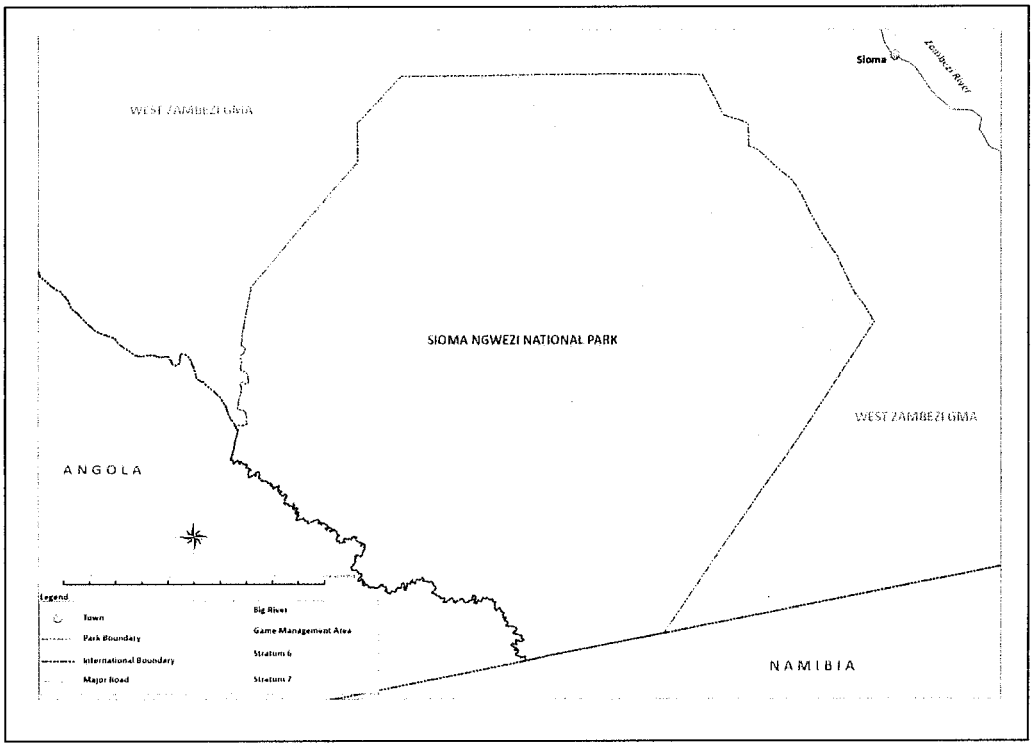

Figure 17. Sioma Ngwezi National Park Survey Strata

Table 10. Population estimates and statistics for Sioma Ngwezi National Park

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	293	35	851	-	35	6.54
Duiker	1166	954	1379	-	142	26.02
Eland	1137	136	2731	-	136	25.37
Giraffe	519	233	804	-	62	11.57
Impala	72	9	182	-	9	1.61
Kudu	411	201	621	-	50	9.17
Oribi	17	2	39	-	2	0.37
Roan	825	182	1469	-	99	18.41
Sable	504	92	916	-	62	11.24
Warthog	114	24	203	-	14	2.54
Wildebeest	59	7	156	-	7	1.31
Zebra	273	33	573	-	33	6.09

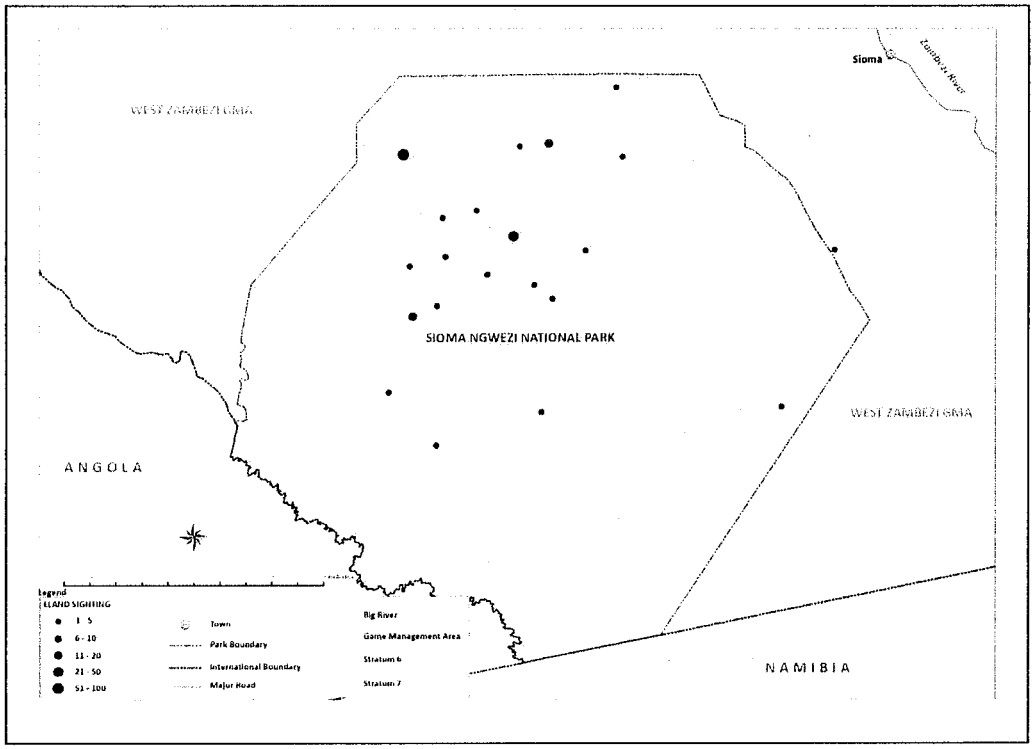

Figure 18. Eland distribution in Sioma Ngwezi National Park

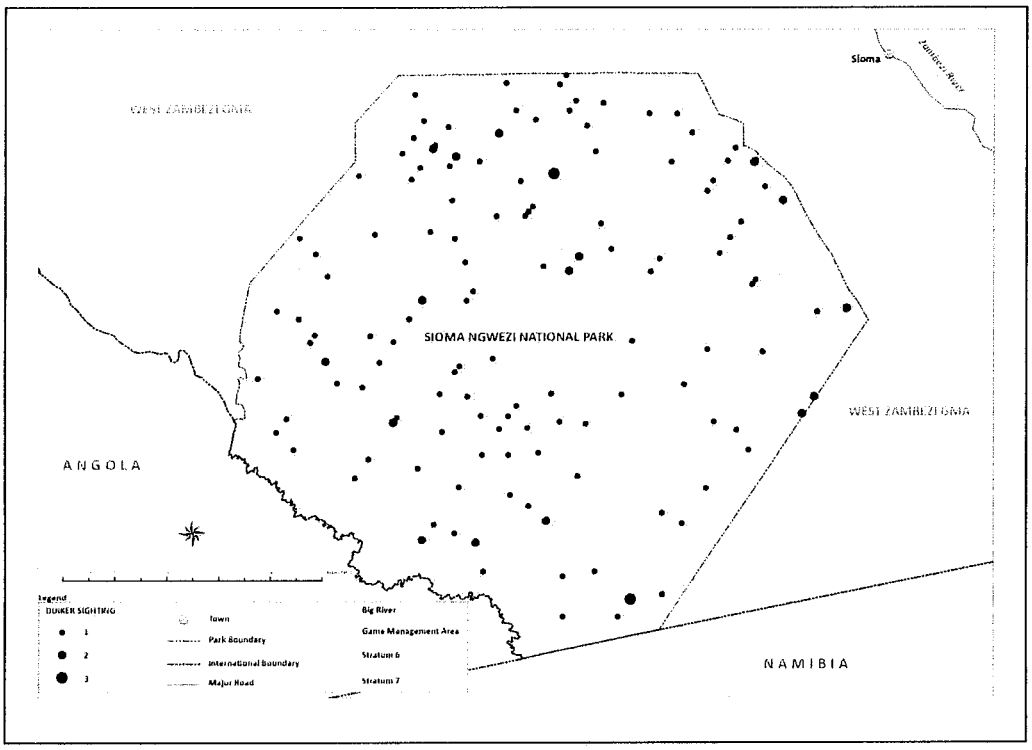

Figure 19. Common duiker distribution in Sioma Ngwezi National Park

Previous studies in the Sioma Ngwezi National Park have indicated higher estimates for all species in the wet season compared to the dry season (Chase and Griffin, 2009). Sioma Ngwezi National Park is seasonally inundated and has little topographic relief, so that surface pans remain widely distributed. These pans are the main water source for animals in the National Park, however in the dry season, these pans dry up and this was worse in 2015 (Henry Luwaya, pers. Communication). Thus animals were forced to migrate to permanent water sources such as the Kwando and the Zambezi rivers in the west and east respectively. These were outside the survey area.

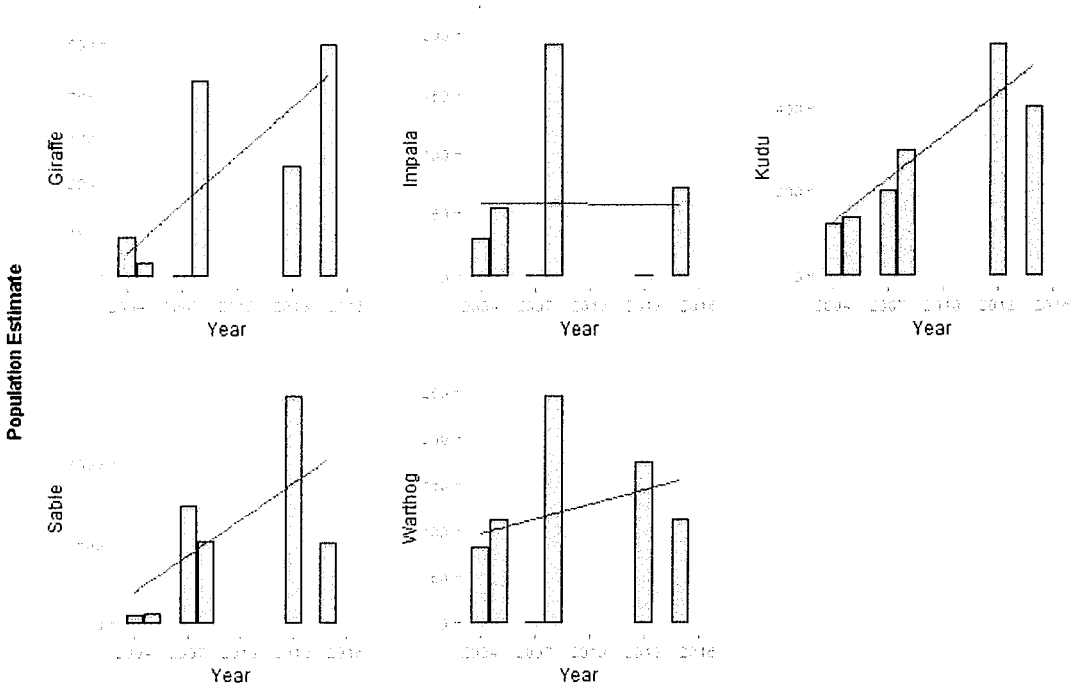

Figure 20: Population trends for selected species in Sioma Ngwezi National Park

3.7 Domestic Livestock

The Kafue ecosystem recorded the highest estimate of cattle at 45549, of which 159 were estimated within the boundaries of the National Park. The density of cattle in the Kafue GMAs was as high as 199.32/100km^2. Of the seven national parks surveyed domestic livestock were only recorded in the Kafue and Sioma Ngwezi National Parks. The estimates for domestic livestock encountered during the surveys are given in the table 12 below.

Table 11. Population estimates and statistics for domestic livestock

Species	Protected Area	Pop. est.	95% Range			No. seen	No./ 100km^2
Donkey	Kafue GMAs	176	10	-	412	10	0.77
Cattle	Kafue National Park	194	17	-	460	17	0.87
	Kafue GMAs	45355	28207	-	62503	2530	199.32
	Luangwa GMAs	588	34	-	1201	34	4.22
	Lower Zambezi GMAs	601	63	-	1252	63	43.46
	Sioma Ngwezi National Park	1057	174	-	1941	130	23.59
Shoats	Kafue GMAs	12318	6470	-	18165	682	54.13
	Luangwa GMAs	129	9	-	278	9	0.93
	Lower Zambezi GMAs	1077	113	-	2213	113	77.87
	Sioma Ngwezi National Park	72	9	-	166	9	1.61

3.8 Birds

Apart from large wild herbivores and domestic livestock, large birds were counted during the surveys. These included crowned cranes, ground hornbill, saddle-billed stocks, and wattled cranes. The estimated population sizes for these species and the associated statistics are given in table 13 below. Ground hornbill were the most widely distributed of the bird species, recorded in all the National Parks and the Game Management areas surveyed. Wattled cranes, of which 10 were sighted in the Luangwa ecosystem, are considered vagrant in this system.

Table 12. Population estimates and statistics for large birds

Species	Protected Area	Pop. est.	95% Range	No. seen	No./ 100km^2
Ground hornbill	Kafue National Park	1558	947 - 2169	137	7.01
	Kafue GMAs	1731	971 - 2491	103	7.61
	South Luangwa National Park	364	110 - 618	35	4.21
	North Luangwa National Park	162	18 - 307	15	3.46
	Luambe National Park	34	4 - 97	4	9.88
	Lukusuzi National Park	167	9 - 349	9	6.4
	Luangwa GMAs	744	413 - 1075	71	5.34
	Lower Zambezi National Park	48	5 - 112	5	4.19
	Zambezi Valley GMAs	29	3 - 68	3	2.1
	Sioma Ngwezi National Park	17	2 - 39	2	0.37
Wattled Crane	Kafue National Park	418	95 - 742	48	1.88
	Kafue GMAs	123	8 - 253	8	0.54
	North Luangwa National Park	28	3 - 80	3	0.6
	Luangwa GMAs	66	7 - 187	7	0.47
Crowned Crane	Kafue National Park	26	3 - 60	3	0.12
	South Luangwa National Park	144	17 - 347	17	1.67
	Luangwa GMAs	68	8 - 158	8	0.49
Saddlebilled stock	Kafue National Park	8	1 - 23	1	0.04
	South Luangwa National Park	28	3 - 67	3	0.32
	Luangwa GMAs	18	2 - 41	2	0.13
Marabou stock	Kafue GMAs	165	9 - 483	9	0.73
	Luangwa GMAs	9	1 - 27	1	0.06

3.9 Other Species

Other species recorded during the surveys include baboon, crocodile, hippo, hyaena, honey badger, lion, and wild dogs. Aerial surveys are not the best methods for estimating abundance of these species, the numbers seen in the sample transects are however given in table 17 below as a record of their presence in the surveyed areas.

Table 13. Other species seen in sample transects

Species	Protected Area	No.seen
Baboon	Kafue National Park	9
	Kafue GMAs	30
	Luangwa South National Park	45
	North Luangwa National Park	40
	Luambe National Park	1
	Luangwa Parks	86
	Luangwa GMAs	188
	Lower Zambezi National Park	3
	Kafue National Park	52
	Kafue GMAs	82
	Sioma Ngwezi National Park	2
Hippopotamus	Kafue National Park	57
	Kafue GMAs	26
	Luangwa South National Park	125
	North Luangwa National Park	72
	Luangwa Parks	197
	Luangwa GMAs	159
	Lower Zambezi National Park	54
	Lower Zambezi GMAs	23
Monkey	Luangwa GMAs	10
Honey Badger	Luangwa South National Park	1
Hyaena	Luangwa GMAs	4
Lion	Luangwa South National Park	11
Wild Dog	Kafue National Park	7
	Luangwa GMAs	4
Crocodile	Luangwa South National Park	1
	Luangwa GMAs	44
	Lower Zambezi National Park	2

4.0 CONCLUSION AND RECOMMENDATIONS

Most species are increasing or stable compared to previous surveys. Given that a low sampling intensity was used during 2015, the estimated numbers are likely to be higher than what was counted.

The low numbers of sable in the Luangwa valley is of great concern. It is therefore recommended that the department continues with the policy of excluding sable on any hunting licenses. It is further proposed that studies are undertaken to investigate the limiting factors to the distribution of sable in the Luangwa ecosystem.

The decreasing numbers in Thornicroft giraffe is worrisome and it is suggested that an intensive study is instituted to determine precise estimates (e.g., mark-resight or other robust methods), and the likely reasons for this downward trend of this endemic sub-species of giraffe.

Habitat encroachment is a serious problem in the country's protected areas. There is a need to develop and implement General Management Plans for the country's protected areas to stem the loss of wildlife habitat. The extensive distribution of human settlements close to water sources is affecting the distribution of wildlife and further constricting their movement and habitat.

The survey has revealed that Game Management Areas, which are often considered as marginal areas are actually important areas for the conservation of some important species such as buffalo in the Luangwa ecosystem, Zebra in the Kafue ecosystem, and impala in the Lower Zambezi Valley. Thus it is important that an ecosystem approach is taken in the management of our protected area network.

The basic design of future aerial surveys should follow designs similar to the 2015 design as it takes an ecosystem approach rather than administrative boundaries in making population level estimates. Monitoring the wider ecosystem will allow management to detect changes in populations that might otherwise have been obscured by movements out of smaller survey areas.

Due to the wide confidence intervals associated with aerial surveys, we recommend regular countrywide surveys at 2 – 3 years intervals. We also recommend alternate wet season and dry season surveys.

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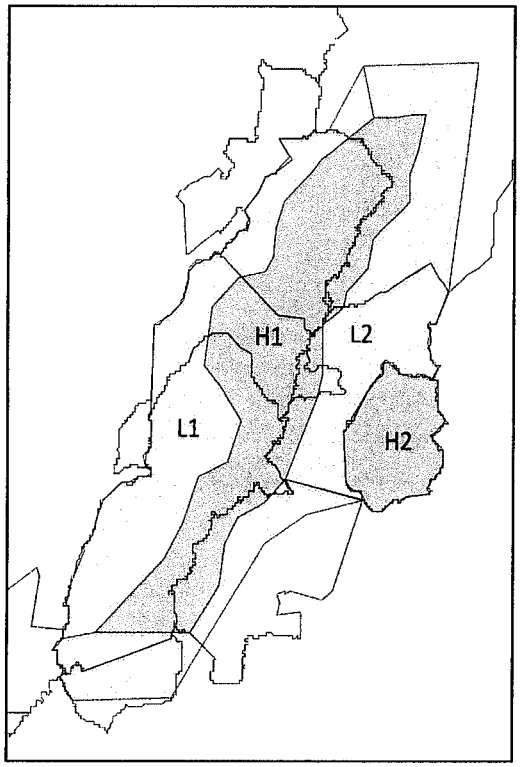
APPENDIX I - Methods

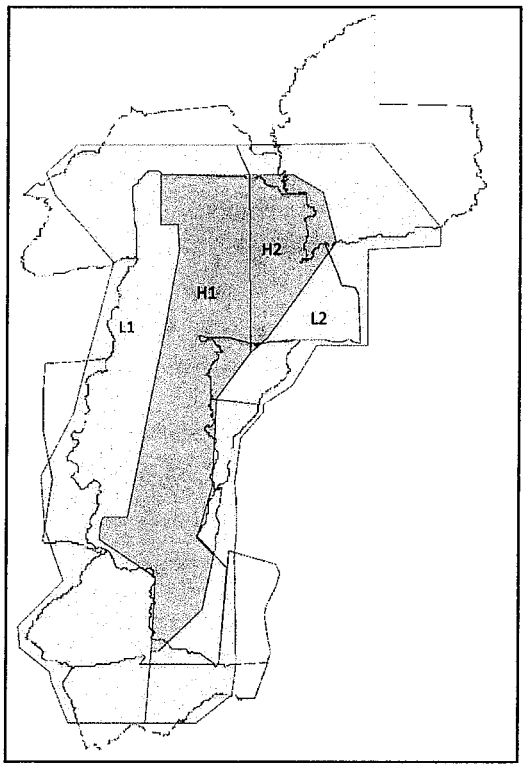
Methods followed CITES MIKE aerial survey standards using stratified systematic transect sampling (Norton Griffiths, 1978) with analysis by Jolly's method for unequal size sampling units (Jolly, 1969).

Survey design

The survey area was stratified on the basis of previously reported elephant densities. The Lower Zambezi Valley was not stratified.



Luangwa Survey Zones: Light shading: 7.5% sampling; Dark shading: 15% sampling; Unshaded: excluded from survey.

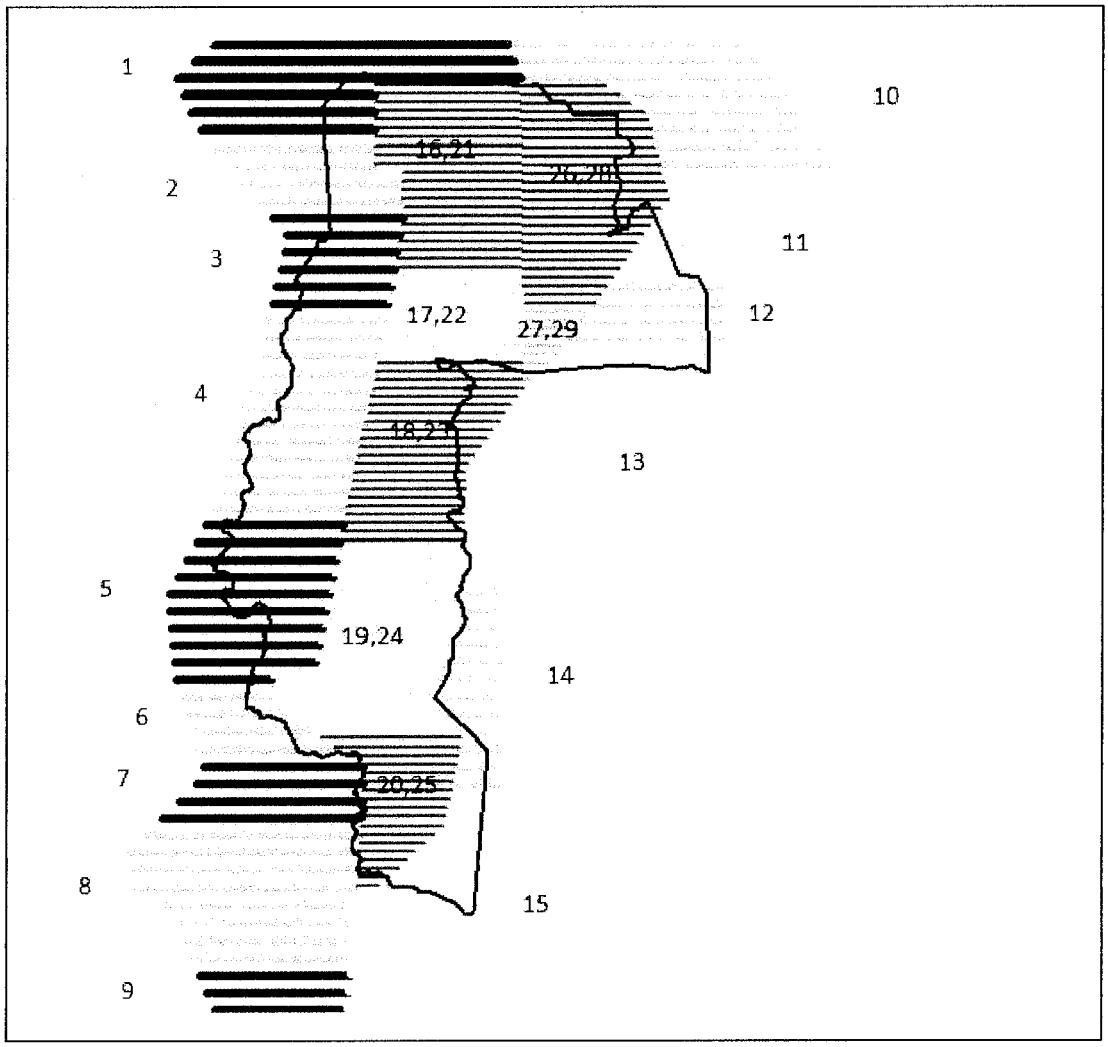


Kafue Survey Zones: Light shading: 7.5% sampling; Dark shading: 15% sampling; Unshaded: excluded from survey

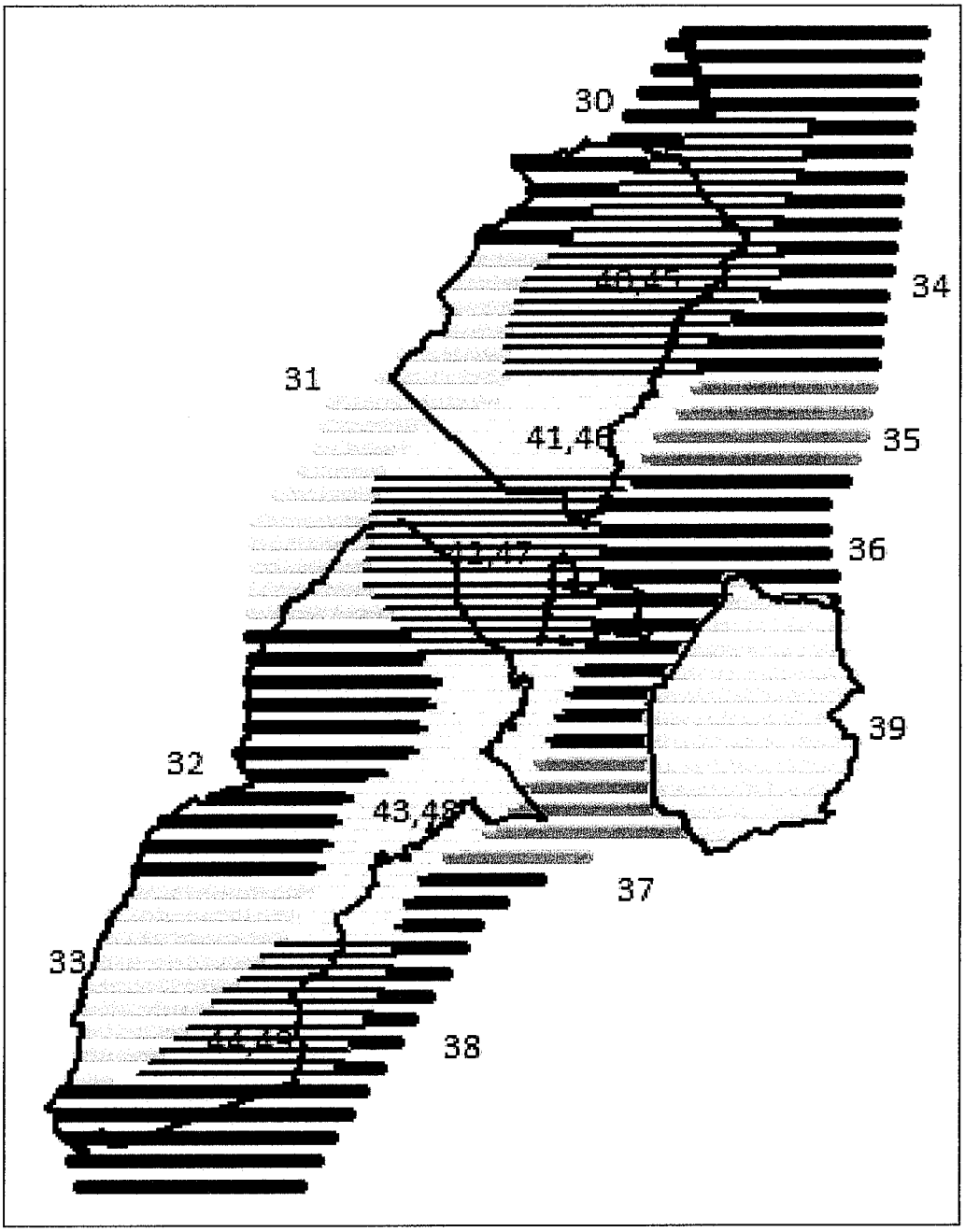
Selection of transects

Transects were evenly spaced according to the required sampling intensity (3 km for 10% coverage,) from a randomly chosen start point and oriented at right angles to major features (e.g. rivers) in each stratum, as far as possible (Fig. 18).

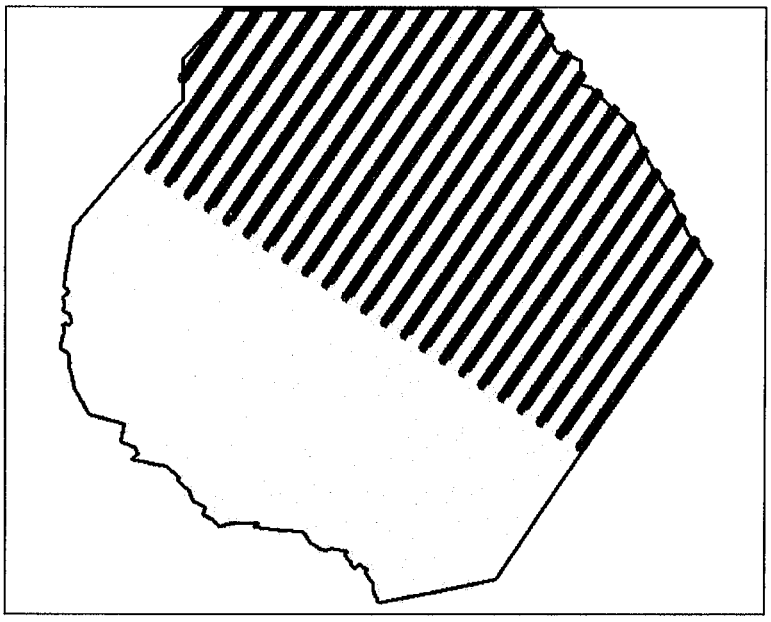
Sampling intensities were designed to maximise the precision of elephant estimates so were selected for each stratum on the basis of previously reported elephant densities and modified to fit budgetary constraints.



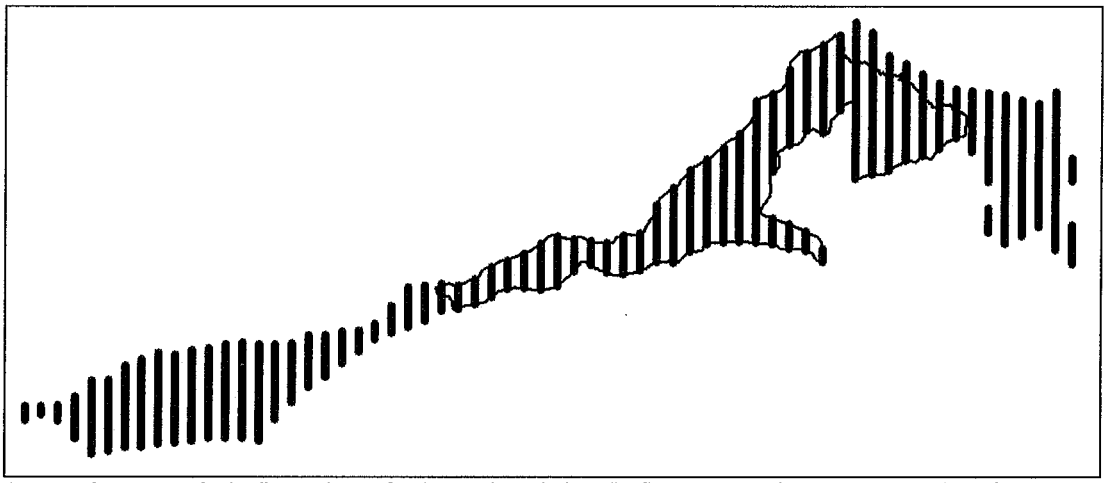
Strata and substrata in Kafue ecosystem: Eastern Stratum is KA, Western is KB and the two central strata are named KC (red) and KD (green), respectively. As each central stratum consists of two interleaved sets of transects, these sets are named KCA, KCB, KDA and KDB. Flight substrata are distinguished by colour here, and numbered 1-25.



Strata and substrata in the Luangwa Ecosystem. Strata: 5% sampling blocks are named LA (blue), LB(green) and LD(yellow). Central block (red) consists of two interleaved 5% coverages: LCA and LCB. Flight substrata are numbered. LD is Lukusuzi National Park - other parks do not coincide with



Transects in Sioma Ngwezi. Northernmost stratum is SIA, the other is SIB



Transects in Lower Zambezi Valley: Outline is of park. Note that only the Valley floor is covered: the escarpment is excluded from the survey.

Data collection

The aircraft were flown at a nominal height of 300 feet above ground level along the transects. Height above ground level was maintained by the pilots using the radar altimeters fitted in each aircraft. The height was recorded every 30 seconds along the transect and the mean height was used to correct the strip width for the transect from the calibrated width at 300ft to the actual width.

Calibration was carried out prior to the survey by flying over numbers painted on the airstrip at 10m intervals. The further and nearer numbers within the strip markers were called out by each observer

on each of about 20 passes over the airstrip. Height readings on both pressure and radar altimeters were taken on each pass. Results and calculations to give calibrated height are reported in Appendix II. Strip markers were fishing rods clamped to the aircraft struts.

Accurate navigation along each transect was achieved using Garmin GPS sets uploaded with transect coordinates. The position of each sighting was recorded on the GPS, which was also

used to record tracklogs of all flights. This data was downloaded as GPX files after each flight. Digital data of uploads and downloads are provided separately with this report.

Species and number seen for each sighting were recorded on data sheets. Data was captured to digital form during and after the survey.

Data analysis

Jolly's (1969) method for blocks of unequal size was used to calculated estimates of density and variance for each species in each stratum as follows:

$$R = \frac{\sum_{i=1}^{n} y_i}{\sum_{i=1}^{n} z_i}$$

$$\hat{Y} = Z.R$$

$$V_{\hat{Y}} = \frac{N(N-n)}{n}.(s_y^2 - 2.R.s_{zy} + R^2.s_z^2)$$

where:

R = density of animals

Y = total number estimated

Z = total area of stratum

y_i = number of animals counted in transect i

z_i = area of transect i

n = number of transects

N = number of transects possible in stratum where N = n.Z/Σz

s_y^2 = variance of number seen per transect

s_z^2 = variance of transect areas

s_{zy} = covariance between number seen per transect and transect area

V_y = variance of estimated number in stratum (i.e. variance of Y)

Overall estimates and variances were obtained from the sums of the stratum estimates and their variances.

Where strata were flown twice by different aircraft (strata KC A&B,KD A&B and LC A&B) the mean estimate of the two results was taken as the overall estimate. The variance of the mean result was the sum of the variances divided by four.

The standard error (SE) of the estimate is the square root of the variance and the 95% confidence limits of the estimate is $Y \pm t \, . \, SE$, where t is Student's t for a two-tailed probability of 0.05 and n-1 degrees of freedom.

Estimates for areas other than original strata (e.g. Parks) were obtained by classifying sightings according to area and reanalysing the strata with the reduced sets of sightings.

Mapping wildlife distribution

The positions of the sightings were simply plotted on a map of the area without accounting for the relative numbers of animals per sighting or the sampling intensity at which the sighting was made. All sightings (in the sample strips and out) were plotted.

APPENDIX II - Results by stratum

The following tables give the results for each stratum based on the numbers seen in the sample. SI refers to the Sampling Intensity for the stratum. Results for all species and associated statistical attributes are given. Column 6, % CI (Percent Confidence Interval), is the 95% confidence interval expressed as a percentage of the estimate.

These are the individual stratum results which have been combined to give higher level results reported above. "No. in" is the number of animals seen between the sampling strips. "No. out" is the number seen outside of them. Where the calculated lower limit of the confidence range is less than the number actually seen in the stratum (including all sightings, both in and out), the number seen is given as the lower confidence limit.

For species or attributes where no meaningful estimate can be given, only number seen is reported.

Kafue Ecosystem

	Stratum:	Kafue A			Area:	17638	Km^2	SI:	6
	Species	**Pop. est.**	**No. seen**	**95% Range**			**Variance**	**% CL**	**No./ 100km²**
1	Baboon	669	40	40	-	1650	239625	146.5	3.79
2	Buffalo	2012	120	120	-	5935	3836403	195	11.41
3	Bushbuck	34	2	2	-	97	1014.5	190.3	0.19
4	Bushpig	84	5	5	-	200	3389.3	139.1	0.48
5	Duiker	1140	68	720	-	1560	43940.1	36.8	6.46
6	Eland	754	45	45	-	2224	538234.1	194.8	4.28
7	Hartebeest	1710	102	231	-	3189	545117.5	86.5	9.7
8	Hippopotamus	17	1	1	-	49	252.8	190	0.1
9	Impala	3739	223	1439	-	6038	1318013	61.5	21.2
10	Kudu	570	34	103	-	1037	54437.6	82	3.23
11	Lechwe	872	52	52	-	2401	582382.9	175.4	4.94
12	Monkey	671	40	40	-	1975	424284.6	194.6	3.8
13	Oribi	17	1	1	-	49	252.8	190	0.1
14	Puku	989	59	59	-	2249	395548.4	127.4	5.61
15	Reedbuck	201	12	12	-	419	11831.9	108.3	1.14
16	Roan	1509	90	197	-	2821	428779.8	86.9	8.55
17	Sable	5767	344	2959	-	8576	1965594	48.7	32.7
18	Sitatunga	101	6	6	-	265	6725.4	163.3	0.57
19	Warthog	1844	110	1144	-	2544	122114.3	38	10.46
20	Waterbuck	234	14	14	-	477	14625.6	103.4	1.33
21	Zebra	117	7	7	-	346	13008.6	194.7	0.67
22	Jackal SS	0	0	0	-	0	0	0	0
23	Ground Hornbill	1073	64	600	-	1546	55802.9	44.1	6.08
24	Wattled crane	34	2	2	-	97	1014.5	190.3	0.19
25	Donkey	84	5	5	-	246	6553.6	193.5	0.48
26	Cattle	6052	361	361	-	11998	8809719	98.2	34.31
27	Sheep/goats	2029	121	121	-	4443	1453256	119	11.5

	Stratum:	Kafue B			Area:	12141	Km²	SI:	5.5
	Species	**Pop. est.**	**No. seen**	**95% Range**			**Variance**	**% CL**	**No./ 100km²**
1	Baboon	1174	64	64	-	2313	323301.3	97	9.67
2	Bushbuck	92	5	5	-	197	2781.9	115.2	0.76
3	Bushpig	92	5	5	-	271	7997.7	195.4	0.76
4	Duiker	403	22	258	-	549	5277.4	36.1	3.32
5	Eland	385	21	21	-	1102	127960.6	186.1	3.17
6	Grysbok	18	1	1	-	54	322.6	196.2	0.15
7	Hartebeest	1376	75	153	-	2598	372367.9	88.9	11.33
8	Hippopotamus	183	10	10	-	538	31314.3	193.3	1.51
9	Impala	5337	291	520	-	10154	5782437	90.3	43.96
10	Kudu	165	9	9	-	332	6965.9	101.3	1.36
11	Monkey	18	1	1	-	54	318	194.8	0.15
12	Puku	2366	129	129	-	6855	5021544	189.7	19.49
13	Reedbuck	459	25	25	-	1120	109168.8	144.4	3.78
14	Roan	569	31	31	-	1494	213271.6	162.7	4.68
15	Sable	2403	131	933	-	3872	538182.8	61.2	19.79
16	Warthog	1541	84	524	-	2557	257657.1	66	12.69
17	Waterbuck	3375	184	184	-	6720	2788253	99.1	27.8
18	Wildebeest	1669	91	91	-	3783	1113868	126.7	13.75
19	Zebra	3631	198	198	-	7705	4136205	112.2	29.91
20	Ground Hornbill	1302	71	562	-	2042	136394.1	56.8	10.73
21	Wattled crane	92	5	5	-	209	3454.7	128.4	0.76
22	Crowned crane	0	0	0	-	0	0	0	0
23	Marabou stork	165	9	9	-	488	26028.4	195.8	1.36
24	Donkey	92	5	5	-	270	7889	194	0.76
25	Cattle	38973	2125	22573	-	55374	6.70E+07	42.1	321.01
26	Sheep/goats	10289	561	4856	-	15722	7356537	52.8	84.75

	Stratum:	Kafue CA		Area:	11821	Km^2	SI:	6.2

	Species	Pop. est.	No. seen	95% Range			Variance	% CL	No./ $100km^2$
1	Buffalo	4825	297	297	-	11395	1.07E+07	136.2	40.82
2	Bushbuck	49	3	3	-	119	1209.7	143.6	0.41
3	Bushpig	49	3	3	-	144	2221.6	194.7	0.41
4	Duiker	146	9	23	-	270	3776.4	84.6	1.24
5	Eland	32	2	2	-	77	484.9	136.4	0.27
6	Hartebeest	1690	104	711	-	2668	236497.7	57.9	14.29
7	Hippopotamus	536	33	33	-	1089	75439.6	103.1	4.54
8	Impala	3444	212	1226	-	5662	1214510	64.4	29.14
9	Kudu	422	26	26	-	829	40825.1	96.3	3.57
10	Lechwe	11583	713	713	-	23919	3.76E+07	106.5	97.99
11	Oribi	65	4	4	-	164	2435	152.9	0.55
12	Puku	9098	560	560	-	19153	2.50E+07	110.5	76.96
13	Reedbuck	81	5	5	-	194	3130	138.6	0.69
14	Roan	195	12	12	-	499	22742.4	155.7	1.65
15	Sable	4776	294	2399	-	7153	1394732	49.8	40.4
16	Warthog	2583	159	1728	-	3438	180360.9	33.1	21.85
17	Waterbuck	1381	85	733	-	2079	111775.3	47.8	11.68
18	Wildebeest	341	21	21	-	704	32538.2	106.4	2.89
19	Zebra	926	57	57	-	2042	307523.1	120.5	7.83
20	Wild Dog	114	7	7	-	336	12201.9	195.5	0.96
21	Ground Hornbill	650	40	319	-	980	26939.3	50.8	5.5
22	Wattled crane	504	31	31	-	1117	92733.9	121.7	4.26
23	Crowned crane	32	2	2	-	96	986.5	194.6	0.27
24	Saddlebill	16	1	1	-	48	246	194.3	0.14
25	Cattle	601	37	37	-	1441	174039.5	139.7	5.08

	Stratum:	Kafue CB		Area:	11821	Km^2	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ $100km^2$**
1	Baboon	556	30	30 - 1177		98289.3	115.5	4.7
2	Buffalo	705	38	38 - 1936		374254.2	174.8	5.96
3	Bushbuck	56	3	3 - 117		931.3	110.4	0.47
4	Bushpig	334	18	18 - 679		29487.7	103.6	2.82
5	Duiker	297	16	142 - 451		5890.5	52.1	2.51
6	Grysbok	19	1	1 - 55		325.7	195.9	0.16
7	Hartebeest	3337	180	1636 - 5039		714455.8	51	28.23
8	Hippopotamus	148	8	8 - 438		20775.5	195.6	1.25
9	Impala	18762	1012	9980 - 27544		1.90E+07	46.8	158.72
10	Kudu	519	28	147 - 891		34132	71.6	4.39
11	Lechwe	11254	607	607 - 29006		7.78E+07	157.7	95.2
12	Oribi	19	1	1 - 55		324.3	195.5	0.16
13	Puku	11254	607	2421 - 20086		1.93E+07	78.5	95.2
14	Reedbuck	334	18	18 - 661		26447.2	98.1	2.82
15	Roan	946	51	51 - 1955		251670.6	106.8	8
16	Sable	6507	351	2729 - 10286		3524130	58.1	55.05
17	Warthog	5599	302	3759 - 7439		835210.2	32.9	47.36
18	Waterbuck	5766	311	3100 - 8431		1753355	46.2	48.78
19	Wildebeest	2114	114	114 - 4319		1200736	104.4	17.88
20	Zebra	593	32	32 - 1298		122471.9	118.7	5.02
21	Ground Hornbill	890	48	354 - 1425		70794.1	60.2	7.53
22	Wattled crane	297	16	16 - 588		20953.9	98.2	2.51
23	Crowned crane	19	1	1 - 55		323.3	195.2	0.16
24	Cattle	445	24	24 - 1059		92916.5	137.9	3.76

	Stratum:	Kafue C Mean Estimates		Area:	11821	Km^2	SI:	5.8
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	278	30		-			2.35
2	Buffalo	2765	335	335	- 5953	2576726	115.3	23.39
3	Bushbuck	52	6	8	- 97	502.1	85.3	0.44
4	Bushpig	191	21	21	- 363	7470.6	89.8	1.62
5	Duiker	221	25	127	- 316	2270.8	42.7	1.87
6	Eland	16	2	2	- 37	113.3	130.1	0.14
7	Grysbok	9	1	1	- 27	76.8	187.7	0.08
8	Hartebeest	2513	284	1574	- 3453	223676.8	37.4	21.26
9	Hippopotamus	342	41	44	- 640	22520.6	87.1	2.89
10	Impala	11103	1224	6765	- 15441	4770617	39.1	93.93
11	Kudu	471	54	207	- 734	17583.3	55.9	3.98
12	Lechwe	11418	1320	1320	- 21759	2.71E+07	90.6	96.59
13	Oribi	42	5	5	- 92	645.3	120.8	0.35
14	Puku	10176	1167	3780	- 16571	1.04E+07	62.9	86.08
15	Reedbuck	207	23	42	- 373	6966	79.9	1.76
16	Roan	570	63	65	- 1075	64643.1	88.6	4.82
17	Sable	5642	645	3506	- 7778	1156613	37.9	47.73
18	Warthog	4091	461	3120	- 5062	239030.6	23.7	34.61
19	Waterbuck	3573	396		-			30.23
20	Wildebeest	1227	135	157	- 2298	290670.3	87.2	10.38
21	Zebra	760	89	129	- 1390	100710.3	83	6.43
22	Wild Dog	57	7	7	- 163	2850.4	186.5	0.48
23	Ground Hornbill	770	88	469	- 1071	22982.5	39.1	6.51
24	Wattled crane	400	47	76	- 724	26602.6	81	3.38
25	Crowned crane	26	3	3	- 60	306.7	136.3	0.22
26	Saddlebill	8	1	1	- 23	57.5	185.3	0.07
27	Cattle	523	61	61	- 1020	62560.7	95	4.42

	Stratum:	Kafue DA		Area:	3430	Km²	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	717	39	39	1558	159030.8	117.4	20.89
2	Buffalo	7516	409	409	22587	5.10E+07	200.5	219.12
3	Bushbuck	18	1	1	56	315.3	203.9	0.54
4	Bushpig	37	2	2	112	1266.8	204.3	1.07
5	Duiker	129	7	7	256	3626.6	98.8	3.75
6	Hartebeest	294	16	16	848	69071.2	188.6	8.57
7	Hippopotamus	294	16	16	856	70988.2	191.2	8.57
8	Impala	8159	444	4257	12061	3420973	47.8	237.87
9	Kudu	74	4	4	172	2194.9	134.5	2.14
10	Oribi	37	2	2	112	1266.8	204.3	1.07
11	Puku	3547	193	961	6132	1501575	72.9	103.4
12	Reedbuck	147	8	11	283	4173.7	92.7	4.29
13	Roan	662	36	36	1566	183982.1	136.8	19.29
14	Sable	845	46	46	1768	191099.5	109.1	24.64
15	Warthog	2775	151	1409	4140	418768.4	49.2	80.9
16	Waterbuck	570	31	31	1324	127903.2	132.5	16.61
17	Zebra	1341	73	78	2605	358781.5	94.2	39.11
18	Ground Hornbill	129	7	7	294	6151.3	128.6	3.75

	Stratum:	Kafue DB		Area:	3430	Km²	SI:	6.3
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Bushbuck	48	3	3	118	1082.6	145.6	1.4
2	Duiker	96	6	7	185	1762.1	92.9	2.79
3	Eland	0	0	0	0	0	0	0
4	Hartebeest	1038	65	65	2127	264037.9	104.9	30.26
5	Hippopotamus	240	15	15	581	25967.9	142.6	6.98
6	Impala	3178	199	1186	5170	883118.4	62.7	92.65
7	Kudu	16	1	1	50	257.9	213.2	0.47
8	Oribi	144	9	17	270	3548.4	87.9	4.19
9	Puku	2332	146	146	4617	1162224	98	67.97
10	Reedbuck	64	4	4	193	3699.7	201.9	1.86
11	Sable	160	10	10	457	19640	186	4.66
12	Warthog	559	35	125	993	41986.8	77.7	16.3
13	Waterbuck	80	5	5	211	3823.8	164.2	2.33
14	Zebra	64	4	4	192	3674	201.2	1.86
15	Ground Hornbill	160	10	10	348	7876.3	117.8	4.66
16	Wattled crane	32	2	2	97	938.6	203.4	0.93

Stratum:	Kafue D Mean Estimates	Area:	3430	Km²	SI:	5.9

	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Baboon	358	39	39	752	37469.6	109.9	10.45
2	Buffalo	3758	409	409	10812	1.20E+07	187.7	109.56
3	Bushbuck	33	4	4	70	326.8	111	0.97
4	Bushpig	18	2	2	54	298.5	191.3	0.54
5	Duiker	112	13	40	185	1265.6	64.5	3.27
6	Eland	0	0	0	0	0	0	0
7	Hartebeest	666	81	98	1234	77873.8	85.2	19.42
8	Hippopotamus	267	31	31	574	22784	115.1	7.78
9	Impala	5668	643	3622	7715	1012054	36.1	165.26
10	Kudu	45	5	5	94	577.3	109.3	1.3
11	Oribi	90	11	22	159	1126.3	75.7	2.63
12	Puku	2939	339	1331	4547	624935.3	54.7	85.69
13	Reedbuck	105	12	18	193	1846.5	82.9	3.07
14	Roan	331	36	36	754	43348.4	128.1	9.64
15	Sable	502	56	56	956	49607.4	90.2	14.65
16	Warthog	1667	186	997	2337	108462.4	40.2	48.6
17	Waterbuck	325	36	36	683	31027.6	110.4	9.47
18	Zebra	703	77	108	1297	85390.4	84.6	20.49
19	Ground Hornbill	144	17	28	261	3286.8	80.9	4.2
20	Wattled crane	16	2	2	46	219	188.5	0.47

Luangwa Ecosystem

Stratum:	Luangwa A	Area:	7767	Km²	SI:	5.6

	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Buffalo	375	21	21	858	57619	129.2	4.82
2	Bushbuck	36	2	2	84	575.6	135.5	0.46
3	Bushpig	178	10	10	527	29902.4	195.4	2.3
4	Duiker	268	15	101	434	6847.9	62.3	3.44
5	Hartebeest	36	2	2	105	1170.8	193.3	0.46
6	Impala	71	4	4	153	1649.7	114.7	0.92
7	Kudu	36	2	2	83	561.8	133.9	0.46
8	Roan	428	24	24	970	72269.8	126.6	5.51
9	Warthog	499	28	248	750	15507.9	50.3	6.43
10	Waterbuck	196	11	11	482	20060.7	145.5	2.53
11	Zebra	749	42	285	1213	53084.9	62	9.64
12	Ground Hornbill	161	9	9	362	10042.5	125.8	2.07

	Stratum:	Luangwa B		Area:	11108	Km^2	SI:	5.8
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	1608	93	93	3321	728138.9	106.6	14.47
2	Buffalo	380	22	22	1048	110512.9	175.6	3.42
3	Bushpig	17	1	1	51	284.1	195.9	0.16
4	Duiker	467	27	226	707	14305.4	51.5	4.2
5	Hartebeest	259	15	15	516	16371.2	99.1	2.33
6	Impala	1729	100	407	3050	433157.1	76.5	15.56
7	Kudu	951	55	325	1577	97161.7	65.9	8.56
8	Monkey	173	10	10	512	28513.8	196.2	1.56
9	Puku	225	13	13	634	41485.9	182.1	2.02
10	Roan	1608	93	631	2584	236150.6	60.7	14.47
11	Warthog	432	25	160	704	18352.9	63	3.89
12	Waterbuck	277	16	16	612	27846.2	121.2	2.49
13	Wildebeest	899	52	52	2138	380515.7	137.8	8.09
14	Zebra	380	22	22	751	34145.5	97.6	3.42
15	Hyaena	17	1	1	51	275.2	192.8	0.16
16	Crocodile	17	1	1	51	276.3	193.2	0.16
17	Ground Hornbill	311	18	51	571	16790.9	83.7	2.8
18	Cattle	588	34	34	1212	96701.1	106.3	5.29
19	Sheep/goats	104	6	6	251	5369.3	141.9	0.93

	Stratum:	Luangwa CA		Area:	11334	Km^2	SI:	5.3
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	412	22	22	1181	144846.8	186.6	3.64
2	Buffalo	32905	1756	11781	54028	1.09E+08	64.2	290.32
3	Bushbuck	19	1	1	55	328.2	195.4	0.17
4	Duiker	37	2	2	88	625.5	134.9	0.33
5	Eland	187	10	10	423	13604.8	125.8	1.65
6	Giraffe	131	7	7	263	4240.8	100.3	1.16
7	Hartebeest	281	15	15	563	19486	100.4	2.48
8	Hippopotamus	3841	205	629	7053	2525670	83.6	33.89
9	Impala	17127	914	9382	24872	1.47E+07	45.2	151.11
10	Kudu	431	23	147	715	19747.4	65.9	3.8
11	Puku	6615	353	3632	9598	2178627	45.1	58.36
12	Roan	187	10	10	446	16323.2	137.8	1.65
13	Sable	0	0	0	0	0	0	0
14	Warthog	1893	101	1258	2527	98442.8	33.5	16.7
15	Waterbuck	2043	109	109	4004	941581.9	96	18.02
16	Wildebeest	3729	199	316	7142	2851869	91.5	32.9
17	Zebra	4666	249	2404	6928	1252160	48.5	41.17
18	Lion	112	6	6	300	8610.8	166.8	0.99
19	Wild Dog	75	4	4	222	5260.8	195.6	0.66
20	Crocodile	431	23	23	1237	159173	187.1	3.8
21	Ground Hornbill	618	33	261	975	31180.2	57.7	5.46
22	Wattled crane	187	10	10	554	32960.7	195.8	1.65
23	Saddlebill	75	4	4	164	1933	118.6	0.66
24	Marabou stork	19	1	1	55	329.6	195.8	0.17

	Stratum:	Luangwa CB		Area:	11334	Km²	SI:	5.9
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	2690	159	297	5083	1401462	88.9	23.73
2	Buffalo	25749	1522	6071	45428	9.48E+07	76.4	227.19
3	Bushbuck	85	5	13	156	1261.4	84.9	0.75
4	Bushpig	203	12	12	444	14237.4	118.8	1.79
5	Duiker	85	5	14	155	1208.5	83.1	0.75
6	Eland	102	6	6	224	3647.7	120.3	0.9
7	Giraffe	68	4	4	132	1023	95.5	0.6
8	Hartebeest	254	15	15	558	22696.7	120	2.24
9	Hippopotamus	2555	151	323	4786	1219198	87.4	22.54
10	Impala	24278	1435	15076	33480	2.07E+07	37.9	214.2
11	Kudu	609	36	175	1043	46028.8	71.2	5.37
12	Monkey	17	1	1	50	266.1	194.9	0.15
13	Puku	7072	418	3884	10260	2487669	45.1	62.39
14	Reedbuck	17	1	1	50	271.9	197	0.15
15	Roan	321	19	81	562	14208.4	74.9	2.84
16	Warthog	2622	155	1268	3976	448768.3	51.6	23.14
17	Waterbuck	558	33	142	975	42453.5	74.6	4.93
18	Wildebeest	1979	117	186	3773	787183.8	90.6	17.46
19	Zebra	2842	168	1655	4030	345335.8	41.8	25.08
20	Honey Badger	17	1	1	50	273.1	197.4	0.15
21	Hyaena	51	3	3	151	2460.2	197.5	0.45
22	Lion	85	5	5	221	4536	160.9	0.75
23	Crocodile	355	21	21	1048	117457.4	195	3.13
24	Ground Hornbill	1150	68	549	1752	88571.8	52.3	10.15
25	Crowned crane	423	25	25	888	53026.9	110	3.73
26	Saddlebill	17	1	1	50	271.8	197	0.15
27	Sheep/goats	51	3	3	124	1296.7	143.4	0.45

	Stratum:	Luangwa C Mean Estimates		Area:	11334	Km^2	SI:	
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	1551	181	353	2749	362525.3	77.3	13.69
2	Buffalo	29327	3278	15542	43112	4.80E+07	47	258.75
3	Bushbuck	52	6	13	90	373	74.4	0.46
4	Bushpig	102	12	12	216	3335.7	113.2	0.9
5	Duiker	61	7	20	102	430.7	67.7	0.54
6	Eland	144	16	18	271	4064.1	87.8	1.27
7	Giraffe	99	11	29	170	1240.1	70.5	0.88
8	Hartebeest	267	30	69	466	9914.6	74.1	2.36
9	Hippopotamus	3198	356	1330	5066	881473.4	58.4	28.22
10	Impala	20702	2349	14962	26443	8321284	27.7	182.66
11	Kudu	520	59	273	767	15442.8	47.6	4.59
12	Monkey	8	1	1	24	62.3	185.7	0.07
13	Puku	6843	771	4759	8927	1096800	30.5	60.38
14	Reedbuck	8	1	1	24	63.7	187.8	0.07
15	Roan	254	29	86	423	7179.7	66.3	2.24
16	Sable	0	0	0	0	0	0	0
17	Warthog	2257	256	1544	2970	128367.3	31.6	19.92
18	Waterbuck	1300	142	342	2259	232071.8	73.7	11.47
19	Wildebeest	2854	316	1012	4697	857207.3	64.6	25.18
20	Zebra	3754	417	2533	4975	376303	32.5	33.12
21	Honey Badger	8	1	1	24	64	188.2	0.07
22	Hyaena	25	3	3	73	576.4	188.3	0.22
23	Lion	99	11	11	209	3094.1	112.4	0.87
24	Wild Dog	37	4	4	108	1241.1	187.1	0.33
25	Crocodile	393	44	44	901	65069.6	129.1	3.47
26	Ground Hornbill	884	101	551	1218	28107.5	37.7	7.8
27	Wattled crane	94	10	10	269	7775.6	187.3	0.83
28	Crowned crane	211	25	25	433	12423.9	104.9	1.87
29	Saddlebill	46	5	5	91	519.7	98.8	0.41
30	Marabou stork	9	1	1	27	77.8	187.3	0.08
31	Sheep/goats	25	3	3	60	303.8	136.7	0.22

	Stratum:	Luangwa D		Area:	2610	Km²	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Bushbuck	37	2	2	122	1470.2	227.2	1.42
2	Bushpig	93	5	5	289	7951.6	211.4	3.56
3	Duiker	167	9	42	292	3206.7	74.6	6.4
4	Eland	93	5	5	289	7951.6	211.4	3.56
5	Hartebeest	130	7	7	332	8460.2	155.7	4.98
6	Kudu	149	8	8	469	21175.2	215.6	5.69
7	Roan	167	9	9	436	14926.1	160.9	6.4
8	Sable	56	3	3	139	1420.1	148.9	2.13
9	Warthog	19	1	1	57	309.5	208.5	0.71
10	Ground Hornbill	167	9	9	349	6805.2	108.6	6.4

Lower Zambezi

	Stratum:	Zambezi Valley		Area:	2528	Km²	SI:	0.5
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	29	3	3	82	721.2	187.3	1.13
2	Buffalo	4806	504	504	9912	6553079	106.3	190.1
3	Duiker	19	2	2	44	159.9	132.3	0.75
4	Hippopotamus	734	77	159	1310	83223.1	78.4	29.04
5	Impala	3947	414	1845	6050	1110993	53.3	156.15
6	Kudu	67	7	7	129	973.6	93.3	2.64
7	Warthog	162	17	17	307	5309.8	89.7	6.41
8	Waterbuck	658	69	69	1347	119389.3	104.8	26.03
9	Zebra	400	42	42	833	47057.3	108.1	15.84
10	Crocodile	19	2	2	45	165.7	134.7	0.75
11	Ground Hornbill	76	8	8	150	1353.8	96.2	3.02
12	Cattle	601	63	63	1252	106662.3	108.5	23.76
13	Sheep/goats	1077	113	113	2213	323754.9	105.3	42.62

Sioma Ngwezi

Stratum:	Sioma A			Area: 2772.1 Km²		SI:	11.9
	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Buffalo	293	35	35	867	76516.9	195.6	11.86
2	Duiker	620	74	470	769	5195.7	24.1	25.08
3	Eland	1081	129	129	2720	624553.9	151.7	43.72
4	Giraffe	503	60	210	796	19971.8	58.3	20.33
5	Kudu	226	27	52	400	7024.5	76.8	9.15
6	Oribi	17	2	2	40	124.2	137.9	0.68
7	Roan	729	87	89	1369	95155.6	87.8	29.48
8	Sable	134	16	16	273	4521.1	104	5.42
9	Warthog	34	4	4	85	615.1	153.5	1.36
10	Wildebeest	59	7	7	158	2316.1	170.2	2.37
11	Zebra	193	23	23	459	16508	138.3	7.79
12	Ground Hornbill	17	2	2	39	117.5	134.2	0.68
13	Cattle	310	37	37	652	27246.2	110.4	12.54

Stratum:	Sioma B			Area: 2010.2 Km²		SI:	12.4
	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Baboon	16	2	2	47	225.8	193.9	0.8
2	Duiker	546	68	386	707	5954.2	29.3	27.19
3	Eland	56	7	7	121	975.3	115.1	2.8
4	Giraffe	16	2	2	37	106.5	133.2	0.8
5	Impala	72	9	9	185	2948	155.7	3.6
6	Kudu	185	23	57	313	3802.8	69.2	9.2
7	Roan	96	12	12	266	6695.8	176	4.8
8	Sable	370	46	46	770	37277.4	108.3	18.39
9	Warthog	80	10	10	157	1357.9	95.1	4
10	Zebra	80	10	10	236	5637	193.7	4
11	Cattle	747	93	93	1590	164944.9	112.7	37.18
12	Sheep/goats	72	9	9	169	2164.3	133.4	3.6

APPLICANT:

JAMES PONDER

ZAWA EXPLAINS HUNTING BAN LIFT

ZAWA explains hunting ban lift

This is the response of ZAWA on their previous press release 'Minister lifts ban on hunting':

Contrary to widespread blatant misinformation reports on social media and some sectors of the media that the hunting ban on elephants has been lifted, The Zambia Wildlife Authority (ZAWA) would like to inform members of the public and the international community that this is not the case.

The ban on hunting of elephants and cats is still in effect. ZAWA would also like to state that even before the ban was affected, **Zambia was never been a pro-elephant hunting nation**. In the last 10years, even before the ban, hunting of elephants in Zambia has been at the lowest and quotas significantly small in the region and was restricted to two out of the 36 Game Management Areas (GMA's) in Zambia, namely, Rufunsa and Lupande. And the only reason for hunting in these areas was because they were overly populated and causing human wildlife conflicts. Initially, ZAWA would simply control (kill) the animals. But this was seen to be a waste when some income could be gained through controlled hunting. It was on this basis that sport hunting was introduced here, and incomes ploughed back into helping the surrounding communities.

ZAWA being committed towards protecting and conserving wildlife, offered significant input and guidance needed for the Ministry Of Tourism and Arts' decision to lift the hunting ban.

People must also be aware and understand that, the decision to lift the ban is not merely a consumptive matter, but a conservation one as well, as money, which is raised in these animal overpopulated areas is usually ploughed back into conservation. The decision is also a human-wildlife conflict mitigation measure as these places are known for this problem.
Conservation is much more than just allowing uncontrolled animal over-populations. It is about ensuring the **balance between humans and wildlife**, for harmonious existence of both. ZAWA has been a target of all sorts of misunderstandings because this role is not clearly understood.

In fact in other cases, especially in communities prone to human wildlife conflicts, ZAWA has been accused of caring more about the welfare of animals than that of human beings. What some people have said is that ZAWA gives too much attention and protection to wildlife and not humans. But we

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Wildlife could generally survive without humans. But we can't say the same for human life in the absence of wildlife and the natural environment, as it is an important basis for our nutrition and economic survival.

Hence, ZAWA's role is unique and complex as it has to juggle and find this balance between the growth of wildlife vis-à-vis human populations. It is for this reason that ZAWA takes great care in the allocation of quotas or what is to be hunted and where this should be undertaken.

But we understand that without proper sensitization and awareness of the key and direct relationships we humans must share with the wild, ZAWA's role will always be misunderstood and misinterpreted and the battle to create harmony between Wildlife and humans will be lost, and the future of this unique estate shall be at stake and at risk. Everything in life is interdependent and maintaining that delicate balance is the answer.

Apart from its economic benefits, Wildlife contributes to the ecological balance of nature, the food chain and nature cycles. It is also a source of ecological, biodiversity, economic, recreation, and scientific, social and cultural values untold. And ZAWA hopes that individuals, the media and the general public could help us communicate this clearly.

Please ensure that you have read the entire article before posting comments. Any off-topic and offensive language will be moderated.

Article by: The Zambia Wildlife Authority

By Zambia Tourism | September 4th, 2014 | Conservation News, Zambia News

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APPLICANT:

JAMES PONDER

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

OMB Control No. 1018-0093
Expires 08/31/2023

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

James M. Ponder (b) (6) Antioch, IL 60002

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta africana, African elephant

b. Sex (if known).

male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Lower Lupande Hunting Block, Zambia. Nearest City Mfuwe

b. Date wildlife was hunted:

October 30th, 2020

c. Approximate age of animal:

35-40 years in age

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Kwalata Safaris. P.H. - WH van Noordwyk

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Kwalata Safaris - 6980 Katanga Road, Lusaka Zambia

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

Please see provided

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Kwalata Safaris
Address:	6980 Katanga Road
City:	Lusaka
State/Province:	Zambia
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
See attached
11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	WH van Noordwyk
E-mail:	werner@vannoordwyksafaris.com
Phone number:	+ 27 824927362

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to res** [redacted] **efit**).

    Applicant's signature: [redacted] Date: 1-16-2021

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

JAMES PONDER

HUNTING PERMITS

NPW FORM 7

Original

REPUBLIC OF ZAMBIA

S/No.: 0005313

THE ZAMBIA WILDLIFE ACT
(ACT NO. 14 of 2015)
THE ZAMBIA WILDLIFE
(LICENCES AND FEES) REGULATIONS, 2007)
Regulation 5(2)
BIRD HUNTING LICENCE

Station of issue: Chilanga Date of issue: 08/10/2020

DETAILS OF LICENSEE

Full Name: Porter James Michael NRC/Passport No: (b) (6) [redacted]

Tel/Mobile No: E-mail address:

Postal Address: Kwelata Safaris Residential Address: USA

DETAILS OF FIREARM(S)

Firearm Licence No(s) 1. 891 2. 3.

Calibre of Firearm(s) 1. 500 2. 416 3. 7mm

The above named licensee is authorized to hunt birds of species specified in column 1 except during the seasons specified in column 2.

Common Name (Column 1)	Closed season (Column 2)
Fulvous Whistling Duck	1st January to 31st May
White-faced Whistling Duck	1st January to 31st May
White-Backed Duck	1st January to 31st May
Egyptian Goose	1st January to 31st October
Spur-Winged Goose	1st January to 31st May
Knob Billed Duck	1st January to 31st May
African Pygmy Goose	1st January to 31st May
African Black Duck	1st January to 31st May
Yellow-Billed Duck	1st January to 31st May
Cape Teal	1st January to 31st May
Pintail	1st January to 31st May
Red-Billed Teal	1st January to 31st May
Hottentot Teal	1st January to 31st May
Garganey	1st January to 31st May
Northern Shoveler	1st January to 31st May
Cape Shoveler	1st January to 31st May
Southern Pochard	1st January to 31st May
Coqui Francolin	1st February to 30th June
White throated Francolin	1st February to 30th June
Crested Francolin	1st February to 30th June
Shelley's Francolin	1st February to 30th June
Red-winged Francolin	1st February to 30th June
Red-billed Francolin	1st February to 30th June
Natal Francolin	1st February to 30th June
Hildebrandits Francolin	1st February to 30th June
Swaisons' Francolin	1st February to 30th June
Red-necked Francolin	1st February to 30th June
Common quail	1st October to 31st March
Harlequin Quail	1st October to 31st March
Blue Quail	1st October to 31st March
Crested Guinea fowl	1st December to 3tht April
Helmeted Guinea fowl	1st December to 3tht April

Note: A maximum of six birds to be hunted within 21 days under Non-Resident Hunting.

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
- 8 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

Official Stamp

Bird Hunting Licence Fees $100

Application Fees Paid: —

Total Fees Paid: $100

GRZ Receipt No: 0069349

Chairperson, Committee

Note: Original copy to Applicant - Duplicate to Accounts - Triplicate to Commercial - Quadruplicate to be retained in the book

Original

NPW FORM 2

0006406

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue..... Chitanga ..... Date of Issue..... 14·10·2020 .....

DETAILS OF LICENSEE

Full Name..... James M Pander ..... NRC No./Passport No. (b) (6) .....

Nationality..... USA ..... Age.....

Tel/Mobile No:..... E-mail.....

Full Name of Safari Company: Kwalata Safaris .....

Certificate of Incorporation No. ..... Date of Incorporation.....

Postal Address... Box 30220 Lusaka ..... Residential Address.....

Firearm Licence/Tourist Firearm Import No.: 891 ..... Calibre of Firearm... 500, 416, 7mm .....

Type of Hunt..... Classic .....

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Hippo	1st	M	Lower Lupande	2020	1,600·00

Total Animals fees paid the kwacha equivalent of... US$ 1,600·00
Concession Fees paid the kwacha equivalent of... US$.....
Grand Total the kwacha equivalent of... US$ 1,600·00

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
14 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

Official Stamp ..... Chairperson of the Committee

*Note: Original copy to Licensee ***Duplicate to Accounts***Triplicate to Commercial*** Quadruplicate to be retained in the book*

Original

NPW FORM 2

0006444

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue..... Chilanga ..... Date of Issue..... 16/10/2020

DETAILS OF LICENSEE

Full Name..... James M Ponder ..... NRC No./Passport No. (b) (6) .....

Nationality..... USA ..... Age.....

Tel/Mobile No:..... E-mail.....

Full Name of Safari Company: Kwalala Safaris .....

Certificate of Incorporation No. ..... Date of Incorporation.....

Postal Address Box 35225 Lsk ..... Residential Address.....

Firearm Licence/Tourist Firearm Import No..... 891 ..... Calibre of Firearm..... 500, 416, 7mm .....

Type of Hunt..... Classic .....

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Kudu	1	M	Lower Lupande	2020	1600

Total Animals fees paid - the kwacha equivalent of US$ 1600
Concession Fees paid - the kwacha equivalent of US$ —
Grand Total the kwacha equivalent of US$ 1600

Official Stamp

Chairperson of the Committee

16 OCT 2020
COMMERCIAL OFFICER

*Original copy to Licensee ***Duplicate to Accounts***Triplicate to Commercial*** Quadruplicate to be retained in the book*

Original

NPW FORM 2

0006560

S/No.....

REPUBLIC OF ZAMBIA
Zambia Wildlife Act, 2015
(No. 14 of 2015)

THE ZAMBIA WILDLIFE
(Licences and Fees) Regulations, 2007
(Regulations 3 (2))

HUNTING LICENCE - NON RESIDENT

Station of Issue: Chilanga Date of Issue: 29/10/2020

DETAILS OF LICENSEE

Full Name: Ponder James Micheal NRC No./Passport No.: (b) (6) [redacted]

Nationality: American Age:

Tel/Mobile No: E-mail:

Full Name of Safari Company: Kwalata Safaris

Certificate of Incorporation No. Date of Incorporation:

Postal Address: Box 35225 LSK Residential Address: USA

Firearm Licence/Tourist Firearm Import No.: 891 Calibre of Firearm: 416

Type of Hunt: Classical

Any other relevant information, which may be considered in support of this application (e.g. previous hunting licences held or previous hunting experience.

The above named Safari Hunting Outfitter and its bona fide Clients are authorised by this licence under the guidance of the Professional Hunter to hunt the following Game and/or protected animals within the Game Management Area or hunting block specified hereunder and for the specified period and upon payment of the fees specified below:

Species of Animals	Number	Sex	Hunting Area	Hunting Period	*Fees - The Kwacha equivalent of US$*
Elephant	15	M	Lolesa-Lupanda	2020	10000
with Tusks					
			0173684		

Total Animals fees paid - the kwacha equivalent of US$ 10,000
Concession Fees paid - the kwacha equivalent of US$ 3,500
Grand Total the kwacha equivalent of US$ 13,500

.....

.....
Chairperson of the Committee

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
29 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

30-10-20

*Note: Original copy to Licensee ***Duplicate to Accounts***Triplicate to Commercial*** Quadruplicate to be retained in the book*

NPW FORM 12

ORIGINAL

S/No. 0000320

REPUBLIC OF ZAMBIA

The Zambia Wildlife Act

(No. 14 of 2015)

(Licences and Fees) Regulations, 2007

(Regulation 7(5))

RECORD OF GAME AND/OR PROTECTED ANIMALS KILLED OR WOUNDED

Name of Professional Hunter: Wtvan Noordwyk NRC/Passport No. 998733/11/2.

Residential Address: Plot 2414 Freedom Way, Lusaka.

Name of Safari Company on behalf of which the Professional Hunter is submitting this return: Kwalata Safaris.

DETAILS OF CLIENT

Name of client: James M Ponder NRC/Passport No: (b) (6)

Tel/Mobile No. Nationality: USA.

Postal Address. Residential Address: (b) (6) Illinois.

Type of Licence: Classic Licence No: 000 6448.

Date of Issue: 8/10/2020 Place of Issue. Chilanga.

Name of Hunting Block where hunting was conducted: Lower Lupande.

Hunting Period From 10/10/2020. To.

Date Killed or wounded	Species	Sex	Number killed	Number Wounded	GPS Location	Trophy for export Yes	Trophy for export No	Foreign currency value charged to client
18/10/20	Kudu	M	1		[illegible]	✓		
19/10/20	Hippo.	M	1		[illegible]	✓		
30/10/20	Elephant	M	1		[illegible]	✓		

DETAILS OF TROPHY MEASUREMENTS

Species	Length of Skin	Length of Tusk	Average length of horn	Length of Skull
Kudu			53 inch.	
Hippo			24 inch	
Elephant.				

Certification by -

(a) Client

I certify that the animals listed on this return were hunted or wounded by me during the period stated and that the total amount of foreign currency stated and paid by me to the safari company is the full amount I was charged.

(b) Professional Hunter

I certify that the animals listed in this return were actually hunted by the client in accordance with the terms and conditions of the Safari Hunting Licence and that the total foreign currency stated above is the full amount paid by the client for the hunt.

Date 30/10/20 Signature of Client [redacted]

Date 30/10/20 Signature of Professional Hunter

Date 30/10/20 Name of Wildlife Police Officer Kenneth Siwale

Employment No. of W.P.O. 00273727

Signature of W.P.O.

Copies: Original copy to Committee ** Duplicate to Safari Company ** Triplicate to Commercial ** Quadruplicate to be retained in the book

Serial No. 555555

NPW FORM 5B

S/No.: .....

0006498

REPUBLIC OF ZAMBIA

THE ZAMBIA WILDLIFE ACT
(ACT NO. 14 OF 2015)

THE ZAMBIA WILDLIFE
(LICENCES AND FEES) REGULATION, 2007

Appendix 2 Second Schedule(3)

PERMIT TO HUNT IN A GAME MANAGEMENT AREA

Station of issue..... Chilanga ..... Date of Issue..... 08/10/2020 .....

DETAILS OF PERMIT HOLDER

Full name:..... Ponder James Michael ..... NRC/Passport No. (b) (6) .....

Tel/Mobile No.:..... E-mail address.....

Postal Address:..... Rwdata Safaris ..... Residential Address: ..... USA .....

DETAILS OF FIREARMS

Firearm Licence No(s) 1.: ..... 891 ..... 2. ..... 3.....

Calibre(s) 1.: ..... 500 ..... 2. ..... 416 ..... 3..... 7mm .....

DETAILS OF LICENCES, HUNTING AREA & HUNTING TYPE

Resident/Non Resident Hunting Licence No (s) .....

Bird Hunting Licence No.....

Hunting Type..... Non-Resident .....

is hereby authorised to hunt in ..... Lupande ..... Game Management Area,

..... Lower Lupande ..... Hunting block for ..... days from 10/10/2020

to..... 27/10/2020 ..... (Dates inclusive)

Amount Paid..... $ 150 - .....

GRZ Receipt No. 0069349

MINISTRY OF TOURISM AND ARTS
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
- 8 OCT 2020
COMMERCIAL OFFICE
PRIVATE BAG 1, CHILANGA, ZAMBIA

..... Official Stamp

..... Chairperson of the Committee

Note: Original copy to Permit Holder - Duplicate copy to Accounts - Triplicate to Commercial - Quadruplicate to be retained in the Book

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
† DON LINDSAY
† BERT KLINEBURGER

BOARD OF DIRECTORS:
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January 25, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803
ATTN: Darcy Vargas

Applicant:	James Mike Ponder
RE:	USFWS Import Permit Application 3.200.20
Date of Hunt:	October 30th, 2020
Species/Country:	Elephant/ Zambia

Ms. Vargas,

Enclosed please find an application to import a sport-hunted elephant trophy for Mr. Mike Ponder. Mr. Ponder took his elephant, that was approximately 35-40 years in age, in the Lower Lupande GMA, located in the southern Luangwa area of Zambia in October of 2020.

The Lupande Game Management Area has one of the largest populations of elephants in Zambia. The number of elephants in this area have been so abundant in the past that Lupande had been one of the only GMA's that allowed hunting for a long period of time to curtail the human-wildlife conflict. Currently, the elephant population continues to be steady. In the operator enhancement report provided you will find that Kwalata Safaris reported an estimated population of over 600 elephants within just the Lower Lupande. Many communities surround this area and Kwalata Safaris compensates villages for any damage done by elephants, as well as sharing hunting revenues with the community and donating edible meat. Kwalata Safaris holds a government lease for their hunting land where they are required to pay community obligations of ZMK 180,000 annually. They must also pay for bore-holes, law enforcement compensation, village scout salaries, fire management, infrastructure repairs, and resource monitoring. Trophy fees go towards anti-poaching, where they have a year-round patrol staff. The trophy fee for this elephant was $13,500 US dollars.

The government of Zambia formally approved the new policy for National Parks and Wildlife in 2018. Which has been a guiding force for the conservation of wildlife. In the Great Elephant Census, it notes that "we need to replicate Luangwa and Kafue's success across all of Zambia's and Africa's national parks (pg. 5)".

We have also provided a document entitled, "Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia". In this research article the author, Paula White, gives insight into the lease agreements of sport hunting operators with the Zambia Wildlife Authority that require them to annually provide local communities a percentage of the meat obtained through sport hunting free of charge. It is estimated that about 129,771 kgs of fresh game meat is provisioned annually by the sport hunting industry to rural communities in Zambia at an approximate value of $600,000 US Dollars (1). In Zambia, 48% percent of the population were undernourished in 2012-2014 (2). Without the addition of game meat into these communities, most residents would rarely meet the recommended protein requirements. The positive benefits of sport hunting to Zambia and its people have literally been lifesaving.

It is clear Zambia is invested in the future of its wildlife resources and does not approve of western interference in the country. The Zambia Wildlife Authority wrote an open letter explaining why they lifted the hunting ban that had been in place for several years. They detail the over-abundance of elephants that were in the Lupande region, creating real human-wildlife conflict and as opposed to controlling the animals by killing them they made the decision to have a controlled paid safari hunt. As a result of opening up safari hunting, incomes ploughed back into the region helping the surrounding communities- as we have detailed above. Without the substantial incomes from safari hunting, surrounding communities and the future of the wildlife that live among them will be in jeopardy. So much has already been lost in Zambia due to the global pandemic of COVID-19 that deterring trophy hunting in addition could mean catastrophic loss for many already struggling communities.

Please refer to the documents and responses included and previously submitted to the DMA by Conservation Force, Zambia's wildlife authorities, professional hunters, and Safari operators. We hope that you will consider these documents and the others provided when making a positive enhancement decision for this import permit application.

If you have any questions about this import application, please do not hesitate to contact us.

Sincerely,

Aimee Korver
Permits Paralegal Conservation Force

Cc: Mr. Mike Ponder W/ attachments

Enclosures:

a. FWS Permit Application Form for Import of Sport-Hunted Trophy
b. Notice of Representation
c. Copy of Hunting Permits/Licenses
d. Operator Enhancement Report – Kwalata Safaris
e. Report on the 2015 Aerial Census of Elephants and Other large mammals in Zambia
   ZAWA explains hunting ban lift.
f. The Great Elephant Census Zambia
g. Provisioning of game meat to Rural Communities as a Benefit of Sport-Hunting in Zambia

APPLICANT:

JAMES PONDER

NOTICE

OF

REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed ELEPHANT Trophy from ZAMBIA.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

(b) (6) [redacted]

SIGNATURE

James Michael Ponder

PRINT FULL NAME

1-16-2021

DATE

APPLICANT:

JAMES PONDER

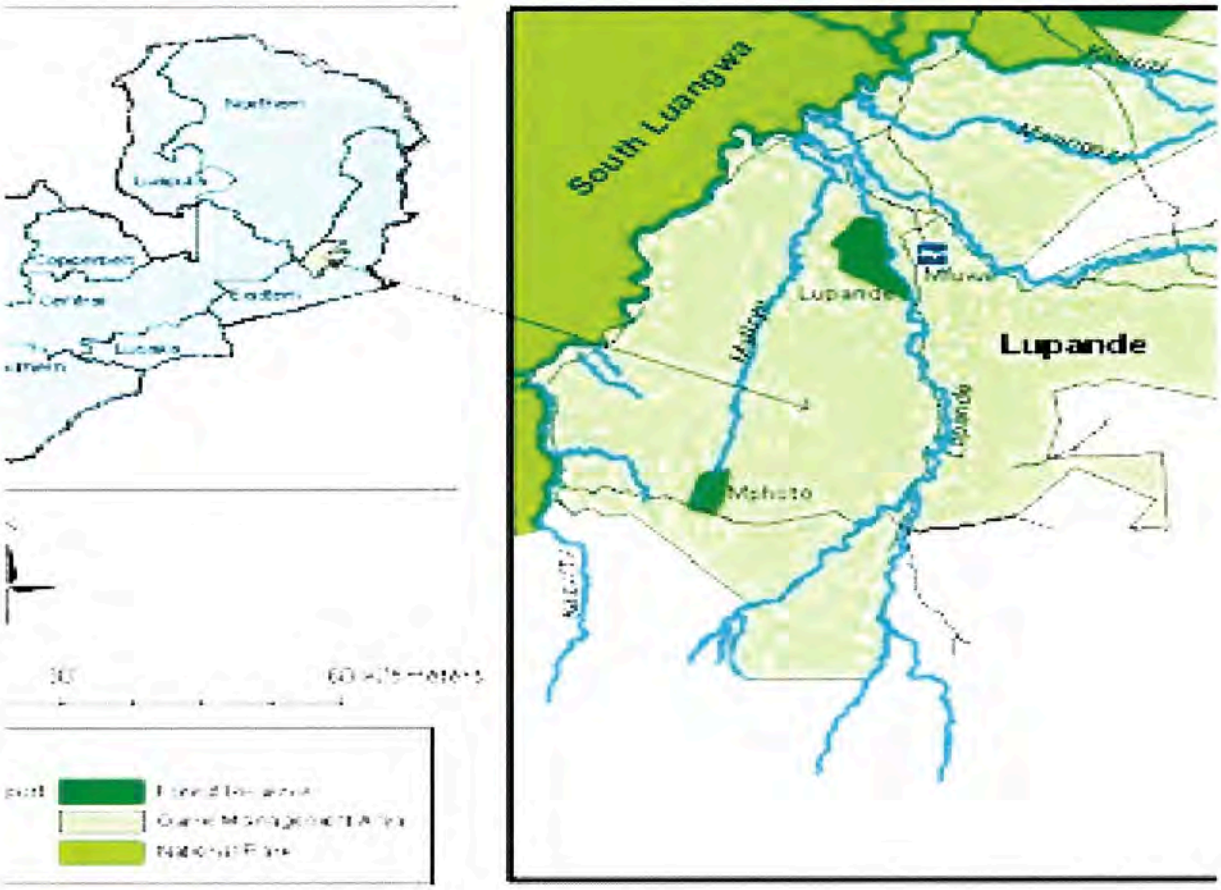
OPERATOR ENHANCEMENT REPORT

ANNEX I OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: ____**KWALATA SAFARIS**_____
b. Years in business: _____**SIX YEARS**_____
c. Name of company conducting hunt: _____**KWALATA SAFARIS**_____
d. Country: _____**ZAMBIA**_____ Concession

a. Name of Concession: ____**LOWER LUPANDE**_____
b. Area in km^2: _____**1511KM2**_____
c. Land tenure:
__X__ Government Lease
_____ Community
_____ Private Ranch
_____ Private Conservancy
d. Length of concession agreement:__**SEVEN YEARS**_____
e. Can the concession be renewed? _____**YES**_____
f. Length of renewal, if applicable: _____**SEVEN YEARS**_____
g. Estimated trophy fees: _____
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: ____
YES, WE NEED TO PAY COMMUNITY OBLIGATIONS OF ZMK 180,000 PER ANNUM_AND OTHER PAYMENTS LISTED BELOW___
ZMK 100,000 BOREHOLES FOR THE CONCESSION PERIOD
ZMK 97,000 PER ANNUM TOWARDS LAW ENFORCEMENT
ZMK 45,000 PER ANNUM TOWARDS VILLAGE SCOUTS SALARIES
ZMK 10,000 PER ANNUM TOWARDS FIRE MANAGEMENT
ZMK 70,000 PER ANNUM TOWARDS INFRASTRUCTURE
ZMK 20,000 PER ANNUM TOWARDS RESOURCE MONITORING
_____
i. Provide concession location and nearest city: _____**NEAREST TOWN IS MFUWE**_____
j. Please attach a map or maps with marked boundaries and nearest city



k. If the concession borders a National Park, provide park name: __**SOUTH LUANGWA NATIONAL PARK**___

l. Describe general and distinctive habitat/water features: _____
__LAGOONS,MOUNTAINS,RIVERS-THE LUANGWA RIVER FLOWS THROUGH THE CONCESSION_____
_____

Communities in the Concession

a. Are there any communities living in the concession? Yes_**X**___ No ____
b. If so, estimated number of people/villages in the concession: ____**APPROXIMATELY 300**_____
c. Are there communities bordering this concession? Yes __**X**__ No ____
d. If so, estimated number of peoples/villages around the concession: __**SPARSE**_____

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant		**600 and above**	**up**	**Patrol data and observations**

Lion	**sparse**		**up**	**Trail cameras,Patrol Data and Observations**
Prey Species (if applicable)	**DENSE**			
Other: _____			**10,000 AND MORE**	**Patrol data and observations**

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____33_____
b. Total employment in the off-season:___17_____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	4		
Trackers	3	3	
Anti-poaching Scouts/Rangers	4	4	4
Other Anti-poaching	12	12	12
Cooks/Housekeepers	5	5	
Community Coordinators	1	1	1
Managers	1	1	
Biologists	0		
Others: _____	3	3	3

Anti-Poaching Efforts

a. Number of anti-poaching staff: _____**18**_____
b. Are patrols conducted during the hunting season, off-season, or both? _____**BOTH**_____
c. Months patrols are conducted: ____**JANAUARY TO DECEMBER**_____
d. Number of patrols per month: _____**THREE PATROLS**_____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: ___**50%**_____
f. Description of anti-poaching equipment, vehicles, gear, etc. _____
_____**TWO 4X4 LANDCRUISERS, SATELLITE PHONES AND FIREARMS**_____
_____
g. Do government-sponsored game scouts conduct patrols? ____YES_____
h. If so, do they have the ability to arrest? _**YES, WE WORK IN COLLABORATION WITH THEM**_____
i. Do you offer rewards to poaching informants leading to arrest? Yes __**X**__ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes__**X**__ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (__2017___) Spending	Year 2 (_2018____) Spending	Year 3 (___2019__) Spending	Remarks
Scout Salaries	157,500	157,500	157,500	
Equipment	50,000	50,000	50,000	
Vehicles				
Fuel	63,000	61,080	59,030	
Rewards	40,222	38,700	30,200	
Others:_____				
Totals	**310,722**	**307,280**	**296730**	

I. What currency are the expenditures given in? _____**ZAMBIAN KWACHA**_____

Anti-Poaching Results

Type	Year 1 (_2017___)	Year 2 (_2018___)	Year 3 (_2019___)	Remarks
Poaching Incidents Discovered	87	98	77	THIS INCLUDES STATISTICS FROM AUTHORITIES AND GUN SHOTS HEARD IN CAMP
Elephant Carcasses Observed	2	1	0	THESE DIED AFTER BEING TRAPPED IN SNARES AND TUSKS REMOVED
Lion Carcasses Observed	NIL	NIL	NIL	
Leopard Carcasses Observed	NIL	NIL	NIL	
Ivory Poachers Observed	3	3	0	THESE WERE SPOTTED WITH IVORY TUSKS,WE APPREHENDED SOME
Bush Meat Poachers Observed	62	51	58	THESE WANTED MEAT FOR MEAT
Illegal Logging Observed	113	205	98	PEOPLE ARE LOOKING FOR MUKULA TO SELL IN CHINA
Other Poachers Observed	2	8	0	THESE WERE DOING IT FOR FUN
Poachers Convicted	1	0	0	THE JUDICIAL PROCESS IS SLOW.

Snares/Traps Collected	289	277	276	NUMBERS ARE REDUCING BECAUSE OF OUR ROBUST PATROLS
Firearms Confiscated	7	12	3	THESE WERE GIVEN TO THE AUTHORITIES
Vehicles Confiscated	0	0	0	
Bicycles Confiscated	3	3	1	THESE ARE THE COMMON MODE OF TRANSPORT
Boats/Nets Confiscated	0	0	0	
Tusks Recovered	0	1		ITS HARD TO RECEOVER BECAUSE THEY CUT THEM INTO SMALLER PIECES.
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes **_X___** No ____
b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? **__10% OF THE TOTAL REVENUE FROM THE SAFARI IS SHARED WITH THE COMMUNITY___**
c. Does the company provide game meat to nearby communities? Yes **__X__** No ____
d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: **__50% OF EADIBLE MEAT WAS GIVEN TO THE COMMUNITY**_____
e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. **_WE COMPENSATE VILLAGERS IF THEIR FIELDS HAVE BEEN DAMAGED BY ELEPHANTS.**_____
_____
f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (__2017__)	Consolation Paid, Year 2 (__2018__)	Consolation Paid, Year 3 (_2019___)	Remarks
Elephant	VEGETABLE FIELDS WERE DESTROYED	47,000	33,700	41,000	
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? _____**ZAMBIAN KWACHA**_____
h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (_2017___)	Spending, Year 2 (_2018___)	Spending, Year 3 (_2019___)	Remarks
Education (classrooms, offices)	120,000	98,000	105,000	RENOVATIONS WERE DONE TO SCHOOLS
Education (supplies, fees)	50,000			WE SCHOOL FEES FOR THE UNDERPRIVILEDGED
Health (clinics, offices)	47,500			BOUGHT MATTRESSES FOR THE HEALTH POST IN THE GMA
Health (equipment, salaries)				
Product/Service	**Spending, Year 1 (__2017__)**	**Spending, Year 2 (_2018___)**	**Spending, Year 3 (__2019__)**	**Remarks**
Community Scout Salaries	157,500	157,500	157,500	
Community Anti-Poaching	58,000	71,000	71,200	FUNDS WERE USED FOR RATIONS AND INCENTIVES AFTER VILLAGERS CATCH A POACHER
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded				
Construction Materials Donated				
Other: _____				
Other: _____				
TOTALS	**433,000**	**326,500**	**228,700**	

i. What currency are the expenditures reported in? **ZAMBIAN KWACHA**

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients	2017(2) 2018(2) 2019(2)	2017(2) 2018(2) 2019(0)	2017(3) 2018(3) 2014(4)

Percentage of Clients from the U.S.	2017(75%) 2018 (75%) 2019(50%)	2017(75%) 2018 (75%) 2019(50%)	2017(75%) 2018 (75%) 2019(50%)
Trophy Fees Paid by U.S. Clients			

b. Approximate amount/percentage of company's revenue from U.S. clientele: __67%_____

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):
__NEED TO HAVE PASSED PROFESSIONAL HUNTERS EXAM FROM THE AUTHORITIES_____

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): _____
_____LION ITS 7 YEARS. ELEPHANT THE TUSKS SHOULD BE ATLEAST MINIMUM 15KGS._____

c. Are there hunt return forms that must be reported to officials? If so, please include a copuy of these forms or confirmation of their receipt for the past 3 years.

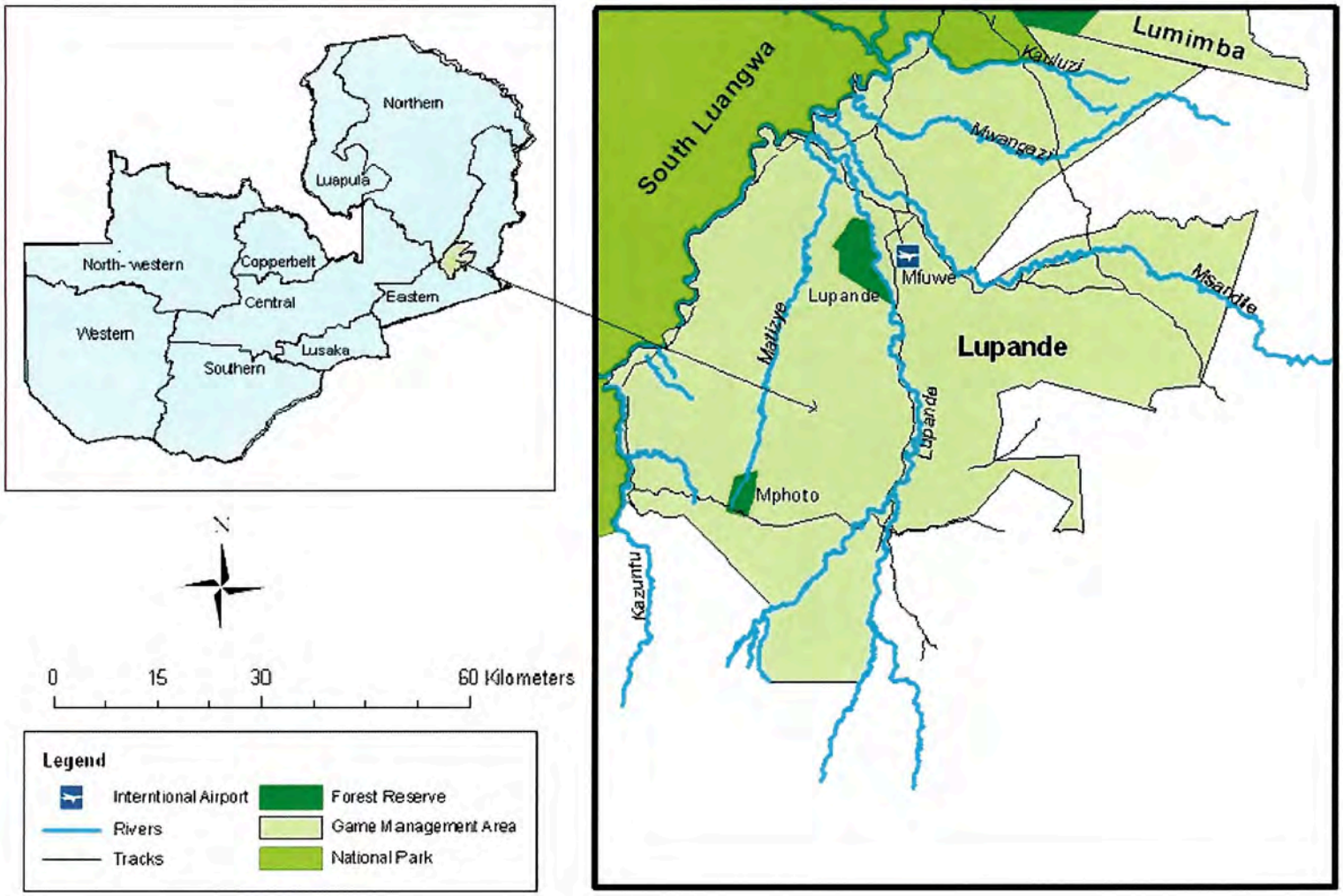
Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct.

X _____
Sign Name and Date

PETER CHIPMAN-DIRECTOR Name and Title


Northern
Luapula
North- western
Copperbelt
Central
Eastern
Western
Lusaka
Southern
South Luangwa
Lumimba
Kanluzi
Mwangazi
Mfuwe
Lupande
Msandile
Lupande
Matizye
Lupande
Mphoto
Kazuntu
N
0
15
30
60 Kilometers
Legend
Interntional Airport
Rivers
Tracks
Forest Reserve
Game Management Area
National Park

APPLICANT:

JAMES PONDER

THE GREAT ELEPHANT CENSUS

ZAMBIA RESULTS

Elephant Census (/blog?author=52f283dee4b0d3acccdd2fa6) · March 3, 2016 (/blog/2016/3/2/zambia-census-announced-luangwa-and-kafue-stable-lower-zambezi-and-sioma-ngwezi-see-decline) · Flyover Milestones (/blog/category/Flyover+Milestones), Photos (/blog/category/Photos), News (/blog/category/News)

CATEGORIES

Naledi (/blog/?category=Naledi)

Results (/blog/?category=Results)

Slideshows (/blog/?category=Slideshows)

Special sightings (/blog/?category=Special+sightings)

The Zambia Department of National Parks and Wildlife (DNPW) released today the Great Elephant Census results. While the results are optimistic, continued efforts are needed to tackle poaching and align conservation with community benefits. Our incredible partners at The Nature Conservancy (http://www.nature.org/ourinitiatives/regions/africa/index.htm) facilitated the training of DNPW ecologists on data collection, consulted on data analysis, and organized the 250 hours of survey flight time.

Zambia is one of 20 countries to participate in the Great Elephant Census, which launched in 2013 with continent-wide results due out this year. It is the first pan-African elephant census in 40 years, and researchers used a standardized method of data collection to create an up-to-date picture of the status of African elephants. The insights revealed through this survey can help create tailored management plans to more effectively protect elephants and deploy the limited conservation resources and dedicated rangers where they will be able to make the most impact. The census also pinpoints opportunities for countries to collaborate across borders and close security gaps. For example, a staggering loss of over 60% of their elephants in Tanzania motivated a new focus on conservation and wildlife management (http://www.greatelephantcensus.com/blog/2015/

Researcher Notes (/blog/?category=Researcher+Notes)

Quests / Expeditions (/blog/?category=Quests+%2F+Expeditions)

Videos (/blog/?category=Videos)

SXSW Eco (/blog/?category=SXSW+Eco)

Technology (/blog/?category=Technology)

Coordination (/blog/?category=Coordination)

Flyover Milestones (/blog/?category=Flyover+Milestones)

Data / Infographics (/blog/?category=Data+%2F+Infographics)

Photos (/blog/?category=Photos)

News (/blog/?category=News)

6/2/government-of-tanzania-response) in what was once the home of one of the largest elephant populations in Africa.

The aerial survey was conducted from September 4-26, 2015, over 21 million acres of Zambia. The survey area comprised national parks and some game management areas with focal areas that included Kafue and Sioma Ngwezi National Parks, and the Luangwa Valley and Lower Zambezi systems.

The results show that, overall, the elephant population in Zambia may be stable, but with large differences between different parts of the country. Turning first to numbers of live elephants, the censuses suggested that **elephant numbers are stable (or possibly even increasing) in the two largest elephant landscapes, Luangwa and Kafue.** In the third landscape, **Lower Zambezi, numbers are declining**. And in the fourth landscape, **Sioma Ngwezi National Park, on the border with Angola and Namibia, elephant numbers are declining catastrophically**, with the species almost extirpated.

"Poaching is like water – it moves to the path of least resistance. When one area is better patrolled, poachers go elsewhere so we have to keep the pressure on." Photo, Kenneth C. Coe

The ecologists were not only counting live elephants, but elephant carcasses and the approximate age of those carcasses. A "carcass ratio" — the ratio of dead elephants to all elephants (alive and dead) — of 2 percent to 8 percent is considered normal for a stable or increasing population. The overall carcass ration for Zambia was estimated at 4.2%, meaning that the observed deaths were within sustainable levels and that the country's population of elephants was stable to increasing, corroborating the live elephant counts. However, Sioma Ngwezi had a carcass ratio of a staggering 85%, alerting conservationists and government officials where the poaching problem is most dire.

"These results are a great example of what we hope to achieve through the Great Elephant Census by informing future efforts," said James Deutsch, Director of Wildlife conservation, Vulcan Inc. "In Luangwa and even Kafue, the existing elephant protection efforts seem to be successful in controlling poaching and stabilizing elephant populations, while elephants are

declining in Lower Zambezi and Sioma Ngwezi. The census results tell us that we need to replicate Luangwa and Kafue's success across all of Zambia's, and Africa's, national parks."

"This survey provides the data we need to direct resources where they can have the biggest impact for both conservation and improving people's livelihoods," said Matt Brown (http://www.nature.org/science-in-action/our-scientists/our-scientists-matthew-brown.xml), Africa Conservation Director, The Nature Conservancy. "The numbers overall appear more positive than expected, suggesting that front line protection is making a difference. This doesn't mean we can rest now. Poaching is like water – it moves to the path of least resistance. When one area is better patrolled, poachers go elsewhere so we have to keep the pressure on."

A ranger from Zambia's Department of National Parks and Wildlife, the boots on the ground protecting elephants from poachers.

"The Nature Conservancy is cautiously optimistic about the findings from the aerial surveys. The results clearly show that the work that has been put in place by the Zambia Department of National Parks and Wildlife and other partners like Game Rangers International, South Luangwa Conservation Society, and Frankfurt Zoological Society are yielding positive results," said Victor Siamudaala, Zambia Program Director, The Nature Conservancy.

For example, The Nature Conservancy has been supporting Game Rangers International's (GRI) anti-poaching efforts in Kafue National Park for the last three years. This increased enforcement has effectively reduced poaching numbers in the park, which is especially evident in areas where GRI has an active presence.

The Nature Conservancy also works in Zambia (http://www.nature.org/ourinitiatives/regions/africa/wherewework/zambia.xml) to fund and facilitate ranger operations, establish community-led conservation programs, and with the Zambian government to create wildlife laws to stop poaching and ensure that communities share the benefits of conservation.

"This census is helping to bring more people to the table and to prioritize the conversation around elephant protection initiatives. Protection

initiatives may need to be intensified in areas where the elephant population is facing more significant threats," said Brown.

The government has indicated that they will launch a working group to develop a way forward. The Nature Conservancy will participate along with other stakeholders to determine not only how we can continue to secure this population, but how we could build on our successful initiatives to see the elephant population grow.

This announcement was originally posted by our partners The Nature Conservancy here (http://www.nature.org/ourinitiatives/regions/africa/explore/documenting-zambias-elephants.xml). Photos were provided by The Nature Conservancy, more here (https://www.flickr.com/photos/131730546@N07/). Thanks to everyone at TNC for being a fantastic census partner, and for working not only to count Zambia's elephants, but to facilitate protection efforts locally and support community driven conservation.

Tagged: Zambia (/blog/tag/Zambia), Results (/blog/tag/Results), Kafue (/blog/tag/Kafue), Luangwa (/blog/tag/Luangwa)

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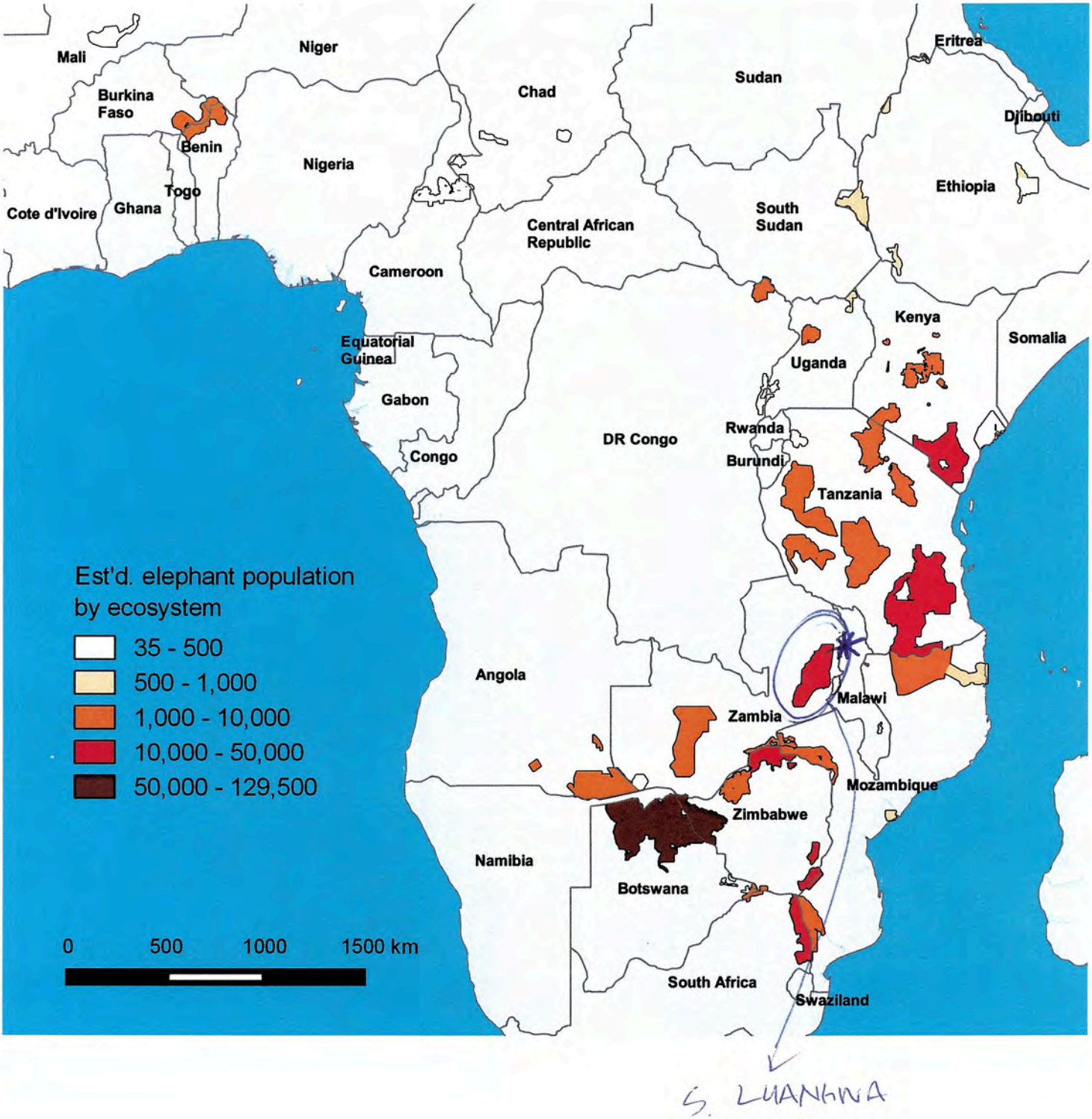

S. LUANGWA & LUPANDE

APPLICANT:

MIKE PONDER

PROVISIONING OF GAME MEAT TO RURAL COMMUNITIES AS A BENEFIT OF SPORT HUNTING IN ZAMBIA

PLOS | ONE

RESEARCH ARTICLE

Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia

Paula A. White[1]*, **Jerrold L. Belant**[2]

1 Center for Tropical Research, Institute of the Environment and Sustainability, University of California Los Angeles, Los Angeles, California, United States of America, **2** Carnivore Ecology Laboratory, Forest and Wildlife Research Center, Mississippi State University, Starkville, Mississippi, United States of America

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Abstract

Sport hunting has reportedly multiple benefits to economies and local communities; however, few of these benefits have been quantified. As part of their lease agreements with the Zambia Wildlife Authority, sport hunting operators in Zambia are required to provide annually to local communities free of charge i.e., provision a percentage of the meat obtained through sport hunting. We characterized provisioning of game meat to rural communities by the sport hunting industry in Zambia for three game management areas (GMAs) during 2004–2011. Rural communities located within GMAs where sport hunting occurred received on average > 6,000 kgs per GMA of fresh game meat annually from hunting operators. To assess hunting industry compliance, we also compared the amount of meat expected as per the lease agreements versus observed amounts of meat provisioned from three GMAs during 2007–2009. In seven of eight annual comparisons of these GMAs, provisioning of meat exceeded what was required in the lease agreements. Provisioning occurred throughout the hunting season and peaked during the end of the dry season (September–October) coincident with when rural Zambians are most likely to encounter food shortages. We extrapolated our results across all GMAs and estimated 129,771 kgs of fresh game meat provisioned annually by the sport hunting industry to rural communities in Zambia at an approximate value for the meat alone of >US$600,000 exclusive of distribution costs. During the hunting moratorium (2013–2014), this supply of meat has halted, likely adversely affecting rural communities previously reliant on this food source. Proposed alternatives to sport hunting should consider protein provisioning in addition to other benefits (e.g., employment, community pledges, anti-poaching funds) that rural Zambian communities receive from the sport hunting industry.

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OPEN ACCESS

Citation: White PA, Belant JL (2015) Provisioning of Game Meat to Rural Communities as a Benefit of Sport Hunting in Zambia. PLoS ONE 10(2): e0117237. doi:10.1371/journal.pone.0117237

Academic Editor: Asim Zia, University of Vermont, UNITED STATES

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Data Availability Statement: All relevant data are within the paper.

Funding: These authors have no support or funding to report.

Competing Interests: The authors have declared that no competing interests exist.

Introduction

Sport hunting in Africa represents an important form of revenue-generating tourism [1],[2]. Additional reported benefits include conservation of biodiversity through protection of large tracts of land that might otherwise be converted to agricultural or domestic livestock use [3–7] and selective hunting of potentially dangerous or destructive species that can increase local people's tolerance for coexistence [8–10]. However, others report that sport hunting contributes little to rural economies or livelihoods [11].

Employment, revenues from hunting fees and licenses, contributions to community capital projects, and funding of anti-poaching scouts are potential benefits that rural communities may receive from sport hunting [12],[13]. Access to game meat has been described as the most tangible benefit to rural communities [14]; however, comparatively little effort has been made to characterize meat provisioning. Notable exceptions are Namibian communal conservancies that report annually on game meat revenues attributable to sport hunting [15], and the comprehensive summary of game meat distributions in Africa compiled by TRAFFIC which considered sport hunting in addition to game ranching and culling [14]. In Zambia, a 1971 report based on household surveys estimated that sport hunting provided 112 tonnes of dressed game meat to rural Zambians countrywide [16] (cited in [12]). We are unaware of more recent studies in Zambia, including studies that quantified provisioning at the GMA scale. In addition, we found no record of previous attempts to examine the patterns or scope of meat distributions.

Food security in developing nations is a primary focus of aide organizations worldwide [17–21]. In Zambia, 48% of the population was undernourished in 2012–2014 [22] and 19% of Zambian households were recently classified as chronically food insecure [20] defined as a continuously inadequate diet caused by the inability to acquire food [23]. Food shortage is defined as an individual receiving less than 2,200 kilocalories per day [18]. Donor aide programs provide supplemental food typically consisting of maize, sorghum, or other cereals. Although high-protein cereals are being developed [24], at present recommended daily protein requirements (50 gm/day)[25] are rarely met in Zambia [22],[26].

As part of their official lease agreements with the Zambia Wildlife Authority (ZAWA), sport hunting operators in Zambia are required to provide to rural communities a proportion of game animals harvested by clients each year. This meat is distributed free of charge to villages that reside within game management areas (GMAs) where sport hunting occurs. To legally obtain protein outside of GMAs, rural Zambians must raise their own livestock, fish, or purchase meat. Livestock husbandry is costly and precluded in some areas due to diseases [27], inadequate grazing, or presence of tsetse flies *Glossina* spp. [28]. To fish legally requires purchasing a permit and access to lakes, rivers, or seasonal ponds. Purchasing meat is expensive: about US$10/kg for beef, US$7/kg for chicken, and US$15/kg for dried fish (i.e., kapenta *Limnothrisa* sp.). Most (64%) Zambians live on less than US$1.00/day [29]. Thus, high expense makes obtaining animal protein cost prohibitive for most rural Zambians.

Obtaining sufficient amounts of protein is a widespread problem faced by rural people in many parts of Africa. Alternatives for meeting the protein requirements are being explored in other countries. In particular, game ranching, communal conservancies [30],[31], and other forms of community-based wildlife conservation programs [32] show promise. However, despite a few earlier attempts, these programs in Zambia are limited in scope, highly localized, and poorly developed [14], meaning that currently most rural Zambians do not have access to meat through these means.

Presently, the only other alternative for rural Zambians to obtain meat is illegally through poaching of wild animals or purchase of poached meat (herein referred to as bushmeat). Global concerns over the prevalence and extent of bushmeat poaching are increasing rapidly [33],[34].

Studies cite the unsustainable nature of the bushmeat trade [34] and the loss of potential income that results from poaching compared to the value of the same animals to photographic tourism or sport hunting [35].

We quantified the annual provisioning of fresh game meat by the sport hunting industry to rural communities in Zambia. Specifically, we characterized the expected and observed amounts of meat provisioned and the timing and spatial extent of meat distributions to rural communities. Finally, we discuss meat provisioning in the context of rural livelihoods, in particular food security and bushmeat poaching, in relation to Zambia's 2013–2014 hunting moratorium.

Methods

Zambia Wildlife Authority ranks GMAs as prime, secondary, or understocked based on species occurrence and animal abundance [36]. Prime GMAs include species that are fairly abundant and include highly valued trophies (e.g., African lion *Panthera leo*, leopard *P. pardus*, roan antelope *Hippotragus equinus*, and sable antelope *H. niger*) and that can accommodate five or more classical safaris and seven or more mini safaris per hunting season. Secondary GMAs include species less abundant but that generally can sustain three to four classical safaris and a minimum of five mini safaris per hunting season. Understocked GMAs contain species assemblages that are intact but with populations low enough that no hunting quota or only a minimum hunting quota is allowed [37]. Quotas are set annually for each GMA based on their ranking, an evaluation of the hunting operators' performance in the GMA during the previous season, and input from regional ZAWA scouts, ZAWA ecologists and representatives of the rural communities located within the GMAs. We obtained quotas from 2007 to 2009 from ZAWA for each of 30 GMAs in Zambia where sport hunting occurred. These 30 GMAs cover 84,033km^2 and represent 11% of Zambia's total land area. We excluded non-edible trophy species (African lion, leopard, spotted hyena *Crocuta crocuta*, Nile crocodile *Crocodylus niloticus*, small carnivores, and primates) from all calculations.

Sport hunting operators in each GMA are mandated by their lease agreements to utilize (i.e., hunt) $\geq$ 60% of their annual quota and distribute $\geq$ 50% of all game animals harvested each year to rural communities located in the GMA where the hunting occurred. Thus, 60% of the allocated quota of game species represents the estimated minimum number of edible animals harvested annually by sport hunters in Zambia; half of which represents the minimum amount of game meat that communities may expect to receive in a given year.

We collected data on meat provisioning from three GMAs (1 prime, 1 secondary, 1 understocked). During the study, each GMA was operated by individual hunting companies under a ten-year (2002–2012) lease agreement with ZAWA and the local communities. Zambia's sport hunting season occurred each year from 1 May to 31 December; however, sport hunting declines during the hottest months (mid-October to early November) and is typically discontinued when the rainy season begins in late November (P. White, personal observation).

We used reported live [38] and dressed weights [25] of game species to estimate harvested biomass. We used body weights for subspecies that occurred in Zambia when available. For species whose dressed weights were not available, we used conversion rates from a closely related species within the same genus. Reported dressed weights excluded offal; however, rural Zambians routinely consume organ meats (e.g., heart, liver, kidneys) in addition to skeletal muscle and bones which are boiled for additional nutrition (P. White, personal observation). Thus, dressed carcass weights represent minimum estimates of the amount of edible meat.

For each of the three GMAs sampled, we calculated the annual amount of meat expected through provisioning during 2007–2009 (data for 2008–2009 only were available for the

understocked GMA). We converted the number and species of animals represented by 50% of the utilized quota to kgs using the same dressed weight calculations as were applied to meat distribution logs (below). We also estimated the expected mean annual amount of meat provisioned in all GMAs where sport hunting occurred during 2007–2009. We excluded GMAs not hunted during the previous lease period, specialized GMAs, private game ranches, and conservancies. We used 60% of the allocated quotas at 50% distribution and converted these values to dressed weights to estimate the total kgs of meat expected to be provisioned countrywide.

We estimated the amount of meat provisioned annually during the 2005–2011 hunting seasons for the sampled prime and secondary GMAs and for five seasons during 2004–2011 for the understocked GMA. We obtained this information from meat distribution logs provided to ZAWA by hunting operators. Logs included date, species, portion of carcass distributed (e.g., half, whole), and generally a description of the recipient location (e.g., name of village, clinic, school, game scout post). Each log entry represented one animal or portion of an animal distributed to one location as verified by signature of the receiving party. We calculated dressed weights (kgs) from species and amount of provisioned meat as described previously.

To assess performance of the sport hunting industry in meeting its meat provisioning requirements, we compared annual expected and observed amounts (kgs) of provisioned meat in the three sampled GMAs during 2007–2009. We also summarized the amount (kgs) of meat provisioned and number of distribution events by month and year. When possible, we determined locations of distribution events using Google Earth, survey charts, and 1:250,000 scale topographic maps (Surveyor General, Lusaka, Zambia) and estimated distances from the recipients' locations to the provisioning hunting camp to determine the spatial extent of meat provisioning.

We used generalized linear mixed-effects models in program R (version 3.0.2; R Development Core Team 2013) [39] to estimate differences in response variables among GMAs and months. Response variables were the amount of meat provisioned and number of distribution events; explanatory variables were GMA and month. We included year as a random effect. We used least-squares difference means tests to compare differences among GMAs and months. We report means with ± 1 standard deviation and set statistical significance at $\alpha = 0.05$.

Results

Mean expected annual amount (kgs) of meat distributed countrywide was 129,771 ± 15,862 kgs during 2007–2009, representing 2,359 ± 320 individual animals of 20 species (Table 1). The mean expected annual amount of meat provisioned from 2007 to 2009 was greater for the prime (6187.3 ± 262.1 kgs) and secondary (5810.0 ± 248.6 kgs) GMAs than for the understocked (1204.0 ± 0 kgs) GMA. Similarly, the observed amount of meat provisioned annually during 2004–2011 varied among GMAs ($F_{2,16} = 21.97$, $P < 0.001$), with the prime (5832.1 ± 1579.9 kgs; $n = 7$) and secondary (6495.0 ± 1876.1 kgs; $n = 7$) GMAs provisioning greater ($P < 0.05$) amounts of meat than the understocked (973.4 ± 390.3 kgs; $n = 5$) GMA. Considering paired 2007–2009 data only, the observed amounts (kgs) of meat provisioned in prime and secondary GMAs exceeded what was expected each year (Fig. 1). In the understocked GMA, observed amounts exceeded expectations in one of two years.

The mean annual number of distribution events varied among GMAs ($F_{2,16} = 17.32$, $P < 0.001$), with more distribution events ($P < 0.05$) in the prime GMA (39.3 ± 8.7) than in the secondary (24.9± 8.9) and understocked (13.8 ± 8.1) GMAs. Annual number of distribution events in the secondary and understocked GMAs were similar ($P > 0.05$). The timing of distributions varied across months ($F_{5,95} = 7.13$, $P < 0.001$) with more distribution events during

Table 1. Mean (± SD) annual harvest quotas and expected amounts (kgs) of dressed meat provisioned during normal hunting seasons in Zambia, 2007–2009.

	Allocated Quota Countrywide		Mandatory 60% Utilization of Allocated Quota		Mandatory 50% Distribution of Utilized Quota		Expected Dressed Meat Provisioned (kg)	
Species	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Cape buffalo (*Syncerus caffer*)	295.3	20.6	177.2	12.4	88.6	6.2	31,718.8	2217.6
Bushbuck (*Tragelaphus scriptus*)	160.0	24.3	96.0	14.6	48.0	7.3	1344	204.4
Bush pig (*Potamochoerus larvatus*)	56.7	21.1	34.0	12.7	17.0	6.3	629	234.5
Common duiker (*Sylvicapra grimmia*)	95.7	22.3	57.4	13.4	28.7	6.7	315.7	73.6
Eland (*Taurotragus oryx*)	46.3	15.5	27.8	9.3	13.9	4.7	5740.7	1920.8
Lichtenstein's hartebeest (*Alcelaphus buselaphus*)	89.3	17.2	53.6	10.3	26.8	5.2	2572.8	496.6
Hippopotamus (*Hippopotamus amphibious*)	206.3	23.2	123.8	13.9	61.9	7.0	53853	6067.0
Impala (*Aepyceros melampus*)	344.7	18.9	206.8	11.3	103.4	5.7	3308.8	181.2
Greater kudu (*Tragelaphus strepsiceros*)	117.0	21.4	70.2	12.8	35.1	6.4	4598.1	840.1
Red lechwe (*Kobus leche*)	15.7	4.6	9.4	2.8	4.7	1.4	324.3	95.6
Oribi (*Ourebia ourebi*)	48.3	9.5	29.0	5.7	14.5	2.8	116	22.7
Puku (*Kobus vardoni*)	191.7	10.3	115.0	6.2	57.5	3.1	2357.5	126.2
Southern reedbuck (*Redunca arundinum*)	67.3	11.0	40.4	6.6	20.2	3.3	585.8	95.8
Roan (*Hippotragus equinus*)	45.7	13.6	27.4	8.2	13.7	4.1	2041.3	608.5
Sable (*Hippotragus niger*)	61.3	11.9	36.8	7.2	18.4	3.6	2318.4	451.0
Sitatunga (*Tragelaphus spekei*)	24.3	2.3	14.6	1.4	7.3	0.7	459.9	43.6
Warthog (*Phacochoerus africanus*)	182.0	30.1	109.2	18.1	54.6	9.0	2948.4	487.9
Waterbuck (*Kobus ellipsiprymnus*)	102.0	25.0	61.2	15.0	30.6	7.5	4375.8	1071.6
Wildebeest (*Connochaetes taurinus*)	74.3	18.0	44.6	10.8	22.3	5.4	3122	756.4
Zebra (*Equus quagga*)	135.7	19.6	81.4	11.8	40.7	5.9	7041.1	1017.5
Totals	2359.7	320.6	1415.8	192.4	707.9	96.2	129,771.4	15,861.5

Expected dressed meat provisioned calculated using live and dressed weights of game species after Skinner & Smithers (1990) and Bothma & du Toit (2010), respectively.

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July and September and fewer during May (Fig. 2). There was no interaction between GMA and month ($F_{10,95} = 1.32$, $P = 0.233$).

The observed amount (kgs) of meat provisioned each month varied among GMAs ($F_{10,95} = 1.24$, $P = 0.277$) with greater amounts of meat provisioned from the prime and secondary

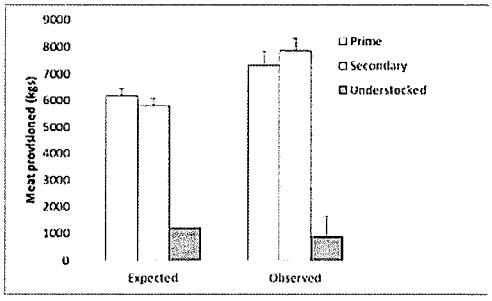

Fig 1. Expected versus observed amounts (kgs) of meat provisioned in each of three Game Management Areas (GMA), Zambia.

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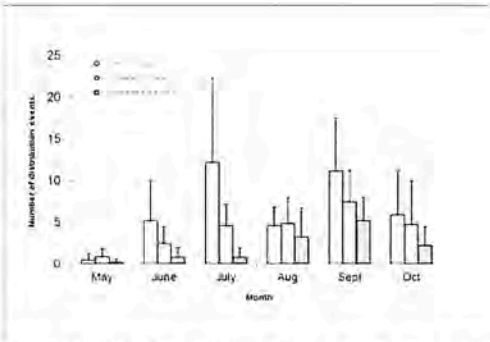

Fig 2. Mean (± SD) number of meat distribution events by month for three Game Management Areas, Zambia.

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GMAs than from the understocked GMA ($P < 0.05$; Fig. 3). Overall, mean total amounts (kgs) of meat provisioned were greatest in September and least in May ($F_{5,95} = 6.15$, $P < 0.001$). There was no interaction between GMA and month ($F_{10,95} = 1.32$, $P = 0.233$). In the prime GMA, mean meat provisioning in July and September exceeded 1,700 kgs/month. In the secondary GMA, mean monthly provisioning was 1,800 kgs in September and exceeded 1,250 kgs/month during July–October. The greatest mean monthly amount of meat provisioned in the understocked GMA was in September (> 400 kgs).

Distribution logs contained locations of meat recipients in 62% ($n = 518$) of entries, including 63% ($n = 275$) in the prime GMA, 78% ($n = 174$) in the secondary GMA, and 16% ($n = 69$) in the understocked GMA. Remaining entries were received by community-appointed liason officers who oversaw onward distribution. To assess the spatial extent of meat provisioning, we determined specific locations for 336 distribution events in relation to the locations of hunting camps that supplied the meat. Meat provisioning extended to > 50 km from sport hunting camps with most (70%) occurring within 20 km of camps (Fig. 4).

Discussion

In Zambia, provisioning of fresh game meat by sport hunting operators constituted an important source of protein for rural communities, with actual meat provisioned exceeding 6,000 kgs annually in the sampled prime and secondary GMAs. Meat provisioning by the hunting industry appeared reliable across years and exceeded expectation in each GMA and in every year

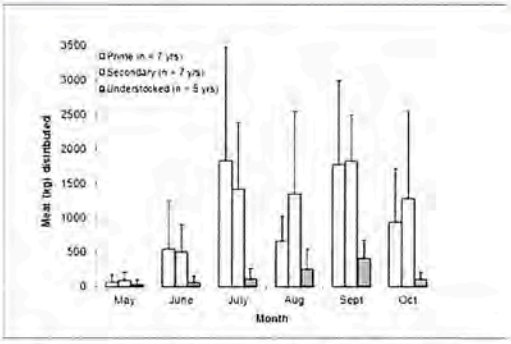

Fig 3. Mean (±SD) amount (kgs) of meat distributed by month for three Game Management Areas, Zambia.

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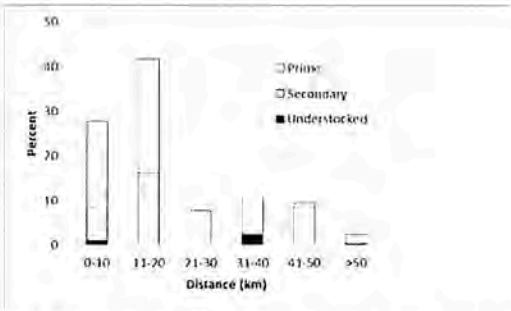

Fig 4. Distances from sport hunting camps of meat provisioned from three Game Management Areas, Zambia.

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except one (understocked GMA in 2009). Variations in the amount and timing of distributions appeared influenced in part by unpredictable short-term perturbations. For example, eruption of the Icelandic volcano and subsequent disruption to international flights in 2010 [40] caused the abrupt cancellation of numerous hunts and lowered the amount of meat distributed in some months that year (PHAZ, personal communication).

The provisioning of greater amounts of meat than expected resulted when operators successfully hunted more than the minimum 60% required of their annually allocated quota (P. White, unpublished data). These results illustrate a potential conflict of interest; ZAWA receives revenues based on GMA ranking (prime GMAs carry the highest fees) as well as the number of animal licenses sold. Therefore, ZAWA could be motivated to rank GMAs as high as possible and to allocate larger quotas in order to receive greater revenues from hunting operators [37]. Local communities also receive a portion of each animal license fee, and receive more meat when allocated quotas are high, especially for large-bodied species. Thus, community representatives engaged in quota setting exercises may also be motivated to support high quotas.

Likewise, hunting operators may be motivated to sell as many hunts as possible each year to maximize profits, especially in prime GMAs where fees are greater. However, an operator's future success is gauged on quality of trophies obtained in previous years. Trophy quality is judged on size and age rather than number of animals shot [41]. Further, lease periods of $\geq$ 10 years help promote good stewardship because holders of longer-term leases have a vested interest in conserving wildlife populations [42]. Zambian Wildlife Authority requirements of a minimum annual harvest could promote shooting of immature animals if allocated quotas are excessive. Despite existing protocols for post-season meetings designed to set quotas in accordance with best available information, allocated quotas are subject to later change by ZAWA's head office sometimes without consulting regional ecologists, hunting operators, or local communities. Subsequently, hunting operators occasionally request reduced quotas for certain species if they believe the allocated quota to be excessive in their GMA (PHAZ, personal communication). A more standardized methodololgy for monitoring trends in game population abundance, preferably including estimates of precision, could simplify setting of quotas and help ensure sustainable harvest.

The amount of meat and frequency of meat distributions was generally greater during months (e.g., September) when rural people are most likely to experience food shortages i.e., when alternative sources of food are exhausted and prior to annual crop production [43]. With a hunting moratorium in place since January 2013 throughout most of Zambia's GMAs, game meat supplied by the sport hunting industry has been almost eliminated. Over 60% of Zambia's

human population was classified as rural in 2013 and 83% of rural Zambian households are poor [44]. Most (20 of 30) of the GMAs analyzed in this study are in three of Zambia's poorest and most remote provinces (Northwestern, Eastern, and Southern) [44]. Zambia's poorest families whose crop production is insufficient to support themselves rely on income from casual labor to purchase food during shortages [43]. Food is the largest expenditure for Zambia's rural poor [45] for whom casual labor constitutes a major source of income [46]. However, most employment opportunities provided by sport hunting camps each year were lost during the current moratorium. This included casual work (road clearing, camp building) as well as seasonal jobs that lasted throughout the hunting season (camp staff, trackers and skinners, drivers and mechanics, etc.). In addition, commodities normally purchased by hunting camps from local communities (e.g., thatching grass, vegetables, maize meal) were not needed (P. White, unpublished data). Thus, in addition to the loss of provisioned meat, many rural people may lack the financial resources to legally purchase meat. During the similar time period (February 2013–February 2014) inflation in Zambia increased 7.6% [47]. The rate of inflation has since increased to 8.1% (November 2013–November 2014) with the cost of food contributing the most to the annual increase [48]. Zambia's poorest provinces have experienced the highest inflation rates countrywide [48].

In the absence of sport hunting, rural communities need alternatives to reliably and legally obtain meat. Solutions must be appropriate to local situations however [34], and consider the needs of humans and wildlife to avoid adverse effects [49–51]. Domestic livestock are excluded from many parts of Zambia due to tsetse flies [28] and can cause habitat degradation if overstocked [52]. Game ranching can provide a source of meat and African game meat has a greater protein content ($>$ 20% per 100g) than domestic species ($<$ 20% per 100g) [25]. But whereas sport hunting operators provision free meat as part of their lease agreements, ranchers may expect fair or subsidized prices for their product [53]. A shift to greater reliance on wild fisheries can result in depletion of fish stocks [33]; Zambia's native fish stocks are showing evidence of severe depletion [54],[55]. Communal conservancies that incorporate game and domestic stock could provide rural people with protein and income. These programs require considerable start-up investment and maintenance and a sport hunting component is often needed to ensure success, especially in the early stages [56],[57]. The most profitable conservancies include a sport hunting component [7],[15]; however, the income received by individuals is inversely related to human population density [10]. Benefits to residents diminish when conservation-benefit programs result in an influx of immigrants seeking to share in returns [58],[59].

Where alternative sources of food and income are not available, incidents of bushmeat poaching increase during the late dry season [35],[60],[61]. Many hunters sell bushmeat to obtain cash to purchase other foods [34], material goods [60], or to enhance their farming efforts thereby increasing the income potential of their crops [62]. Whether hunting for food or cash, expanding human populations coupled with the unsustainable hunting methods favored by bushmeat poachers have caused widespread concerns for the viability of wildlife populations and entire species [34],[63],[64]. Studies of bushmeat hunters in Zambia [60] and buyers in Zimbabwe [53] concluded that increasing the supply of free meat would help reduce bushmeat poaching.

Those most dependent on bushmeat for food are often the most remote and marginalized groups [33],[34],[49]. In Zambia, poor families are more likely to live $\geq$ 20 km from the nearest markets than families that are not poor [45]. Most of Zambia's GMAs are located in the poorest and most remote provinces [44]. Sport hunting operators in Zambia provisioned meat to at least 50 km from their hunting camps, which were situated in remote areas on average 84 km from the nearest towns (N = 32 camps). While the price of bushmeat can vary with distance to

source [65], average cost of bushmeat in Zambia in 2012 was US$4.75/kg of fresh game meat (P. White, unpublished data). Thus, the estimated replacement cost of game meat exceeds US $27,700/year for each prime GMA, US$30,850/year for each secondary GMA, and US$4,620/year for each understocked GMA. Countrywide, the estimated annual cost to purchase the equivalent of 129,771 kgs of fresh game meat is US$616,412, excluding butchering and delivery costs. At > 20% protein per 100g game meat, this is equivalent to 519,084 people days of protein per year. This figure is based on the recommended daily protein requirement of 50 gm/day [25] being fulfilled entirely by animal protein. In fact, Zambians on average obtain less than 20% of their dietary energy from animal protein [66]. Thus, although meat provisioned by sport hunting operators represents a small percentage of protein requirements for Zambians, it appears an effective means of distributing fresh, high quality meat to some of the most remote areas of the country with the greatest protein needs, thereby partially alleviating protein deficiencies in rural Africans. Elsewhere in Africa (e.g., Selous Game Reserve, Tanzania) where communities may be located too far from sport hunting camps to facilitate distribution of fresh meat, alternative sources of protein may be required.

The recent moratorium on sport hunting throughout much of Zambia created a crisis situation [67]. Bushmeat poaching is a serious problem in Zambia [14],[37] and the severity and rate of poaching has escalated during the current hunting closure [68]. Similarly, accelerated loss of wildlife occurred during previous (2000–2002) hunting closures in Zambia [4] and elsewhere (Kenya [9],[69]). Zambia's human population continues to increase (2.8% in 2010) [70]. From 1987–1997, Zambia's wildlife sector underperformed with regards its potential to supply game meat to rural people [14]. This included game ranching and cropping schemes in addition to sport hunting.

We characterized and quantified meat provisioning in Zambia. Large-scale sport hunting also occurs in the African countries of Namibia, Mozambique, Tanzania and Zimbabwe. In all five countries, over 60% of the total population is rural, with at least 25% of the population in each country categorized as undernourished [22]. With the exception of Namibia, each of these countries has lower than average GDPs compared to the mean for all African countries [71]. Globally, Zambia, Mozambique and Tanzania each rank in the bottom 20 of food supply of meat [66]. As in Zambia, most hunting areas in these other four countries are located in rural regions [72]. National governments and wildlife authorities are responsible for establishing hunting quotas and lease agreements including meat distribution requirements, thus extrapolation of meat provisioning in Zambia to other countries would be speculative, and wider-scale estimates are beyond the scope of this paper. However, the detailed information we provide for Zambia may serve as a template for future investigations of expected meat distributions in other countries or regions where hunting occurs.

While the amount of game meat provisioned annually by Zambia's sport hunting industry is substantial, a multi-use approach that incorporates sport hunting, game ranching, and communal conservancies for additional sources of protein and income in rural areas will likely be required to keep pace with the growing demand for meat and jobs. It is vital that Zambia's GMAs be afforded sound custody unless and until viable alternatives offering the same or greater benefits than sport hunting provided can be implemented.

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Author Contributions

Conceived and designed the experiments: PAW. Performed the experiments: PAW. Analyzed the data: PAW JLB. Contributed reagents/materials/analysis tools: JLB. Wrote the paper: PAW JLB.

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REPORT ON THE 2015 AERIAL CENSUS OF ELEPHANTS AND OTHER LARGE MAMMALS IN ZAMBIA

REPUBLIC OF ZAMBIA

MINISTRY OF TOURISM AND ARTS

REPORT ON THE 2015 AERIAL CENSUS OF ELEPHANTS AND OTHER LARGE MAMMALS IN ZAMBIA

Volume II: Population Estimates and Statistics for other large mammals and birds

MARCH 2016

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VOLUME II

POPULATION ESTIMATES AND STATISTICS FOR OTHER LARGE MAMMALS AND BIRDS IN ZAMBIA

SUMMARY

During September 2015 the Zambia Wildlife Authority carried out an aerial survey of elephants and other large herbivores, wild and domestic, in four Zambian ecosystems. A total area of 84,859 km^2, representing 37% of Zambia's protected area network was sampled at an average intensity of 8%. Fixed-wing aircraft were used to conduct transect surveys over the entire survey area.

The main objective was to estimate numbers and distribution of African elephants and the associated elephant carcasses, but other large wild mammals and birds within the survey area were recorded. This report presents the estimates of the other large mammals and birds counted during the survey. Population estimates of elephants are presented in volume I.

Some large herbivores are not easily seen from the air and their numbers were undoubtedly underestimated. Nevertheless, population estimates are given for these species, because the estimates provide useful indices of abundance (with measures of precision) that can be used to determine spatial distribution, as well as temporal trends in population number. No corrections have been applied to any of the estimates to compensate for any undercounting or missed animals.

The areas covered during the surveys are:-

- Luangwa ecosystem (32,819 km^2), comprising the North and South Luangwa, Luambe and Lukusuzi National Parks, Mukungule, Musalangu, Munyamadzi, Lumimba, Lupande and Sandwe Game Management Areas (GMAs);
- Kafue ecosystem (45,030 km^2) comprising the Kafue National Park and the 9 surrounding GMAs except Bbilili.
- Sioma Ngwezi National Park (4,482 km^2)
- Lower Zambezi Valley (2,528 km^2) comprising the valley sections of the Lower Zambezi National Park, Chiawa and Rufunsa GMAs.

Mosi-au-tunya, Liuwa Plains, West Lunga, Kafue flats, Blue Lagoon, Nsumbu, Mweru Wa Ntipa, Lusenga Plains, Isangano, Lavushi Manda, Kasanka and Nyika National Parks with their surrounding Game Management Areas were not covered. Therefore, the total estimates of wild large herbivores presented in this report do not necessarily represent the total for the whole country.

The estimated population numbers of the primary large herbivores in the country were; Buffalo 43715 (95% confidence Interval (CI) 26877 – 60554); Eland 2530 (CI 283 - 4777); Hartebeest 6957 (CI 4753 - 9162); Kudu 3383 (CI 2448 - 4318); Roan 6261 (CI 4121 - 8401); Sable 14874 (CI 11061 - 18686); waterbuck 9927 (CI 6287 - 13567); blue wildebeest 2955 (CI 630 - 5280); cookson's wildebeest 3753 (CI 1558-5948); zebra 10768 (CI 6426 - 15110).

Of the seven national parks surveyed domestic livestock were only recorded in the Kafue and Sioma Ngwezi National Parks.

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1.0 INTRODUCTION

This report presents the results of the 2015 dry season aerial survey of large herbivores and selected large birds in Zambia's protected area network. The survey was conducted between 4th and 26th September 2015 and covered 36.6 % (84, 859.3 km^2) of Zambia's protected area network. The areas covered in the survey included: (1) the Luangwa ecosystem – comprising the South Luangwa, North Luangwa, Luambe and Lukusuzi National Parks and adjoining Game Management Areas; (2) Kafue ecosystem comprising the Kafue National Park and its surrounding Game Management Areas (GMAs); (3) the Lower Zambezi valley and (4) Sioma Ngwezi National Parks (Figure 1). The survey was part of the Great Elephant Census covering the main elephant range in East, Central and Southern Africa funded by the Paul G. Allen Family Foundation through the Vulcan Philanthropy.

2.0 METHODS

2.1 Survey Design

The survey procedure was based on a well-established standardized wildlife aerial survey approach as described by Norton-Griffiths 1978. This survey was optimised for counting elephants in their known range in Zambia. Thus, counting and estimation of other large mammals and large birds were limited to areas of high elephant densities. However, the range of other large mammals far exceeds the elephant range and thus estimates of large mammals are underrepresented in this current design. Other elephant range areas such as Nsumbu and West Lunga NPs and surrounding GMAs were not included in the survey due to budgetary limitations. The Liuwa Plain National Park, Bangweulu wetlands and Kafue flats which hold significant numbers of blue wildebeest, black lechwe, Kafue lechwe, and plains zebra were not included in the surveys. Therefore, the estimates of large mammals do not necessarily represent the total for the whole country.

Flights were in Cessna 182 and 206 aircraft at a nominal height of 300 feet above the ground, with a total nominal transect strip-width of 300m. Details of methods are provided in Appendix I.

2.2 Stratification

Strata were selected to cover known elephant densities illustrated in previous survey reports (Dunham & Simwanza, 2002; Dunham, 2004; Masonde & Simpamba, 2006; Viljoen, 2007; Chase & Griffin, 2008; Simukonda, 2008; WCS, 2009; Frederick, 2011; Simukonda, 2011; Chase, Nyirenda & Sitali, 2013; Viljoen, 2013; Frederick, 2013). The strata comprised the core elephant range, and the marginal wildlife areas which were expected to contain other wildlife species and few elephants (Figure 1). It was considered important to include the marginal areas to confirm that most of the elephant range was covered by the survey. It is for this reason that protected area boundaries were not used as a basis for stratification.

2.3 Data Analysis

Population estimates and confidence intervals for each stratum were calculated based on Jolly's (II) 1969 method for unequal-sized sampling units (Norton-Griffiths 1978). Population estimates for each ecosystem was further calculated as the sum of the estimates for the individual strata within the ecosystem.

Although protected area boundaries were not the basis for stratification, GIS analysis was used to present population estimates for the national parks within the areas surveyed. This was done

by determining in which national park that each sighting occurred and separating data sets for each area, then re-analysing with the same strata and transects as mentioned in the above paragraph. By re-analysing the data in this way the total for the ecosystems did not change because the sampling intensities remained the same.

To evaluate population trends for large herbivores in each of the ecosystems, a literature search was done to collect data on population estimates from the 2002 to date. The data was analyzed by linear regression where the population estimates taken as the dependent variable and the time as the independent variable. The analysis was done in program R (R Development Core Team, 2013).

A detailed description of the design, implementation and technical details of this aerial survey are extensively elaborated in Part 1 of the report on the 2015 Aerial survey in Zambia (DNPW, 2016).

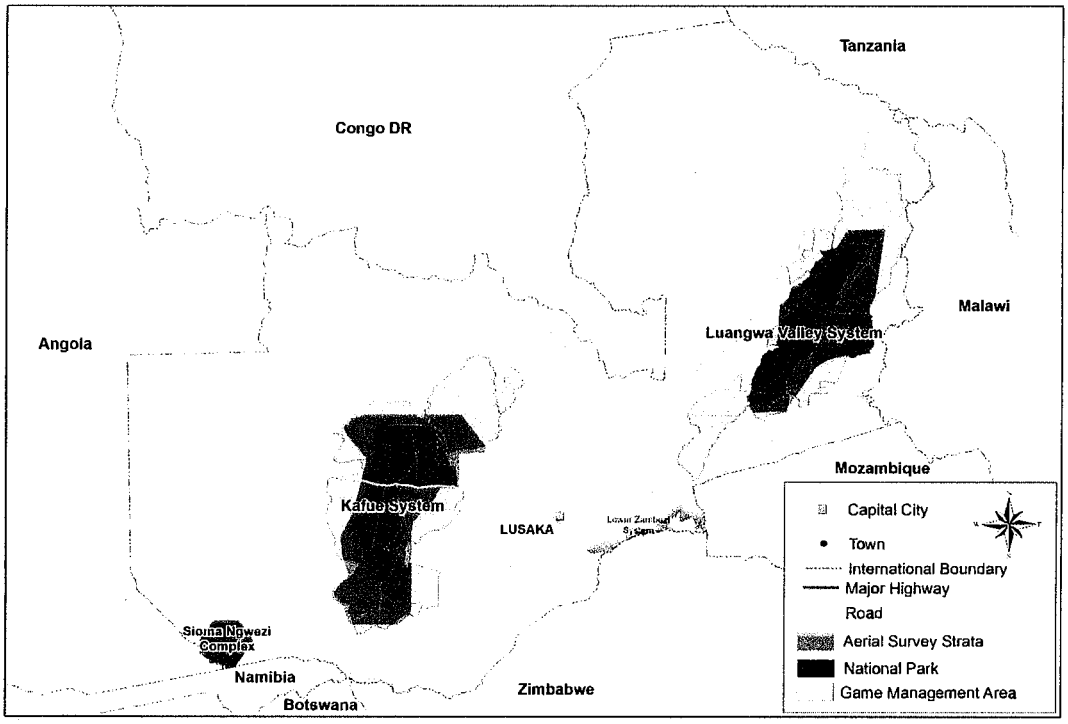

Figure 1. Survey Areas

3.0 RESULTS AND DISCUSSION

3.1 General

The results are presented by ecosystem, with the overall ecosystem estimates presented first (Tables 2, 5 & 12), followed by a breakdown according to the parks and a combined estimate for the Game Management Areas. The results tables provide the estimated number per stratum with the 95% confidence interval indicating the lower limit and the upper limit. The numbers actually seen within the sampling strips by observers are labelled as "No. seen". In deriving the population estimate only the number of animals seen within the sampling strips were used, for species seen outside the sampling strip, the information is used to show species occurrence and distribution.

The presentation of results by park enabled us to make trend comparisons with previous aerial surveys where park only results have been reported. Given the wide and often overlapping confidence

intervals associated with aerial survey population estimates, we did not expect significant differences between estimates considering the short time frame (10 - 12 years) and number of estimates (4 - 6). Thus the assumption that the relationship between population size and time is linear over the short term. For the purpose of comparison we wanted to know how areas we consider core areas i.e., National Parks compare to areas we consider marginal areas i.e., Game Management Areas. Tables 3, 5 and 10 compare the estimates between the NPs and GMAs in the Kafue and Luangwa Ecosystems. For each of the Kafue, Luangwa and Lower Zambezi ecosystems combined estimates are also given the Game Management Areas. Complete population estimates and statistics by strata as flown during the surveys are presented in Appendix I.

3.2 Countrywide Estimates

The estimated population numbers of the primary herbivores in the four ecosystems surveyed were: Buffalo 43715, duiker 4025, eland 2530, giraffe 618, hartebeest 6957, impala 52369, kudu 3383, puku 23538, roan 6261, sable 14874, warthog 12626, waterbuck 9927, blue wildebeest 2955, Cookson's wildebeest 3753 and zebra 10768. Liuwa plain National Park Zambia's stronghold for blue wildebeest was not part of the surveys and as such the estimate presented here is an underestimate of the species in Zambia. Table 1, below gives population estimates and statistics for the primary herbivores counted.

Table 1. Population estimates and statistics for large herbivores in Surveyed Area

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	43715	26877	-	60554	4724	51.52
Bushbuck	335	170	-	500	27	0.39
Bushpig	775	291	-	1260	61	0.91
Duiker	4025	3439	-	4612	330	4.74
Eland	2530	283	-	4777	225	2.98
Giraffe	618	331	-	906	73	0.73
Grysbok	28	2	-	67	2	0.03
Hartebeest	6957	4753	-	9162	596	8.2
Impala	52369	42982	-	61756	5257	61.71
Kudu	3383	2448	-	4318	283	3.99
Red Lechwe	12290	1934	-	22646	1372	14.48
Oribi	166	74	-	257	19	0.2
Puku	23538	15294	-	31782	2478	27.74
Reedbuck	981	272	-	1690	73	1.16
Roan	6261	4121	-	8401	474	7.38
Sable	14874	11061	-	18686	1241	17.53
Sitatunga	101	6	-	262	6	0.12
Warthog	12626	10762	-	14490	1182	14.88
Waterbuck	9927	6287	-	13567	581	11.7
Blue wildebeest	2955	630	-	5280	233	3.48
Cookson's wildebeest	3753	1558	-	5948	368	11.44
Zebra	10768	6426	-	15110	927	12.69

3.3 Kafue Ecosystem

At 45030 km^2, the Kafue ecosystem accounted for 53% of the total surveyed area. The surveys covered approximately 68% of the protected area network in the Kafue ecosystem. This was made up of the entire park and 52% of the Game Management Areas.

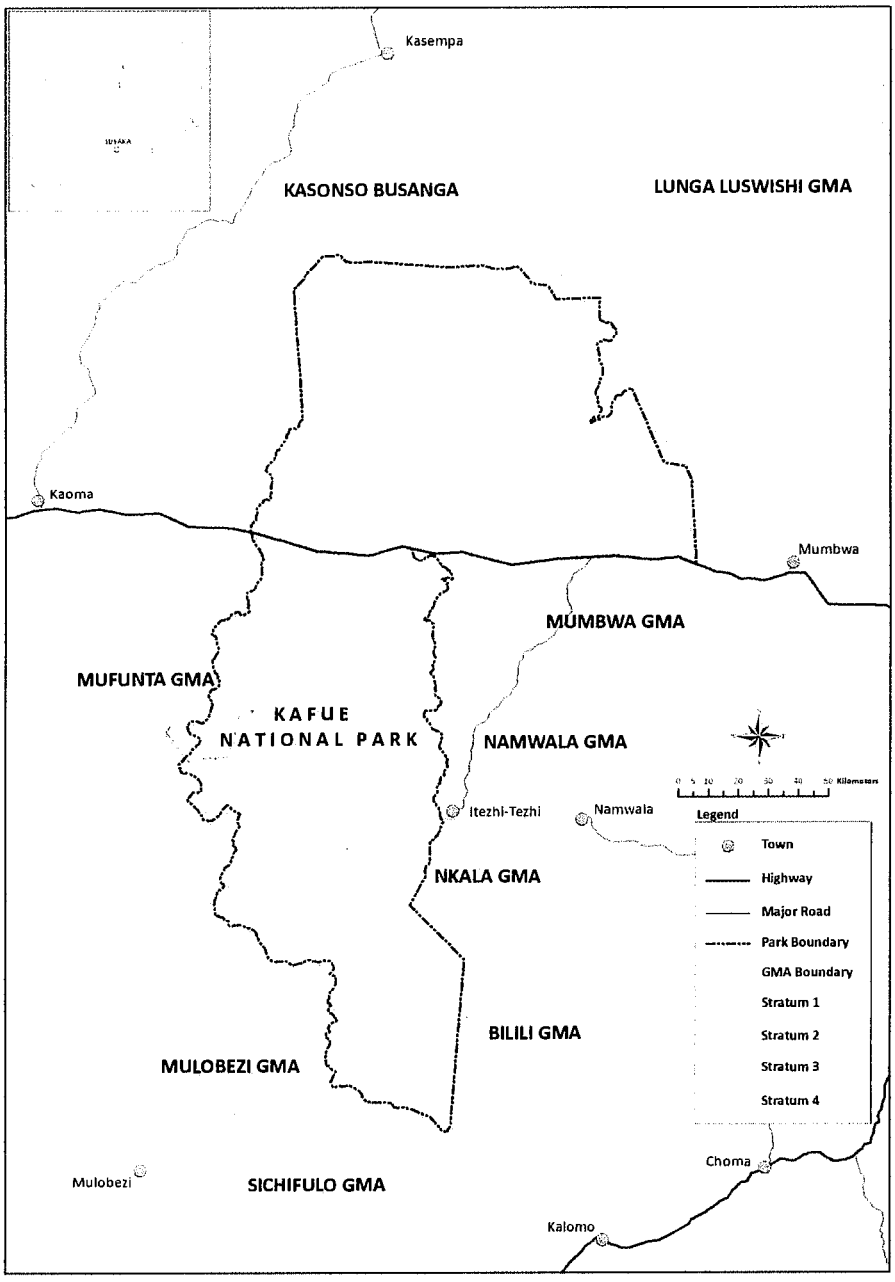

Figure 2. Kafue ecosystem survey strata

The Kafue ecosystem accounted for all the grysbok, red lechwe and sitatunga estimated countrywide, while 90 % or more of hartebeest, oribi, reedbuck and sable was counted from the

ecosystem. The population estimates of the primary large herbivore species in the ecosystem were: Buffalo 8534, eland 1156, hartebeest 6265, impala 25847, kudu 1251, red lechwe 12290, puku 16470, roan 2978 and sable 14314. Complete population estimates and associated statistics for the ecosystem are given in table 2 below.

Table 2. Overall population estimates and statistics for the Kafue Ecosystem

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	8534	864	-	16993	864	18.95
Bushbuck	211	77	-	345	17	0.47
Bushpig	385	112	-	658	33	0.86
Duiker	1877	1425	-	2330	128	4.17
Eland	1156	68	-	2764	68	2.57
Grysbok	28	2	-	67	2	0.06
Hartebeest	6265	4090	-	8440	542	13.91
Impala	25847	18776	-	32918	2381	57.4
Kudu	1251	695	-	1806	102	2.78
Lechwe	12290	1923	-	22657	1372	27.29
Oribi	149	60	-	237	17	0.33
Puku	16470	8489	-	24450	1694	36.57
Reedbuck	973	263	-	1682	72	2.16
Roan	2978	1272	-	4685	220	6.61
Sable	14314	10520	-	18109	1176	31.79
Sitatunga	101	6	-	262	6	0.22
Warthog	9143	7463	-	10823	841	20.3
Waterbuck	7261	3702	-	10820	605	16.13
Wildebeest	2896	562	-	5231	226	6.43
Zebra	5211	1109	-	9313	371	11.57

3.3.1 Kafue National Park

The estimated population numbers of the primary herbivores in the Kafue National Park were: Impala 14859, red lechwe 12206, sable 9695, buffalo 8219, waterbuck 5000, hartebeest 4640, zebra 1269 and eland 771.

In comparison to the surrounding Game Management Areas, the Kafue National Park had a higher density of all the species apart from zebra, common duiker and reedbuck (Figure 1). Nkala Game Management Area had the highest concentration of zebra among the GMAs in the ecosystem (Figure 8). Sable was uniformly distributed in the ecosystem with a higher concentration in the southern parts, the distribution of hartebeest in the KNP was concentrated in the central parts of the park, and almost absent on the western boundary. Of the twelve species considered for population trends (Fig. 4), only zebra showed a decreasing trend for the period 2006 – 2015 in the Kafue National Park. The park also accounted for more than 95 per cent of the buffalo and lechwe population in this ecosystem (Figure 7).Table 3 and 4, below gives the population estimates and statistics for the primary herbivore species in the Kafue National Park and Community areas respectively.

Table 3. Population estimates and statistics of large herbivores in KNP and GMAs

	Kafue National Park				Kafue Ecosystem Game Management Areas			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	8219	830 - 16658	830	36.97	315	34 - 900	34	1.38
Bushbuck	105	17 - 192	10	0.47	106	7 - 209	7	0.47
Bushpig	200	24 - 377	20	0.9	185	13 - 393	13	0.81
Duiker	631	432 - 830	54	2.84	1246	832 - 1661	74	5.48
Eland	771	47 - 2216	47	3.47	385	21 - 1090	21	1.69
Grysbok	9	1 - 27	1	0.04	18	1 - 54	1	0.08
Hartebeest	4640	2948 - 6333	443	20.87	1625	325 - 2924	99	7.14
Impala	14859	10623 - 19095	1565	66.84	10988	5530 - 16446	816	48.29
Kudu	698	382 - 1015	68	3.14	552	89 - 1015	34	2.43
Lechwe	12206	1840 - 22573	1367	54.91	84	5 - 240	5	0.37
Oribi	98	24 - 171	12	0.44	51	5 - 105	5	0.22
Puku	12224	6140 - 18308	1359	54.99	4246	335 - 8915	335	18.66
Reedbuck	419	163 - 676	40	1.88	553	32 - 1217	32	2.43
Roan	2454	1021 - 3887	189	11.04	524	31 - 1434	31	2.3
Sable	9695	6534 - 12856	898	43.61	4619	2294 - 6944	278	20.3
Sitatunga	84	5 - 244	5	0.38	17	1 - 48	1	0.07
Warthog	6240	4905 - 7574	628	28.07	2903	1842 - 3964	213	12.76
Waterbuck	5000	2351 - 7649	479	22.49	2507	353 - 4661	151	11.02
Wildebeest	1631	332 - 2930	157	7.34	1265	69 - 3167	69	5.56
Zebra	1269	435 - 2104	145	5.71	3942	226 - 7964	226	17.32

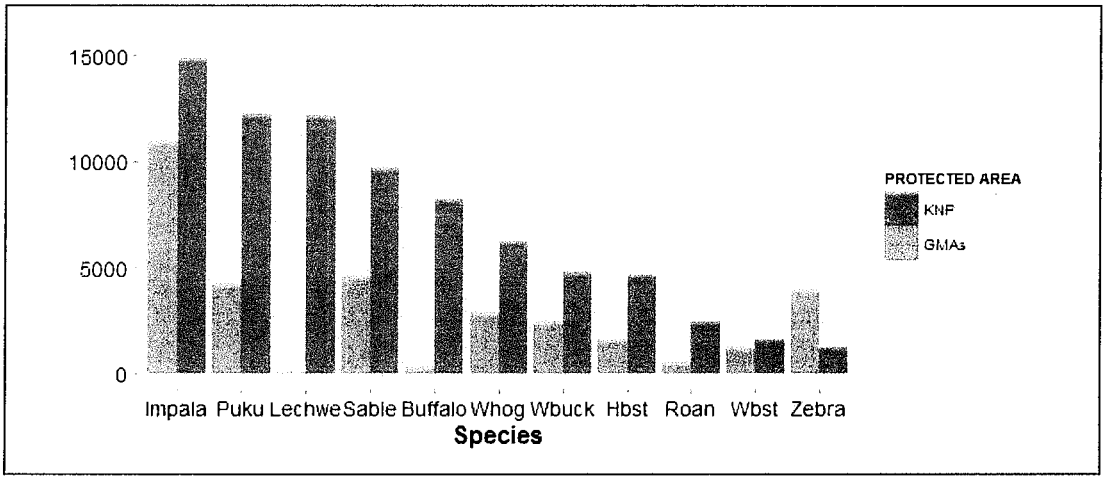

Figure 3. Comparison of species abundance between Kafue National Park and the GMAs in the Kafue ecosystem

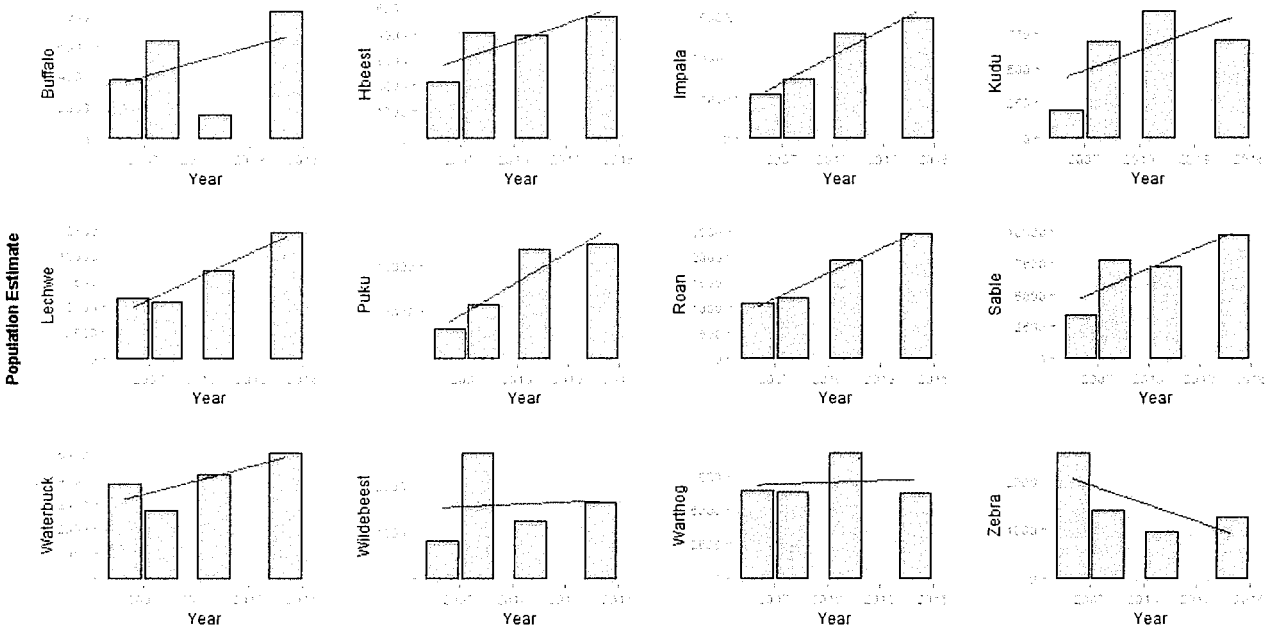

Figure 4. Population trends for selected species in the Kafue National Park for the period 2006 - 2015

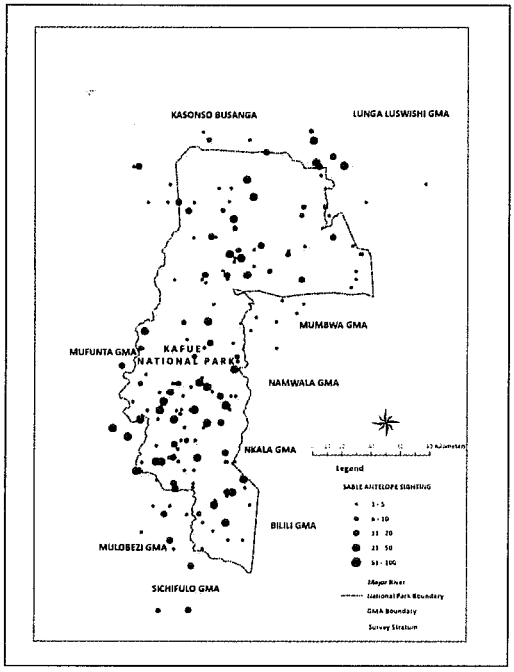

Figure 5. Sable distribution in the Kafue ecosystem

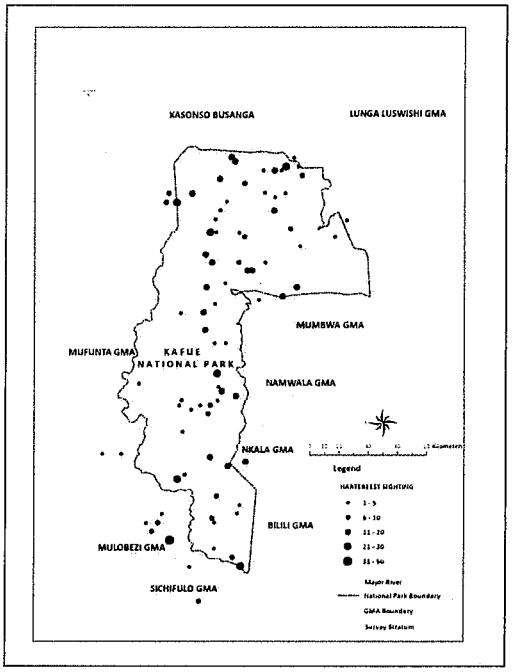

Figure 6. Hartebeest distribution in the Kafue ecosystem

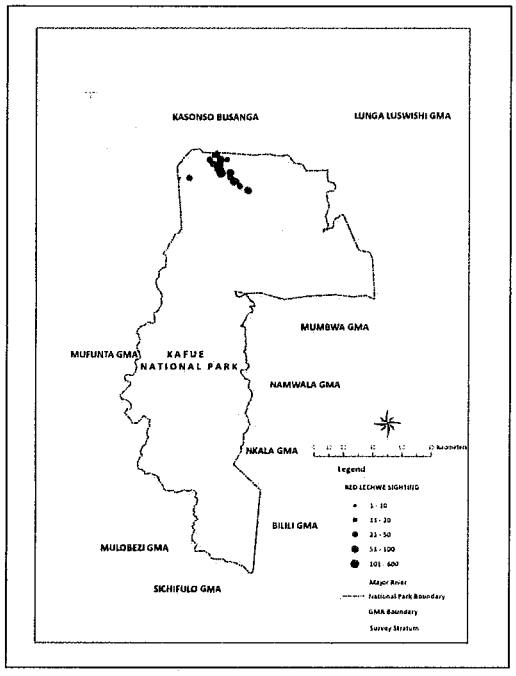

Figure 7: Red lechwe distribution in the Kafue ecosystem

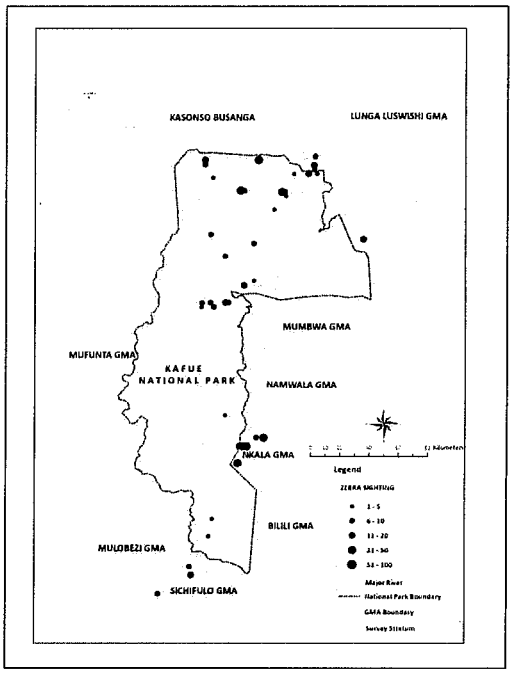

Figure 8: Zebra distribution in the Kafue ecosystem

3.4 Luangwa Ecosystem

The estimated population of the primary herbivores in the Luangwa ecosystem were: Buffalo 30082, duiker 962, eland 237, giraffe 99, hartebeest 692, impala 22502, kudu 1655, puku 7068, roan 2457, sable 56, warthog 3208, waterbuck 1773, wildebeest 3753, and zebra 4883. Complete population estimates and statistics for the ecosystem are given in table 5 below.

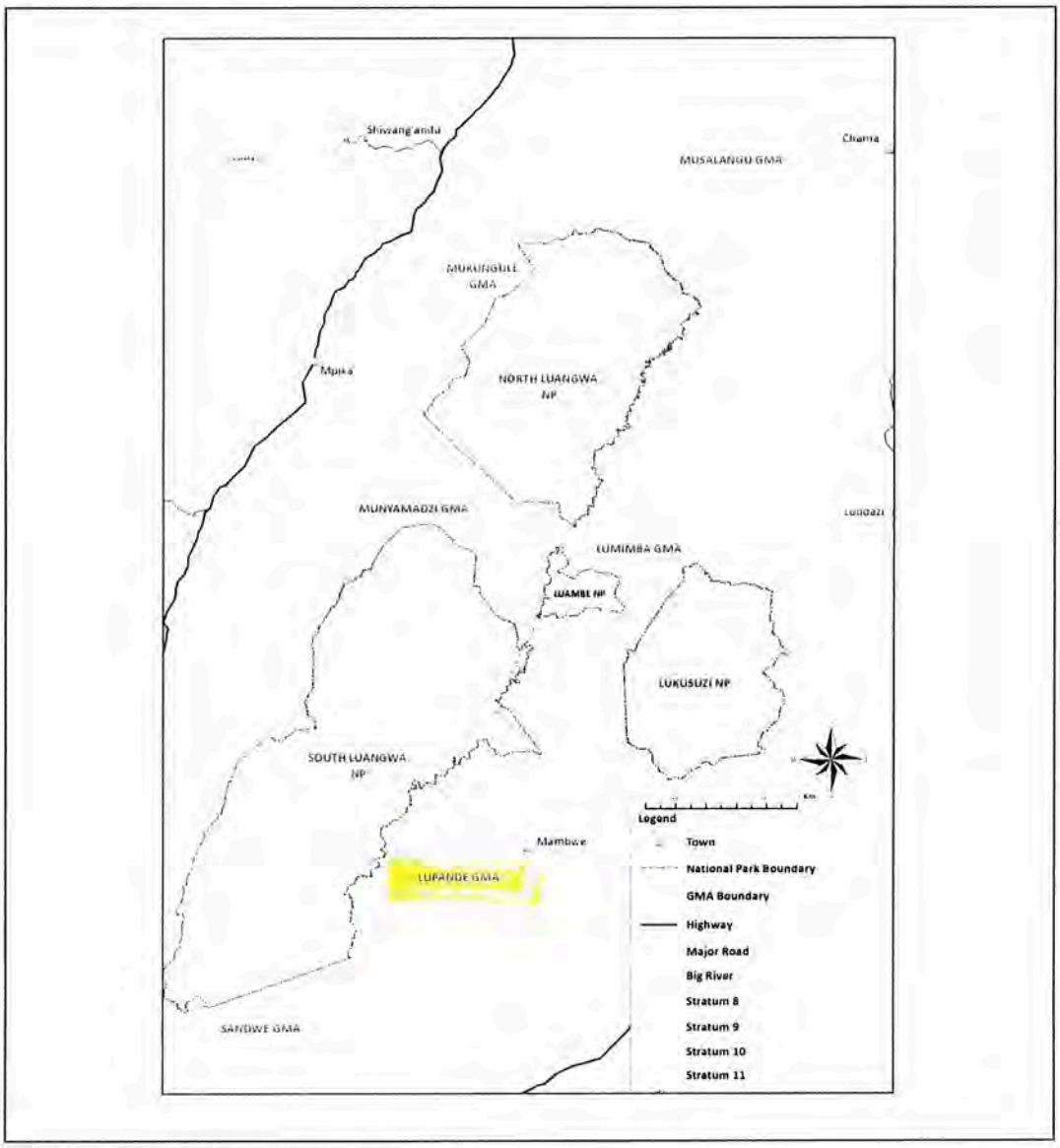

Figure 7. Luangwa Ecosystem survey strata

The Luangwa ecosystem accounted for 70% of the national total of buffalo. Approximately to 60% of the estimated buffalo population in the ecosystem was counted from GMAs (Table 6 & 7). The GMAs also had higher estimates of roan (73%), Cookson's wildebeest (65%), kudu (64%), common duiker (54%), and hartebeest (52%) (Figure 10 and table 7). Sable was only sighted in the Lukusuzi National Park.

Table 4. Overall population estimates for the Luangwa ecosystem

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	30082	16392	-	43772	3321	91.66
Bushbuck	124	27	-	222	10	0.38
Bushpig	390	28	-	792	28	1.19
Duiker	962	652	-	1273	58	2.93
Eland	237	21	-	454	21	0.72
Giraffe	99	30	-	169	11	0.3
Hartebeest	692	318	-	1066	54	2.11
Impala	22502	16664	-	28340	2453	68.56
Kudu	1655	932	-	2378	124	5.04
Puku	7068	4963	-	9173	784	21.54
Reedbuck	8	1	-	24	1	0.03
Roan	2457	1323	-	3591	155	7.49
Sable	56	3	-	130	3	0.17
Warthog	3208	2412	-	4003	310	9.77
Waterbuck	1773	729	-	2817	169	5.4
Wildebeest	3753	1558	-	5948	368	11.44
Zebra	4883	3540	-	6227	481	14.88

Table 5. Population estimates and statistics for large herbivores in Luangwa Ecosystem Parks and GMAs

	Luangwa Ecosystem Parks				Luangwa Ecosystem GMAs			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km^2**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km^2**
Buffalo	12750	3518 - 21981	1420	78.34	17332	7145 - 27520	1901	124.4
Bushbuck	72	5 - 157	5	0.44	53	6 - 99	5	0.38
Bushpig	339	22 - 735	22	2.08	51	6 - 120	6	0.37
Duiker	442	241 - 643	26	2.72	520	279 - 761	32	3.73
Eland	220	19 - 434	19	1.35	17	2 - 49	2	0.12
Giraffe	81	15 - 146	9	0.5	19	2 - 44	2	0.14
Hartebeest	330	82 - 578	27	2.03	363	94 - 631	27	2.61
Impala	13662	8980 - 18345	1560	83.94	8840	5631 - 12049	893	63.45
Kudu	589	191 - 988	49	3.62	1066	445 - 1687	75	7.65
Puku	5145	3137 - 7153	577	31.61	1923	1033 - 2813	207	13.8
Reedbuck	8	1 - 24	1	0.05	0	0 - 0	0	0
Roan	663	84 - 1243	42	4.07	1794	823 - 2765	113	12.88
Sable	56	3 - 130	3	0.34	0	0 - 0	0	0
Warthog	1671	1229 - 2113	158	10.27	1536	829 - 2243	152	11.02
Waterbuck	1142	280 - 2005	116	7.02	631	113 - 1150	53	4.53
Wildebeest	1304	307 - 2302	143	8.01	2449	689 - 4209	225	17.58
Zebra	3742	2615 - 4869	383	22.99	1142	532 - 1752	98	8.2

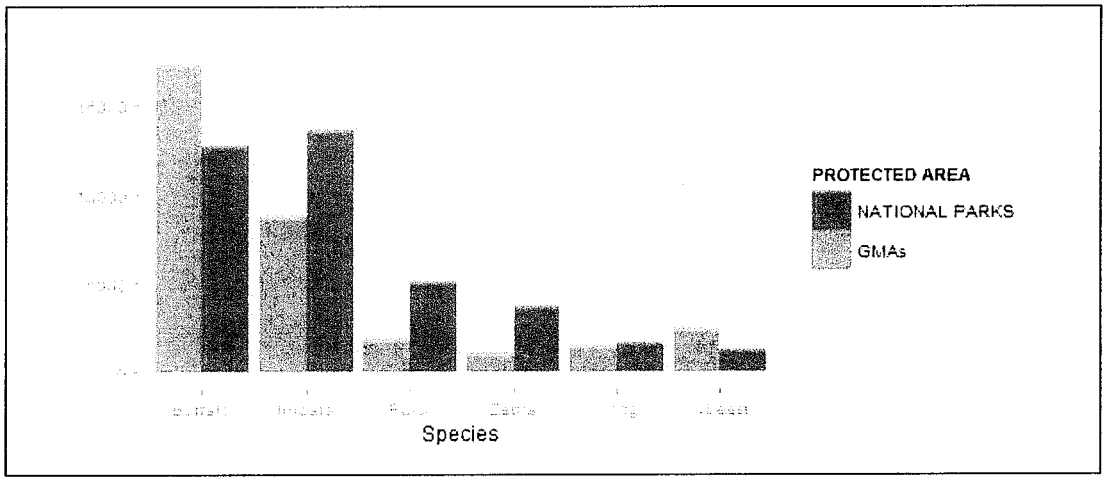

Figure 8. Species abundance in the Luangwa ecosystem. National Parks vs GMAs

3.4.1 South Luangwa National Park

The most abundant species in the South Luangwa National Park was impala 10873, followed by puku 4146, buffalo 3808, zebra 2767, waterbuck 1106 and warthog 1029. Complete population estimates and statistics for South Luangwa National Park are given in table 6 below. Population trends in the South Luangwa National Park have largely been stable to decreasing over the period 2002 to 2015. Of concern is the population of Thornicroft's giraffe which has reduced from an estimated 187 in 2002 (Dunham & Simwanza 2002) to 72 in 2015. A reduction of 61%. In contrast Berry and Bercovitch (2016), using an index method estimate between 500 & 600 Thornicroft giraffe along the Luangwa River. The huge differences in estimates call for more robust methods for estimating the population of this endemic sub species of giraffe.

Table 6. Population estimates for South and North Luangwa National Parks

	SLNP				NLNP			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	3808	404 - 7496	404	44.04	7030	812 - 14799	812	150.34
Bushbuck	35	3 - 75	3	0.4	0	0 - 0	0	0
Bushpig	178	10 - 520	10	2.06	51	6 - 145	6	1.09
Duiker	240	77 - 403	14	2.78	35	3 - 75	3	0.75
Eland	118	13 - 240	13	1.36	9	1 - 27	1	0.19
Giraffe	72	8 - 136	8	0.83	0	0 - 0	0	0
Hartebeest	73	6 - 171	6	0.84	127	14 - 266	14	2.72
Impala	10873	6398 - 15348	1242	125.76	1853	635 - 3071	214	39.63
Kudu	362	92 - 632	32	4.19	60	7 - 119	7	1.28
Puku	4146	2265 - 6028	468	47.95	543	129 - 957	60	11.61
Reedbuck	8	1 - 24	1	0.09	0	0 - 0	0	0
Roan	445	28 - 971	28	5.15	17	2 - 39	2	0.36
Warthog	1029	685 - 1373	94	11.9	563	304 - 822	59	12.04
Waterbuck	1106	242 - 1969	112	12.79	37	4 - 91	4	0.79
Wildebeest	903	100 - 1742	100	10.44	401	43 - 949	43	8.58
Zebra	2767	1767 - 3766	285	32	732	282 - 1182	72	15.65

3.4.2 Luambe National Park

Buffalo 1,911 and impala 936 were the most abundant species in Luambe National Park (Table 9). The density of buffalo (555.52/100km^2) was the highest recorded in the country during the 2015 surveys (Figure 8). The density of impala (272.09/100km^2) was only second to that of the Lower Zambezi National Park. Population trends for impala, puku and zebra, the three species for which there has been consistent sightings in previous surveys (Simukonda, 2009; Simukonda 2011; WCS, 2012) have largely been stable for the park (Figure 11). The lack of consistent buffalo estimates in the area from previous surveys may indicate that the buffalo population in Luambe is transient between the park and the surrounding Game Management Areas.

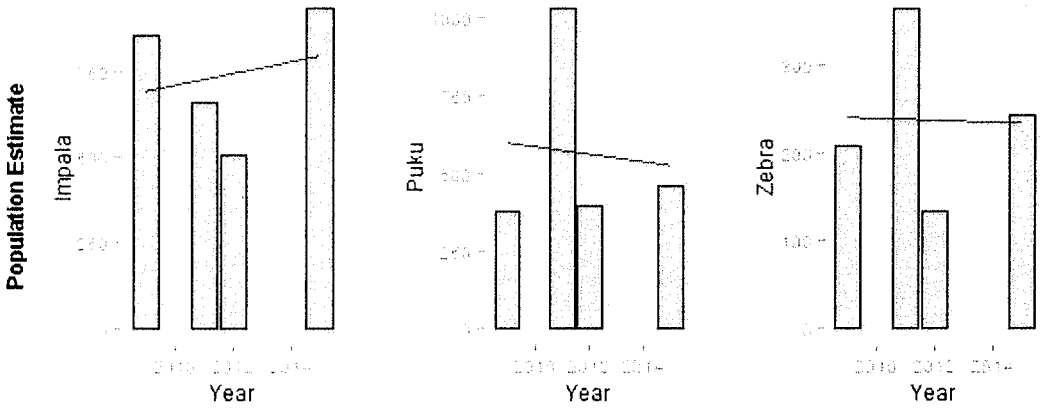

Figure 9. Impala, puku and zebra populations trends in Luambe National Park for the period 2009 - 2015

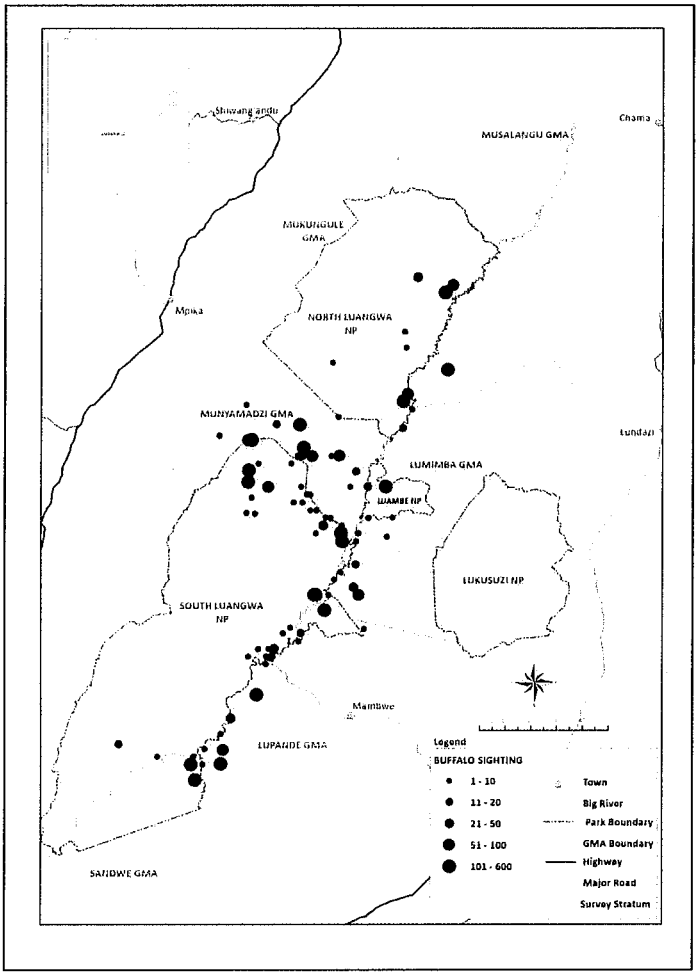

Figure 10. Buffalo distribution in the Luangwa valley

Table 7. Population estimates for Luambe and Lukusuzi National Parks

	LUAMBE				LUKUSUZI			
Species	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**	**Pop. est.**	**95% Range**	**No. seen**	**No./ 100km²**
Buffalo	1911	204 - 5398	204	555.52	**0**	0 - 0	**0**	**0**
Bushbuck	0	0 - 0	0	0	37	2 - 122	2	1.42
Bushpig	17	1 - 51	1	4.94	93	5 - 289	5	3.56
Duiker	0	0 - 0	0	0	167	42 - 292	9	6.4
Eland	0	0 - 0	0	0	93	5 - 289	5	3.56
Giraffe	8	1 - 24	1	2.33	0	0 - 0	0	0
Hartebeest	0	0 - 0	0	0	130	7 - 332	7	4.98
Impala	936	187 - 1685	104	272.09	0	0 - 0	0	0
Kudu	19	2 - 54	2	5.52	149	8 - 469	8	5.69
Puku	455	49 - 1045	49	132.27	0	0 - 0	0	0
Reedbuck	0	0 - 0	0	0	0	0 - 0	0	0
Roan	34	3 - 80	3	9.88	167	9 - 436	9	6.4
Sable	0	0 - 0	0	0	56	3 - 139	3	2.13
Warthog	60	4 - 162	4	17.44	19	1 - 57	1	0.71
Waterbuck	0	0 - 0	0	0	0	0 - 0	0	0
Wildebeest	0	0 - 0	0	0	0	0 - 0	0	0
Zebra	243	26 - 522	26	70.64	0	0 - 0	0	0

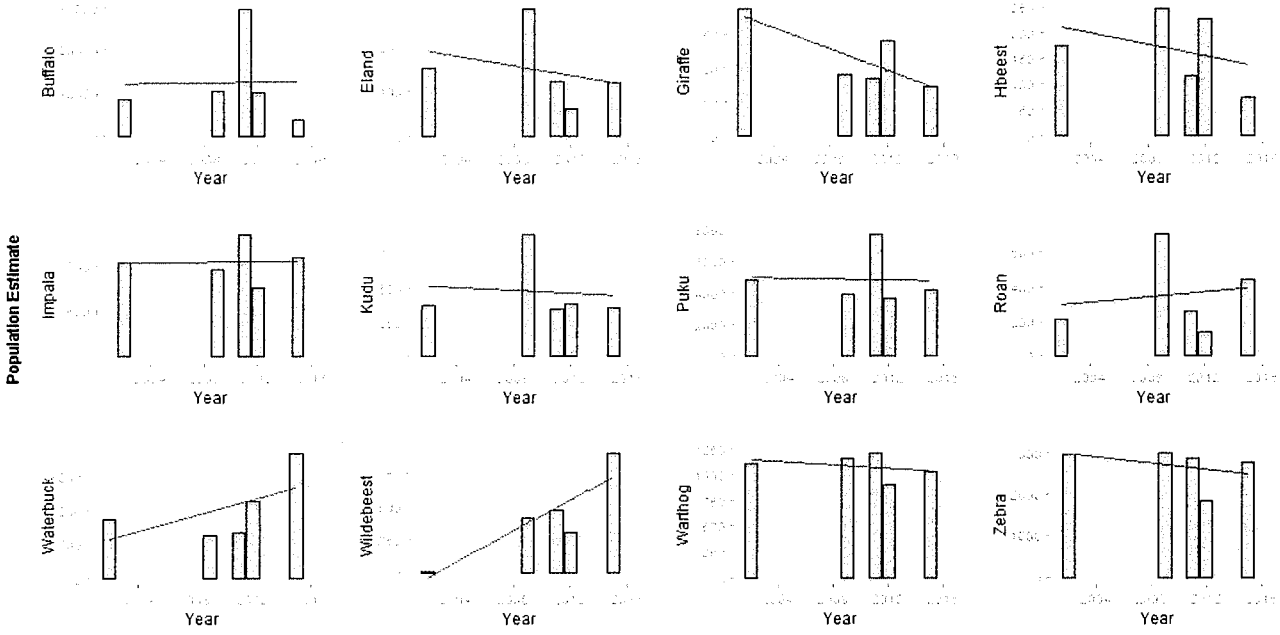

Figure 11. Population trends for selected species in the South Luangwa National Park 2002 - 2015

3.4.3 North Luangwa National Park

The most abundant herbivores in North Luangwa National Park were buffalo 7030, impala 1853, zebra 732, warthog 563 and puku 543 (Table 10). Other species counted included bushpig, duiker, hartebeest, kudu, roan and wildebeest. Population trends for North Luangwa are given in figure 15 below. Apart from buffalo, hartebeest and warthog, most other species in the North Luangwa National Park showed a declining trend.

3.4.4 Lukusuzi National Park

Nine herbivore species were observed in the Lukusuzi National Park and of these only duiker 167, hartebeest 130, kudu 149 and roan 167 were estimated above a hundred individuals (Table 5). Lukusuzi National Park is the only park that recorded Sable Antelope in the Luangwa ecosystem. Previous surveys have considered the number of sightings in Lukusuzi National Park to be too low to warrant statistical analysis, and have only provided absolute numbers (e.g., WCS, 2009, 2012). It is evident from the associated confidence intervals (table 7), which are too wide that the estimates from Lukusuzi are unreliable due to the few sightings recorded. As such caution should be taken when interpreting the estimates. Lukusuzi National Park recorded human activities (mining) right in the interior of the park (Figure 14). The abundance of these activities could be having an effect on the abundance, diversity and distribution of the animal species in the park.

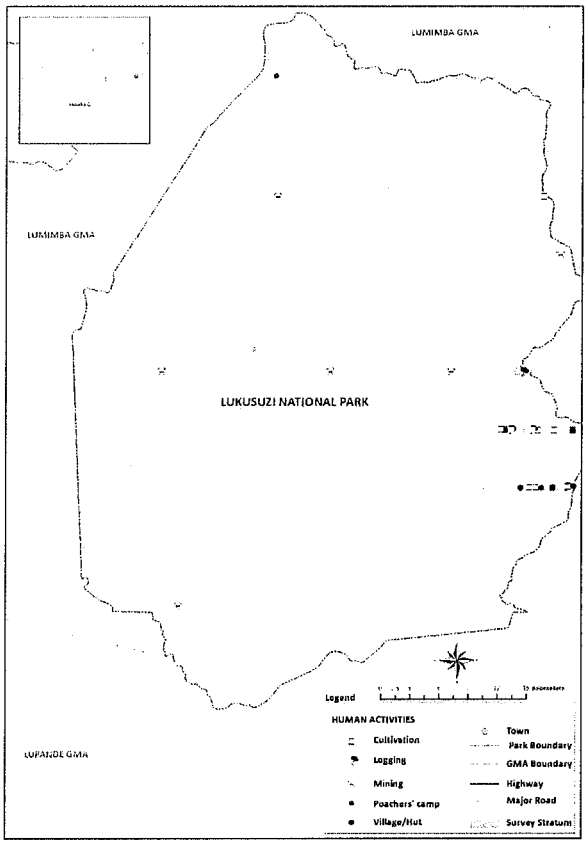

Figure 12. Human activities in Lukusuzi National Park

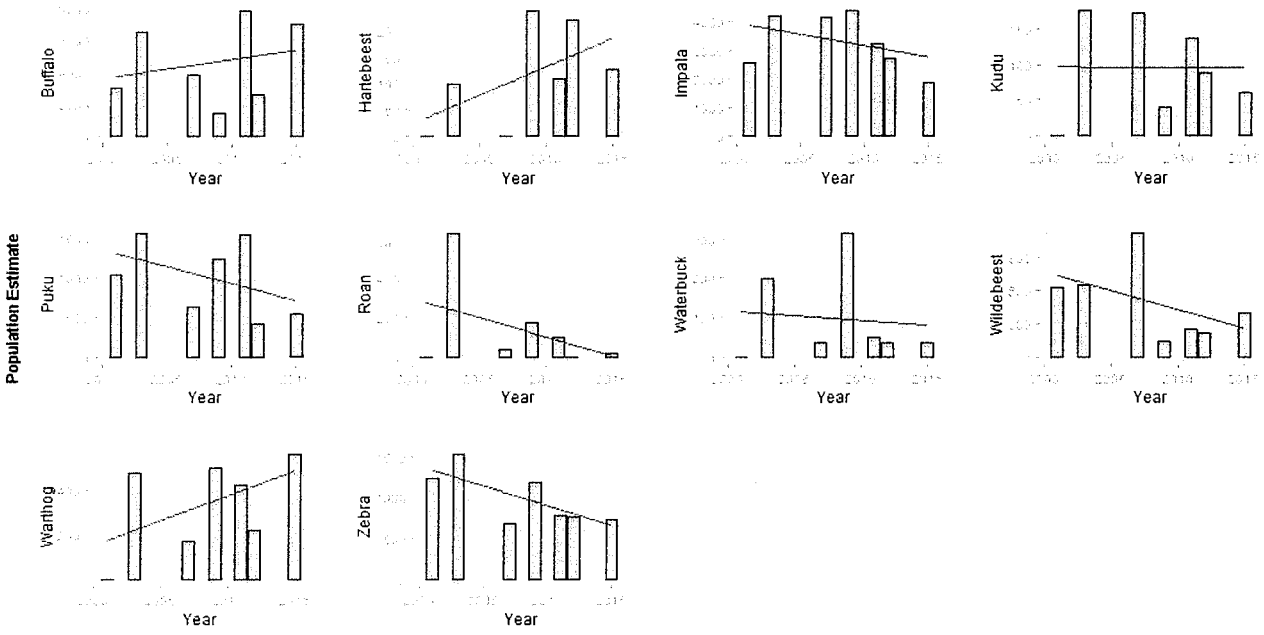

Figure 13. Population trends for selected species in NLNP

3.5 Lower Zambezi Valley

The estimated population of the primary herbivores in the Zambezi valley were: Buffalo 4806, impala 3947, waterbuck 658, zebra 400, warthog 162, kudu 67, and duiker 19 (Table 12).

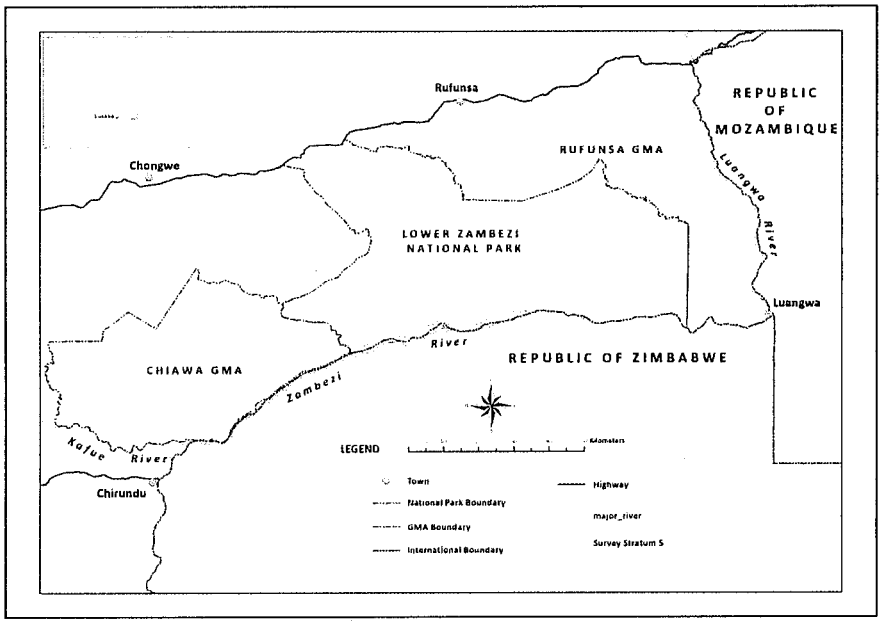

Figure 14. Lower Zambezi Valley Survey Strata

Buffalo was the most abundant herbivore in the Zambezi valley, however, about 81% of this population was found in the Game Management Areas, which accounted for 55% of the surveyed area.

Table 8. Overall population estimates and statistics for the Lower Zambezi Valley

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	4806	504	-	9912	504	190.1
Duiker	19	2	-	44	2	0.75
Impala	3947	1845	-	6050	414	156.15
Kudu	67	7	-	129	7	2.64
Warthog	162	17	-	307	17	6.41
Waterbuck	658	69	-	1347	69	26.03
Zebra	400	42	-	833	42	15.84

3.5.1 Lower Zambezi National Park

The Lower Zambezi National Park recorded the highest density (282.27/100km^2) of impala in the country (Table 13).The distribution of impala in the Zambezi Valley is in direct contrast to the distribution of buffalo (Figure 6). Eighty-two per cent of the impala population in the Lower Zambezi Valley was found in the LZNP. Previous studies using ground counts have found similar high densities of impala in the Lower Zambezi National Park (Leigh, 2005). The LZNP recorded the lowest species

diversity in primary large herbivores of the 7 parks surveyed. Apart from waterbuck, the populations of buffalo, Impala, and warthog have seen a downward trend in the period 2003 – 2015 (Figure 6).

Table 9. Population estimates for LZNP and GMAs

	LZNP				Lower Zambezi GMAs			
Species	Pop. Est	95% Range	No. seen	No./ 100km²	Pop. Est	95% Range	No. seen	No./ 100km²
Buffalo	887	93 - 2276	93	77.47	3919	411 - 8835	411	283.37
Duiker	10	1 - 28	1	0.87	10	1 - 28	1	0.72
Impala	3232	1244 - 5220	339	282.27	715	146 - 1284	75	51.7
Kudu	48	5 - 101	5	4.19	19	2 - 55	2	1.37
Warthog	114	12 - 247	12	9.96	48	5 - 111	5	3.47
Waterbuck	200	21 - 417	21	17.47	458	48 - 1072	48	33.12
Zebra	362	38 - 792	38	31.62	38	4 - 109	4	2.75

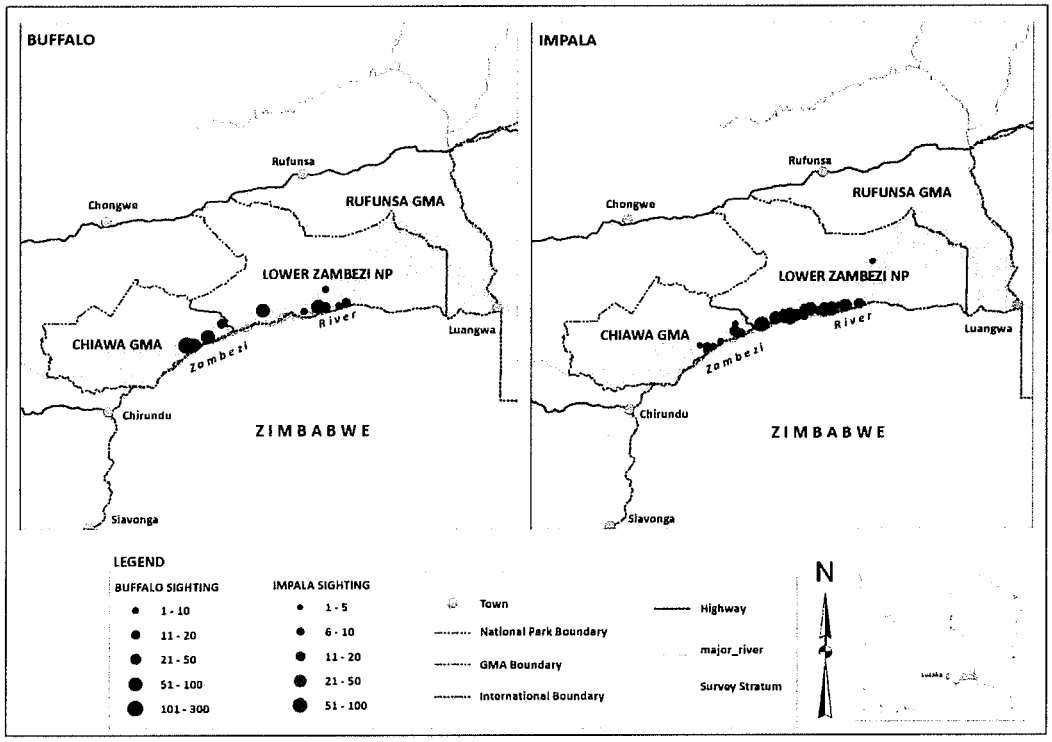

Figure 15. Buffalo and Impala distribution in the Lower Zambezi Valley. Note the difference in the distribution of the two species.

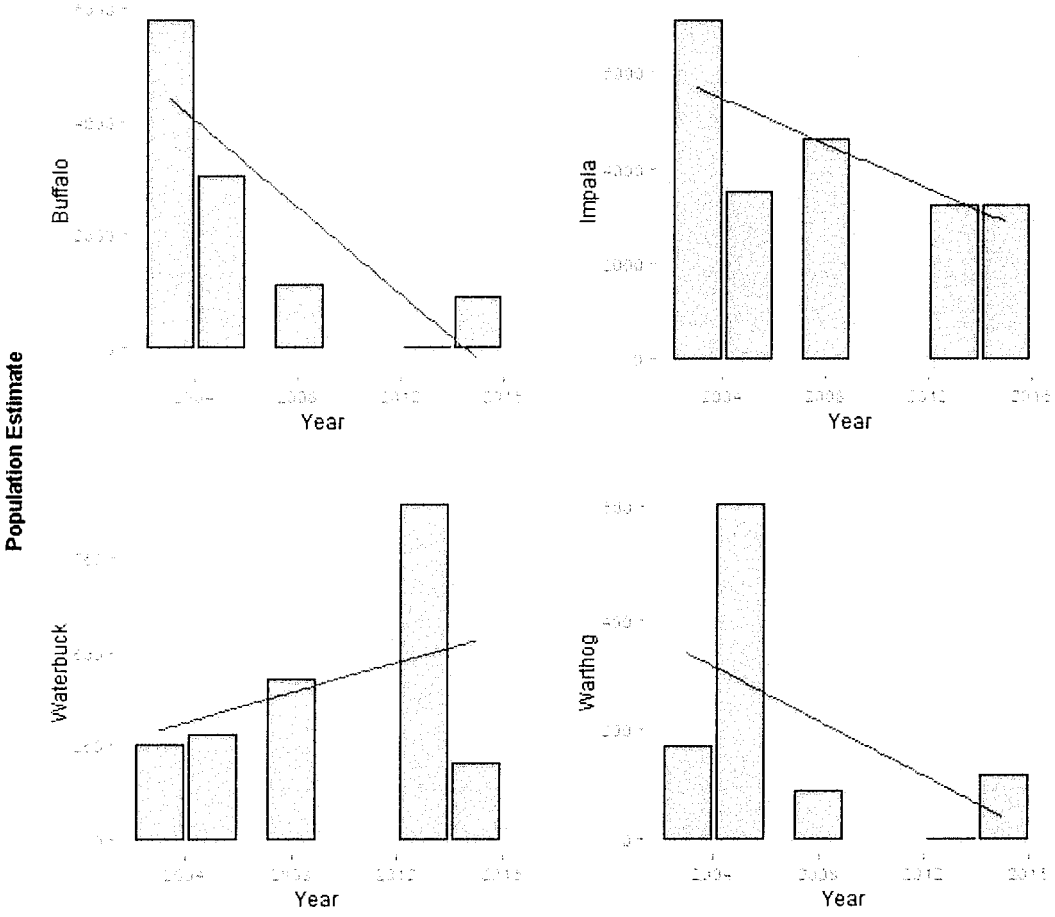

Figure 16. Population trends for selected species in the Lower Zambezi National Park 2003 - 2015

3.6 Sioma Ngwezi National Park

Sioma Ngwezi National Park recorded the highest density of eland (25.37/100km2), duiker (26.02/100km2) and roan (18.41/100km2) in the country. The population estimate (1137) for eland in Sioma Ngwezi National Park was the highest in the country during the 2015 surveys, whilst the estimate for duiker (1166) was only second to Kafue National Park.

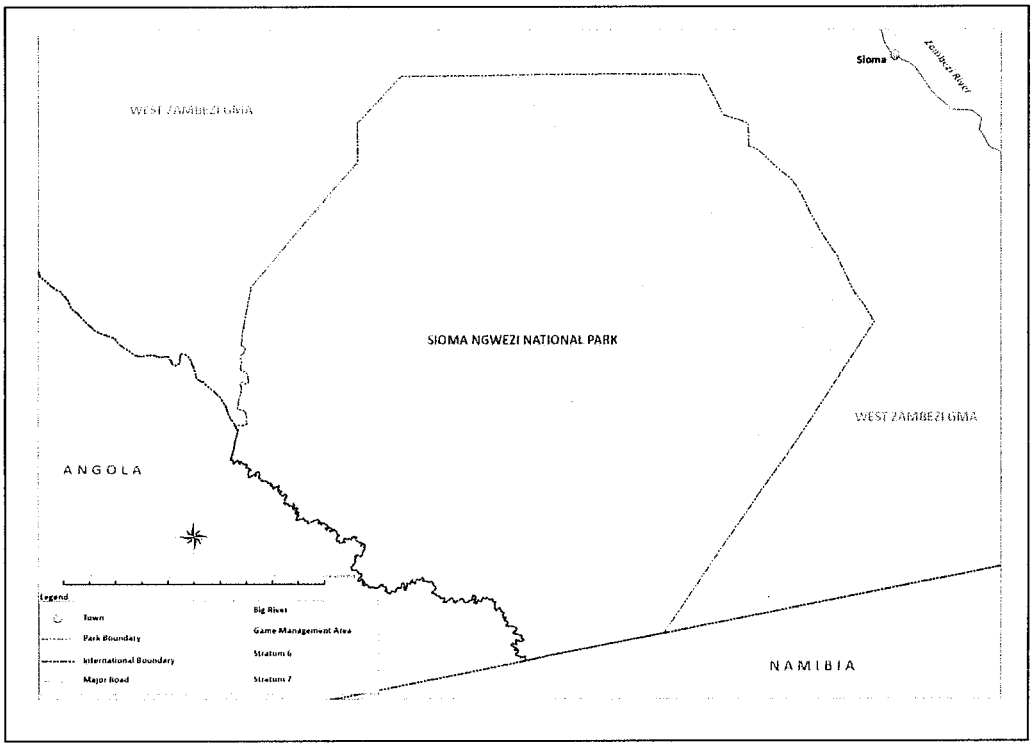

Figure 17. Sioma Ngwezi National Park Survey Strata

Table 10. Population estimates and statistics for Sioma Ngwezi National Park

Species	Pop. est.	95% Range			No. seen	No./ 100km^2
Buffalo	293	35	851	-	35	6.54
Duiker	1166	954	1379	-	142	26.02
Eland	1137	136	2731	-	136	25.37
Giraffe	519	233	804	-	62	11.57
Impala	72	9	182	-	9	1.61
Kudu	411	201	621	-	50	9.17
Oribi	17	2	39	-	2	0.37
Roan	825	182	1469	-	99	18.41
Sable	504	92	916	-	62	11.24
Warthog	114	24	203	-	14	2.54
Wildebeest	59	7	156	-	7	1.31
Zebra	273	33	573	-	33	6.09

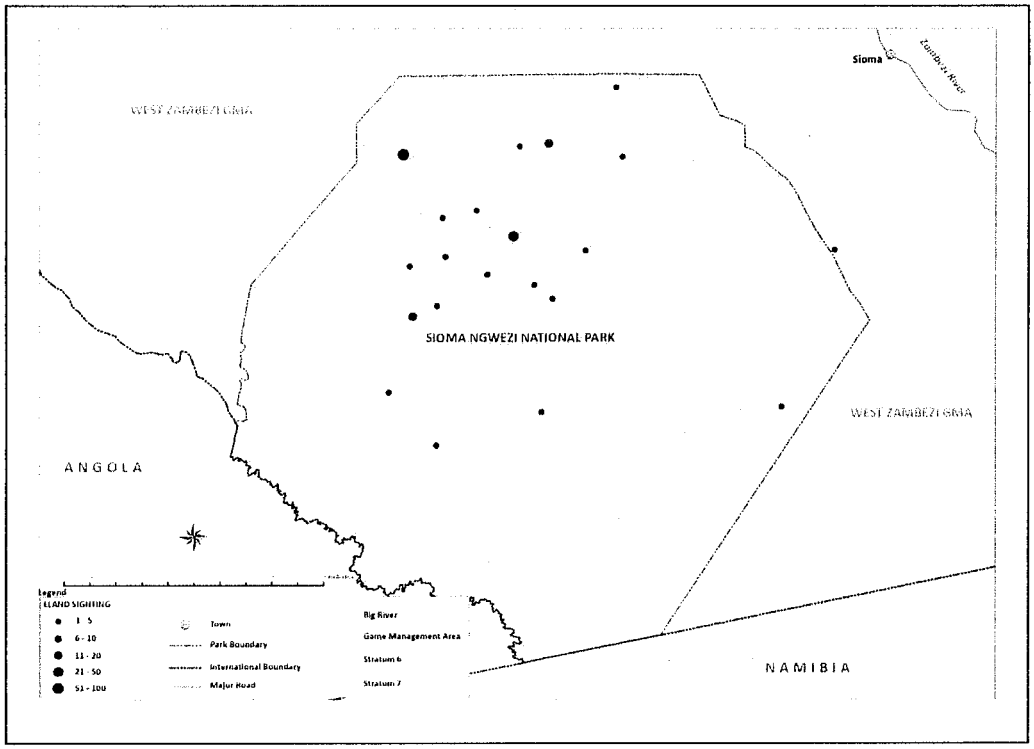

Figure 18. Eland distribution in Sioma Ngwezi National Park

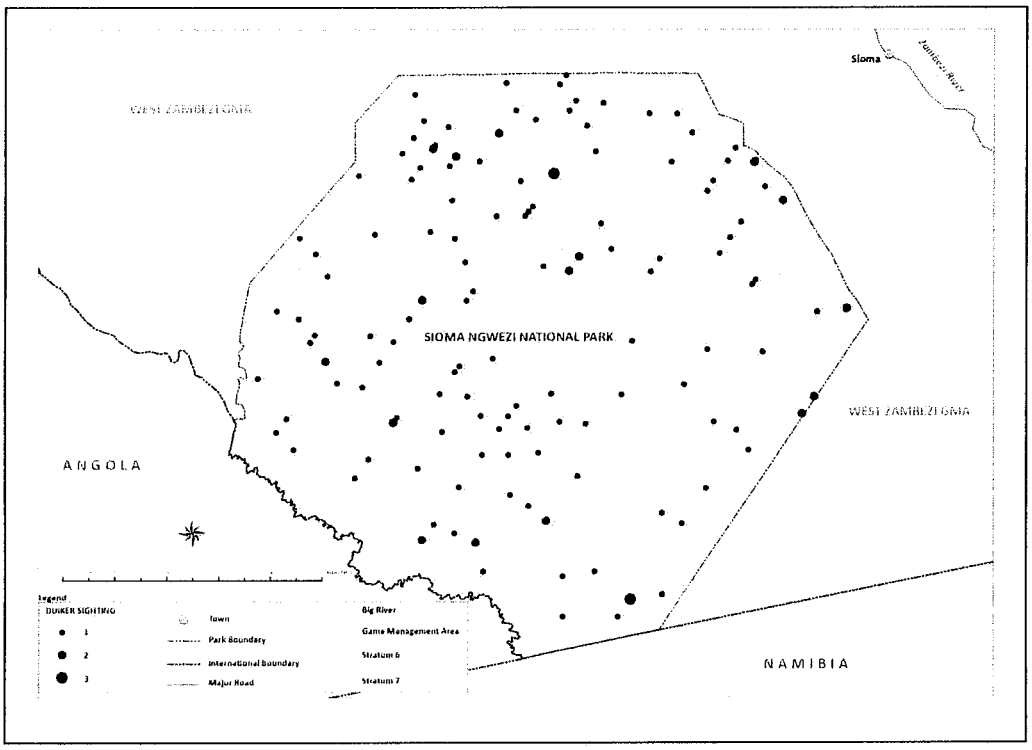

Figure 19. Common duiker distribution in Sioma Ngwezi National Park

Previous studies in the Sioma Ngwezi National Park have indicated higher estimates for all species in the wet season compared to the dry season (Chase and Griffin, 2009). Sioma Ngwezi National Park is seasonally inundated and has little topographic relief, so that surface pans remain widely distributed. These pans are the main water source for animals in the National Park, however in the dry season, these pans dry up and this was worse in 2015 (Henry Luwaya, pers. Communication). Thus animals were forced to migrate to permanent water sources such as the Kwando and the Zambezi rivers in the west and east respectively. These were outside the survey area.

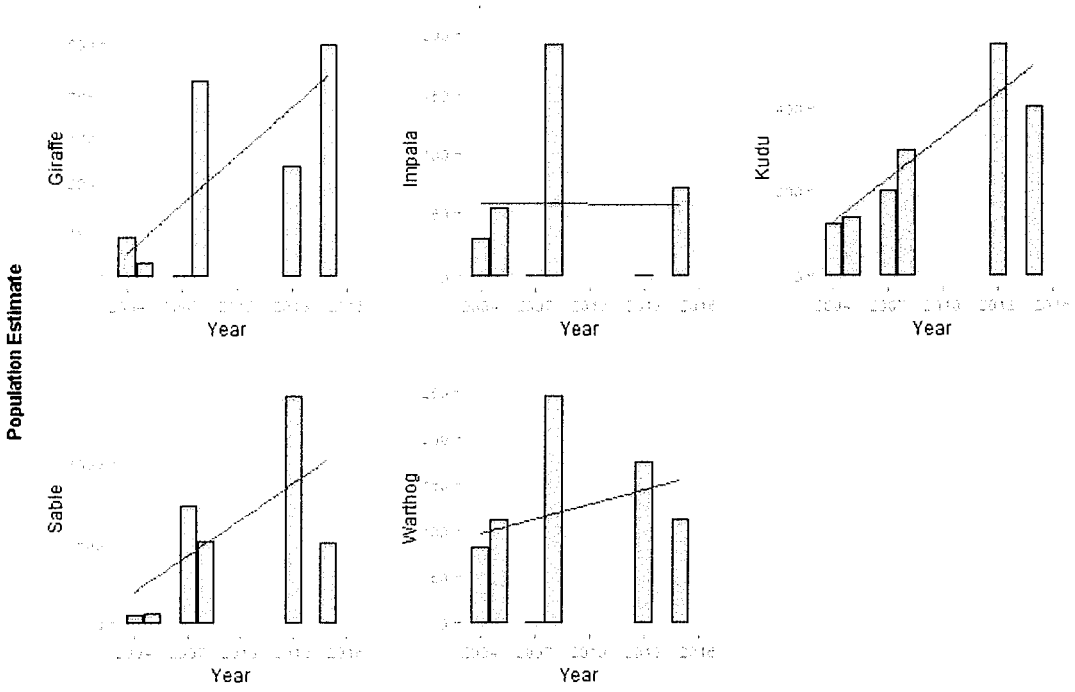

Figure 20: Population trends for selected species in Sioma Ngwezi National Park

3.7 Domestic Livestock

The Kafue ecosystem recorded the highest estimate of cattle at 45549, of which 159 were estimated within the boundaries of the National Park. The density of cattle in the Kafue GMAs was as high as 199.32/100km^2. Of the seven national parks surveyed domestic livestock were only recorded in the Kafue and Sioma Ngwezi National Parks. The estimates for domestic livestock encountered during the surveys are given in the table 12 below.

Table 11. Population estimates and statistics for domestic livestock

Species	Protected Area	Pop. est.	95% Range			No. seen	No./ 100km^2
Donkey	Kafue GMAs	176	10	-	412	10	0.77
Cattle	Kafue National Park	194	17	-	460	17	0.87
	Kafue GMAs	45355	28207	-	62503	2530	199.32
	Luangwa GMAs	588	34	-	1201	34	4.22
	Lower Zambezi GMAs	601	63	-	1252	63	43.46
	Sioma Ngwezi National Park	1057	174	-	1941	130	23.59
Shoats	Kafue GMAs	12318	6470	-	18165	682	54.13
	Luangwa GMAs	129	9	-	278	9	0.93
	Lower Zambezi GMAs	1077	113	-	2213	113	77.87
	Sioma Ngwezi National Park	72	9	-	166	9	1.61

3.8 Birds

Apart from large wild herbivores and domestic livestock, large birds were counted during the surveys. These included crowned cranes, ground hornbill, saddle-billed stocks, and wattled cranes. The estimated population sizes for these species and the associated statistics are given in table 13 below. Ground hornbill were the most widely distributed of the bird species, recorded in all the National Parks and the Game Management areas surveyed. Wattled cranes, of which 10 were sighted in the Luangwa ecosystem, are considered vagrant in this system.

Table 12. Population estimates and statistics for large birds

Species	Protected Area	Pop. est.	95% Range	No. seen	No./ 100km^2
Ground hornbill	Kafue National Park	1558	947 - 2169	137	7.01
	Kafue GMAs	1731	971 - 2491	103	7.61
	South Luangwa National Park	364	110 - 618	35	4.21
	North Luangwa National Park	162	18 - 307	15	3.46
	Luambe National Park	34	4 - 97	4	9.88
	Lukusuzi National Park	167	9 - 349	9	6.4
	Luangwa GMAs	744	413 - 1075	71	5.34
	Lower Zambezi National Park	48	5 - 112	5	4.19
	Zambezi Valley GMAs	29	3 - 68	3	2.1
	Sioma Ngwezi National Park	17	2 - 39	2	0.37
Wattled Crane	Kafue National Park	418	95 - 742	48	1.88
	Kafue GMAs	123	8 - 253	8	0.54
	North Luangwa National Park	28	3 - 80	3	0.6
	Luangwa GMAs	66	7 - 187	7	0.47
Crowned Crane	Kafue National Park	26	3 - 60	3	0.12
	South Luangwa National Park	144	17 - 347	17	1.67
	Luangwa GMAs	68	8 - 158	8	0.49
Saddlebilled stock	Kafue National Park	8	1 - 23	1	0.04
	South Luangwa National Park	28	3 - 67	3	0.32
	Luangwa GMAs	18	2 - 41	2	0.13
Marabou stock	Kafue GMAs	165	9 - 483	9	0.73
	Luangwa GMAs	9	1 - 27	1	0.06

3.9 Other Species

Other species recorded during the surveys include baboon, crocodile, hippo, hyaena, honey badger, lion, and wild dogs. Aerial surveys are not the best methods for estimating abundance of these species, the numbers seen in the sample transects are however given in table 17 below as a record of their presence in the surveyed areas.

Table 13. Other species seen in sample transects

Species	Protected Area	No.seen
Baboon	Kafue National Park	9
	Kafue GMAs	30
	Luangwa South National Park	45
	North Luangwa National Park	40
	Luambe National Park	1
	Luangwa Parks	86
	Luangwa GMAs	188
	Lower Zambezi National Park	3
	Kafue National Park	52
	Kafue GMAs	82
	Sioma Ngwezi National Park	2
Hippopotamus	Kafue National Park	57
	Kafue GMAs	26
	Luangwa South National Park	125
	North Luangwa National Park	72
	Luangwa Parks	197
	Luangwa GMAs	159
	Lower Zambezi National Park	54
	Lower Zambezi GMAs	23
Monkey	Luangwa GMAs	10
Honey Badger	Luangwa South National Park	1
Hyaena	Luangwa GMAs	4
Lion	Luangwa South National Park	11
Wild Dog	Kafue National Park	7
	Luangwa GMAs	4
Crocodile	Luangwa South National Park	1
	Luangwa GMAs	44
	Lower Zambezi National Park	2

4.0 CONCLUSION AND RECOMMENDATIONS

Most species are increasing or stable compared to previous surveys. Given that a low sampling intensity was used during 2015, the estimated numbers are likely to be higher than what was counted.

The low numbers of sable in the Luangwa valley is of great concern. It is therefore recommended that the department continues with the policy of excluding sable on any hunting licenses. It is further proposed that studies are undertaken to investigate the limiting factors to the distribution of sable in the Luangwa ecosystem.

The decreasing numbers in Thornicroft giraffe is worrisome and it is suggested that an intensive study is instituted to determine precise estimates (e.g., mark-resight or other robust methods), and the likely reasons for this downward trend of this endemic sub-species of giraffe.

Habitat encroachment is a serious problem in the country's protected areas. There is a need to develop and implement General Management Plans for the country's protected areas to stem the loss of wildlife habitat. The extensive distribution of human settlements close to water sources is affecting the distribution of wildlife and further constricting their movement and habitat.

The survey has revealed that Game Management Areas, which are often considered as marginal areas are actually important areas for the conservation of some important species such as buffalo in the Luangwa ecosystem, Zebra in the Kafue ecosystem, and impala in the Lower Zambezi Valley. Thus it is important that an ecosystem approach is taken in the management of our protected area network.

The basic design of future aerial surveys should follow designs similar to the 2015 design as it takes an ecosystem approach rather than administrative boundaries in making population level estimates. Monitoring the wider ecosystem will allow management to detect changes in populations that might otherwise have been obscured by movements out of smaller survey areas.

Due to the wide confidence intervals associated with aerial surveys, we recommend regular countrywide surveys at 2 – 3 years intervals. We also recommend alternate wet season and dry season surveys.

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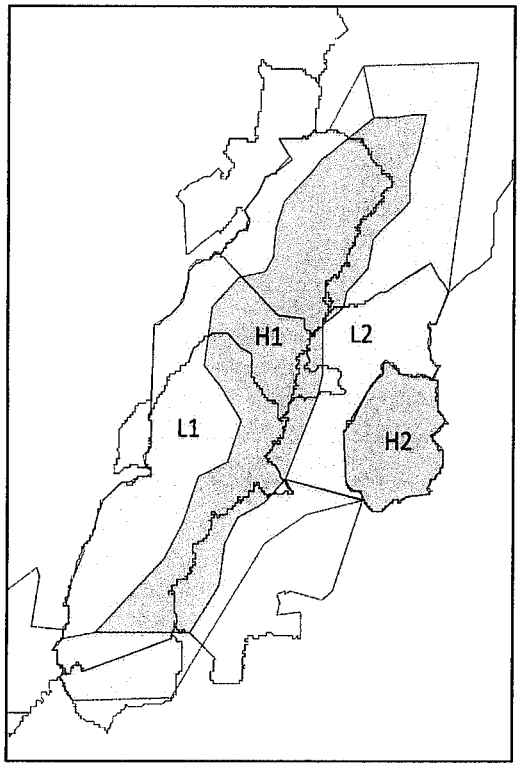
APPENDIX I - Methods

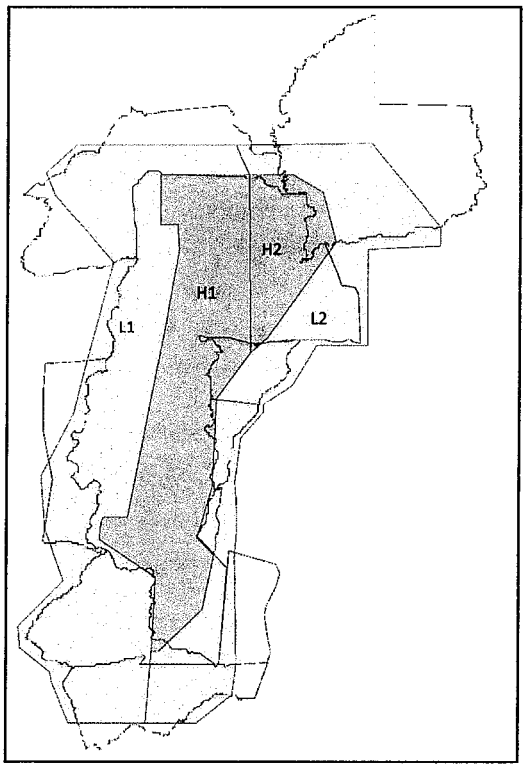
Methods followed CITES MIKE aerial survey standards using stratified systematic transect sampling (Norton Griffiths, 1978) with analysis by Jolly's method for unequal size sampling units (Jolly, 1969).

Survey design

The survey area was stratified on the basis of previously reported elephant densities. The Lower Zambezi Valley was not stratified.



Luangwa Survey Zones: Light shading: 7.5% sampling; Dark shading: 15% sampling; Unshaded: excluded from survey.

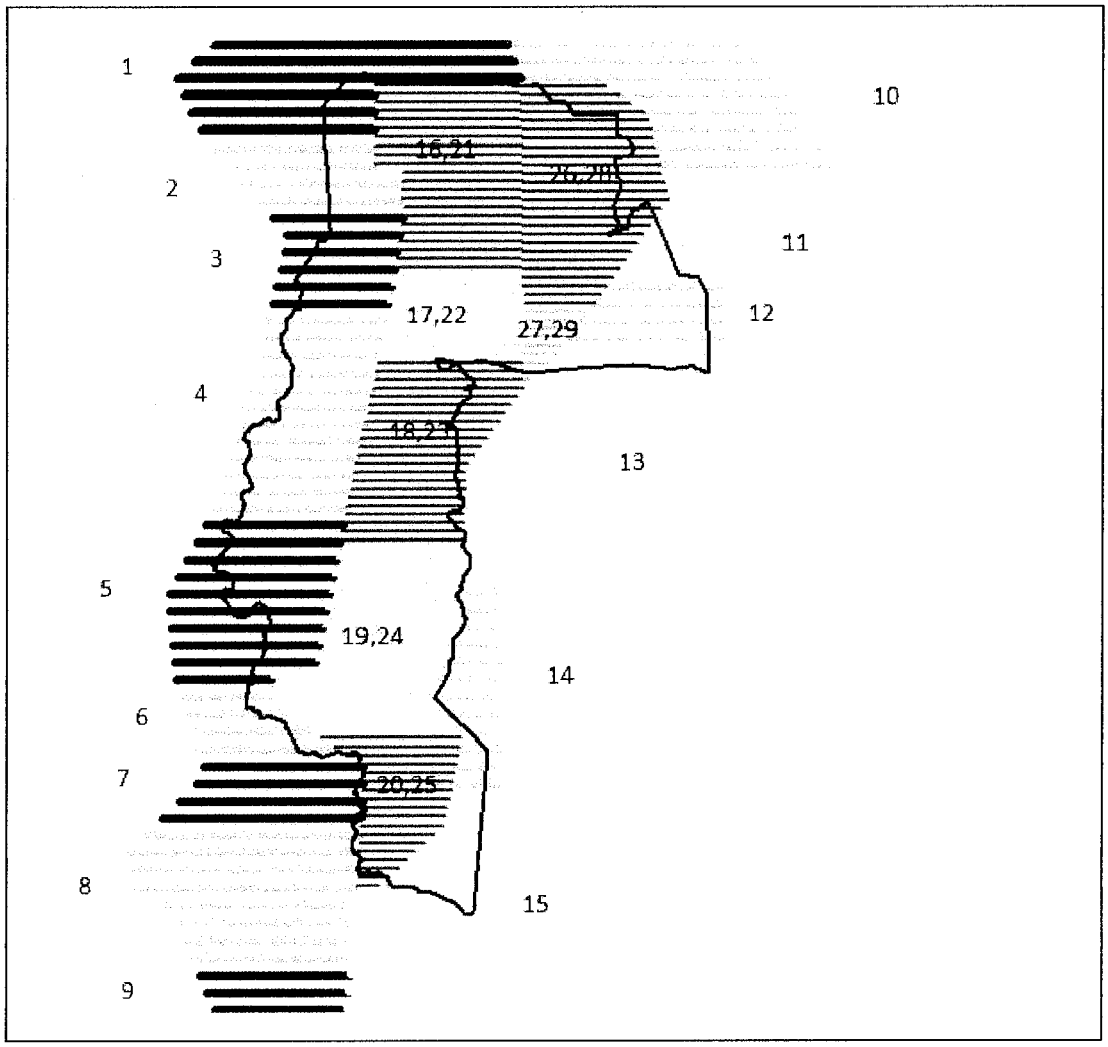


Kafue Survey Zones: Light shading: 7.5% sampling; Dark shading: 15% sampling; Unshaded: excluded from survey

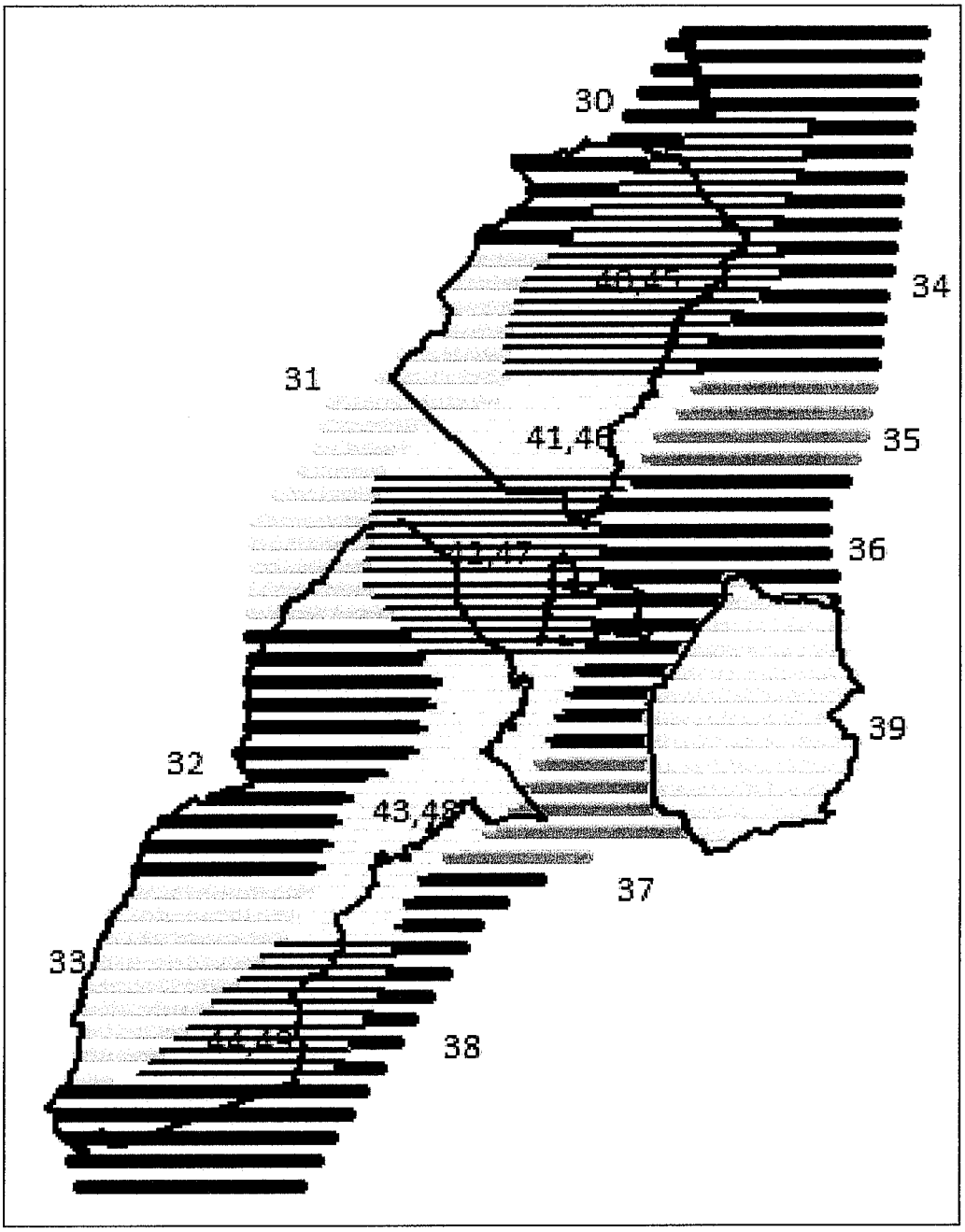
Selection of transects

Transects were evenly spaced according to the required sampling intensity (3 km for 10% coverage,) from a randomly chosen start point and oriented at right angles to major features (e.g. rivers) in each stratum, as far as possible (Fig. 18).

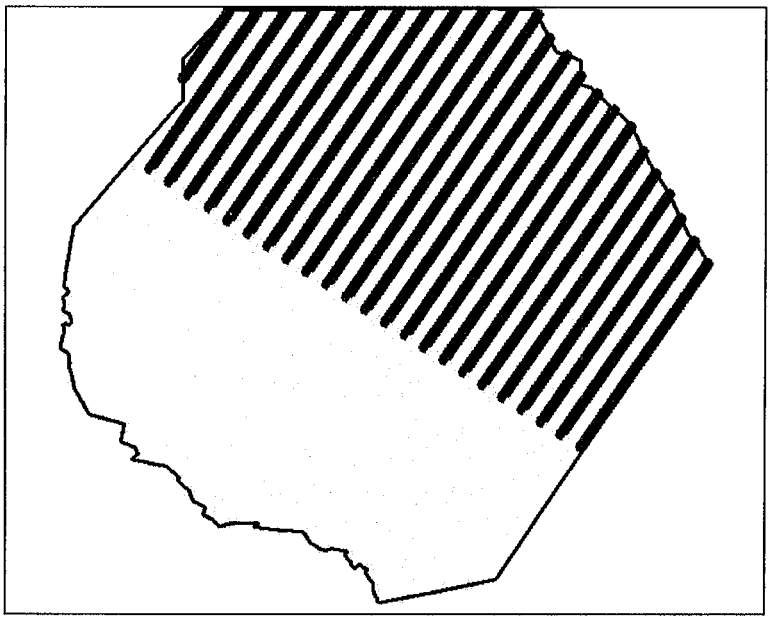
Sampling intensities were designed to maximise the precision of elephant estimates so were selected for each stratum on the basis of previously reported elephant densities and modified to fit budgetary constraints.



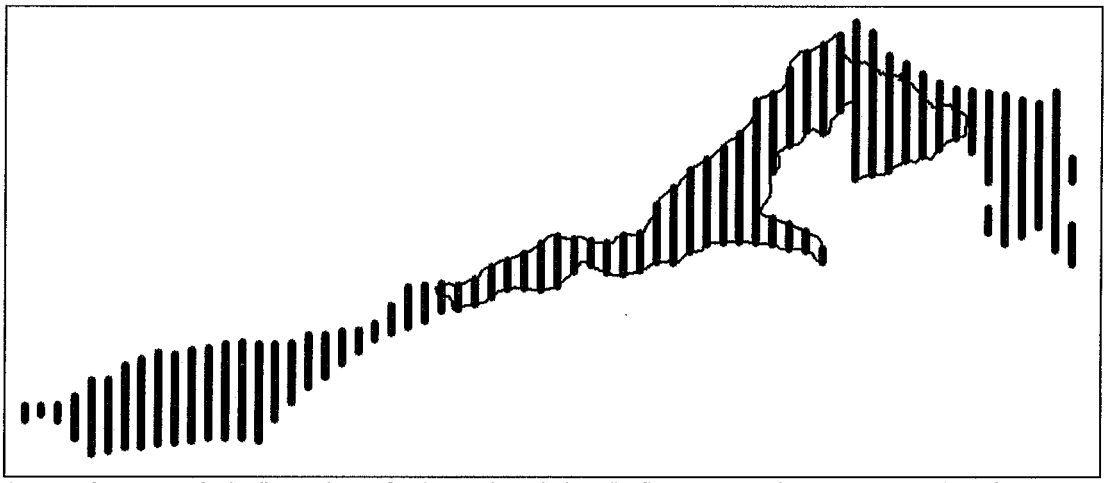
Strata and substrata in Kafue ecosystem: Eastern Stratum is KA, Western is KB and the two central strata are named KC (red) and KD (green), respectively. As each central stratum consists of two interleaved sets of transects, these sets are named KCA, KCB, KDA and KDB. Flight substrata are distinguished by colour here, and numbered 1-25.



Strata and substrata in the Luangwa Ecosystem. Strata: 5% sampling blocks are named LA (blue), LB(green) and LD(yellow). Central block (red) consists of two interleaved 5% coverages: LCA and LCB. Flight substrata are numbered. LD is Lukusuzi National Park - other parks do not coincide with



Transects in Sioma Ngwezi. Northernmost stratum is SIA, the other is SIB



Transects in Lower Zambezi Valley: Outline is of park. Note that only the Valley floor is covered: the escarpment is excluded from the survey.

Data collection

The aircraft were flown at a nominal height of 300 feet above ground level along the transects. Height above ground level was maintained by the pilots using the radar altimeters fitted in each aircraft. The height was recorded every 30 seconds along the transect and the mean height was used to correct the strip width for the transect from the calibrated width at 300ft to the actual width.

Calibration was carried out prior to the survey by flying over numbers painted on the airstrip at 10m intervals. The further and nearer numbers within the strip markers were called out by each observer

on each of about 20 passes over the airstrip. Height readings on both pressure and radar altimeters were taken on each pass. Results and calculations to give calibrated height are reported in Appendix II. Strip markers were fishing rods clamped to the aircraft struts.

Accurate navigation along each transect was achieved using Garmin GPS sets uploaded with transect coordinates. The position of each sighting was recorded on the GPS, which was also

used to record tracklogs of all flights. This data was downloaded as GPX files after each flight. Digital data of uploads and downloads are provided separately with this report.

Species and number seen for each sighting were recorded on data sheets. Data was captured to digital form during and after the survey.

Data analysis

Jolly's (1969) method for blocks of unequal size was used to calculated estimates of density and variance for each species in each stratum as follows:

$$R = \frac{\sum_{i=1}^{n} y_i}{\sum_{i=1}^{n} z_i}$$

$$\hat{Y} = Z.R$$

$$V_{\hat{Y}} = \frac{N(N-n)}{n}.(s_y^2 - 2.R.s_{zy} + R^2.s_z^2)$$

where:

R = density of animals

Y = total number estimated

Z = total area of stratum

y_i = number of animals counted in transect i

z_i = area of transect i

n = number of transects

N = number of transects possible in stratum where N = n.Z/Σz

s_y^2 = variance of number seen per transect

s_z^2 = variance of transect areas

s_{zy} = covariance between number seen per transect and transect area

V_y = variance of estimated number in stratum (i.e. variance of Y)

Overall estimates and variances were obtained from the sums of the stratum estimates and their variances.

Where strata were flown twice by different aircraft (strata KC A&B,KD A&B and LC A&B) the mean estimate of the two results was taken as the overall estimate. The variance of the mean result was the sum of the variances divided by four.

The standard error (SE) of the estimate is the square root of the variance and the 95% confidence limits of the estimate is $Y \pm t \, . \, SE$, where t is Student's t for a two-tailed probability of 0.05 and n-1 degrees of freedom.

Estimates for areas other than original strata (e.g. Parks) were obtained by classifying sightings according to area and reanalysing the strata with the reduced sets of sightings.

Mapping wildlife distribution

The positions of the sightings were simply plotted on a map of the area without accounting for the relative numbers of animals per sighting or the sampling intensity at which the sighting was made. All sightings (in the sample strips and out) were plotted.

APPENDIX II - Results by stratum

The following tables give the results for each stratum based on the numbers seen in the sample. SI refers to the Sampling Intensity for the stratum. Results for all species and associated statistical attributes are given. Column 6, % CI (Percent Confidence Interval), is the 95% confidence interval expressed as a percentage of the estimate.

These are the individual stratum results which have been combined to give higher level results reported above. "No. in" is the number of animals seen between the sampling strips. "No. out" is the number seen outside of them. Where the calculated lower limit of the confidence range is less than the number actually seen in the stratum (including all sightings, both in and out), the number seen is given as the lower confidence limit.

For species or attributes where no meaningful estimate can be given, only number seen is reported.

Kafue Ecosystem

	Stratum:	Kafue A			Area:	17638	Km^2	SI:	6
	Species	**Pop. est.**	**No. seen**	**95% Range**			**Variance**	**% CL**	**No./ 100km²**
1	Baboon	669	40	40	-	1650	239625	146.5	3.79
2	Buffalo	2012	120	120	-	5935	3836403	195	11.41
3	Bushbuck	34	2	2	-	97	1014.5	190.3	0.19
4	Bushpig	84	5	5	-	200	3389.3	139.1	0.48
5	Duiker	1140	68	720	-	1560	43940.1	36.8	6.46
6	Eland	754	45	45	-	2224	538234.1	194.8	4.28
7	Hartebeest	1710	102	231	-	3189	545117.5	86.5	9.7
8	Hippopotamus	17	1	1	-	49	252.8	190	0.1
9	Impala	3739	223	1439	-	6038	1318013	61.5	21.2
10	Kudu	570	34	103	-	1037	54437.6	82	3.23
11	Lechwe	872	52	52	-	2401	582382.9	175.4	4.94
12	Monkey	671	40	40	-	1975	424284.6	194.6	3.8
13	Oribi	17	1	1	-	49	252.8	190	0.1
14	Puku	989	59	59	-	2249	395548.4	127.4	5.61
15	Reedbuck	201	12	12	-	419	11831.9	108.3	1.14
16	Roan	1509	90	197	-	2821	428779.8	86.9	8.55
17	Sable	5767	344	2959	-	8576	1965594	48.7	32.7
18	Sitatunga	101	6	6	-	265	6725.4	163.3	0.57
19	Warthog	1844	110	1144	-	2544	122114.3	38	10.46
20	Waterbuck	234	14	14	-	477	14625.6	103.4	1.33
21	Zebra	117	7	7	-	346	13008.6	194.7	0.67
22	Jackal SS	0	0	0	-	0	0	0	0
23	Ground Hornbill	1073	64	600	-	1546	55802.9	44.1	6.08
24	Wattled crane	34	2	2	-	97	1014.5	190.3	0.19
25	Donkey	84	5	5	-	246	6553.6	193.5	0.48
26	Cattle	6052	361	361	-	11998	8809719	98.2	34.31
27	Sheep/goats	2029	121	121	-	4443	1453256	119	11.5

	Stratum:	Kafue B			Area:	12141	Km²	SI:	5.5
	Species	**Pop. est.**	**No. seen**	**95% Range**			**Variance**	**% CL**	**No./ 100km²**
1	Baboon	1174	64	64	-	2313	323301.3	97	9.67
2	Bushbuck	92	5	5	-	197	2781.9	115.2	0.76
3	Bushpig	92	5	5	-	271	7997.7	195.4	0.76
4	Duiker	403	22	258	-	549	5277.4	36.1	3.32
5	Eland	385	21	21	-	1102	127960.6	186.1	3.17
6	Grysbok	18	1	1	-	54	322.6	196.2	0.15
7	Hartebeest	1376	75	153	-	2598	372367.9	88.9	11.33
8	Hippopotamus	183	10	10	-	538	31314.3	193.3	1.51
9	Impala	5337	291	520	-	10154	5782437	90.3	43.96
10	Kudu	165	9	9	-	332	6965.9	101.3	1.36
11	Monkey	18	1	1	-	54	318	194.8	0.15
12	Puku	2366	129	129	-	6855	5021544	189.7	19.49
13	Reedbuck	459	25	25	-	1120	109168.8	144.4	3.78
14	Roan	569	31	31	-	1494	213271.6	162.7	4.68
15	Sable	2403	131	933	-	3872	538182.8	61.2	19.79
16	Warthog	1541	84	524	-	2557	257657.1	66	12.69
17	Waterbuck	3375	184	184	-	6720	2788253	99.1	27.8
18	Wildebeest	1669	91	91	-	3783	1113868	126.7	13.75
19	Zebra	3631	198	198	-	7705	4136205	112.2	29.91
20	Ground Hornbill	1302	71	562	-	2042	136394.1	56.8	10.73
21	Wattled crane	92	5	5	-	209	3454.7	128.4	0.76
22	Crowned crane	0	0	0	-	0	0	0	0
23	Marabou stork	165	9	9	-	488	26028.4	195.8	1.36
24	Donkey	92	5	5	-	270	7889	194	0.76
25	Cattle	38973	2125	22573	-	55374	6.70E+07	42.1	321.01
26	Sheep/goats	10289	561	4856	-	15722	7356537	52.8	84.75

	Stratum:	Kafue CA		Area:	11821	Km^2	SI:	6.2

	Species	Pop. est.	No. seen	95% Range			Variance	% CL	No./ $100km^2$
1	Buffalo	4825	297	297	-	11395	1.07E+07	136.2	40.82
2	Bushbuck	49	3	3	-	119	1209.7	143.6	0.41
3	Bushpig	49	3	3	-	144	2221.6	194.7	0.41
4	Duiker	146	9	23	-	270	3776.4	84.6	1.24
5	Eland	32	2	2	-	77	484.9	136.4	0.27
6	Hartebeest	1690	104	711	-	2668	236497.7	57.9	14.29
7	Hippopotamus	536	33	33	-	1089	75439.6	103.1	4.54
8	Impala	3444	212	1226	-	5662	1214510	64.4	29.14
9	Kudu	422	26	26	-	829	40825.1	96.3	3.57
10	Lechwe	11583	713	713	-	23919	3.76E+07	106.5	97.99
11	Oribi	65	4	4	-	164	2435	152.9	0.55
12	Puku	9098	560	560	-	19153	2.50E+07	110.5	76.96
13	Reedbuck	81	5	5	-	194	3130	138.6	0.69
14	Roan	195	12	12	-	499	22742.4	155.7	1.65
15	Sable	4776	294	2399	-	7153	1394732	49.8	40.4
16	Warthog	2583	159	1728	-	3438	180360.9	33.1	21.85
17	Waterbuck	1381	85	733	-	2079	111775.3	47.8	11.68
18	Wildebeest	341	21	21	-	704	32538.2	106.4	2.89
19	Zebra	926	57	57	-	2042	307523.1	120.5	7.83
20	Wild Dog	114	7	7	-	336	12201.9	195.5	0.96
21	Ground Hornbill	650	40	319	-	980	26939.3	50.8	5.5
22	Wattled crane	504	31	31	-	1117	92733.9	121.7	4.26
23	Crowned crane	32	2	2	-	96	986.5	194.6	0.27
24	Saddlebill	16	1	1	-	48	246	194.3	0.14
25	Cattle	601	37	37	-	1441	174039.5	139.7	5.08

	Stratum:	Kafue CB		Area:	11821	Km^2	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ $100km^2$**
1	Baboon	556	30	30 - 1177		98289.3	115.5	4.7
2	Buffalo	705	38	38 - 1936		374254.2	174.8	5.96
3	Bushbuck	56	3	3 - 117		931.3	110.4	0.47
4	Bushpig	334	18	18 - 679		29487.7	103.6	2.82
5	Duiker	297	16	142 - 451		5890.5	52.1	2.51
6	Grysbok	19	1	1 - 55		325.7	195.9	0.16
7	Hartebeest	3337	180	1636 - 5039		714455.8	51	28.23
8	Hippopotamus	148	8	8 - 438		20775.5	195.6	1.25
9	Impala	18762	1012	9980 - 27544		1.90E+07	46.8	158.72
10	Kudu	519	28	147 - 891		34132	71.6	4.39
11	Lechwe	11254	607	607 - 29006		7.78E+07	157.7	95.2
12	Oribi	19	1	1 - 55		324.3	195.5	0.16
13	Puku	11254	607	2421 - 20086		1.93E+07	78.5	95.2
14	Reedbuck	334	18	18 - 661		26447.2	98.1	2.82
15	Roan	946	51	51 - 1955		251670.6	106.8	8
16	Sable	6507	351	2729 - 10286		3524130	58.1	55.05
17	Warthog	5599	302	3759 - 7439		835210.2	32.9	47.36
18	Waterbuck	5766	311	3100 - 8431		1753355	46.2	48.78
19	Wildebeest	2114	114	114 - 4319		1200736	104.4	17.88
20	Zebra	593	32	32 - 1298		122471.9	118.7	5.02
21	Ground Hornbill	890	48	354 - 1425		70794.1	60.2	7.53
22	Wattled crane	297	16	16 - 588		20953.9	98.2	2.51
23	Crowned crane	19	1	1 - 55		323.3	195.2	0.16
24	Cattle	445	24	24 - 1059		92916.5	137.9	3.76

	Stratum:	Kafue C Mean Estimates		Area:	11821	Km^2	SI:	5.8
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	278	30		-			2.35
2	Buffalo	2765	335	335	- 5953	2576726	115.3	23.39
3	Bushbuck	52	6	8	- 97	502.1	85.3	0.44
4	Bushpig	191	21	21	- 363	7470.6	89.8	1.62
5	Duiker	221	25	127	- 316	2270.8	42.7	1.87
6	Eland	16	2	2	- 37	113.3	130.1	0.14
7	Grysbok	9	1	1	- 27	76.8	187.7	0.08
8	Hartebeest	2513	284	1574	- 3453	223676.8	37.4	21.26
9	Hippopotamus	342	41	44	- 640	22520.6	87.1	2.89
10	Impala	11103	1224	6765	- 15441	4770617	39.1	93.93
11	Kudu	471	54	207	- 734	17583.3	55.9	3.98
12	Lechwe	11418	1320	1320	- 21759	2.71E+07	90.6	96.59
13	Oribi	42	5	5	- 92	645.3	120.8	0.35
14	Puku	10176	1167	3780	- 16571	1.04E+07	62.9	86.08
15	Reedbuck	207	23	42	- 373	6966	79.9	1.76
16	Roan	570	63	65	- 1075	64643.1	88.6	4.82
17	Sable	5642	645	3506	- 7778	1156613	37.9	47.73
18	Warthog	4091	461	3120	- 5062	239030.6	23.7	34.61
19	Waterbuck	3573	396		-			30.23
20	Wildebeest	1227	135	157	- 2298	290670.3	87.2	10.38
21	Zebra	760	89	129	- 1390	100710.3	83	6.43
22	Wild Dog	57	7	7	- 163	2850.4	186.5	0.48
23	Ground Hornbill	770	88	469	- 1071	22982.5	39.1	6.51
24	Wattled crane	400	47	76	- 724	26602.6	81	3.38
25	Crowned crane	26	3	3	- 60	306.7	136.3	0.22
26	Saddlebill	8	1	1	- 23	57.5	185.3	0.07
27	Cattle	523	61	61	- 1020	62560.7	95	4.42

	Stratum:	Kafue DA		Area:	3430	Km²	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	717	39	39	1558	159030.8	117.4	20.89
2	Buffalo	7516	409	409	22587	5.10E+07	200.5	219.12
3	Bushbuck	18	1	1	56	315.3	203.9	0.54
4	Bushpig	37	2	2	112	1266.8	204.3	1.07
5	Duiker	129	7	7	256	3626.6	98.8	3.75
6	Hartebeest	294	16	16	848	69071.2	188.6	8.57
7	Hippopotamus	294	16	16	856	70988.2	191.2	8.57
8	Impala	8159	444	4257	12061	3420973	47.8	237.87
9	Kudu	74	4	4	172	2194.9	134.5	2.14
10	Oribi	37	2	2	112	1266.8	204.3	1.07
11	Puku	3547	193	961	6132	1501575	72.9	103.4
12	Reedbuck	147	8	11	283	4173.7	92.7	4.29
13	Roan	662	36	36	1566	183982.1	136.8	19.29
14	Sable	845	46	46	1768	191099.5	109.1	24.64
15	Warthog	2775	151	1409	4140	418768.4	49.2	80.9
16	Waterbuck	570	31	31	1324	127903.2	132.5	16.61
17	Zebra	1341	73	78	2605	358781.5	94.2	39.11
18	Ground Hornbill	129	7	7	294	6151.3	128.6	3.75

	Stratum:	Kafue DB		Area:	3430	Km²	SI:	6.3
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Bushbuck	48	3	3	118	1082.6	145.6	1.4
2	Duiker	96	6	7	185	1762.1	92.9	2.79
3	Eland	0	0	0	0	0	0	0
4	Hartebeest	1038	65	65	2127	264037.9	104.9	30.26
5	Hippopotamus	240	15	15	581	25967.9	142.6	6.98
6	Impala	3178	199	1186	5170	883118.4	62.7	92.65
7	Kudu	16	1	1	50	257.9	213.2	0.47
8	Oribi	144	9	17	270	3548.4	87.9	4.19
9	Puku	2332	146	146	4617	1162224	98	67.97
10	Reedbuck	64	4	4	193	3699.7	201.9	1.86
11	Sable	160	10	10	457	19640	186	4.66
12	Warthog	559	35	125	993	41986.8	77.7	16.3
13	Waterbuck	80	5	5	211	3823.8	164.2	2.33
14	Zebra	64	4	4	192	3674	201.2	1.86
15	Ground Hornbill	160	10	10	348	7876.3	117.8	4.66
16	Wattled crane	32	2	2	97	938.6	203.4	0.93

Stratum:	Kafue D Mean Estimates	Area:	3430	Km²	SI:	5.9

	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Baboon	358	39	39	752	37469.6	109.9	10.45
2	Buffalo	3758	409	409	10812	1.20E+07	187.7	109.56
3	Bushbuck	33	4	4	70	326.8	111	0.97
4	Bushpig	18	2	2	54	298.5	191.3	0.54
5	Duiker	112	13	40	185	1265.6	64.5	3.27
6	Eland	0	0	0	0	0	0	0
7	Hartebeest	666	81	98	1234	77873.8	85.2	19.42
8	Hippopotamus	267	31	31	574	22784	115.1	7.78
9	Impala	5668	643	3622	7715	1012054	36.1	165.26
10	Kudu	45	5	5	94	577.3	109.3	1.3
11	Oribi	90	11	22	159	1126.3	75.7	2.63
12	Puku	2939	339	1331	4547	624935.3	54.7	85.69
13	Reedbuck	105	12	18	193	1846.5	82.9	3.07
14	Roan	331	36	36	754	43348.4	128.1	9.64
15	Sable	502	56	56	956	49607.4	90.2	14.65
16	Warthog	1667	186	997	2337	108462.4	40.2	48.6
17	Waterbuck	325	36	36	683	31027.6	110.4	9.47
18	Zebra	703	77	108	1297	85390.4	84.6	20.49
19	Ground Hornbill	144	17	28	261	3286.8	80.9	4.2
20	Wattled crane	16	2	2	46	219	188.5	0.47

Luangwa Ecosystem

Stratum:	Luangwa A	Area:	7767	Km²	SI:	5.6

	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Buffalo	375	21	21	858	57619	129.2	4.82
2	Bushbuck	36	2	2	84	575.6	135.5	0.46
3	Bushpig	178	10	10	527	29902.4	195.4	2.3
4	Duiker	268	15	101	434	6847.9	62.3	3.44
5	Hartebeest	36	2	2	105	1170.8	193.3	0.46
6	Impala	71	4	4	153	1649.7	114.7	0.92
7	Kudu	36	2	2	83	561.8	133.9	0.46
8	Roan	428	24	24	970	72269.8	126.6	5.51
9	Warthog	499	28	248	750	15507.9	50.3	6.43
10	Waterbuck	196	11	11	482	20060.7	145.5	2.53
11	Zebra	749	42	285	1213	53084.9	62	9.64
12	Ground Hornbill	161	9	9	362	10042.5	125.8	2.07

	Stratum:	Luangwa B		Area:	11108	Km^2	SI:	5.8
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	1608	93	93	3321	728138.9	106.6	14.47
2	Buffalo	380	22	22	1048	110512.9	175.6	3.42
3	Bushpig	17	1	1	51	284.1	195.9	0.16
4	Duiker	467	27	226	707	14305.4	51.5	4.2
5	Hartebeest	259	15	15	516	16371.2	99.1	2.33
6	Impala	1729	100	407	3050	433157.1	76.5	15.56
7	Kudu	951	55	325	1577	97161.7	65.9	8.56
8	Monkey	173	10	10	512	28513.8	196.2	1.56
9	Puku	225	13	13	634	41485.9	182.1	2.02
10	Roan	1608	93	631	2584	236150.6	60.7	14.47
11	Warthog	432	25	160	704	18352.9	63	3.89
12	Waterbuck	277	16	16	612	27846.2	121.2	2.49
13	Wildebeest	899	52	52	2138	380515.7	137.8	8.09
14	Zebra	380	22	22	751	34145.5	97.6	3.42
15	Hyaena	17	1	1	51	275.2	192.8	0.16
16	Crocodile	17	1	1	51	276.3	193.2	0.16
17	Ground Hornbill	311	18	51	571	16790.9	83.7	2.8
18	Cattle	588	34	34	1212	96701.1	106.3	5.29
19	Sheep/goats	104	6	6	251	5369.3	141.9	0.93

	Stratum:	Luangwa CA		Area:	11334	Km^2	SI:	5.3
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	412	22	22	1181	144846.8	186.6	3.64
2	Buffalo	32905	1756	11781	54028	1.09E+08	64.2	290.32
3	Bushbuck	19	1	1	55	328.2	195.4	0.17
4	Duiker	37	2	2	88	625.5	134.9	0.33
5	Eland	187	10	10	423	13604.8	125.8	1.65
6	Giraffe	131	7	7	263	4240.8	100.3	1.16
7	Hartebeest	281	15	15	563	19486	100.4	2.48
8	Hippopotamus	3841	205	629	7053	2525670	83.6	33.89
9	Impala	17127	914	9382	24872	1.47E+07	45.2	151.11
10	Kudu	431	23	147	715	19747.4	65.9	3.8
11	Puku	6615	353	3632	9598	2178627	45.1	58.36
12	Roan	187	10	10	446	16323.2	137.8	1.65
13	Sable	0	0	0	0	0	0	0
14	Warthog	1893	101	1258	2527	98442.8	33.5	16.7
15	Waterbuck	2043	109	109	4004	941581.9	96	18.02
16	Wildebeest	3729	199	316	7142	2851869	91.5	32.9
17	Zebra	4666	249	2404	6928	1252160	48.5	41.17
18	Lion	112	6	6	300	8610.8	166.8	0.99
19	Wild Dog	75	4	4	222	5260.8	195.6	0.66
20	Crocodile	431	23	23	1237	159173	187.1	3.8
21	Ground Hornbill	618	33	261	975	31180.2	57.7	5.46
22	Wattled crane	187	10	10	554	32960.7	195.8	1.65
23	Saddlebill	75	4	4	164	1933	118.6	0.66
24	Marabou stork	19	1	1	55	329.6	195.8	0.17

	Stratum:	Luangwa CB		Area:	11334	Km²	SI:	5.9
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	2690	159	297	5083	1401462	88.9	23.73
2	Buffalo	25749	1522	6071	45428	9.48E+07	76.4	227.19
3	Bushbuck	85	5	13	156	1261.4	84.9	0.75
4	Bushpig	203	12	12	444	14237.4	118.8	1.79
5	Duiker	85	5	14	155	1208.5	83.1	0.75
6	Eland	102	6	6	224	3647.7	120.3	0.9
7	Giraffe	68	4	4	132	1023	95.5	0.6
8	Hartebeest	254	15	15	558	22696.7	120	2.24
9	Hippopotamus	2555	151	323	4786	1219198	87.4	22.54
10	Impala	24278	1435	15076	33480	2.07E+07	37.9	214.2
11	Kudu	609	36	175	1043	46028.8	71.2	5.37
12	Monkey	17	1	1	50	266.1	194.9	0.15
13	Puku	7072	418	3884	10260	2487669	45.1	62.39
14	Reedbuck	17	1	1	50	271.9	197	0.15
15	Roan	321	19	81	562	14208.4	74.9	2.84
16	Warthog	2622	155	1268	3976	448768.3	51.6	23.14
17	Waterbuck	558	33	142	975	42453.5	74.6	4.93
18	Wildebeest	1979	117	186	3773	787183.8	90.6	17.46
19	Zebra	2842	168	1655	4030	345335.8	41.8	25.08
20	Honey Badger	17	1	1	50	273.1	197.4	0.15
21	Hyaena	51	3	3	151	2460.2	197.5	0.45
22	Lion	85	5	5	221	4536	160.9	0.75
23	Crocodile	355	21	21	1048	117457.4	195	3.13
24	Ground Hornbill	1150	68	549	1752	88571.8	52.3	10.15
25	Crowned crane	423	25	25	888	53026.9	110	3.73
26	Saddlebill	17	1	1	50	271.8	197	0.15
27	Sheep/goats	51	3	3	124	1296.7	143.4	0.45

	Stratum:	Luangwa C Mean Estimates		Area:	11334	Km^2	SI:	
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km^2**
1	Baboon	1551	181	353	2749	362525.3	77.3	13.69
2	Buffalo	29327	3278	15542	43112	4.80E+07	47	258.75
3	Bushbuck	52	6	13	90	373	74.4	0.46
4	Bushpig	102	12	12	216	3335.7	113.2	0.9
5	Duiker	61	7	20	102	430.7	67.7	0.54
6	Eland	144	16	18	271	4064.1	87.8	1.27
7	Giraffe	99	11	29	170	1240.1	70.5	0.88
8	Hartebeest	267	30	69	466	9914.6	74.1	2.36
9	Hippopotamus	3198	356	1330	5066	881473.4	58.4	28.22
10	Impala	20702	2349	14962	26443	8321284	27.7	182.66
11	Kudu	520	59	273	767	15442.8	47.6	4.59
12	Monkey	8	1	1	24	62.3	185.7	0.07
13	Puku	6843	771	4759	8927	1096800	30.5	60.38
14	Reedbuck	8	1	1	24	63.7	187.8	0.07
15	Roan	254	29	86	423	7179.7	66.3	2.24
16	Sable	0	0	0	0	0	0	0
17	Warthog	2257	256	1544	2970	128367.3	31.6	19.92
18	Waterbuck	1300	142	342	2259	232071.8	73.7	11.47
19	Wildebeest	2854	316	1012	4697	857207.3	64.6	25.18
20	Zebra	3754	417	2533	4975	376303	32.5	33.12
21	Honey Badger	8	1	1	24	64	188.2	0.07
22	Hyaena	25	3	3	73	576.4	188.3	0.22
23	Lion	99	11	11	209	3094.1	112.4	0.87
24	Wild Dog	37	4	4	108	1241.1	187.1	0.33
25	Crocodile	393	44	44	901	65069.6	129.1	3.47
26	Ground Hornbill	884	101	551	1218	28107.5	37.7	7.8
27	Wattled crane	94	10	10	269	7775.6	187.3	0.83
28	Crowned crane	211	25	25	433	12423.9	104.9	1.87
29	Saddlebill	46	5	5	91	519.7	98.8	0.41
30	Marabou stork	9	1	1	27	77.8	187.3	0.08
31	Sheep/goats	25	3	3	60	303.8	136.7	0.22

	Stratum:	Luangwa D		Area:	2610	Km²	SI:	5.4
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Bushbuck	37	2	2	122	1470.2	227.2	1.42
2	Bushpig	93	5	5	289	7951.6	211.4	3.56
3	Duiker	167	9	42	292	3206.7	74.6	6.4
4	Eland	93	5	5	289	7951.6	211.4	3.56
5	Hartebeest	130	7	7	332	8460.2	155.7	4.98
6	Kudu	149	8	8	469	21175.2	215.6	5.69
7	Roan	167	9	9	436	14926.1	160.9	6.4
8	Sable	56	3	3	139	1420.1	148.9	2.13
9	Warthog	19	1	1	57	309.5	208.5	0.71
10	Ground Hornbill	167	9	9	349	6805.2	108.6	6.4

Lower Zambezi

	Stratum:	Zambezi Valley		Area:	2528	Km²	SI:	0.5
	Species	**Pop. est.**	**No. seen**	**95% Range**		**Variance**	**% CL**	**No./ 100km²**
1	Baboon	29	3	3	82	721.2	187.3	1.13
2	Buffalo	4806	504	504	9912	6553079	106.3	190.1
3	Duiker	19	2	2	44	159.9	132.3	0.75
4	Hippopotamus	734	77	159	1310	83223.1	78.4	29.04
5	Impala	3947	414	1845	6050	1110993	53.3	156.15
6	Kudu	67	7	7	129	973.6	93.3	2.64
7	Warthog	162	17	17	307	5309.8	89.7	6.41
8	Waterbuck	658	69	69	1347	119389.3	104.8	26.03
9	Zebra	400	42	42	833	47057.3	108.1	15.84
10	Crocodile	19	2	2	45	165.7	134.7	0.75
11	Ground Hornbill	76	8	8	150	1353.8	96.2	3.02
12	Cattle	601	63	63	1252	106662.3	108.5	23.76
13	Sheep/goats	1077	113	113	2213	323754.9	105.3	42.62

Sioma Ngwezi

Stratum:	Sioma A			Area: 2772.1 Km²		SI:	11.9
	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Buffalo	293	35	35	867	76516.9	195.6	11.86
2	Duiker	620	74	470	769	5195.7	24.1	25.08
3	Eland	1081	129	129	2720	624553.9	151.7	43.72
4	Giraffe	503	60	210	796	19971.8	58.3	20.33
5	Kudu	226	27	52	400	7024.5	76.8	9.15
6	Oribi	17	2	2	40	124.2	137.9	0.68
7	Roan	729	87	89	1369	95155.6	87.8	29.48
8	Sable	134	16	16	273	4521.1	104	5.42
9	Warthog	34	4	4	85	615.1	153.5	1.36
10	Wildebeest	59	7	7	158	2316.1	170.2	2.37
11	Zebra	193	23	23	459	16508	138.3	7.79
12	Ground Hornbill	17	2	2	39	117.5	134.2	0.68
13	Cattle	310	37	37	652	27246.2	110.4	12.54

Stratum:	Sioma B			Area: 2010.2 Km²		SI:	12.4
	Species	Pop. est.	No. seen	95% Range		Variance	% CL	No./ 100km²
1	Baboon	16	2	2	47	225.8	193.9	0.8
2	Duiker	546	68	386	707	5954.2	29.3	27.19
3	Eland	56	7	7	121	975.3	115.1	2.8
4	Giraffe	16	2	2	37	106.5	133.2	0.8
5	Impala	72	9	9	185	2948	155.7	3.6
6	Kudu	185	23	57	313	3802.8	69.2	9.2
7	Roan	96	12	12	266	6695.8	176	4.8
8	Sable	370	46	46	770	37277.4	108.3	18.39
9	Warthog	80	10	10	157	1357.9	95.1	4
10	Zebra	80	10	10	236	5637	193.7	4
11	Cattle	747	93	93	1590	164944.9	112.7	37.18
12	Sheep/goats	72	9	9	169	2164.3	133.4	3.6

APPLICANT:

JAMES PONDER

ZAWA EXPLAINS HUNTING BAN LIFT

ZAWA explains hunting ban lift

This is the response of ZAWA on their previous press release 'Minister lifts ban on hunting':

Contrary to widespread blatant misinformation reports on social media and some sectors of the media that the hunting ban on elephants has been lifted, The Zambia Wildlife Authority (ZAWA) would like to inform members of the public and the international community that this is not the case.

The ban on hunting of elephants and cats is still in effect. ZAWA would also like to state that even before the ban was affected, **Zambia was never been a pro-elephant hunting nation**. In the last 10years, even before the ban, hunting of elephants in Zambia has been at the lowest and quotas significantly small in the region and was restricted to two out of the 36 Game Management Areas (GMA's) in Zambia, namely, Rufunsa and Lupande. And the only reason for hunting in these areas was because they were overly populated and causing human wildlife conflicts. Initially, ZAWA would simply control (kill) the animals. But this was seen to be a waste when some income could be gained through controlled hunting. It was on this basis that sport hunting was introduced here, and incomes ploughed back into helping the surrounding communities.

ZAWA being committed towards protecting and conserving wildlife, offered significant input and guidance needed for the Ministry Of Tourism and Arts' decision to lift the hunting ban.

People must also be aware and understand that, the decision to lift the ban is not merely a consumptive matter, but a conservation one as well, as money, which is raised in these animal overpopulated areas is usually ploughed back into conservation. The decision is also a human-wildlife conflict mitigation measure as these places are known for this problem.
Conservation is much more than just allowing uncontrolled animal over-populations. It is about ensuring the **balance between humans and wildlife**, for harmonious existence of both. ZAWA has been a target of all sorts of misunderstandings because this role is not clearly understood.

In fact in other cases, especially in communities prone to human wildlife conflicts, ZAWA has been accused of caring more about the welfare of animals than that of human beings. What some people have said is that ZAWA gives too much attention and protection to wildlife and not humans. But we

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Wildlife could generally survive without humans. But we can't say the same for human life in the absence of wildlife and the natural environment, as it is an important basis for our nutrition and economic survival.

Hence, ZAWA's role is unique and complex as it has to juggle and find this balance between the growth of wildlife vis-à-vis human populations. It is for this reason that ZAWA takes great care in the allocation of quotas or what is to be hunted and where this should be undertaken.

But we understand that without proper sensitization and awareness of the key and direct relationships we humans must share with the wild, ZAWA's role will always be misunderstood and misinterpreted and the battle to create harmony between Wildlife and humans will be lost, and the future of this unique estate shall be at stake and at risk. Everything in life is interdependent and maintaining that delicate balance is the answer.

Apart from its economic benefits, Wildlife contributes to the ecological balance of nature, the food chain and nature cycles. It is also a source of ecological, biodiversity, economic, recreation, and scientific, social and cultural values untold. And ZAWA hopes that individuals, the media and the general public could help us communicate this clearly.

Please ensure that you have read the entire article before posting comments. Any off-topic and offensive language will be moderated.

Article by: The Zambia Wildlife Authority

By Zambia Tourism | September 4th, 2014 | Conservation News, Zambia News

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APPLICANT:

MARK MURPHY

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

Mark Murphy - (b) (6) [redacted]., South Jordan, Utah 84095

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta Africana, African elephant

b. Sex (if known).

male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Maswa Game Reserve, Tanzania

b. Date wildlife was hunted:

November 23. 2020

c. Approximate age of animal:

45-50 years of age

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Bushman Hunting Safaris; P.H. Michael Fell

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Bushman Hunting Safaris - Plot No. 61-64, Block E, Kihonda Industrial Complex

P. O. Box 678 Morogoro, Tanzania

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

See attached

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Bushman Hunting Safaris
Address:	Plot No. 61-64, Block E, Kihonda Industrial Complex, P.O. Box 678
City:	Morogoro
State/Province:	Tanzania
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
See attached
11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Michael Fell
E-mail:	info@bushmanhunting.com
Phone number:	+ 255 23 2603353/ 2603346

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**)

    Applicant's signature: [redacted] Date: January 30, 2021

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

MARK MURPHY

HUNTING PERMITS

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF NATURAL RESOURCES AND TOURISM

TANZANIA WILDLIFE MANAGEMENT AUTHORITY (TAWA)

GAME HUNTING PERMIT

ORIGINAL
CN.# 998411123902
APP: 0000290

MAIN PERMIT
RETURN DATE: Friday, January 8, 2021
PERMIT NO. MP-0000231

Station: ARUSHA OFFICE **Start Date:** Thursday, November 19, 2020 **End Date:** Wednesday, December 9, 2020 **Package Type:** PREMIUM **Extra Days:** **This RESIDENT'S / VISITOR'S Permit is Granted to** MARK CHARLES MURPHY **of Address** USA **Passport No.** (b) (6)

Who holds Weapon (Type) NA **Calibre** NA **Maker's No:** 2006-2 95 **C.A.R No:** NA **Licence No:** 0 **Dated** 2020-11-17 **Issued At** ARUSHA **Weapon owner & Address** AS ABOVE , **Weapon (Type)** SAKO **Calibre** .375 **Maker's No:** (b) (6) **C.A.R No:** 0 **Licence No:** (b) (6) **Dated** 2020-11-13 **Issued At** ARUSHA **Weapon owner & Address** AS ABOVE , **Weapon (Type)** BOW & ARROW **Calibre** NA **Maker's No:** 2005-2 90 **C.A.R No:** 0 **Licence No:** NA **Dated** 2020-11-17 **Issued At** ARUSHA **Weapon owner & Address** AS ABOVE , **Weapon (Type)** BOW & ARROW **Calibre** NA **Maker's No:** 2006-2 95 **C.A.R No:** 0 **Licence No:** NA **Dated** 2020-11-17 **Issued At** ARUSHA **Weapon owner & Address** AS ABOVE

and entitles him to hunt the below animals in the (Game area and blocks) MASWA GR N **owned by** BUSHMAN HUNTING SAFARIS (T) LTD **PH** MICHAEL GEORGE FELL **LICENSE No.** NT201901DAR , **PH** THOMAS MARK DAMES **LICENSE No.**

Additional Blocks

SN	SPECIE NAME	QTY PER SPECIES
1	BUFFALO AFRICAN CAPE	4
2	BABOON OLIVE	3
3	BUSHBUCK CHOBE	1
4	BUSHPIG	1
5	NILE CROCODILE	1
6	DIKDIK KIRK'S	1
7	DUIKER COMMON	1
8	ELAND PATERSON'S	1
9	ELEPHANT AFRICAN	1
10	GAZELLE ROBERT'S	1
11	GAZELLE THOMSON'S	3
12	GENET BLOTCHED	1
13	HARTEBEEST COKE'S	1
14	HIPPOPOTAMUS	1
15	HYAENA SPOTTED	1
16	IMPALA EAST AFRICAN	3
17	JACKAL SLIVER BACKED	1
18	LEOPARD	1
19	LION	1
20	OSTRICH	1
21	PORCUPINE CRESTED	1
22	RATEL (HONEY BADGER)	1
23	REEDBUCK BOHOR	1
24	ROAN ANTELOPE	1
25	SERVAL CAT	1
26	TOPI	2
27	WARTHOG	1
28	WATERBUCK DEFASSA	2
29	WILD CAT	1
30	WILDEBEEST EASTERN WHITE BEARDED	2
31	ZEBRA BURCHELL'S	2

Signature of Holder

Signature of Issuing Officer & Official Stamp

TANZANIA WILDLIFE MANAGEMENT AUTHORITY
18 NOV 2020
SUSTAINABLE WILDLIFE ... OFFICE-ARUSHA
P.O. BOX 1541 ARUSHA, TEL: 027 254 8760

1. The Hunting Permit must be surrendered to the Director of Wildlife Division within 30 days of expiry or immediately the Professional Hunter returns from safari
2. This Permit does not entitle the holder to capture animals, be in possession of live animals or carry on a live animal business of a Trophy dealer.
3. Maximum number of animals must not be exceeded without the written authority of the Director of Wildlife.

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF NATURAL RESOURCES AND TOURISM

TANZANIA WILDLIFE MANAGEMENT AUTHORITY (TAWA)

TANZANIA WILDLIFE MANAGEMENT AUTHORITY
SUSTAINABLE WILDLIFE UTILIZATION OFFICE-ARUSHA
P.O. BOX 1541 ARUSHA, TEL: 027 254 8750

REGISTER OF GAME KILLED (INCLUDES WOUNDED ANIMALS)

PERMIT NO. MP-0000231 **998411123902**
CLIENT NAME: MARK CHARLES MURPHY **PH NAME:** MICHAEL GEORGE FELL
COMPANY: BUSHMAN HUNTING SAFARIS (T) LTD **PH LICENSE NO:** NT201901DAR

	SPECIES	No. KILLED	AREA WHERE HUNTED	WEAPON USED	DATE	TIME	SEX	GPS COORDINATES		LENGTH OF HORN/ANIMAL OR WEIGHT	REMARKS
1)	African Elephant	One	Masuwa G.R (North)	Bow & Arrow	11/23/20	12.32PM	M.	36M 0645328	UTM 9721682	L. tusk 20.45kg Length 171cm R. tusk 20.20kg Length 168cm	Killed.
2)	Zebra Burchell's	One	Masuwa G.R (North)	.375	11/26/20	7.30AM	M.	36M 0653135	UTM 9703092		Killed.
3)	Zebra Burchell's	One	Masuwa G.R (North)	.375	11/26/20	7.35AM	M.	36M 0652811	UTM 9703322		Killed.
4)	Topi	One	Masuwa G.R (North)	.375	11/29/20	9.10AM	M.	36M 0658711	UTM 9692613	L. 34.3cm R. 35cm	Killed.
5)	Bohor Reedbuck	One	Masuwa G.R (North)	.375	12/01/20	9.15AM	M.	36M 0649678	UTM 9702417	L. 19cm R. 18.5cm	Killed.
6)	African Cape Buffalo	One	Masuwa G.R (North)	.375	12/01/20	10.45AM	M.	36M 0654697	UTM 9698585	Width 82cm	Killed.
7)	East Africa Impala	One	Masuwa G.R (North)	.375	12/02/20	9.50AM	M.	36M 0649857	UTM 9705279	L. 58cm R. 60cm	Killed.
8)											

DECLARATION

I (name of client) MARK Murphy hereby declare that the register of game killed is a true record of all animals killed or wounded by me during the validity of this permit.

[redacted] (a) (a)

HUNTING CLIENT SIGNATURE
Date December 4th 2020

PROFESSIONAL HUNTER SIGNATURE
Date 12/04/20.

ANTON COSMAS
WILDLIFE OFFICER INCHARGE SIGNATURE
Date 4/12/2020

TANZANIA

GAME DIVISION

REGISTER OF GAME KILLED AND TROPHY LIST

A№ 0028216

Client's Name and Address: Mark Charles Murphy, UTAH, USA

Permit # 9984123902

Permit No: mp-0000231

Area Hunted: Maswa G.R (North)

Hunter's Name and Address: Michael Fell

Safari company and address: Burhman Hunting Safaris (T) Ltd.

P. H. Licence and Date: NT 20190: OAR Valid until end of 2021

Safari Dates: November 19 - December 9, 2020

Shipping Instructions: As per office instructions

SN	Species/Trophy	Quant.	Fee T. SH.	Fee US $	Sex	Locality	Date	Tag. No.	Length of horn or Animal, or weight	Circ. of Base of horn	Width of horn	Reg. No.	C. of O. No.	Date	Place of issue	Remarks
9	African Elephant	One			M	Maswa	11/23/20		(1) - tusk		(2) - tusk		(3) - skull (4) - foot			
									(5) - foot		(6) - foot		(7) - bellyskin (8) - tail			
	Zebra Burchellis	One			M		11/24/20		(9) - Shoulder mount (Cape)							
	Zebra Burchellis	One			M		11/26/20		(10) - shoulder mount (Cape)							
	Topi	One			M		11/29/20		(11) - skull		(12) - Cape					
	Bohor Reedbuck	One			M		12/01/20		(13) - skull		(14) - Cape					
	African Cape Buffalo	One			M		12/01/20		(15) - skull							
	East African Impala	One			M		12/02/20		(16) - skull		(17) - Cape					

[redacted] (9) (g)

Signature of Hunter

Mark Murphy

Signature of Client

Signature of Guide

Certified Booking and Trophy fee Shs. ..... received on E.R.V. No. ..... Dated December 4, 2020

Certificate can be issued. Currency Details :- .....

NOTE: 1. All columns must be filled in block letters accurately.
2. Original and Duplicate to Game, Duplicate to be returned to Hunter with Certificate details.
3. Original and Hunting permit(s) to be attached to duplicate Certificate of Ownership.
4. Triplicate to Regional Game Officer in charge of area.

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

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† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
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January 27, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Attn: Heather Harcum
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803
VIA: E-Permits Filing

RE:	**Import Permit Application for a sport-hunted elephant trophy from Tanzania**
APPLICANT:	**Mark Murphy**

Ms. Harcum,

Attached please find the USFWS permit application to import a sport-hunted elephant trophy from Tanzania for Mr. Mark Murphy. Mr. Murphy went on safari in November and December of 2020 with Bushman Hunting Safaris and took his elephant in the Maswa Game Reserve with professional hunter, Michael Fell.

The Maswa Game Reserve is part of the Serengeti Ecosystem. It shares a border with the Serengeti National Park, creating a buffer zone between the villages to the West and the Serengeti National Park to the East In a report to the EU CITES scientific review group, it was stated that an aerial census conducted by TAWIRI in 2014 detailed the Serengeti eco-system to have a 98 % increase in the elephant population. (pg. 15) In 2009 it was reported that there were 3,068 elephants in the Serengeti eco-system and in 2014 there were an estimated 6,087 (pg. 17) Since that study, Mr. Fell and his team have noticed further increased numbers of elephants through their own aerial and ground monitoring. In addition, the Great Elephant Census report shows that the Northeastern region of Tanzania is seeing a steady increase in the elephants.

In the operator enhancement report attached, you will find that over the last six years Bushman Hunting Safaris and Mr. Fell have contributed more than $11 million to the Maswa Game Reserve and Tanzania, all of which came from hunting revenues (about 85-90% US clients). Wildlife departments and local communities depend on this revenue and the economic success of these community-based natural resource management groups. A large portion of the revenue is spent on anti-poaching initiatives; purchasing equipment staffing patrolman, conducting aerial surveillance, and providing conservation seminars to local communities all to monitor poaching year-round.

Bushman Hunting Safaris Ltd actively supports the surrounding communities in many ways. They encourage hunting clients to deliver goodwill "Blue bags" to community members, containing basic medical supplies, educational materials, clothes, and toys for children. Hunters at Maswa donate their game meat to the local communities on all big game species, such as buffalo, topi, wildebeest, and elephants. This practice is especially helpful when a legally harvested elephant is taken because that animal provides literally thousands of pounds of meat to the people of the very villages who have the most conflict with elephants and other wild game. In the operator enhancement report photographs have been included of the celebration that occurs when a mature male elephant is brought to a village to share meat amongst its residents.

In March of 2020, the COVID pandemic outbreak began to affect the entire world and its reaches did not spare poor rural communities in Southern Africa. With depleted levels of tourism, many safari operators were negatively affected, especially those only doing photographic safaris. The hunting model of conservation has proved to be a more robust and resistant model, as photographic safari operators are having to make budget cuts that drastically affect their anti-poaching endeavors, which also means cutting anti-poaching jobs for community members. Luckily, in Maswa they have been able to maintain their regular anti-poaching budgets and presence.

We have included with this application a fact sheet detailing the benefits of licensed and regulated hunting in Tanzania, which all conclude that science based legal regulated hunting does in fact enhance the species and provides benefits to the communities that would never exist without it.

We ask that you consider all the documents provided, as well as documents submitted by the Tanzania government, other operators, and other hunters when making an enhancement decision regarding this application. These hunters are providing the funding for wildlife conservation throughout the world and without their continued contributions, the future of the wildlife populations and the surrounding communities will be at risk.

If you have any questions about this import application, please do not hesitate to contact us.

Sincerely,

Aimee Korver
Permits Paralegal Conservation Force

Cc: Mr. Mark Murphy (w/attachments)

Enclosures:

a. FWS Permit Application Form 3-200-20
b. Notice of Representation
c. Hunting Permits
d. Operator Enhancement Report
e. A report to the EU CITES Scientific Review Group on the EU Experts Mission to Assess the Sustainability and Management of Lion and Elephant Trophy Hunting in Tanzania (19-27 August 2016)
f. Tanzania Elephant Census results
g. Benefits of licensed, regulated hunting in Tanzan

APPLICANT:

MARK MURPHY

NOTICE

OF

REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed _____ Trophy from _____.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

Mark C. Murphy
SIGNATURE

MARK Charles Murphy
PRINT FULL NAME

January 30, 2021
DATE

CONSERVATION FORCE

Re: Proof of Enhancement for trophy import permitting

Dear Operator:

The FWS has added a requirement that enhancement and non-detriment findings be proven case by case. Conservation Force has always helped with import permits to open areas or add new game species. Now we have enlarged our program to assist you and your clients in successfully applying for USFWS trophy import permits for select species. To prove enhancement, we need your help.

As announced in March 2018, the USFWS has withdrawn and is no longer making countrywide enhancement (ESA) and non-detriment (CITES) findings. It must now make findings on an application-by-application basis. This means the USFWS must find that the particular hunt and operator benefits the species hunted.

The USFWS has previously found that habitat protection and restoration, control of poaching (to protect the hunted species or its prey), and community participation to reduce conflict and increase stewardship are important indicators of enhancement upon which to base issuance of permits.

The attached questionnaire, which is in Word table format, asks about this kind of enhancement generated by hunting in your area. We request that you complete this Operator Enhancement Questionnaire as best you can to enable your client to obtain an import permit. It is useful to attach supporting documents (e.g., it can be very effective to attach your annual report to the wildlife authority or an anti-poaching log if available). The more information that demonstrates benefits and active management the better. We will not share this specific information with anyone but the USFWS. However, we request your permission to use this information aggregated with other operators to describe the real benefits of safari hunting.

We also ask that you forward any applicable hunting licenses or permits for your client to us when returning this completed questionnaire.

Please let us know if you have questions.

Kindest regards,

John J. Jackson III
CONSERVATION FORCE
CHAIRMAN

TANZANIA WILDLIFE MANAGEMENT AUTHORITY

OFFICE OF THE CONSERVATION COMMISSIONER

Kingolwira Area, Dar es Salaam Road, TAFORI Building, P.O Box 2658, Morogoro -Tanzania

Ref No: **DA: 517/531/14/89** Date: **19th March, 2020**

Bushman Hunting Safaris Limited,
P.O. Box 678,
MOROGORO

RE: REQUEST FOR INFORMATION TO COMPLETE THE ELEPHANT IMPORT PERMIT APPLICATION IN USA WITH THE US FISH & WILDLIFE SERVICES

Kindly refer to the subject above and your letter with **Ref. No. BUSH/OP/018** dated 17th January, 2020.

TAWA is hereby submitting the response to questions raised by US Fish and Wildlife Service for importation of the said elephant trophies hunted in Maswa Game Reserve North during 2019 hunting season.

We thank you for your cooperation.

Musamba, E.B.
For: **Conservation Commissioner**

(a) According to census conducted by Tanzania Wildlife Research Institute (TAWIRI) in 2014, a total of **6,087** elephants were observed in the Serengeti Ecosystem of which Maswa Game Reserve is part of it.

(b) TAWA spend approximately **USD 321,213 (TZS 706,670,000)** in 2016/2017 for protection and conservation of wildlife species even those which are not included in trophy hunting such as African wild dogs, giraffes, rhinoceros and cheetah

(c) TAWA contributed to local communities surrounding Maswa Game Reserve a total of **USD 149,840 (TZS 329,647,598)** in 2016. The source of funds mainly is from trophy hunting. These funds are used to support community projects such as education and health services. Furthermore, Bushman hunting company operating in Maswa Game Reserve contributed a total of **USD 77,190** for community development.

(d) Trophy hunting activities create job opportunities for communities surrounding Maswa Game Reserve though it is highly promising for rangers. These rangers (both from Makao WMA and Maswa Game Reserve) do joint ant poaching patrol and other conservation activities. These activities are financed through revenue accrued from trophy hunting. Additionally, a total of **USD 11,011,356** was contribute by Bushman hunting company for ant poaching operation in the area

(e) Trophy hunting creates job opportunities for both Tanzanians and foreigners. Such job includes professional hunters, camp and operations managers, trackers, skinners, cooks, guard. For instance, out of **120** professional hunters, 8 are Americans and among these, 5 professional hunters have hunted in Maswa Game Reserve during the hunting season 2019.

(f) Elephant hunting which is in a package of **21** days safari contributes significant amount of revenue. These revenues are invested back in wildlife conservation in the area.

(g) Makao WMA which is also part of the Serengeti Ecosystem bordering Maswa Game Reserve benefits from trophy hunting. For instance, trophy hunting contributed a total of **TZS 33.1M** revenue for community development and incentives. Trophy hunting trends is promising because it rose from **TZS 34.1M** in 2013/14 to **334.6 M** in 2016/17. The amount is expected to shoot in the coming years.

(h) Revenue from trophy hunting shared to Meatu District Council from 2011/12 to 2015/2016 is **TZS 342,641,020**. Out of these **40%** of the amount generated is used for ant poaching operation and **60%** for development projects.

OPERATOR ENHANCEMENT QUESTIONNAIRE

1. **OPERATOR INFORMATION**
   a. Name of Area Operator: Bushman Hunting Safaris (T) Ltd
   b. Years in business: Over 18 years
   c. Name of Company conducting hunt: Bushman Hunting Safaris (T) Ltd
   d. Closest town to hunt location: Shinyanga
   e. Country where hunt will take place: United Republic of Tanzania

2. **CONCESSION**
   a. Name of Concession: Maswa North Game Reserve
   b. Area in Km^2: 751 sq.km
   c. Land tenure: 5 years

Government Lease	Community	Private Ranch	Private Conservancy
	x		

   d. Length of Concession Agreement: 5 years Renewable
   e. Can it be renewed? Yes X No
   f. Length of Renewal, if applicable: Every 5 years renewable
   g. Estimated total amount received in trophy fees last year, if applicable:

In six years (2014-2019), The Company paid the government a total of $11,011,356 in hunting revenues including approximately $650,000 in 2019 for Government licenses, Government concession fees and Government trophy fees combined.

   h. Are there any special obligations under the Concession Agreement such as annual reporting, poaching control, community investment, community employment, etc.? If so, please explain below:
   The figures of the concession agreement is as such:

Fee Type	2017	2018	2019
Government Concession Fee	180,000	180,000	180,000

Community Development Fee	20,000	20,000	20,000

The $20,000 is split amongst the local communities surrounding the hunting area.

Compiled reports on block maintenance, anti poaching activity, cattle logging, charcoal production, and trespassing to illegally grazing cattle herds in the designated wildlife areas. These reports are submitted to TAWA annually at the end of each year with all community development, block maintenance and anti-poaching activities carried out in the concession.

i. Please provide the Concession location and nearest City: Maswa Game Reserve (North) is located in the North West of Tanzania at the following coordinates:

36M 642532
UTM 9725379

The nearest city is Shinyanga, in the Shinyanga Region of Tanzania.

j. Please attach a map or maps with the boundaries marked and showing the nearest City

Lake Victoria
BURIGI GAME RESERVE
BIHARAMULO GAME RESERVE
SERENGETI NATIONAL PARK
MASWA GAME RESERVE
NGORONGORO CONSERVATION AREA
KILIMANJARO NATIONAL PARK
KIGOSI GAME RESERVE
MOYOWOSI GAME RESERVE
GOMBE NATIONAL PARK
TARANGIRE NATIONAL PARK
MKOMAZI GAME RESERVE
TANZANIA
UGALLA RIVER GAME RESERVE
MAHALE NATIONAL PARK
KATAVI NATIONAL PARK
Lake Tanganyika
DODOMA
KISIGO GAME RESERVE
RUNGWA GAME RESERVE
UWANDA GAME RESERVE
RUAHA NATIONAL PARK
MIKUMI NATIONAL PARK
UDZUNGWA MOUNTAINS NATIONAL PARK
SELOUS GAME RESERVE
Lake Nyasa

MASWA NORTH G.R HUNTING BLOCK GPS COORDINATES: 2013-2018

GPS ID	MN-1	MN-2	MN-3	MN-4	MN-5	MN-6	MN-7	MN-8	MN-9	MN-10	MN-11	MN-12	MN-13
Latitude	-2.4188	-2.4539	-2.5103	-2.5714	-2.5914	-2.6535	-2.6775	-2.7228	-2.7592	-2.8363	-2.8896	-2.9516	-2.9577
Longitude	34.2601	34.3026	34.3263	34.3518	34.3854	34.4123	34.4481	34.4883	34.5263	34.5554	34.5979	34.64	34.5792

GPS ID	MN-14	MN-15	MN-16	MN-17	MN-18	MN-19	MN-20	MN-21	MN-22	MN-23	MN-24	MN-25
Latitude	-2.9785	-2.9706	-2.9818	-2.9177	-2.8679	-2.8225	-2.7726	-2.7637	-2.6955	-2.6388	-2.554	-2.487
Longitude	34.545	34.4842	34.4191	34.4212	34.4369	34.3854	34.3629	34.3855	34.3406	34.3289	34.2905	34.2601

Coordinate System: GCS, Datum: Arc 1960, Units: Degrees Data source: TAWIRI, 2010 Map production: TAWIRI, 2012

k. If the Concession borders a National Park, please provide Park name:

The Maswa Game Reserve shares approximately 77 km's of border with the Serengeti National Park, Tanzania. The Serengeti National Park borders to the west side of the hunting concession and the concession forms the buffer zone between the villages to the West and the Serengeti National Park to the East.

l. Description of general and distinctive habitat features and any water features:

Maswa Game Reserve is part of the greater Serengeti grassland ecosystem. Bordering Maswa Game Reserve is the Serengeti National Park, which is one of the largest natural parks in Africa: nearly 15,000 sq.km. of grassland, savannah shrubs and forests; while the entire Serengeti ecosystem, covering an area of about 30,000 sq. km., encompasses the Serengeti National Park, the Ngorongoro Conservation Area, the Maswa Game Reserve, the Grumeti Reserve, the Controlled Ikorongo Area, the Controlled Loliondo Area and the Masai Mara National Reserve in Kenya.

Maswa Game Reserve is one of the most important buffer zones separating villages to the West from Serengeti National Park.

The Serengeti Volcanic Grasslands are vital to the cyclical

movement of millions of large mammals in the region.

There are wide-open plains along the Southern edge of the Serengeti. Rolling hills covered in thickets and rock kopjes are interspersed with seasonally dry rivers containing permanent water holes.

Wooded savannah with clumps of acacias are a common feature in the central part of the park; as many as 16 different species of acacia grow here.

Shrubby savannah, thorny bush savannah and Commiphora gallery forests can be found further North, while to the far North the landscape is hilly.

Mixed acacia scrub, marshy savannah and grasslands can be found to the West, where the soil is of black clay and impermeable to rain; further North-West, acacias give way to Combretum and Terminalia forests.

Two valleys are crossed by the Duma and Simuya rivers, bordered by hills and dotted with kopjes. These nonperennial rivers converge in Maswa Game Reserve and then flow out of the area and into Lake Victoria.

The kopjes are granite and gneiss rock formations that can be found in different parts of the Serengeti; they have surfaced as a result of soil erosion and subsequently shaped and modified by the wind, the weather and the effect of

biological phenomena.

Maswa Game Reserve lies within the great Acacia savannah belt. It can be described as ranging from “Mbuga” to wooded Acacia tree grassland and riverine forest intercepted by rocky hills and kopjes. It contains a more diverse vegetation and country if compared to the neighboring Serengeti National Park. The vegetation is characterized chiefly by the many species of Acacia which form a dominant part of most of the plant communities. The Reserve is covered mainly by 15 species of Acacia, 4 species of Albizia, 3 of combretum and 3 species of *commiphora* woodland and open grassland. The distinct tree and grass species which occur with approximately equal frequency include: *Acacia tortolis, Acacia lbida, Acacia Senegal, Acacia robusta, Acacia polycantha, Acacia drepanolobium, Acacia xanthophloea, and Acacia hockii.* Others are *Commiphora madagascariensis, Commiphoraeminii, Commiphoramollis, Combretummolle, Combretumobovatum, Blanitea egyptica, Kigelia Africana, Dalbergiamelanoxylon and Ficussycormorus.* The grass growth include: *Themedatriandra, Chrorisroxburgiana, HyparrheniaPanicum, DigitariaCenchrus and Sporobolusrobustus. GenerallyMaswa South is predominantly an AcaciaCommiphor*a and *combretum* woodland while the North is acacia tree thicket grassland.

The primary species under management in the hunting area:

Maswa Game Reserve has abundant and varied wildlife, with a high density of buffalo, cheetah, hippo, crocodile, elephant, lion, and leopard. Several Black rhino are also resident in the reserve.

Maswa Game Reserve maintains about 50 different species of large mammals, including 24 ungulates, 19 carnivores, four rodents, and three primates. About 200 different birds, including the Grey-breasted Francolin, which is endemic to Maswa and Serengeti is observed throughout the season. The Game Reserve forms the last remaining refuge for the Roan antelope (*Hippotragusequinus*) in this ecosystem.

This world-renowned ecoregion is part of a stage for some of the world's most spectacular mass game migrations. While populations fluctuate due to their migratory nature, an estimated 1.3 million blue wildebeest (Connochaetes taurinus) can be seen migrating in this area. Also, other plains game such as zebra (Equus burchelli) numbering more than 200,000, and approximately 400,000 Thomson's gazelles (Gazella thomsoni) naturally feed between this ecoregion and the Southern Acacia-Commiphora bushlands ecoregion each year

The area represents the last remnant of a large mammal dominated ecosystem that has existed in African at least since the Pleistocene. A large number of associated mammalian predators are also involved in these movements. By the onset of the dry season (late May), many of the grasses on these plains have either dried out or been eaten to stubble by grazing wild plains animals. The watering sources become quite scarce, triggering the massive migration of wildebeest and zebra, later followed by Thomson's gazelle and eland from the plains to the Acacia-Commiphora woodlands. At the beginning of the wet season, these animals complete the cycle and return to the plains

After being reintroduced back into the Serengeti National Park, the Black Rhinoceros (Diceros bicornis, CR) once again occurs in the Maswa Game Reserve ecoregion. When the Serengeti National Park dries up seasonally, these rhinos can occasionally move into Maswa Game Reserve for both browsing needs and water. When this happens, the Maswa Game Reserve operators communicate with Tanzania authorities the whereabouts acting as a further rhino protection blanket.

The area has a wide array of mammalian predators, including cheetah (Acinonyx jubatus), lion (Panthera leo),

leopard (P. pardus), spotted and striped hyaena (Crocuta crocuta, Hyaena hyaena), side-striped (Canis adustus), golden (C. aureus) and black-backed (C. mesomelas) jackal, honey badger (Mellivora capensis), caracal (Felis caracal), serval (F. serval), wild cat (F. sylvestris), bat-eared fox (Otocyon megalotis), African civet (Civettictis civetta), and several genet and mongoose species. Avian predators are also plentiful, with Maswa Game Reserve having 34 raptor species, and six vultures. A variety of smaller predators such as snakes, lizards, spiders, and scorpions, also live and thrive here.

Several species taking up residency in this area are of international importance because of their abundance, including eland, waterbuck (Kobus ellipsiprymnus), wildebeest, Coke's hartebeest (Alcelaphus buselaphus), topi, impala (Aepyceros melampus), Grant's and Thompson's gazelles, zebra and buffalo. A European population of white stork (Ciconia ciconia) has a significant wintering ground here, and the Nile crocodile (Crocodylus niloticus).

3. COMMUNITIES IN THE CONCESSION

a. Are there any communities living in the Concession? Yes ____ No X

b. If so, estimated number of people or villages in the Concession?

N/A. Maswa North is a Game Reserve. Game Reserves in Tanzania have restricted entry and are where no human habitation or activities (hunting, grazing animals,

cutting wood etc.) are allowed except with permission of the Government Wildlife Management Authority. So only licensed tourist hunting and licensed non-consumptive tourist activities are permitted.

c. Are there communities bordering this Concession? Yes X No .....

d. If so, estimated number of people or Villages around the Concession?

Kilima, Kisesa, Bariadi, Nyakabindi, Lalogo, Mbogo, and Somanda

4. **RELEVANT GAME POPULATIONS IN THE CONCESSION:**[1]

Species Name:	**Relative Abundance**	**Estimated Population**	**Density per square Kilometre:**	**3-Year Trend**	**How is it monitored?**
	Dense, Average, Sparse			Up, Down or Stable	
Elephant	Dense	Greater than 550	Approximately 0.73 per 1 km2	Up	Trail cameras, aerial, foot, vehicle, and surveys
Leopard	Dense	Greater than 300	Approximately 0.55 per 1 km2	Up	Trail cameras, sign such as tracks and kills, foot, Vehicle, and surveys
Lion	Dense	Greater than 100	Approximately 0.13 per 1 km2	Up	Trail cameras, sign such as tracks and kills, foot, Vehicle, and surveys
Prey Species	Dense	Greater than 40 000	Approximately 53.1 per 1 km2	Up	Trail cameras, aerial, foot, vehicle, and surveys

[1] The FWS Import Permit Application form asks the applicant: "9. a. Do you have any information regarding the population status or trend on the species hunted?"

5. LOCAL COMMUNITY PARTICIPATION

a. Total employment number: 93

b. Please identify the number and type of all employees:

EMPLOYEE TYPE	TOTAL NUMBER OF THIS TYPE	NUMBER OF THIS TYPE WHO ARE LOCAL/FROM NEARBY COMMUNITIES
PROFESSIONAL HUNTERS	5	
TRACKERS	10	
ANTI-POACHING SCOUTS/RANGERS	24	
OTHER ANTI-POACHING	24	
COOKS/HOUSEKEEPERS	16	
COMMUNITY COORDINATORS	1	
MANAGERS	3	
BIOLOGISTS		
OTHERS: _____ OFFICE STAFF SECURITY GUIARDS DRIVERS MECHANICS	10	

6. Number of staff employed in the off-season: 46 including game scouts

a. Please identify the number and type of staff that are engaged when the season is not open:

EMPLOYEE TYPE	TOTAL NUMBER OF THIS TYPE	NUMBER OF LOCALS /FROM NEARBY COMMUNITIES	WHEN EMPLOYED?
ANTI-POACHING STAFF	24	18	Jan-June
MANAGERS	3	3	Jan-June
MAINTENANCE	2	2	Jan-June
ROAD OPENING /CONSTRUCTION	15	15	Jan-June
COMMUNITY RELATIONS PERSONNEL	3	1	Jan-June
OTHERS:	Guards and office staff 10	10	Jan-June

7. ANTI-POACHING EFFORTS:[2]

a. Number of Anti-Poaching staff: 24

b. Are Anti-Poaching Patrols conducted during the hunting season, off-season, or both?
Hunting season: _____ Off-season: _____ Both seasons: Both

[2] The new FWS Import Permit Application asks for activities that provide a "conservation benefit" to the species. The FWS considers anti-poaching a "conservation benefit."

c. Months during which Anti-Poaching Patrols are conducted: Daily, 365 days per year.
d. Number of Anti-Poaching Patrols per month: Daily times 30 days

e. Description of Anti-Poaching equipment, vehicles, etc.:

4x4 Toyota Land cruiser vehicles, tractor (during the rainy wet season), VHF and UHF radios, Bushnell and Stealth Cam trail cameras, computers, tents, rations, boots, uniforms, Thuraya satellite phones, radios, medical boxes, kitchen supplies, bedding and mosquito nets, tarps, gps, digital cameras, camera traps, cable cutters for snares, and mechanical tools and spares.

The anti poaching teams are equipped with digital VHF and UHF two-way radio systems, which allow rangers to be in constant and rapid communication while keeping track of their location. Rangers can, therefore, communicate more clearly while keeping track of each other's positions, which is very crucial in case of an emergency.
The Company has also invested in repeater antennae that have increased the range to include the entire Maswa North Game Reserve area to be within radio reach. Each team of rangers is equipped with handheld Motorola VHF/ UHF radios. Each vehicle is equipped with Motorola VHF/UHF radios and antennae's, and a two-way repeater covers the area.

Also, the Rangers use Thuraya satellite phones and cell phones where necessary as required for communication.

Bushman Hunting Safaris (T) Ltd has an extensive amount of trail cameras, and professional Nikon camera traps located thru out the concession. The surveillance cameras aid in providing critical intelligence about illegal poaching activity and game densities. The strategic placement of camera traps throughout the concessions has captured images of poachers and wildlife that would not have been observed otherwise and led to the arrest of many illegal poachers.

Also, yearly improvements in cell phone coverage over the area

has helped to make this system of intelligence gathering and rapid communication more effective every year.

Tanapa (Tanzania National Parks) has a Cessna Super Cub stationed in the area and regularly uses the Maswa North airstrip for patrols and provides the anti poaching units in the area with aerial surveillance. This manned aircraft is frequently used in Maswa North to look for sign of poaching and to monitor the resident Black rhino's/ elephant populations in the area.

Meat poachers successfully arrested by rangers.

7. ANTI-POACHING EFFORTS: *[CONTINUATION]*

f. Who is responsible for organizing and coordinating anti-poaching from prevention through successful prosecution?

As part of the Bushman Hunting Safaris (T) Ltd and the government's efforts to combat poaching in Maswa North Game Reserve, the Tanzania Wildlife Authority (TAWA) rangers, Tanzania National Park (TANAPA) rangers and Bushman Hunting Safaris (T) Ltd company rangers work together in forming conservation and protection teams that work round the clock to end the poaching. Joint patrols and intelligence sharing puts severe pressure on the illegal poachers and is helping to curb this illegal activity. The teams

include a RRT (Rapid Response Team) and a special Black rhino task force. There are three permanent anti poaching ranger outpost camps located strategically within Maswa North Game Reserve, and these camps are manned all year round.

Below is an image of rangers monitoring the resident Black rhino.

Rangers enforce the related laws and regulations of the Game Reserve that manages the biodiversity of this ecosystem, protecting and conserving the fauna and flora. The laws are strict and this ensures that poachers are prosecuted and fined to the fullest in court. The Tanzania

government has a zero tolerance policy and we are now seeing the poachers regularly receiving heavy prosecution and fines in the courts. This is a game changer for wildlife and conservation.

The rangers are provided training that focuses on wildlife protection, strategic field patrol methods, intelligence gathering operations and use of modern intelligence and security equipment.

Rangers are charged with functions of:

- Protection of natural resources;
- Ecological and wildlife health monitoring;
- Community involvement in conservation efforts

Furthermore, the activity of the legal hunters in the area naturally provides valuable intelligence to the anti poaching rangers. The presence of the legal hunters during the hunting season also significantly curbs the ability for the poachers to operate undetected within the Maswa North Game Reserve.

CAMP
MASTER
CAMP
MASTER

Below is an example of some trail camera images that were used to detect poachers activity and further allowed the rangers the necessary intelligence to successfully ambush and arrest these meat poachers.

05:02AM 09/23/20 53F
MIKEFELLCAM

STEALTH CAM
10:13 AM 10/06/20 77F
MIKEFELLCAM

g. Do you offer rewards to poaching informants leading to arrest? Yes X No
h. Do you offer rewards to poaching informants upon conviction? Yes X No
i. Please describe the company's anti-poaching expenditures below:

Type of expense	Spending 2017	Spending 2018	Spending 2019(*)	Remarks
Anti-poaching scout salaries	$1,848	$2,515	$2800	
Casual Labour	$13,313		$8070	

Food Expenses	$2,188	$6,121	$4,742	
Fuel	$13,979	$19,358	$12,391	
Vehicles Repairs & Maintenance	$19,346	$13,743	$8,696	
Clothes & other items	$640	$6,835		
Medical Expenses	$807	$6,313	$542	
Total	$ 52,121	$49,186	$ 37,241	

*Note : In the year 2019 above expenditure we spent on Maswa and Kizigo camps where in the year 2017 and 2018 we spent above expenditure for Kizigo, Maswa, Selous, Rungwa.

What currency are the expenditures given in? USD

8. ANTI-POACHING RESULTS:

Category	2017	2018	2019	2020	Remarks
Poaching Incidents Discovered	46	34	56	30	
Elephant Carcasses Observed	1*	0	0	2*	*All natural deaths
Lion Carcasses Observed	0	0	1*killed by poacher for local medicine	1 *natural death-killed by buffalo	
Leopard Carcasses Observed	0	0	0	0	
Ivory Poachers Arrested	0	0	0	0	
Meat Poachers Arrested	36	19	32	17	
Other Poachers Arrested	12	5	15	4	

Poachers Convicted	26	10	16	10	
Snares/Gin Traps Collected	307	200	370	250	*Mostly all wire snares home made from discarded vehicle tires
Firearms Confiscated	0	0	0	0	
Vehicles Confiscated	0	0	0	0	
Bicycles Confiscated	22	15	20	12	
Boats/Nets Confiscated	0	0	0	0	
Tusks Recovered	0	0	0	0	
Other: _____ Vulture Poisoning	5	2	3	0	
Coal Ovens	7	9	13	22	
Illegal Entry	16	9	13	4	
Spears	32	8	7	0	
Livestock	750	400	360	1100	
Motorbikes	11	8	15	4	

Handcuffed meat poachers arrested and being escorted by rangers to the Mbariadi court to await prosecution.

Wire snares confiscated from arrested poachers.

The poachers wire snares are the greatest threat to all wildlife in the Reserve and especially to the apex predators such as lion.

A typical poachers camp detected and disbanded.

Illegal coal ovens are a great threat to the hard wood tree’s in the Reserve.

9. COMMUNITY INVESTMENT:[3]

a. Does the Company contribute money or goods/services to local communities?
X Yes ____ No

b. If so, what percentage or amount is shared, how often, and why (e.g.: required by law, required by contract, voluntary contribution)?

The Company provides conservation education seminars to local communities' multiple times during each hunting season. Many clients who visit the Maswa Game Reserve bring Foundation Safari Care and Bell Family Blue Bags. These clients deliver goodwill bags while on safari to the local villages. Items in these gift bags include basic medical supplies, educational materials, and other relief supplies, as

[3] The new FWS Import Permit Application asks for activities that provide a "conservation benefit" to the species. The FWS considers community investment a "conservation benefit."

well as clothing and toys. “Blue Bags” help those in need in these remote areas.

c. Does the Company provide game meat to nearby communities? Yes X No
d. If so, please estimate the amount and/or value of meat contributed in prior year and describe the meat contribution program:

Hunters at Maswa donate their game meat to the local communities on all big game species such as buffalo, topi, wildebeest, and elephants. Hunters donate meat from their legally harvested game animals from the strict area quota and donate the meat to local communities. This practice is especially helpful when a legally harvested elephant is taken because that animal provides literally thousands of pounds of meat to the people of the very villages who have the most conflict with elephants and other wild game.

The company aids the villages with vehicles and tractor transportation to safely and quickly transport this meat from the Maswa Game Reserve to the adjacent towns and schools before it spoils or is eaten by scavenges such as hyena and vultures.

The benefits of legally harvested meat have gained the strong support, and the hearts and minds of the

local people. The younger adults who see the benefits of supporting legal hunting and conservation are much less inclined to pursue a poacher's life. The legally harvested game meat is most often dried, therefore preserving it for many months.

The harvesting of a mature male elephant is a rare event. The cutting of meat and its distribution is quite a celebration, and attracts many villagers, often numbering in the hundreds.

e. If the Company performs problem animal activities for surrounding communities (e.g.: patrolling fields during the harvest, chasing away problem animals, conducting PAC hunts or PAC killings), please describe.

The Tanzania Government does not issue PAC permits. However, the Company legally hunts crop raiding problem animals with valid “regular” hunting licenses. Hunters pay full trophy fees to assist the local populations with PAC where possible - when the animal is within the legal hunting boundary perimeter, is within the validity of the hunting permit/ hunting season and fulfills the minimum requirements of the Tanzania Wildlife Conservation Act (which requires that one of the tusks of

elephant exceed 20kgs and above or measures 160cm and above).

Elephants can be very destructive when they encroach onto farmland and move through villages, destroying crops and sometimes wounding or killing people. The bulk of this damage is caused by bachelor groups of elephant bulls. The bulls crop raid by night and rest in the thickets of the Maswa North Game Reserve by day.

When the villages report an incident, where possible every effort is made to ensure that the problem elephant bull is tracked and hunted as such.

f. Please describe any consolation payments made to local residents damaged by game species

The Company does not use this system and we would rather offer the local community support and projects.

While compensating pastoralists and farmers for damage caused by wildlife can reduce pressure on wild animal populations, this system can be bad for conservation. It can lead to a decrease in efforts to prevent damage and exacerbate conflicts with wildlife. Furthermore, compensation programs increase the return to agriculture and can therefore be viewed as a subsidy toward crop and livestock production. Such subsidies can trigger agricultural expansion (and wild habitat conversion), an inflow of agriculture producers, and intensification of agricultural production.

g. What currency are the expenditures reported in? N/A

SPECIES	DAMAGE CAUSED	CONSOLATION PAID 2017	CONSOLATION PAID 2018	CONSOLATION PAID 2019
ELEPHANT	None			
LION	None			
LEOPARD	None			
OTHER	None			

a. Please describe any community projects paid for by the Company:

BUSHMAN

LAND CRUISER
BUSHMAN
SAFARI TRACKERS LTD.

Kusoma namba 11 hadi 99
Kusoma namba 11 hadi 99 kwa maneno
Namba
Maneno
11 Kumi na moja
12 Kumi na mbili
13 Kumi na tatu
17 Kumi na saba
20 Ishirini
23 Ishirini na tatu
Kusoma

The Tanzanian government charges an annual community concession fee of $20 000USD. The company voluntarily provides additional funding as required on a need basis.

Examples of the Company voluntarily support includes providing conservation education seminars to local communities' multiple times during each hunting season. Many clients who visit the Maswa Game Reserve bring Foundation Safari Care and Bell Family Blue Bags. These clients deliver goodwill bags while on safari to the local villages. Items in these gift bags include basic medical

supplies, educational materials, and other relief supplies, as well as clothing and toys. “Blue Bags” help those in need in these remote areas.

The Company has voluntarily financially supported dozens of disabled children in the Maswa local community to get surgery thru the Plaster house in Arusha. This financial support has supported the disabled kids and their parents and included transportation, boarding fees, medical costs, clothing costs, and educational materials. This has enabled these children to jump-start their road to recovery.

Gulinja ilanga msalenge, birthday 12/12/2011, alizaliwa nyumbani, mamaye:mwalu gulinja, babaye:ilanga msalenge,wote wanaishi mwasinasi.

1st Born
Mama Samweli ndio Boss wetu

The Company and clients have financed several local rangers to further their studies at the Wildlife college in Tanzania and to further themselves in education. This education will aid Tanzanian conservation and it's management in the long run.

b. What currency are the expenditures reported in? USD

Type of Project	Spending 2017	Spending 2018	Spending 2019	Remarks
Fuel Expenses	$2,237	$2057	$2,326	
Education (e.g., school fees, supplies)				
Health (e.g., clinics, offices)				

Food Expense to local	$5,143	$4,510	$3,630	
Community scout salaries	$6,446	$6,264	$3,478	
Other community anti-poaching				
Local government activities				
Infrastructure funded				
Sports teams funded				
Construction materials donated				
Conservation seminars or meetings				
Other:				
Other:				
Total				

10. How many U.S. Clients did the Company have in the past three years, what percentage of the Company's clients were from the U.S., and what fees did they pay?

	Hunting Elephant		Hunting Lion		Hunting Leopard		Hunting all Species	
Number of U.S. clients	**2017:00:00**	0	**2017:00:00**	0	**2017:00:00**	7	**2017:00:00**	15
	2018:00:00	0	**2018:00:00**	0	**2018:00:00**	8	**2018:00:00**	16
	2019:00:00	1	**2019:00:00**	0	**2019:00:00**	7	**2019:00:00**	14
Percentage of U.S. clients	**2017:00:00**	0	**2017:00:00**	0	**2017:00:00**	90%	**2017:00:00**	90%
	2018:00:00	0	**2018:00:00**	0	**2018:00:00**	90%	**2018:00:00**	85%
	2019:00:00	20%	**2019:00:00**	0%	**2019:00:00**	90%	**2019:00:00**	90%
Trophy fees paid by U.S. clients	**2017:00:00**	0	**2017:00:00**	0	**2017:00:00**	$49000	**2017:00:00**	$257,070
	2018:00:00	0	**2018:00:00**	0	**2018:00:00**	$56000	**2018:00:00**	$336,600
	2019:00:00	$25 000	**2019:00:00**	0	**2019:00:00**	$49000	**2019:00:00**	$461,950

11. Approximate Dollar amount and/or percentage of Company's revenue from U.S. Clients:

Fee Type	2017	2018	2019
Block Fee	180,000	180,000	180,000
C D Fee	20,000	20,000	20,000

Hunting Licence	25,950	25,250	128,100
Conservation Fee	61,350	56,700	
Inter Company Fee	2,800	1700	
Observer Fee	22,800	23,900	
Trophy Handling Fee	10,600	10,300	
Gun Permit	3,160	3,600	7,350
Game Fee	257,070	336,600	461,950
Total	623,730	658,050	797,400

Approximately 85-90 percent of this revenue is from US clients.

12. OTHER INFORMATION: Please provide a narrative of other enhancement information about the operation, such as any special Hunting Policies (e.g.: aging, size, resting areas), Concession Improvements (e.g.: digging and maintaining boreholes, restocking), Management Activities, Research, etc.

1) <u>The challenge.</u> The rangers must continually adapt to the rapidly evolving threat of poaching in order to protect the Maswa wildlife under its care. This protection is time consuming and expensive and is almost solely dependent on the revenue generated from the successful and sustainable legal hunting in the concession.
2) <u>Force for good.</u> Maswa Game Reserve has seen the wildlife populations steadily grow in the past 5 years (including lion, leopard, elephant, hippo, wild dogs, Nile crocodile, cheetah, Black rhino, and plains game).

3) <u>Keeping endangered species safe.</u> The area has seen increased diversity and protected wildlife such as pangolin, wild dog, cheetah and Black Rhino are benefiting from the hunting revenue. Seasonally, Maswa Game Reserve is home to over 15 % of Tanzania's endangered Black rhino population that wander in from the National Park. In dryer months this movement is significant. Black rhino bulls are extremely territorial and as they fight other males found in their territory within the Serengeti, often causing the younger bulls to be pushed out into the Maswa North Game Reserve.

4) Hunting Revenue: In six years (2014-2019), Bushman Hunting Safaris (T) Ltd has generated $11,011,356.00 through hunting revenues to Tanzania. Wildlife departments and local communities depend on this revenue and the economic success of these community-based natural resource management programs. Calls to potentially ban this hunting or impede the importation of legally harvested lions, leopards and elephants to the United States removes the source of income for the local communities and endangers the communities, habitat, and the same species it wants to conserve. Hence, eliminating the best and most sustainable conservation tool acts to destroy the resource it seeks to protect. A ban on elephant and lion imports affects

and severely limits the Maswa area and its operators' ability to package big game species (that are the more significant revenue generators). The result dwindles the effectiveness and source of income and value derived directly into conservation for protection.

Fee Type	2017	2018	2019
Block Fee	180,000	180,000	180,000
C D Fee	20,000	20,000	20,000
Hunting Licence	25,950	25,250	128,100
Conservation Fee	61,350	56,700	
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Gun Permit	3,160	3,600	7,350
Game Fee	257,070	336,600	461,950
Total	623,730	658,050	797,400

5) Reduced presence of domestic livestock. Less and less illegal cattle and other livestock grazing occurs on the Maswa Game Reservation. Before, when herdsman would cross the boundary and illegally graze their livestock in the Reserve, the penalty was a small fine, which they were happy to pay to fatten their livestock. Fortunately, a recent change in regulation allows the game-scouts to commandeer the livestock and auction the illegally grazing cattle at the market, keeping the revenues to offset anti-poaching and

policing activities. Hence, there is virtually no illegal crossing of the boundary line for cattle grazing because it is too expensive and risky for the herdsmen. The result is that there is no co-mingling of domestic livestock and wild game. There is less poisoning of the Apex predators and wild game now, and herds of buffalo and plains game, a primary food source for lion and lion prides, are less disturbed. There is furthermore less competition for grasslands a result in the dryer months.

6) <u>An ever increasing and patrolling effort around Anti-poaching</u>. Locally, revenues from legal hunting have

increased the anti-poaching activity. Further, additional fees collected by the Tanzanian Wildlife Department return to the local communities to reduce poaching. Maswa Game Reserve (North) operated by Bushman Hunting Safaris (T) Ltd has been the top income generating concession in Tanzania for 2018 and 2019 and thus the greatest contributor for funding to the wildlife department in the country.

7) Greater consequences for poachers. Apprehended poachers face full prosecution. Moreover, in recent years, the Government has seriously cracked down on recent bribery attempts for assailants to coax officials out of their pending jail-time. Consequently, the penalties are justifiably severe, and the price to pay for being a poacher is a good reminder for those who think of committing crimes against animals.

8) <u>Communities – The First Line Of Defence.</u> Our anti-poaching work is centered around people**.** The people who live around us at Maswa are our greatest anti-poaching asset**.** The fact that we are able to achieve success in our work is due to the good partnership and collaboration we have with our neighboring communities**.** And in return, they are the first line of defense against wildlife criminals**.**

9) <u>Partnership with Tanzania Government Authorities:</u>
Our close partnership and collaboration with TAWA (Tanzania Wildlife Authority and TANAPA (Tanzania National Parks) has been key to our success with the fight against poachers. Together with the government of Tanzania, and thru the generation of conservation revenue thru legal hunting, rangers have secured the Maswa North Game Reserve and created a safe refuge for key wildlife species and preserved wild habitat from encroachment.

10) Pressure on poachers is changing the trend. Our results show that that, with increased law enforcement efforts in an Maswa area, illegal poachers switch to less detectable methods such as snaring, and target smaller sized mammals such as impala. Where as before the poachers would put lines of snares up targeting big game, the trend shows that the increased pressure of anti poaching on them is forcing them to minimize the amount of snares they put out and target smaller game only to avoid detection and arrest. We are also finding that the poachers are restricting their movements in the reserve to after dark as a result of this pressure.

11) Conservation philosophy employed by the Company.
The Maswa area limits its buffalo hunting to solitary bulls exclusively, so hunters do not pressure or trail breeding herds. This strategy has a dual effect; first it ensures breeding bulls stay with the herd, and second, there is less pressure on the herds which has increased lions populations

in the area (as the lions prey primarily on the buffalo during the dry/non migratory season)

12) Strict inner hunting company policies. The Company sets it's own rules for the professional hunters and staff to adhere to that are firmer than the Tanzania Wildlife Act, such as minimum age/ size requirements for each species and this is closely monitored and employees are fined or terminated for indiscretions. The company also has expanded the allocated resting areas for the wildlife within the concession and has increased buffer zones allocated for non-hunting along permanent water, salt licks, and along the National Park boundaries. The Company is very strict about ensuring all rules and regulations are followed.

TANZANIA WILDLIFE MANAGEMENT AUTHORITY

OFFICE OF THE CONSERVATION COMMISSIONER

Kingolwira Area, Dar es Salaam Road, TAFORI Building. P.O Box 2658, Morogoro -Tanzania

Ref No: **BA:269/380/01/76**

Date: **28th May 2019**

Managing Director,
Bushman Hunting Safaris Ltd,
P. O. Box 678,
MOROGORO

RE: RESULTS OF AGE DIAGNOSIS OF LION TROPHIES HUNTED DURING THE 2018 HUNTING SEASON

Reference is made to the heading above,

Please find enclosed herewith the age diagnosis of the lion trophies harvested during the 2018 hunting season as per Regulation 26 (1), 27(1)(a) of the Wildlife Conservation (Tourist Hunting) (Amendment) Regulation 2017.

The strictest confidentiality is requested regarding the enclosed document.

Yours sincerely,

Prosper Kyssima
For: **CONSERVATION COMMISSIONER**

Phone: +255 (0) 23 293 4204 (Dir) | +255 (0) 23 293 4205 (Gen) | Email: cc@tawa.go.tz | Website: www.tawa.go.tz

CONSERVING FOR RECREATION AND PROSPERITY

Lion trophy hunting in 2018
Results
Age diagnosis of trophies

2011628	Bushman Hunting Safaris	Rungwa Rungwa GR E
2011692	Bushman Hunting Safaris	Rungwa Rungwa GR E
2010575	Bushman Hunting Safaris	Maswa GR N

Result from your Company: Bushman Hunting Safaris

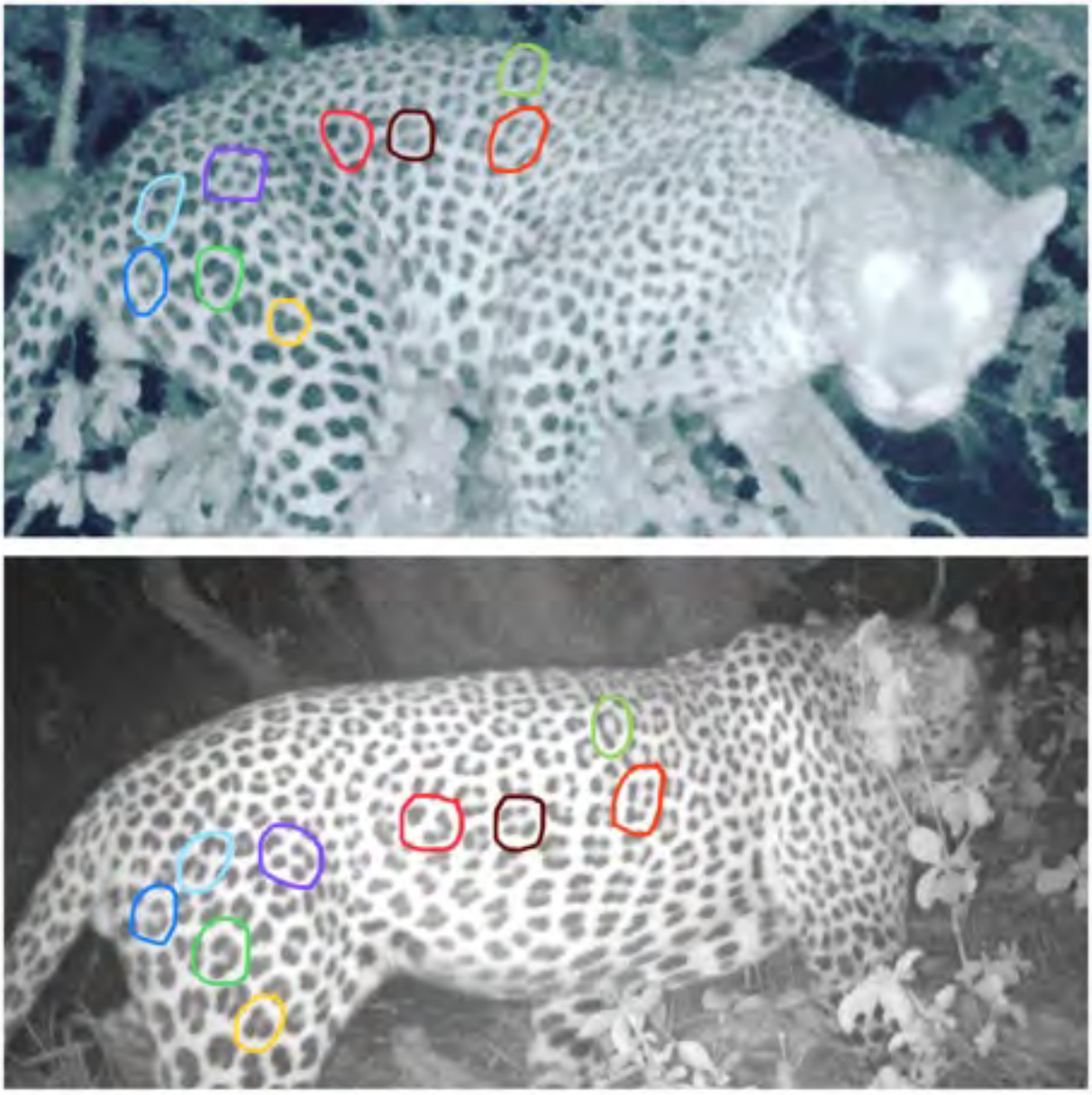
Hunting block: Maswa GR N, Rungwa Rungwa GR E

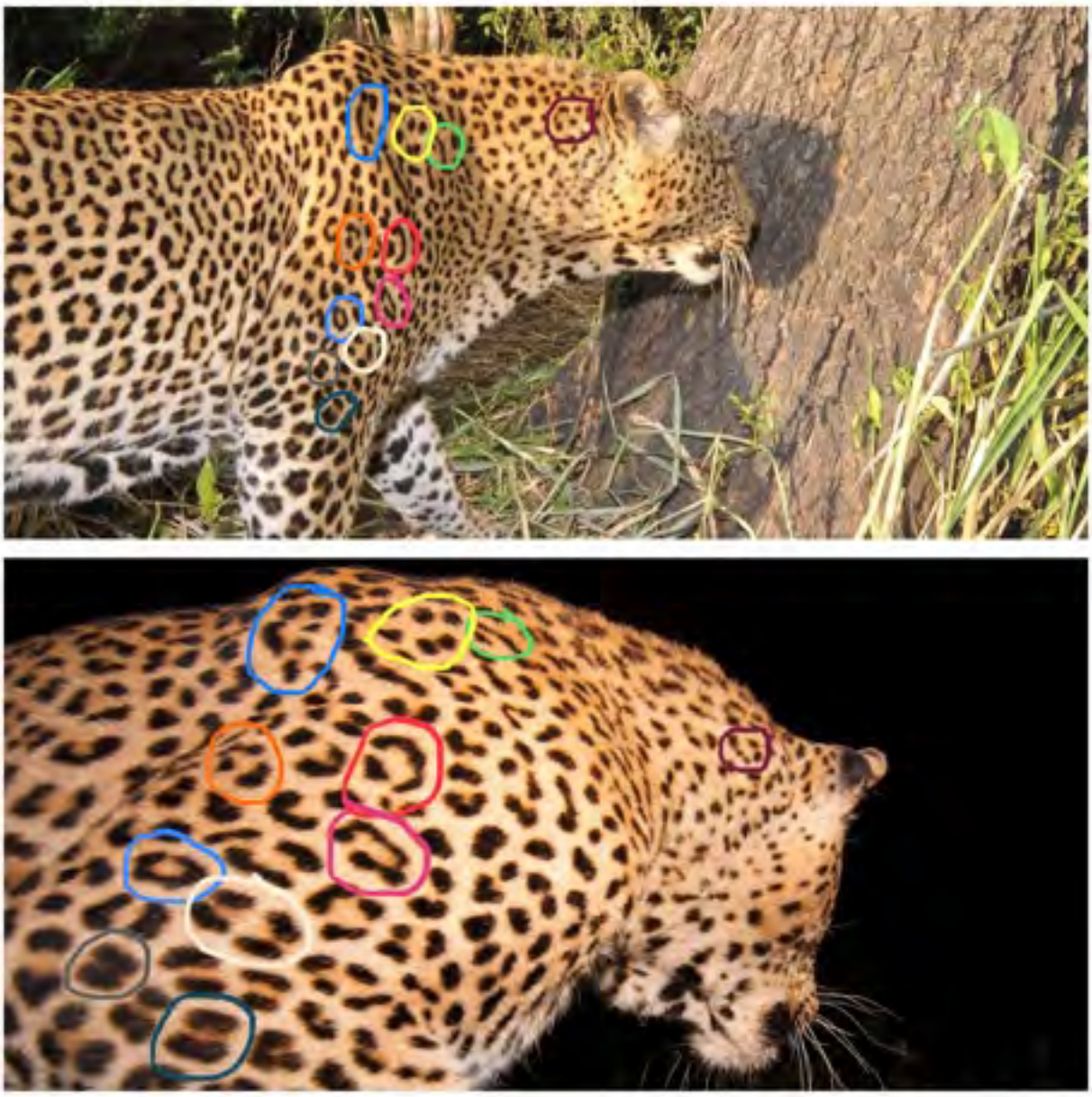
Permit Number	Age Categories			Total
	Under 4 years	4 & 5 years	6 Years and Above	
2011628			X	3
2011692			X	
2010575			X	

13) Increased Infrastructure: The Company has increased the road network in the concession and maintains the roads, airstrip and boundaries. This allows access to the concession for both aerial and ground patrols year round. The increased road network also allows all areas of the concession to be protected.

14) Data Management: The Company and hunters have increased remote camera traps deployed across the Maswa territory, including monitoring camera positions, image capture, and data collection. A database on population of lion, leopard and elephants is kept using this method and by making all hunting/ anti poaching parties photograph and record data and imagery from all the

activity in the area.

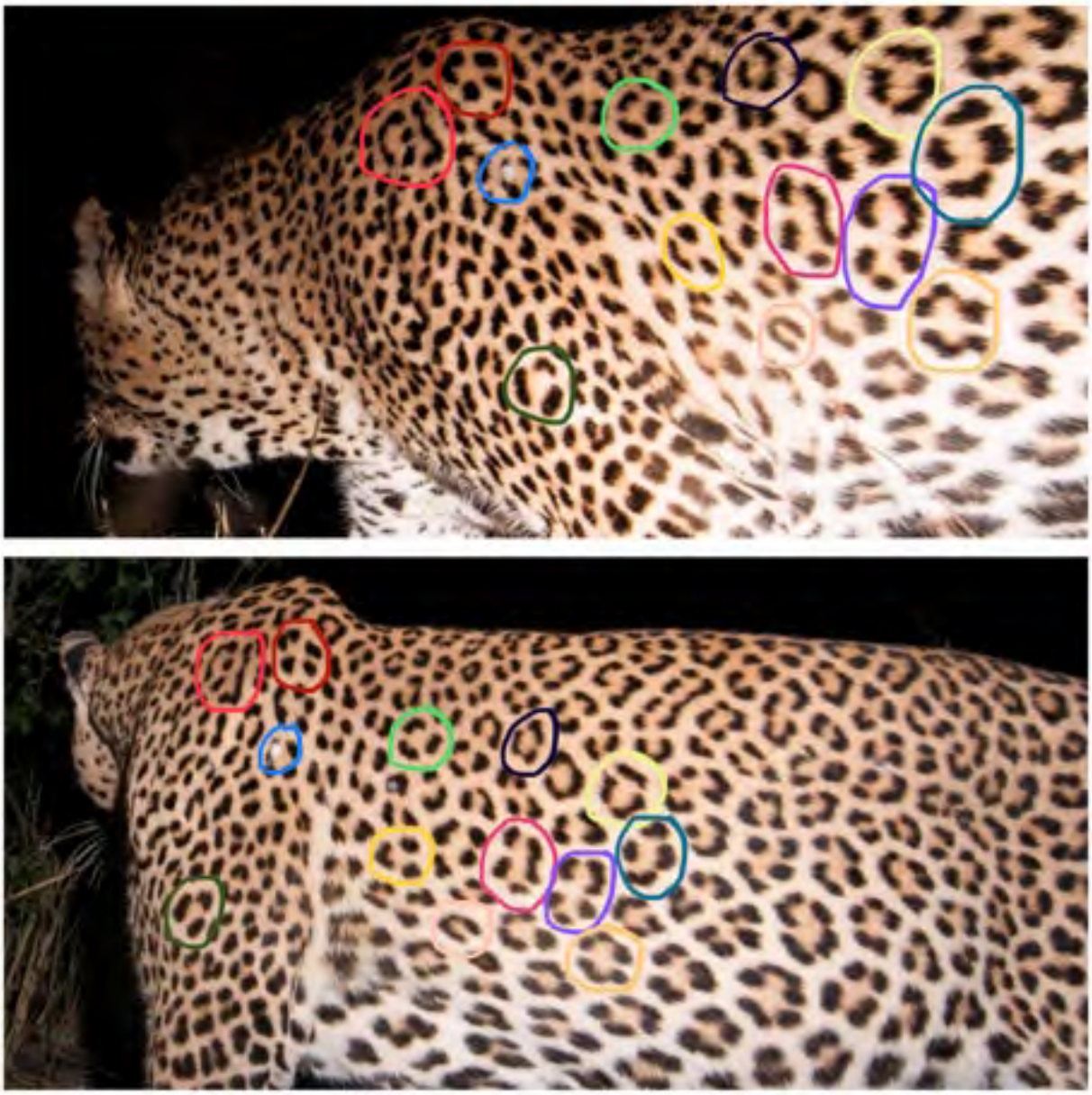


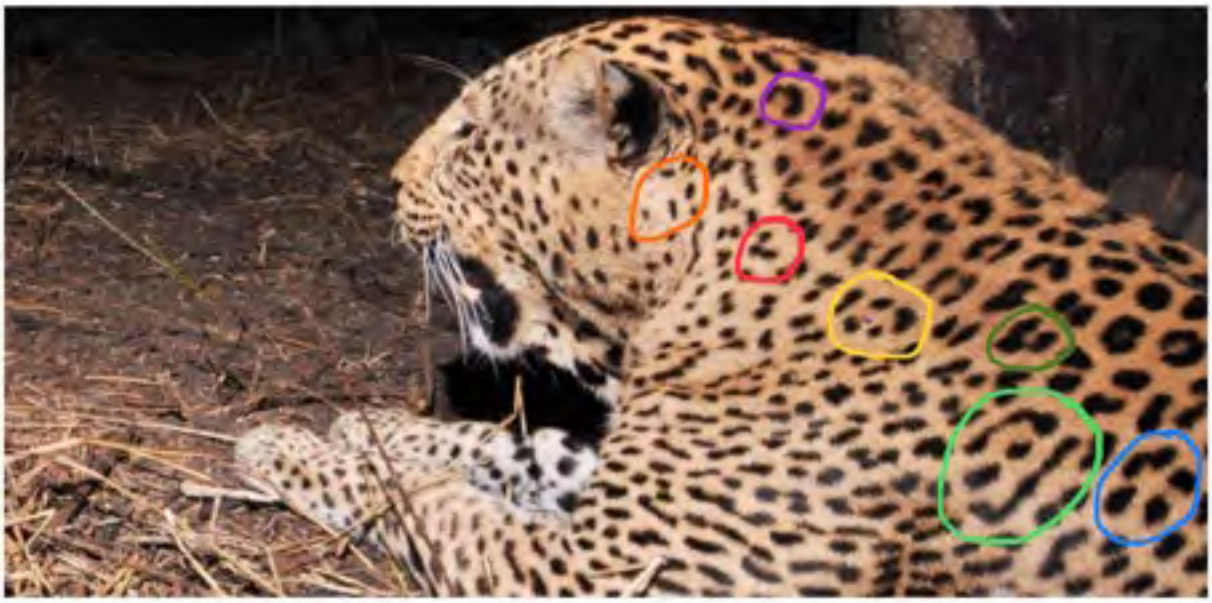


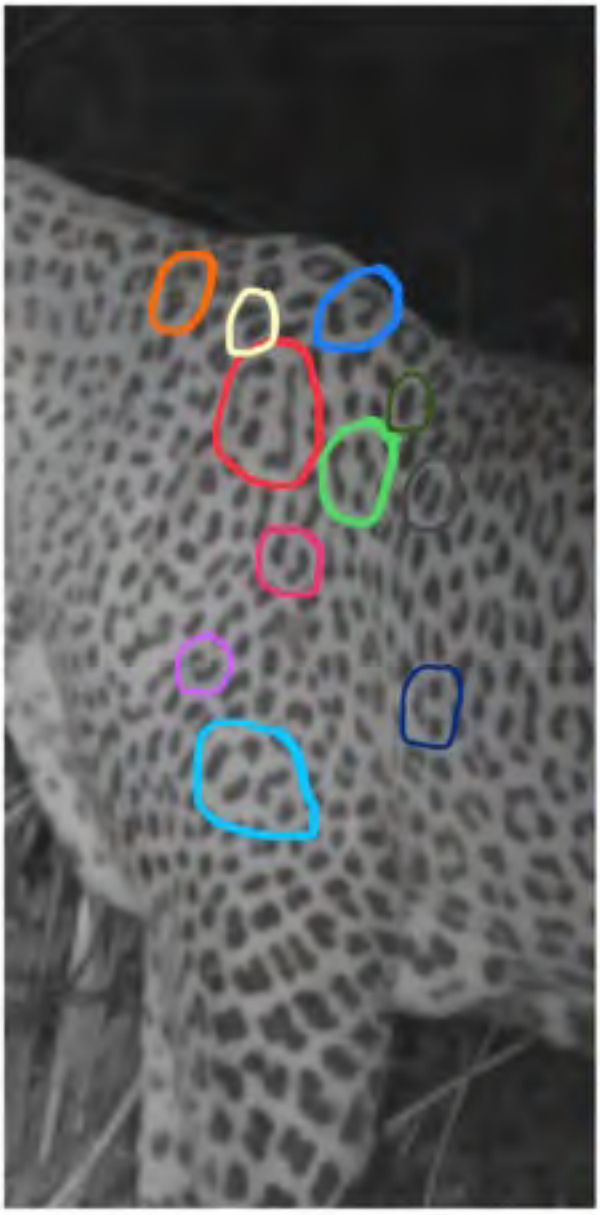
15) Data collection and analysis. We have worked with Data Hunters- Dr. Carla White and Dr. Arturo Caso, biologists specializing in lion and leopard, with an on going data capture and analysis since 2006. This study shows great potential to fill data gaps on these wide-ranging species that are notoriously difficult to survey.

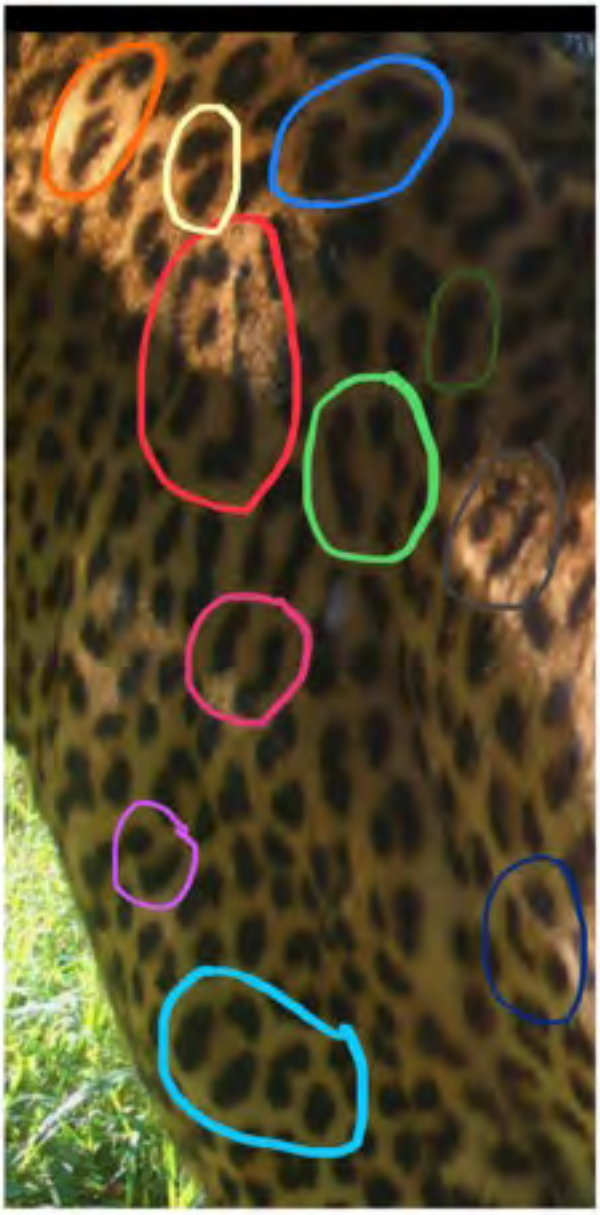
This has further enabled us a proactive and rapid assessment of leopard and lion densities in the Maswa hunting area for our internal conservation management, promoted transparency in the hunting industry, and allowed us to make the best decisions for the adaptive management of our concession. Furthermore, population data is always needed to inform on status of the species, to update non-detriment findings (NDFs), and to investigate the sustainability of trophy hunting. Overall, there is a call for more and better data reporting on lion and leopard populations range wide and this data collecting is critical to achieve this goal. Ultimately, a pro-active approach towards collection of scientific data coming from within the hunting community demonstrates a stakeholder commitment towards sustainability and conservation. It is this level of cooperation between hunters and scientists that underscores the value, and helps ensure the future success.

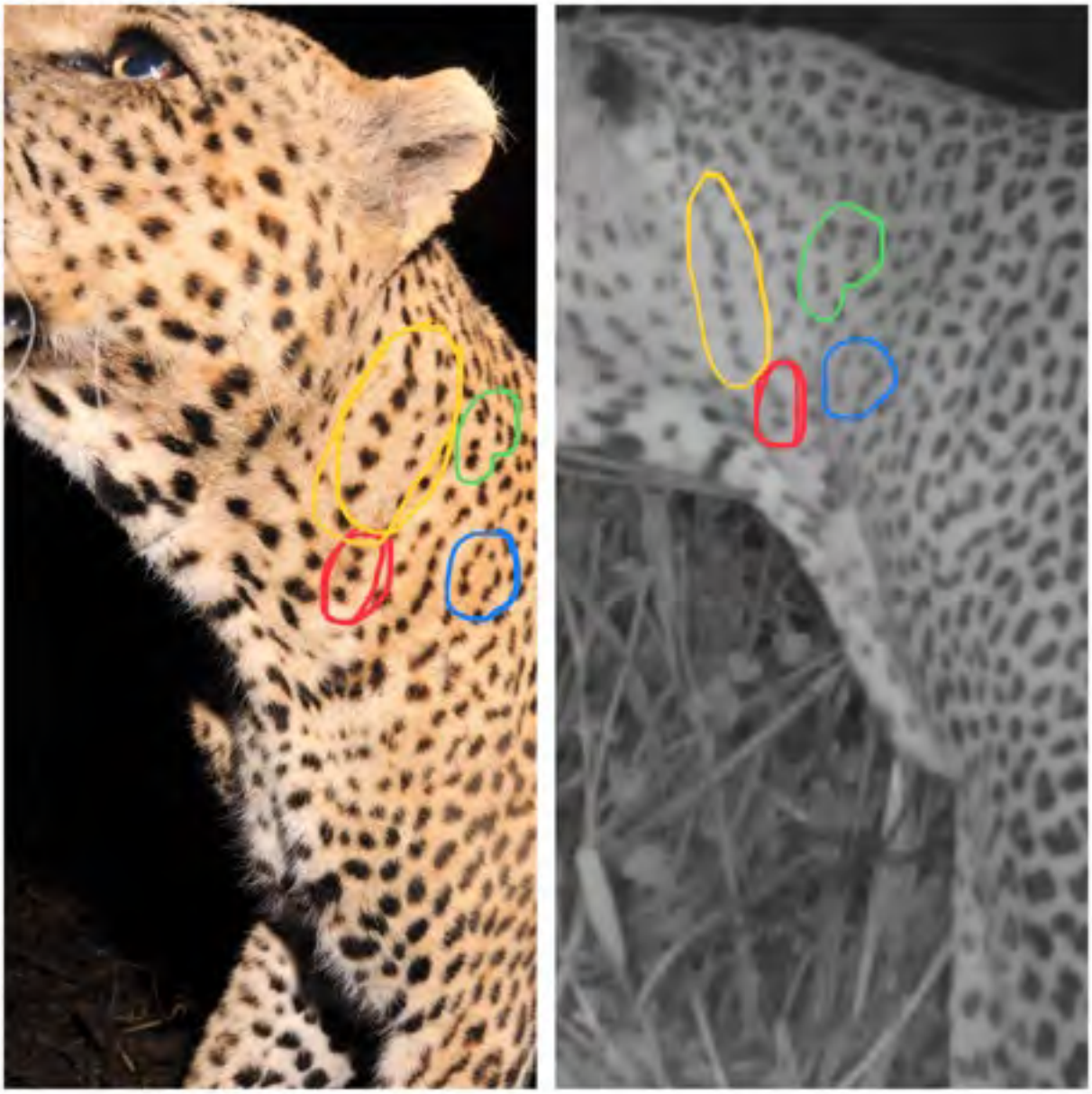
Below are examples of the typical photo and trail camera imagery that is collected to identify leopard, lion and elephant individuals in Maswa North Game Reserve.











STEALTH CAM
07:38 AM 09/19/19 59F
MIKEFELLCAM

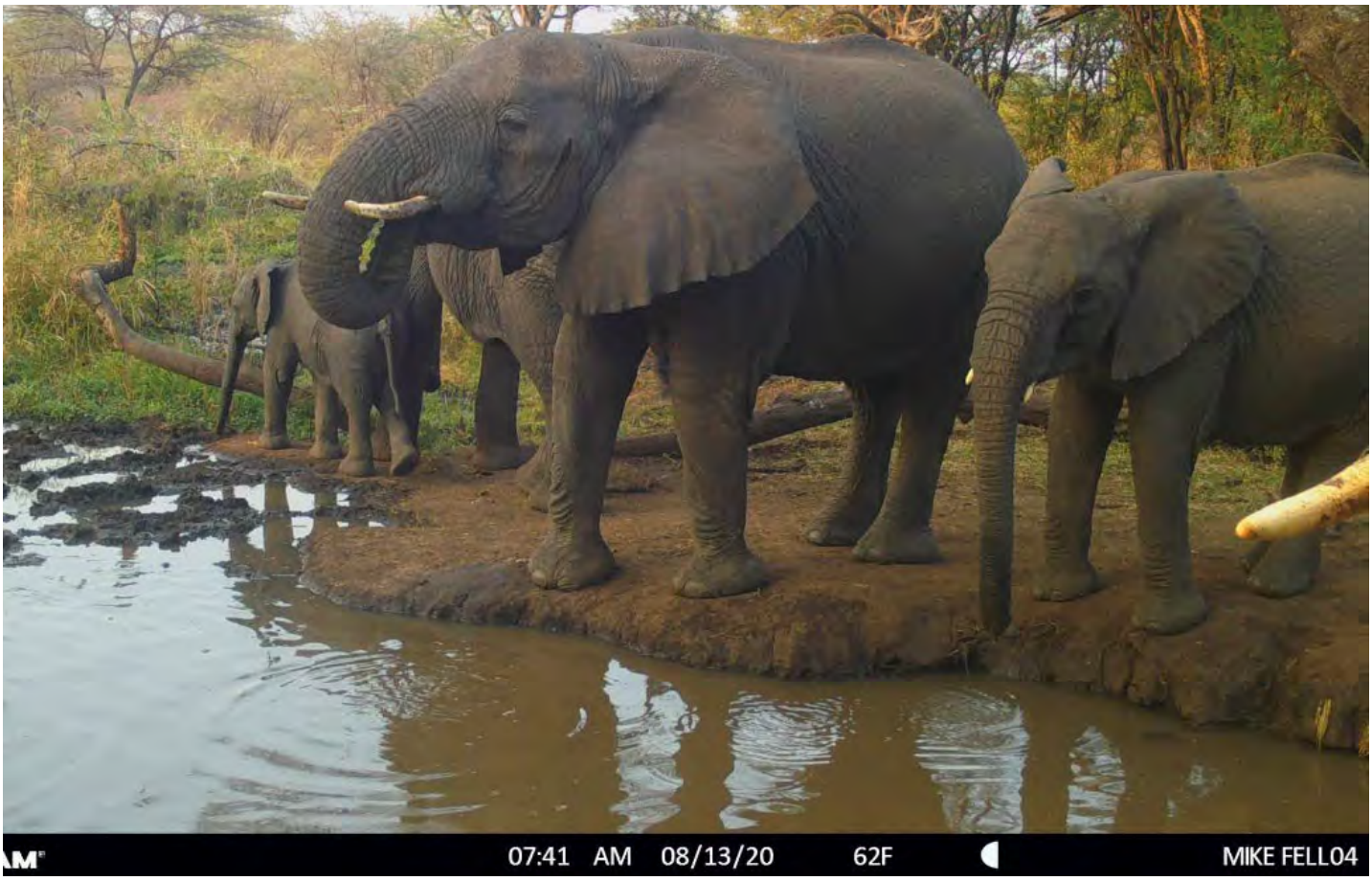
STEALTH CAM
11:07 AM 09/06/20 84F
MIKE FELL04

STEALTH CAM
02:15 PM 09/05/20 86F
MIKE FELL04

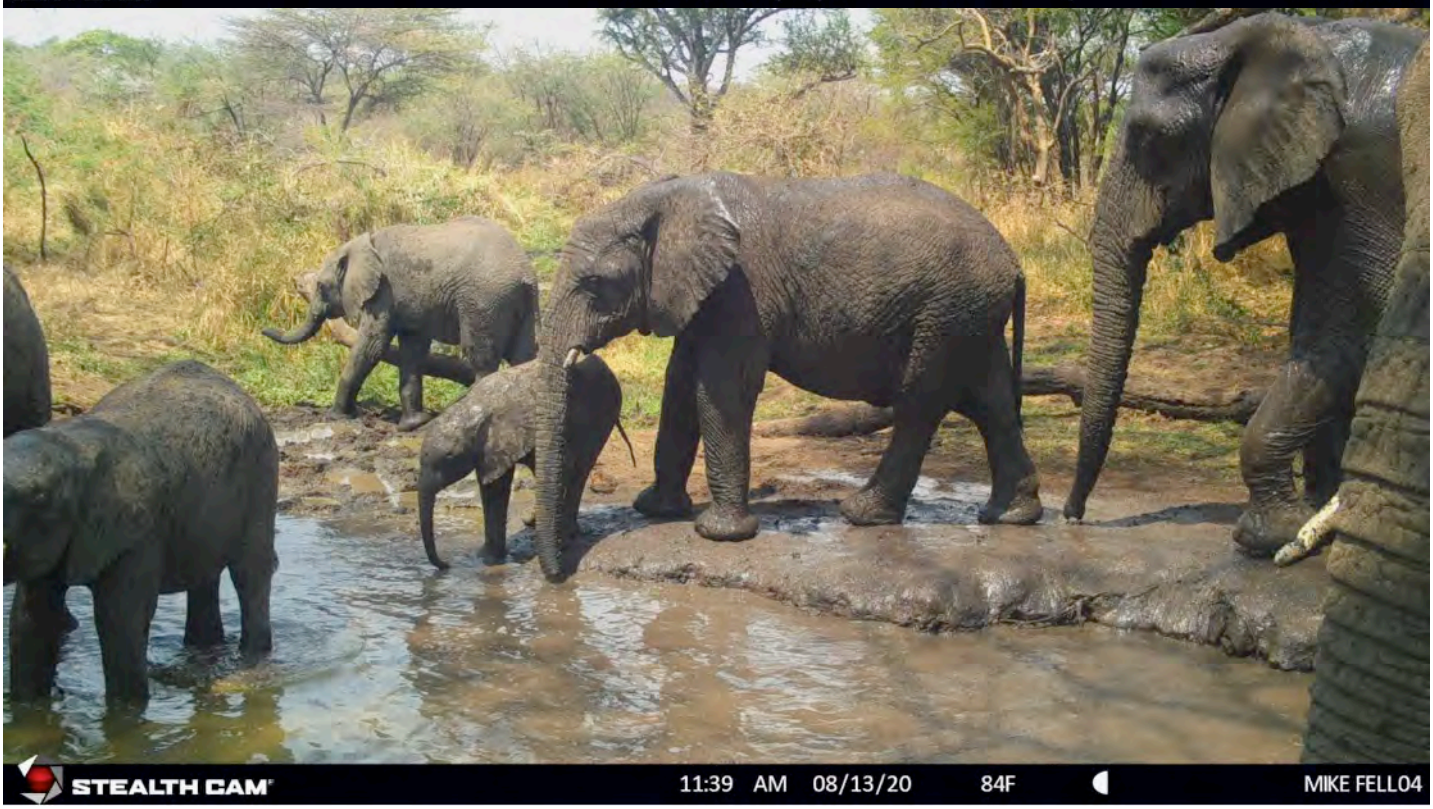
STEALTH CAM
11:59PM 08/22/20 64F
MIKE FELL04

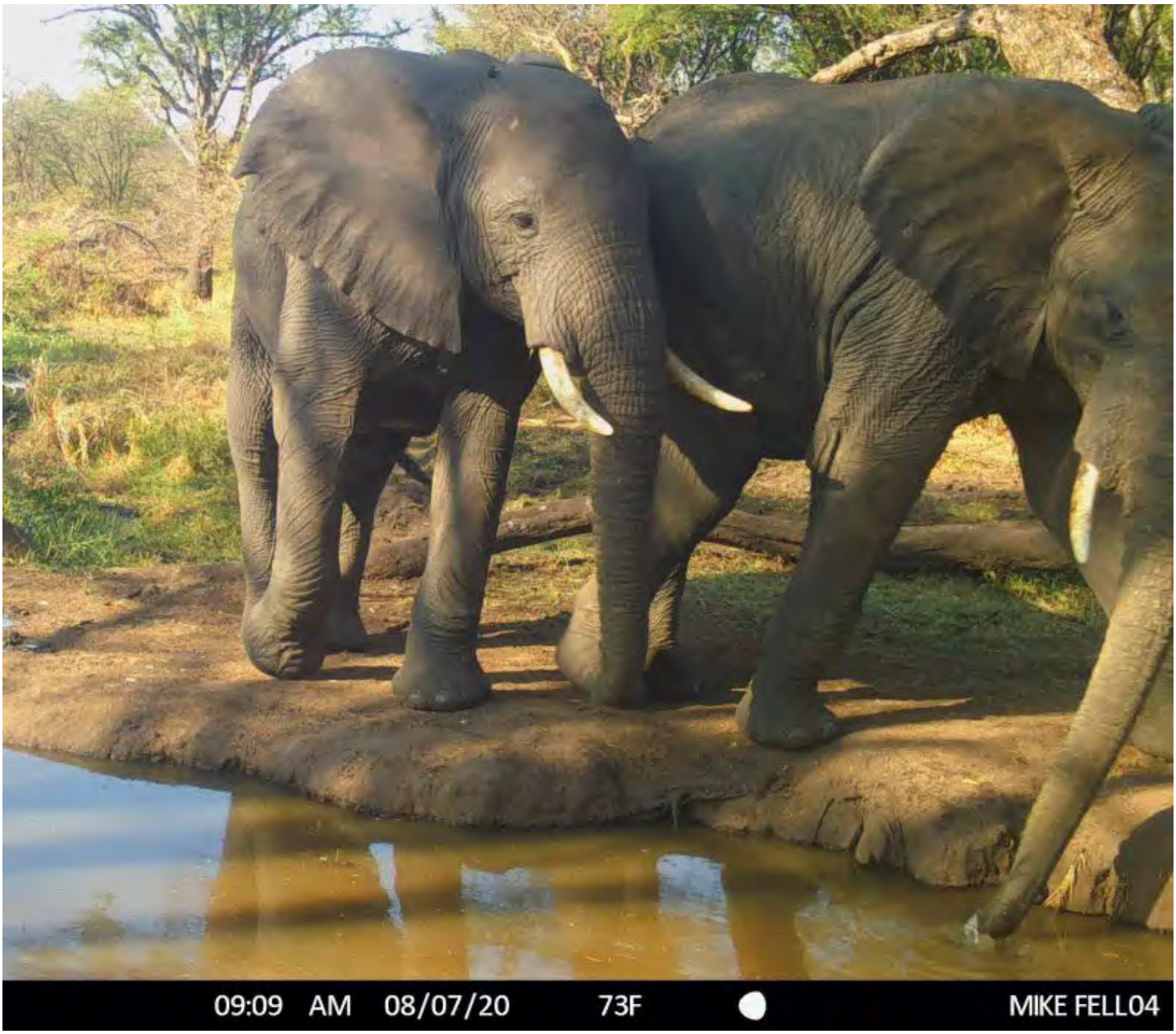
STEALTH CAM
06:41 PM 08/20/20 77F
MIKE FELL04

STEALTH CAM
06:41 PM 08/20/20 77F
MIKE FELL04


07:41 AM 08/13/20 62F MIKE FELL04

ALTH CAM
07:01 AM 08/12/20 68F
MIKE FELL04


STEALTH CAM
11:39 AM 08/13/20 84F
MIKE FELL04



16) Land Use: This legal hunting's land use creates higher income than generated in the adjacent Serengeti National Park with a much smaller ecological footprint on the environment. The safari hunting requires little infrastructure (tracks and buildings), draws smaller crowds, and produces less litter than game viewing. Also, it

concerns only a small fraction of the animal population- old males with mature, aesthetic trophies.

a. In a year such as 2020 and with the outbreak of the Covid pandemic, the hunting model of conservation proves to be a more robust and resistant model of conservation compared to the photographic model, that at this time is suffering anti poaching budget cuts, when we in Maswa are still able to maintain business and maintain out regular anti poaching budgets and presence.
b. We see another trend in poachers that suggests this fact. The local poachers are walking thru Maswa and doing their poaching activities in the adjacent Serengeti National Park, which suggests that the hunting area is placing greater pressure on this illegal activity.

17) Human wildlife conflict. There has been a trend into greater agriculture production on the borders of the Maswa Game Reserve boundary. The trend has significantly increased the population of bachelor groups of elephant in the reserve, as they are attracted to this food source. These rogue elephants crop raid by night and rest in the reserve by the day.

a. The poor rural communities, which reside at the conflict zones, will ultimately determine the fate of the species. These communities endure crop destruction and personal and even fatal injuries from elephants, especially during the harvest season. They can least afford such losses. Just

last year in 2019, elephant conflict and their encroachment killed 9 village people. Further, many acres of crops were damaged or destroyed outside this protected ecosystem.

Some imagery that shows how elephant bulls damaged local farmers huts and ransacked critical human food reserves adjacent to Maswa Game Reserve, Tanzania.
With a population growth from 13,6 million in 1970 to about 50 million today in Tanzania, humans and wild animals increasingly compete for resources. Involvement of rural communities in the decision-making process and material incentives are essential to mitigate human-wildlife conflicts.

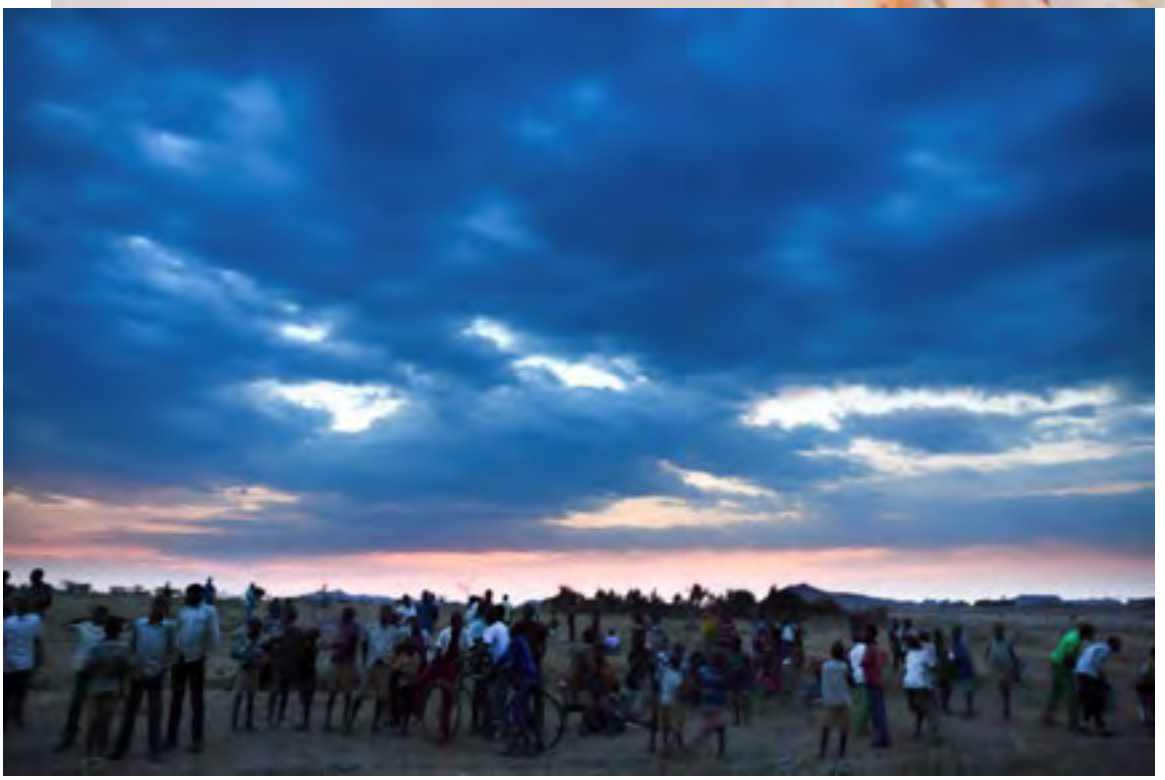
Stains that tell a story.
The red bricks that the locals make their huts from are made from laterite clay. This red clay tint is evident on the bulls face and body and proves his complicit actions in raiding villages in search of maize, millet and sweet potatoes. Fortunately the only damage was to property and no person was hurt or killed.
The economic damage is substantial on those who can least afford it. These subsistence farmers and their families rely on this crop and food stock and it is not like they can afford to go out and buy more food. This only forces them into a destitute of meat poaching to survive.
For several weeks, the villages have been complaining of an aggressive long tusked bull that keeps ransacking huts. While the Gamescout's make every effort to chase elephants out of the villages, some bulls do this habitually and it is impossible to prevent without high fences.
The demise of such marauding bulls provided a temporary relief for the villages.
A by product of legal hunting is resolving human wildlife conflict and mitigating the pressure on humans being marauded by these uncontrollable bulls.

Elephant bulls in Maswa leaving the concession in the late afternoon to crop raid in the villages by night.

b. The only reparation available comes from income derived from legal hunting in the Maswa North Game Reserve area and the harvesting and distribution of meat from that activity.

HAZARD
10

FENDI



18)<u>Hunting as a conservation tool:</u> This legal, regulated safari hunting is a conservation tool uniquely suited to reducing the elephant's primary threats. This conservation hunting generates a net benefit to elephants and wildlife beyond the number taken - both grow and protect populations. Hunting secures vast tracts of elephant and wildlife habitat in Maswa North Game Reserve.

19) Easing human/wildlife conflict. The proactive approach through land use planning and buffers around this zone protect area has largely failed due to lack of enforcement around the zone. The number and high levels of human-elephant conflict and the consequent impact on livelihoods has dramatically increased in this ecosystem, thus warranting the need for elephant hunting. Hunting is necessary to ease conflict between animals and humans, especially farmers who have seen their crops and infrastructure destroyed by elephants roaming outside their feeding zones.

The images below show some of the typical damage to property and people caused by the elephants.

20) <u>Operation Hangman and reducing the wire snares.</u> The Company has an ongoing project to buy and source used tires in the local villages. Poachers make wire snares from used vehicle tires. The rubber from the tires is burned off and the internal wires, which give the tires their structural integrity, are turned into rudimentary but extremely strong and reliable snares intended to catch bush meat in and around the reserve. The project limits the snare production of poachers by doing this.

21) Quota allocation. The importance of monitoring the appropriate parameters of off take is of critical importance to the Company in their vision of conservation and sustainability.

a. Quota is set by The Tanzania Wildlife Authority ("TAWA") annually. TAWA has the authority and is responsible for monitoring the status and distribution of wildlife across all of Tanzania's ecosystems, which expands across approximately 296,976km2 of wild land.

b. The Company often requests quota reduction to ensure that the numbers are conservative and sustainable and reflect localized impacts such as drought, disease, and natural cycles such as in invasion of exotic weeds such as Devils weed, Noxious weed, Famine weed, Ol Nino hibiscus and Purple hibiscus.
c. This quota system for trophies is managed carefully following ecological trends, and only removing a few older males with low reproductive value from a population, which should have a negligible effect on the wider environment.

22) Informers: A strong network of local informers from the adjacent villages have led to the arrest of dozens of suspects and the confiscation of much illegal poaching contraband.

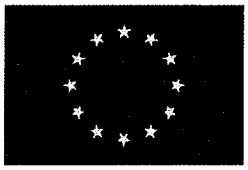
23) Vital Role. Our role is vital, as conservation without utilization will not guarantee a future for the wildlife of Maswa. The wildlife must contribute to the economy of Tanzania to ensure its survival. Equally, all outfitters must operate to high standards.

13. I declare that the foregoing is true and correct:

Maswa North Game Reserve, Tanzania	**TELEPHONE:** +255 23 260 3353 / 260 3346
CONCESSION NAME	**EMAIL:** ops@bushmanhunting.com
	Operations Manager
OPERATOR – FULL NAME (PLEASE PRINT)	**TITLE**
	HTTPS://WWW.BUSHMANHUNTING.COM
SIGNATURE	**OPERATOR WEBSITE**

APPLICANT:
MARK MURPHY

A REPORT TO THE EU CITES SCIENTIFIC REVIEW GROUP ON THE EU EXPERTS MISSION TO ASSESS THE SUSTAINABILITY AND MANAGEMENT OF LION AND ELEPHANT TROPHY HUNTING IN TANZANIA



A REPORT TO THE EU CITES SCIENTIFIC REVIEW GROUP ON THE EU EXPERTS MISSION TO ASSESS THE SUSTAINABILITY AND MANAGEMENT OF LION AND ELEPHANT TROPHY HUNTING IN TANZANIA (19-27 August 2016)

By:
Alison Littlewood
Gerald Benyr
Zoltán Czirák

PART 1 & 2: General Introduction & elephant trophy hunting

Hosted by Tanzanian Wildlife Division and Tanzanian Wildlife Management Authority (TAWA)

Organised and funded by the European Commission through the Environmental Technical Assistance and Information Exchange Facility (TAIEF)

Acknowledgements

Special appreciation is extended to:

- Major General Gaudence S. Milanzi, Permanent Secretary, Ministry of Natural Resources and Tourism (MNRT)
- Fredrick A. Ligate, Principal Wildlife Officer – CITES desk, MNRT, Wildlife Division (WD)
- Maria Chiara Femiano, Programme Officer-Climate Change and Environment, EU Delegation to Tanzania
- Prof. Alexander Songorwa, Ag. Director of Wildlife, MNRT
- Dr. Simon Mduma - Director General, Tanzania Wildlife Research Institute (TAWIRI)
- Dr. Dennis Ikanda - Director, Kingupira Wildlife Research Centre, TAWIRI
- Benson Kibonde, Former Manager Selous Game Reserve in Tanzania
- Mr Robert Mande, Assistant Director of Anti-Poaching, MNRT, WD
- Mr Mabula Misungwi (outgoing Manager of the Selous Game Reserve) and his successor, Mr Henock H.Z. Msocha, who hosted our field trip
- Community leaders of the NALIKA and JUKUMU Wildlife Management Areas and Tunduru District Council
- Mr. Herman Keraryo, Former Director of Wildlife, MNRT, WD
- Mr. Martin Loibooki, Ag. Director General, Tanzania Wildlife Management Authority (TAWA)

Plate1: EU Mission delegates and representatives from the Ministry of Natural Resources and Tourism Wildlife Division (WD) and Tanzania Wildlife Management Authority (TAWA), Selous Game Reserve.

Background

Tanzania is a highly biodiverse country hosting one of the largest populations of big game, including lions and elephants, in Africa. Wildlife is crucial to Tanzania's economy and an essential component of the tourism industry; a sector that accounts for about 11.5% of Tanzania's gross domestic product (GDP) (World Travel and Tourism Council, 2016) and sustains millions of the country's rural population. The contribution of the country's wildlife to the economy is largely through hunting concessions, trophy licenses, non-consumptive tourism and to a lesser extent exports of live animals.

More than a third of Tanzania's land is set aside for wildlife conservation and if well managed, the wildlife protected area network (over 360,000km², or 38% of Tanzania's surface area)[1], has the potential for significant long-term benefits for wildlife conservation. The government of Tanzania believes tourism, both consumptive and non-consumptive, holds great potential for the socioeconomic development of the country including rural communities through, for example the operation of Wildlife Management Areas in which private companies can invest.

Illegal poaching, financed by international criminal syndicates, poses a continuing threat to Tanzania's wildlife, particularly for elephants. It has reduced elephant populations by c.46% between 2009 and 2015 (110,000 to just over 50,000). Concerns that the measures Tanzania had in place to tackle the large-scale poaching of elephants weren't leading to reduced mortality rates and a stabilisation of the population, led the EU CITES Scientific Review Group (SRG) to suspend imports of elephant hunting trophies in July 2015.

The country's rapidly increasing human population, which is expected to exceed 100 million by 2040[2], also poses a significant long-term threat to Tanzania's wildlife, with growing demand for land reserved for wildlife protection and more human-wildlife conflicts and illegal killing. Whilst habitat loss and illegal killing are considered to be the main threat to lions in Tanzania, trophy hunting of lions has also been reported to have contributed to population declines outside of (and within) some protected areas (Lindsey *et al.*, 2013).

Trophy hunting has been the subject of intense debate within the EU CITES Scientific Review Group but, it is recognised that, if well-regulated and if following recommendations for best practise, in the form of highly selective and well monitored trophy hunting, it can play an important role in delivering benefits for both wildlife conservation and for the livelihood of indigenous and local communities.

It is also recognised that without alternative forms of investment or economic incentives, long-term import bans on trophies could lead to hunting blocks going vacant which in turn could lead to reductions in habitat declared as protected areas.

It is with these issues in mind that the EU CITES Scientific Review Group accepted an invitation from the Tanzanian Government to see first-hand the challenges Tanzania faces in conserving their wildlife and, more specifically, to monitor implementation of the procedures, management measures and safeguards Tanzania have put in place to conserve elephants and lions, reduce killing and to manage trophy hunting sustainably.

This report (Part 1-3) presents a summary of the observations made by the mission's participants and information gathered, with a number of recommendations for the EU CITES Scientific Review Group to consider with respect to the import of lion and elephant hunting trophies.

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[1] UNEP-WCMC (2017). Protected Area Profile for United Republic of Tanzania from the World Database of Protected Areas, May 2017. Available at: www.protectedplanet.net

[2] UN Department of Economic and Social Affairs, Population Division

Executive Summary - general observations from the Mission

- Hunting appears to be a well-regulated industry in Tanzania and makes a significant contribution to the conservation of elephants and lions, particularly in & around the Selous Game Reserve, by providing incentives for habitat conservation, valuable income to rural communities and support for anti-poaching measures.
- The geographical extent of the protected areas and type of habitat presents important management challenges for surveying elephant & lion populations and to combat poaching, both in terms of human and financial resources, but also logistics.
- With one of the fastest growing human populations in the world, it inevitably means the threat from encroachment & human-wildlife conflicts will continue to increase.
- Revenue generated from hunting directly supports the management of Tanzania's wildlife areas, including the newly established Tanzania Wildlife Management Authority (TAWA) and their anti-poaching activities. [*This situation is much improved on previous years where the Wildlife Divisions revenue share has been paid by central treasury and saw the situation where funds were being diverted away from conservation, leaving the Wildlife Division inadequately resourced to meet their obligations to conserve, manage and protect Tanzania's wildlife or effectively deal with the poaching crisis.*] Although TAWA has only recently become fully operational (July 2016), there have been notable achievements since its conceptualisation in 2014. Continued functioning and success of TAWA relies heavily on income derived from hunting sector.
- Tanzania's wildlife conservation at the current time depends upon hunting, among other things for its long-term survival. Trophy hunting generates revenue in areas that would not otherwise attract tourists, including those remote wilderness areas lacking infrastructure or low densities of viewable wildlife. It also generates considerably more income per client than photo tourism. Expanding the area devoted to photo (non-consumptive) tourism as an alternative to trophy hunting is not a viable option.
- Revenues generated from hunting are also vital to maintain the Wildlife Management Areas (WMA), contributing to poverty reduction and socio-economic development, with the rural communities within the WMA receiving around 60-65% of total hunting revenue accrued in the WMA.
- The economic viability of hunting concessions is being compromised by import bans of lion & elephant hunting trophies, evidenced by the decrease in bookings (estimated to be down by 30%) and number of blocks going vacant. A consequence of hunting blocks going vacant is that protected areas, particularly on the edge of Reserves will be converted to agro-pastoral land, something which is already happening, leading to loss of key habitat for lions and elephants and more cases of human-wildlife conflict.
- The National and Transnational Serious Crimes Investigation Unit (NTSCIU), established in 2014, in cooperation with Tanzania Police Force, Wildlife sector, State security and the Wildlife and Forest Crime Task Force (WFCTF), appear to be making a significant difference in Tanzania's effort to curb poaching with fewer incidents being recorded and higher number of arrests.
- There have been reports of past political corruption at high levels within government as well as allegations against Wildlife Division staff leading to several staff being suspended in 2014. However, with the new Presidents anti-corruption agenda and the establishment of TAWA there are currently high levels of support to tackle poaching and illegal wildlife trade. Nonetheless, the possibility that resources will be diverted in the future, remains a real threat.

Recommendations to EU CITES Scientific Review Group

Imports of *Loxodonta africana* hunting trophies

Recommend retaining the Negative Opinion for imports of elephant hunting trophies from Tanzania except for those acquired from four of the six main ecosystems that are forming the elephant range in Tanzania; specifically: Serengeti, Tarangire-Manyara, Katavi-Rukwa and Selous-Mikumi, where we would recommend forming a **'Positive opinion'** with the following conditions:

- Only trophy animals taken from the following 'ecosystems': Serengeti [15], Tarangire-Manyara [10], Katavi-Rukwa [13] and Selous-Mikumi [36]
- quotas allocated at ecosystem level do not exceed >0.3% of managed population, and
- trophy animals are male (tusks >20kg or 160cm in length), and
- quota reviewed annually and adjusted, as necessary, to take into account most recent population data
- SRG opinion is reviewed at regular intervals as and when new information becomes available (or at least every two years)

These recommendations are based amongst other things on the following observations:

- The current CITES quota of 100 elephants represent 0.24% of the total population (Great Elephant Census, 2014) and 0.20% on the basis of the updated 2015 total estimates(IUCN/SSC AfESG, 2016), a percentage that is less than the 0.3% which is the minimum off-take to maintain high level trophy quality, and well below the standing population guidelines (0.5%) of the total population (Martin, R. B. 1986, Craig et. al 2011).
- Quota allocation is at the ecosystem level and does not exceed 0.3% of managed population.
- According to latest aerial surveys, Serengeti and Tarangire-Manyara have increasing populations and Katavi-Rukwa was found to be stable (GEC 2014); the latter also having very low numbers of category 1 and 2 carcasses (i.e. carcasses determined to be less than a year old based on the MIKE classification), a signal of a population not recently subject to poaching.
- Selous-Mikumi: hunting industry is well managed and monitored, population appears to have stabilised since 2014 and levels of illegal killing have been brought under control through a suite of effective anti-poaching measures. This includes a total of 277 wildlife wardens being recruited (an increase of 38%) and being better equipped (aerial surveillance, night vision goggles, radio transmitters, weapons). Between July 2014 and November 2015, a total of 173,902 patrol man-days were conducted involving routine and special operations in and around the Selous Game Reserve, whereby 366 poachers were arrested and scores of weapons and trophies impounded. [Ref. MNRT, Feb 2016]
- Hunting makes a significant contribution to the conservation of elephants in and around Selous by providing incentives for habitat conservation and valuable income for supporting anti-poaching measures.
- The Trophy hunting industry appears to be a very well regulated industry and was not the cause of the decline in elephants.
- Economic viability of hunting concessions is being compromised by import bans on elephant hunting trophies leading to some concessions going vacant and thus an increased risk of human encroachment, land conversion to agriculture, cattle grazing and poaching.
- Data provided by the National and Transnational Serious Crimes Investigation Unit (NTSCIU), during the mission in August, showed that the number of new carcasses and poached elephants significantly reduced following proactive engagement by the NTSCIU in 2014 and a more strategic approach to tackle poaching, achieving impressive results within the first few months of operation. Since then, a MIKE Report (2017) indicated a 55% reduction in the number of carcass records from three sites in Tanzania in 2016, relative to 2015.

- The intelligence-led policing approach that Tanzania has adopted to address the poaching crisis follows advice from Interpol and UNDP and is an accepted model used by other countries. Since October 2015, the NTSCIU and WFTCF have been responsible for the arrest of five key (level 5) ivory traffickers in East Africa, and disrupted eight out of ten identified organized crime groups. [NTSCIU, 2016]
- Although the quota allocated to the elephant ecosystems, Ruaha-Rungwa and Malagarasi-Muyovozi, (and Burigi-Biharamulo) do not exceed 0.3% of the managed population, the significant declines and high carcass ratio, together with the lack of information on the extent or impact of anti-poaching measures in these regions on illegal killing means a confident non-detriment finding for these ecosystems cannot be established at this stage.* (*See below)*

Additional Recommendations to Tanzania

- Continue to monitor and undertake regular surveys of all the major elephant ecosystems, to verify population trends (particularly with respect to Ruaha-Rungwa and Selous-Mikumi) and to carry out further research on the migration theory and its influence on fluctuations in local elephant populations.
- To publish all new survey data as soon as it is available.
- To review quota annually and adjust, as necessary, to take into account most recent population data
- To consider greater involvement of the wildlife authorities in locating and identifying suitable trophy animals prior to the hunt taking place to enhance compliance with age restrictions.
- To publish annual quota and make available details of how the quota will be allocated (as a minimum to the 'ecosystem level')
- Encourage the publication of prosecution and conviction statistics on wildlife offences (and particularly in relation to ivory poaching and smuggling), to improve Justice System transparency.
- To maintain momentum with their anti-poaching efforts, intelligence-led law enforcement and disruption of newly identified criminal syndicates (in the knowledge that any gaps are quickly exploited by the poachers).

**Response from Tanzania to Mission report, TAWA, Wildlife Division [27 April 2017]*

The [most recent] *1+2 carcass ratio is extremely low in all three ecosystems* [Ruaha-Rungwa and Malagarasi-Muyovozi and Burigi-Biharamulo] *suggesting that the populations are not anymore under threat from poaching. Overall, taking into account the very limited quota, the need to provide incentives to rural communities, the need to revert the fact that after the EU visit xxx hunting blocks totalling xxxxxxx km² have been returned to the Wildlife division and will be converted to agro-pastoral land, something which is already happening, leading to loss of key habitat for lions and elephants and more cases of human-wildlife conflict, we appeal to the EU to accept the whole of the quota for elephants in Tanzania. The consequences of having Ruaha Rungwa, Malagarasi- Muyowosi and Burigi-Biharamulo ecosystems excluded for the hunting quotas will be disastrous for the ecosystems, their wildlife and the rural communities living around these ecosystems. Furthermore, the weight and length minimum size for hunting elephants will provide further protection. Finally, the bottom line is that accepting the whole quota for Tanzania will put the Government and the Safari Operators in the condition to provide increased protection for elephants. As a further measure the quota for the three ecosystems for which the EU SRG experts feels that the negative opinion should be maintained can be turned into positive provided that if elephants above the minimum size are found by clients in these areas, the communities in the WMAs closest to the hunting area can obtain a share in the revenues as the elephants were hunted in the WMA. In this way communities will obtain a revenue, increasing the level of tolerance toward wildlife.*

Imports of *Panthera leo* hunting trophies [For full account – refer to Part 3][3]

Recommend maintaining the **'Positive Opinion'** for imports of lion hunting trophies from Tanzania in accordance with their current age-sex based restrictions and a total quota of 207 trophies, allocated in accordance with density recommendations (0.5 lions/1,000 km^2 (with the exception of Selous where 1.0/1,000 km^2)).

Even when only considering lion trophy hunting, it is a considerable challenge to provide a consistent picture of the conservation status and to assess management practises for a large and diverse country, such as Tanzania. Taking all of the potential detrimental factors into account (Kideghesho et al. 2013), it seems likely that the lion population of Tanzania will continue to decline outside of protected areas (Riggio et al. 2013). However, under the current circumstances controlled trophy hunting helps to mitigate the losses. In addition, incentives to dedicate additional areas to the conservation of wildlife depend to a large extent on the revenues from trophy hunting and these again are strongly correlated with the availability of iconic species, such as lions.

Tanzania has several large protected lion populations with a relatively stable population trend, the current management practice should be sufficient to prevent hunting from being detrimental and able to conserve the long-term survival of the national lion population. During the last few years, Tanzania has increased its awareness for the need to survey and manage the national lion population and reached a conservation level which is in accordance with CoP17 Res. 17.9 and the expectations of the European Union for allowing the import of hunting trophies. Based on the findings of the field mission and the available literature we are confident, that it is possible to recommend a positive SRG opinion for the import of lion trophies from Tanzania.

Nevertheless, it should be acknowledged that the conservation of lions will provide a continuing or even increasing challenge for Tanzania. The current management practice and the dedication and enthusiasm of those who are in charge are promising. However, rapid reactions to rumours about a local crises and continued research are indispensable and without continuing efforts, questions about the sustainability of trophy hunting on this species will raise again.

Additional Recommendations to Tanzania:

- Rapid response to any report of a population decline and regular updates for the estimated size of the national lion population, including results from the latest surveys, would enhance the confidence that others have in Tanzania's commitment to conserve its lion populations.
- It should be considered to restrict trophy hunting on lions to areas where a population survey has been conducted within a reasonable period which is defined according to the local threat, national importance of the population, and annual offtake.
- The use of camera traps to identify suitable lions to hunt should be encouraged. This would further reduce the taking of animals less than 6 years of age and assist with quota allocation.

[3] an updated and comprehensive non-detriment finding (NDF) for *Panthera leo* [refer to Document SRG77-4-6b) was produced by Tanzania in June 2016, the contents of which were considered as part of this report.

- Roads make the surveillance of an area easier. On the other hand, inaccessibility by roads provides the most effective protection for the wildlife of large reserves, such as Selous. Therefore, the advantages of upgrading and maintaining the road system (e.g. by a hunting block owner) needs to be balanced against the risks to the conservation of the wildlife and habitat it runs through.

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Report to the EU CITES Scientific Review Group on the EU expert's mission to assess the sustainability and management of lion and elephant trophy hunting in the United Republic of Tanzania

PART 1: General Background

1. Introduction

Following an invitation to the EU CITES Scientific Review Group, by the government of Tanzania, to see firsthand the procedures, management measures and safeguards they have established to conserve lions and elephants, reduce killing and to manage trophy hunting sustainably, a mission took place between 19 - 27 August 2016. The mission was hosted by the Tanzanian Wildlife Division and the newly established Tanzanian Wildlife Authority – TAWA , and organized and funded by the European Commission through the Environmental Technical Assistance and Information Exchange Facility (TAIEF).

2. Primary Objectives

The primary purpose of the mission was to follow-up on discussions that have taken place within the Scientific Review Group (SRG) and in exchanges with the Tanzanian Wildlife Authorities regarding the sustainability and management of lion and elephant trophy hunting. Specifically:

2.1. Elephant Trophy hunting

Aim: to gather information in order to help inform the SRG decision-making regarding the current negative opinion for imports of tourist-hunted elephant trophies and whether the anti-poaching measures and broader management system employed by the Tanzanian authorities can allow for sustainable exports to the EU.

The SRG has had a negative opinion in place under Article 4.1(a)(i) of Council Regulation (EC) No. 338/97 for imports of sport-hunted elephant trophies since 2 July 2015. In making their decision they determined that Tanzania hadn't yet been able to demonstrate that anti-poaching measures are leading to reduced mortality rates or, that illegal killing is under control and having a positive impact on the species. The SRG agreed to revaluate this decision upon receipt of new information that demonstrates an improved situation for elephants in Tanzania. In March 2016 and June 2016 the SRG re-confirmed their negative opinion acknowledging Tanzania's efforts to establish anti-poaching measures and reduce illegal killing but failing so far to see the stabilisation of its elephant population as a result of such measures.

2.2. Lion Trophy hunting

Aim: to gain improved understanding and monitor implementation of the procedures, management measures and safeguards Tanzania have put in place to conserve the species, reduce killing and to manage trophy hunting sustainably, and to enable the SRG to make an informed decision on whether the SRG can maintain its current positive opinion regarding imports of lion trophies into the EU.

The SRG has a long-standing positive opinion in place for imports of lion hunting trophies which was most recently reviewed at SRG75, following the publication of the Red List assessment by IUCN (Bauer et al, 2016) which had raised questions for the SRG regarding

the population trend in Tanzania. Following consultation with the Tanzanian Authorities and lion experts, the SRG maintained the positive opinion but agreed to continue monitoring the situation in the country.

3. Mission Programme

The mission included a field visit (Day 1 – 3) to the Selous Game Reserve accompanied by selected officials from the Wildlife Division and the Tanzanian Wildlife Management Authority. From their Headquarters in Matambwe, we undertook a number of site visits and flights; meeting with Sector Managers, Game Wardens and staff from the Tanzanian Wildlife Research Unit (TAWIRI). Additional meetings and site visits were organised at the District level where District Game Officers and village leaders, representatives from Wildlife Management Areas and hunting Operators were interviewed. We were based at the Ministry of Natural Resources and Tourism, Dar Es Salaam, for the remainder of the mission (Day 4 – 7), and included a meeting with Major General Gaudence S. Milanzi, Permanent Secretary.

[For an annotated copy of the Mission Programme conducted (19 – 27 August 2016) – refer to Annex 1]

4. Participants and contacts

For a complete list of participants and contacts – refer to Annex 2

5. Regulations and enforcement

In Tanzania, wildlife resources are protected under several Acts of Parliament, providing the regulatory controls and authority for all aspects of wildlife management, including law enforcement. Wildlife species in Tanzania, including African elephants and lions, are protected under the Wildlife Conservation Act (WCA) No.5 of 2009, and its subsidiary legislations. The WCA provides the legal framework for operation of the Wildlife Division under the Ministry of Natural Resources and Tourism (MNRT), as well as the establishment of Game Reserves [28], Game controlled Areas [44], Wildlife Management Areas[4] [38] and other protected areas such as wildlife corridors, outside of the National Parks [16] or the Ngorongoro Conservation Area. Other laws relevant to wildlife conservation include the Tanzania National Parks Act (CAP 284 R.E. 2002), implemented and enforced by the Tanzania National Parks Authority (TANAPA) and the Ngorongoro Conservation Area Act (CAP 282 R.E. 2002) implemented and enforced by the Ngorongoro Conservation Area Authority (NCAA).

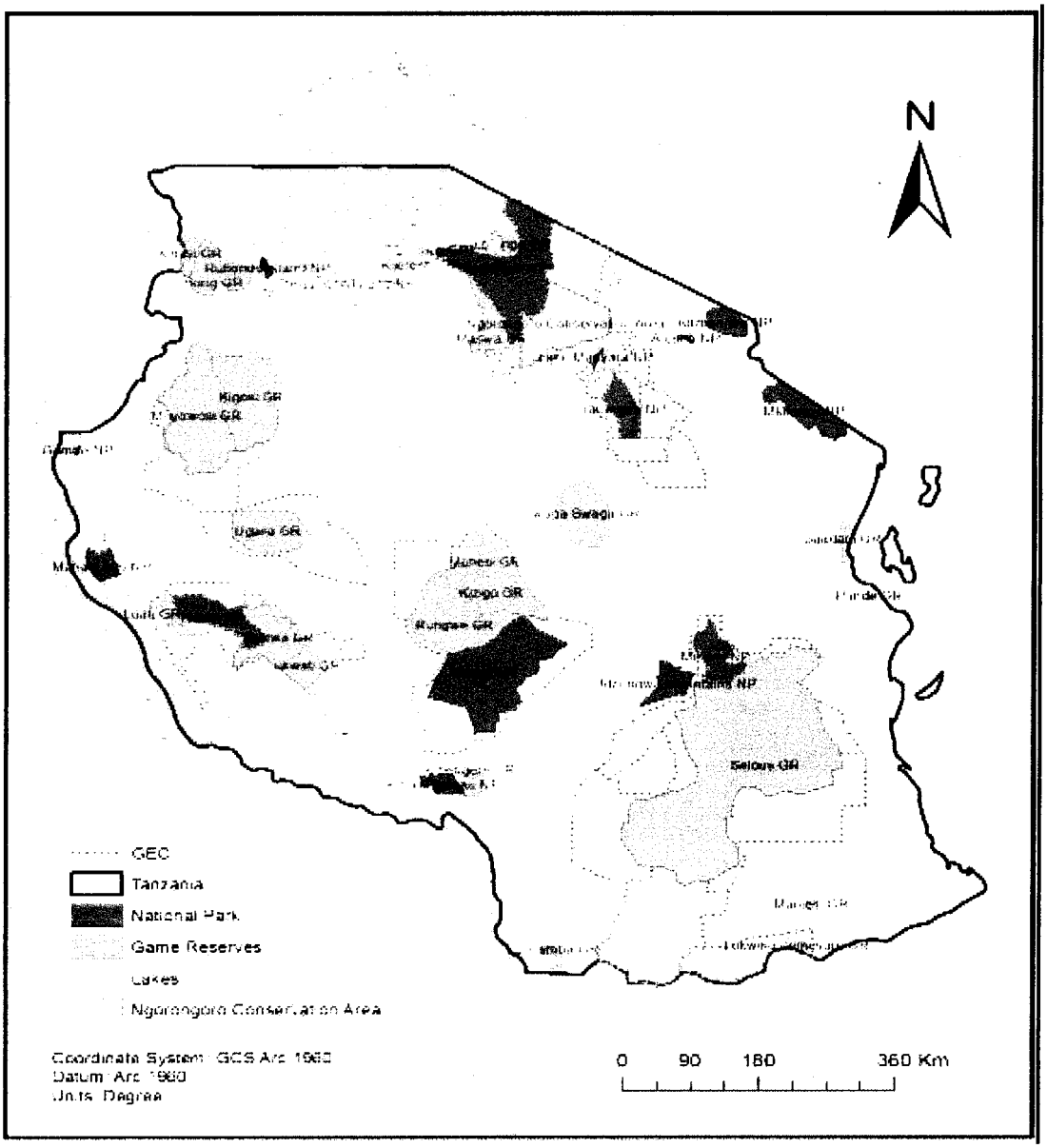
The present network of wildlife Protected Areas in Tanzania (Refer to Figure 1) covers more than 360,000km^2 and is comprised of 16 National Parks, the Ngorongoro Conservation Area, 28 Game Reserves, 44 Game Controlled Areas, 38 Wildlife Management Areas, and 570 Forest Reserves. Protected areas gazetted as hunting areas cover about one third (28%) of Tanzania's land surface area. New categories of protected areas include Ramsar Sites and Nature Reserves. Commitment to gazette more areas, which are critical habitats for wildlife species, is contained in Tanzania's Wildlife Policy (URT 2007) and the Wildlife Conservation Act No.5, 2009.

The safari hunting sector in Tanzania is governed by the Wildlife Conservation Act, No. 5 of 2009, the Wildlife Conservation (Tourist Hunting) Regulations of 2010 (now 2015) and the

[4] Wildlife Management Areas (WMA) represent the community based conservation system of Tanzania and they are seen as a key component of rural development and as one of the best weapons in the fight against illegal utilization. Safari hunting is an important component of WMAs' activities and revenues

Wildlife Conservation (CITES Implementation) Regulations of 2005. The hunting season starts from 1st July to 31st December as per Closed Season Order of 2012.

Figure 1 Protected Areas in Tanzania [Provided by TAWIRI, 2016]



6. Insitutional Framework and responsibilities

Unlike the two parastatal organisations, the Tanzanian National Parks Authority (TANAPA) and the Ngorongoro Conservation Area Authority (NCAA), that retain 100% of their share of revenue generated by the tourist industry and are largely self-sustaining, the Wildlife Division's revenue share was paid to the central treasury which was then responsible for allocating a budget. This arrangement led to the situation where funds were being diverted away from conservation leaving the Wildlife Division inadequately resourced to meet their obligations to conserve, manage and protect Tanzania's wildlife or effectively deal with the poaching crisis.

The situation changed in 2014, with a long-term strategy being put in place & more secure funding. Since the new President was elected there has also been a high level of political support to fight corruption and tackle poaching and illegal wildlife. Since 2014 core funding has been made available to undertake censuses, set up a dedicated Multi-Agency Taskforce & National Wildlife Crime Unit, and the establishment of the Tanzanian Wildlife Authority (TAWA) which is an autonomous body responsible for undertaking conservation of wildlife resources and biodiversity outside of National Parks and the Ngorongoro Conservation Area.

TAWA was officially inaugurated in October 2015 and from then until 1 July 2016 when it became operational, the transition of management activities from the Wildlife Division has taken place. Most of TAWA's funding will now come directly from user fees such as hunting license fees, hunting block fees, game fees and daily conservation fees. The viability of TAWA will depend on sufficient revenue from safari hunting.

Despite current support for combating illegal wildlife trade, human-wildlife conflicts and habitat loss, the possibility that resources will be diverted, remains a real threat.

Other Agencies responsible in managing the wildlife and wetlands in Tanzania include:

- District Councils which are responsible for the implementation of wildlife policy within their jurisdictions by formulating and enforcing laws, and preparing development plans that protects wildlife and habitat, and protect people's lives and properties from dangerous and destructive wild animals

- Tanzania Wildlife Research Institute (TAWIRI) which is responsible for wildlife research in Tanzania with an overall objective of providing scientific information and advice to the government and wildlife management authorities on the sustainable conservation of wildlife. They are also appointed as Tanzania's CITES Scientific Authority

7. Predominant challenges facing Tanzania in conserving their elephant and lion populations (*highlighted during mission*)

- Large geographical area and difficult terrain to monitor/ police
- High demand for ivory and continued threat from, and highly organised nature of, illegal wildlife trade
- High levels of population growth leading to encroachment and frequent human-wildlife conflict (including the killing of rangers by poachers and retaliation killings)
- Providing incentives to local Communities to conserve elephants and lions as a natural resource.
- Low human resources and financing compared to the problem
- Poor infrastructure and social services for staff in rural areas

PART 2: ASSESSMENT OF THE SUSTAINABILITY AND MANAGEMENT OF ELEPHANT TROPHY HUNTING IN TANZANIA

(based on direct observations and information gathered during the mission, including Tanzania's 2014 and 2015 Non-Detriment Finding)

8. Summary of protection afforded to elephants

Elephants are protected throughout Tanzania; both inside and outside protected areas under the Wildlife Conservation Act, 2009. Within protected areas they are managed on the basis of General Management Plans and the Tanzania Elephant Management Plan (TEMP). Outside protected areas, there is no formal management other than conflict resolution and general protection as a biological resource[5]. In some wildlife Protected Area categories e.g. Game Reserves, Game controlled Areas, Open Areas/Wildlife Management Areas, elephants are harvested consumptively through tourist hunting.

9. Current population size and trends

In June 2014 the Government undertook an aerial elephant census in major ecosystems across the country as part of the African continent-wide Great Elephant Census (GEC). This was done jointly with TAWIRI, Vulcan (USA), and Frankfurt Zoological Society (Germany). Seven ecosystems were surveyed using two census techniques: Total Count in the Tarangire Manyara and Serengeti ecosystems and Systematic Reconnaissance Flight (SRF) in Selous-Mikumi, Ruaha Rungwa, Katavi-Rukwa, Malagarasi-Muyovozi, and Burigi-Biharamulo Ecosystems. TAWIRI conducted a verification exercise in the Ruaha-Rungwa Ecosystem during the dry season from 16th September to 13th November 2015.

9.1 Aerial Survey Methodologies employed

Total Count (TC): used for species such as elephants which typically occur in large herds which are not evenly distributed. The entire survey area is flown in parallel strips at a height of 150-180m above ground. Each herd seen is photographed in a series of overlapping photographs. Individuals are then later carefully counted from these photos. [Refer to Fig. 2]

Systematic Reconnaissance Flight (SRF) is a systematic sampling approach during which only a portion of animal populations is counted. The totals for various species are then estimated by applying appropriate statistical analyses. Parallel strips are usually flown at a constant height of 100m above ground while animals are counted in strip widths of 150m on both sides of the aircraft. [Refer to Fig. 3]

Estimates from other areas, were obtained through non GEC (Great Elephant Census) funding, recent censuses, and other techniques. SRF was conducted in Mkomazi and Saadani National Parks in 2014 through government funding. Recent census results used include those from a total count of large animals in West Kilimanjaro and Lake Natron conducted in 2013. Dung count technique was used for Rubondo Island National Park and educated guesses for Arusha, and Kilimanjaro national parks, and Swagaswaga and Ibanda-Rumanyika game reserves.

[5] Tanzania's Elephant Management Plan (TEMP) applies to all areas with the known record of elephant existence.

Fig. 2 Total Count

Fig. 3 Systematic Reconnaissance Flight (SRF)

9.2 Survey results

Counts and estimates from six key ecosystems in 2014 gave a total population size of 42,469 (±3,078 SE) elephants. Replacing the data for the Ruaha Rungwa ecosystem and its Itigi extension which, after a repeated survey carried out in 2015, gave respectively an estimate of 14,824(±6,123) and 1,553(±2,956), the total elephant population in Tanzania is estimated at 50,433 (± 8,502) (Thouless *et al* 2016). This total is calculated after the post survey validation and auditing process performed by IUCN/African Elephant Specialist Group (AfESG) in accordance with TAWIRI protocols and is similar to the estimate of 50,894 elephants calculated by TAWIRI.

This represented a 46.24% decline in elephant numbers since 2009. The 2014 survey of Selous-Mikumi ecosystem, elephant population revealed an estimate of 15,217 which was higher than the previous estimate in 2013 (which was 13,084 (± 1,816 SE, the lowest ever recorded in the ecosystem since when census began in 1976). This might be an indication that the elephant population had stabilized, since the last census, but may also be accounted for by an extension of the survey area. Ecosystems showing a stable or positive trend since 2009, included Katavi (stable), Tarangire-Manyara (64% increase) and Serengeti (98% increase). The Katavi-Rukwa ecosystem elephant survey reported an estimate similar to the previous surveys and also in this ecosystem the 1+2 carcass ratio is very low, a signal of a population not recently subjected to poaching.

However, the unprecedented rate of elephant population decline observed in the Ruaha-Rungwa ecosystem in 2014 raised serious concerns, with an estimated 66% decrease in the numbers over a period of 1 year (20,090± 3,282 SE estimated in 2013 compared to 8,272 ± 1,652 SE in 2014). However, TAWIRI maintain that at least for three ecosystems (Ruaha-Rungwa, Malagarasi-Muyovozi, and Burigi-Biharamulo) the 2014 survey results have to be taken with extreme caution, given the declining trend did not match with the observed small number of carcasses observed. As a result of the inconclusive results, TAWIRI conducted a verification exercise in the Ruaha-Rungwa ecosystem during the dry season from 16th September to 13th November 2015.

The estimate of live elephants in the 2015 SRF census for Ruaha-Rungwa (and its Itigi extension) was 15,836 (±4,759 SE), and after the post-survey validation performed by

IUCN/AfESG the estimates are 14,284(±6,123) for the Ruaha-Rungwa ecosystem and 1,553(±2,956) for the Itigi extension, compared with 8,272 (±1,652 SE) estimated in 2014.

Table 1: Most recent elephant population census results
[*Source: IUCN/SSC African Elephant Specialist Group, African Elephant Status Report, 2016*]

Ecosystems / Protected Areas	Estimate	Area (Km²)	Method	Census Year
Selous-Mikumi Ecosystem (Masasi, Selous-Mikumi Ecosystem, Selous-Niassa)	15,939 (±4,624)	105,730	SRF	2014
Ruaha-Rungwa Ecosystem (Itigi Extension, Ruaha-Rungwa Ecosystem)	15,837 (±9,079)	53,204	SRF	2015
Serengeti Ecosystem	6,087	23,660	TC	2014
Katavi-Rukwa Ecosystem	5738 (±2993)	19,953	SRF	2014
Tarangire-Manyara Ecosystem	4,079	17,367	TC	2014
Malagarasi-Muyovosi Ecosystem (Moyowosi-Kigosi Ecosystem, Sagara-Nyamagoma ecosystem, Ugalla Game Reserve)	2953 (±3,808)	42,690	SRF	2014
Arusha National Park	200	322	EG	2014
West Kilimanjaro-Lake Natron GCA	200	10,060	TC	2013
Burigi-Biharamulo Ecosystem	110	4,713	SRF	2014
Rubondo Island National Park	102	210	EG	2014
Kilimanjaro Forest Reserve	793	499	EG	2003
Inyonga Game Conservation Area	600	6,050	EG	2002
Piti East Hunting Block	200	2,223	EG	2002
Loliondo Game Controlled Area	0	5,356	TC	2009
Mkomazi National Park	59	3,509	TC	2014
Saadani National Park	30	2,502	SRF	2014
TOTAL	50,433[6]			

[6] This figure excludes survey data resulting from 'educated guesses' (EG)

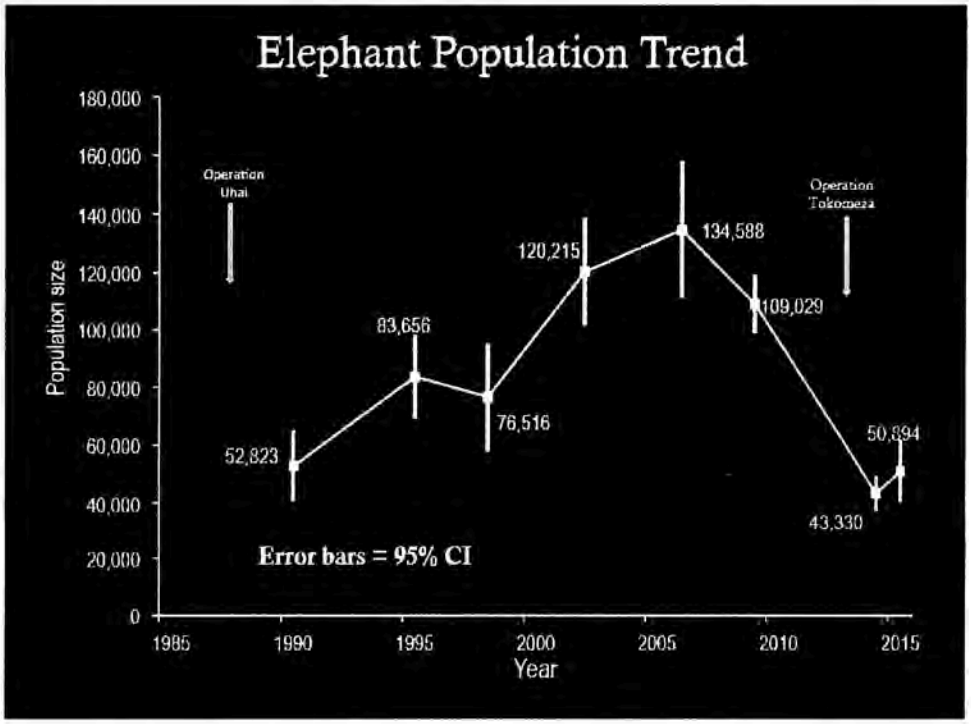
Table: 2 Tanzania's elephant population status and trend, 2009_2014
[Adapted from presentation provided by TAWIRI, 2016]

	2009			2014				
Ecosystem / PA	Estimate	SE	Area (km²)	Estimate	SE	Area (km²)	Method*	Status
Serengeti	3,068		21,884	6,087		33,185	TC	Increase
Tarangire-Manyara	2,561		12,766	4,202		18,725	TC	Increase
W. Kilimanjaro-L. Natron	-	-		200		10,060	TC	New record
Katavi-Rukwa	6,396	920	10,274	5,738	1,375	19,953	SRF	Stable
Malagarasi-Muyovosi	15,198	2,751	45,532	2,953	1,308	44,809	SRF	Decline
Selous-Mikumi	44,806	2,874	107,968	15,217	1,800	105,730	SRF	Decline
Ruaha-Rungwa	34,664	4,178	43,641	8,272	1,623	50,368	SRF	Decline
Burigi-Biharamulo	1,295	785	7,292	110		4,713	SRF	Decline
Saadani National Park	255	178	25,020	30		1,154	SRF	Inconclusive
Mkomazi National Park	209	131	30,150	59		3,107	TC	
Ibanda-Rumanyika	0	-		0		-	PM	
Rubondo Island NP	49	-		102		237	DC	Increase
Arusha National Park	100	-	322	200		316	ECL	Increase
Swagaswaga GR	-	-		60		871	ECL	Possible decline
Kilimanjaro National Park	450	-		100		1,652	ECL	
Mahale Mt. National Park	-	-						
Wami-Mbiki Wma		-				2,344		
Total	**109,051**	**5,899**		**43, 330**	**3,078**			

Table: 3 Total elephant population estimates (2006 – 2015)

	2006	2009	2014	2015
Source	African Elephant database	African Elephant database	Great Elephant Census results (TAWIRI, 2016)	African Elephant Status Report, 2016
Total Population	136,753 (±27,938)	109,051 (±5,899)	43,330 (±3,078)	50,433 (±8,502)

Fig: 4 Tanzania's elephant population status and trend [Adapted from presentation provided by TAWIRI, 2016]



The census results show the significant decline in Tanzania's elephant population since 2009, but also indicate a slight increase between 2014-15 based on regular aerial surveys. This increase is primarily accounted for by an increase in the number of elephants observed in Ruaha-Rungwa Ecosystem; but further studies are required to understand localized migrations. The fact that their carcass counts did not equate to the levels of decline earlier indicated supports the hypothesis that behavioural change may have contributed in the observed variations; that change of activity patterns, possibly as an adaptation to increased levels of poaching, may have reduced visibility of elephants as they become less active during the census hours. The above is potentially also applicable to Malagarasi-Muyovozi, and Burigi-Biharamulo ecosystems. TAWIRI recognise that more research is needed to understand the influence of migration on fluctuations in local elephant population and is working on understanding what caused the mismatch between the low 1+2 carcass ratio (especially in the areas that were surveyed also in 2013) and the apparent declining number of estimated elephant.

9.3 Summary

A 46.24% population decline in elephants has been estimated for the whole country since 2009. The major declines occurring in the Malagarasi-Muyovozi, Ruaha-Rungwa and Selous-Mikumi ecosystems. In the Selous-Mikumi ecosystem, the GES revealed an estimate of 15,217 which was higher than the previous estimate in 2013 (which was 13,084 (± 1,816 SE), which might be an indication that the elephant population in this ecosystem has stabilized after a significant decline. TAWIRI maintain that at least for three ecosystems (Ruaha-Rungwa, Malagarasi-Muyovozi, and Burigi-Biharamulo) the 2014 survey results have to be taken with extreme caution, given the declining trend did not match with the observed small number of new carcasses observed. The follow-up 2015 census conducted in Ruaha-Rungwa ecosystem suggests the population may not

have declined to such an extent as reported in 2014, but that further studies are required to understand localized migrations. Overall, indications are that in the last 2 years (i.e. since 2014) the elephant population may be stabilising following a significant period of decline. However, some populations remain severely threatened and in decline and continued monitoring and research is essential to verify the trend, as well as the theories around the fluctuations in elephant populations.

10 Carcass Count Data

Carcass surveys are carried out in the 6 important elephant ecosystems at least every 3 years with every carcass photographed, categorised based on the CITES / MIKE classification[7] and GPS coordinates recorded. Most of the carcasses found during the 2014 countrywide surveys (refer to Figures 5 (a – f) were over one-year-old (category 3) with the majority being very old carcasses (category 4). **This is an indication that the wave of poaching that hit Tanzania until 2012/2013 has probably decreased and does not support the numeric declines highlighted in the survey.** This was true in particular for the Ruaha-Rungwa ecosystem. In 2013 a SRF survey was conducted with funding from GIZ[8] and the estimate was of 20,090 ± 3,282 SE (TAWIRI 2014). The 2014 survey estimated 8,272 (± 1,652 SE) elephants with a 1+2 Carcass ratio of 2.2%. (TAWIRI 2015) The low numbers of category 1 and 2 carcasses did not match with the decline, hence another survey was carried out in 2015 which estimated more than 15,000 elephants and a 1+2 Carcass ratio of 1.67% with 0 carcasses in category 1 (<1-month-old), confirming a further decrease in illegal activities.

Figure 5(a-f): **Elephant population trends and Carcass Estimates for the 6 main elephant ecosystems in Tanzania in 2014**[Adapted from presentation by Prof. Simon Miduma, Director General TAWIRI (August 2016)][9]

Fig: (a)

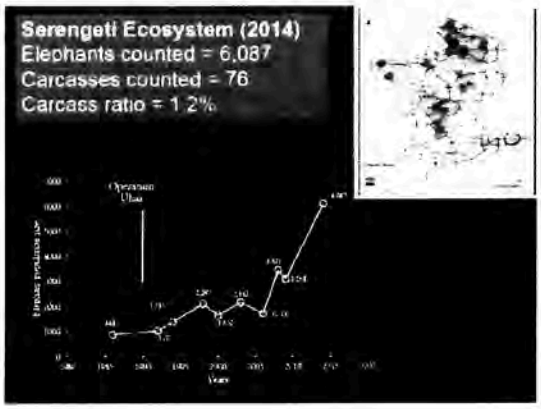
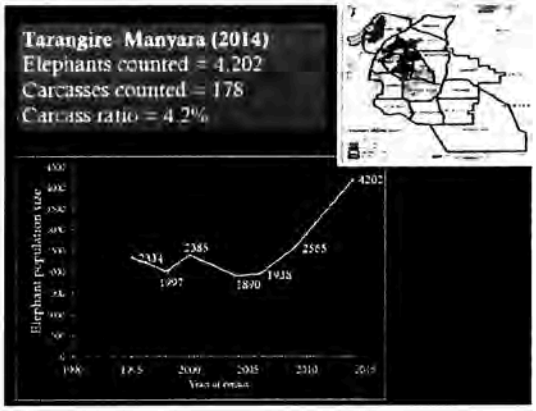


Fig: (b)



[7] Carcasses are divided into four categories based on the body structure, colour of the bone and other factors (see below), which is a reflection of the approximate age since the animal died (Craig, 2012). Carcass 1: Fresh (<1 month). Still has flesh giving the body a rounded appearance. Vultures probably present and ground still moist from body fluids. Carcass 2: Recent (<1 year). Rot patch and skin still present. Skeleton not scattered Carcass 3: Old (>1 year). Clean bones, skin usually absent, vegetation re-grown in rot patch Carcass 4: Very old (up to 10 years). Bones scattered and turning grey.

[8] Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ) https://www.giz.de/de/html/index.html

[9] Carcass ratio presented here includes all categories (1-4), with possible double counting when repeated counts were carried out in subsequent years (e.g. Selous-Mikumi and Ruaha-Rungwa)

Fig (c)

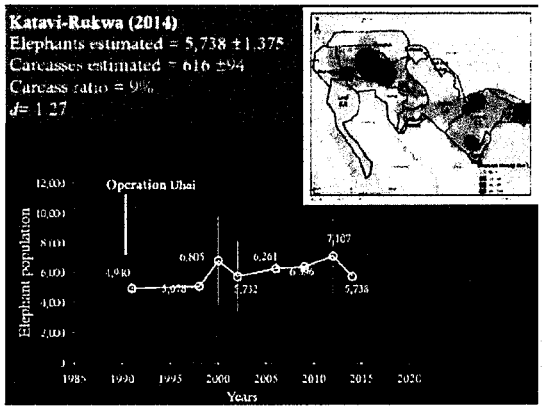


Fig (d)

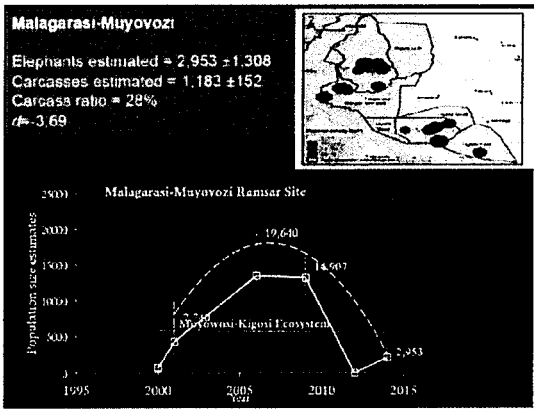


Fig (e)

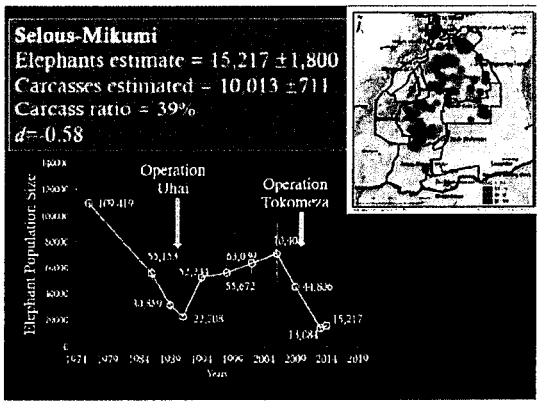
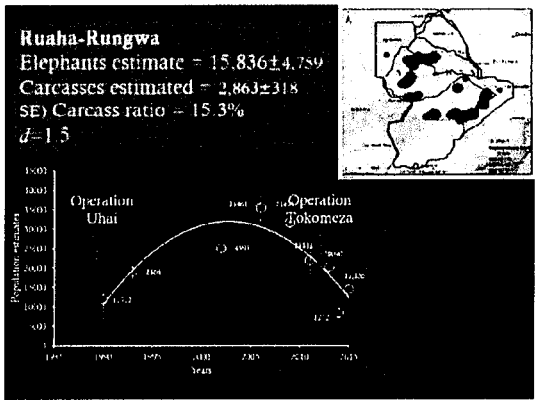


Fig (f)



[A Carcass ratio of 7-8% is considered to represent natural mortality (Douglas-Hamilton and Burrill 1991)]

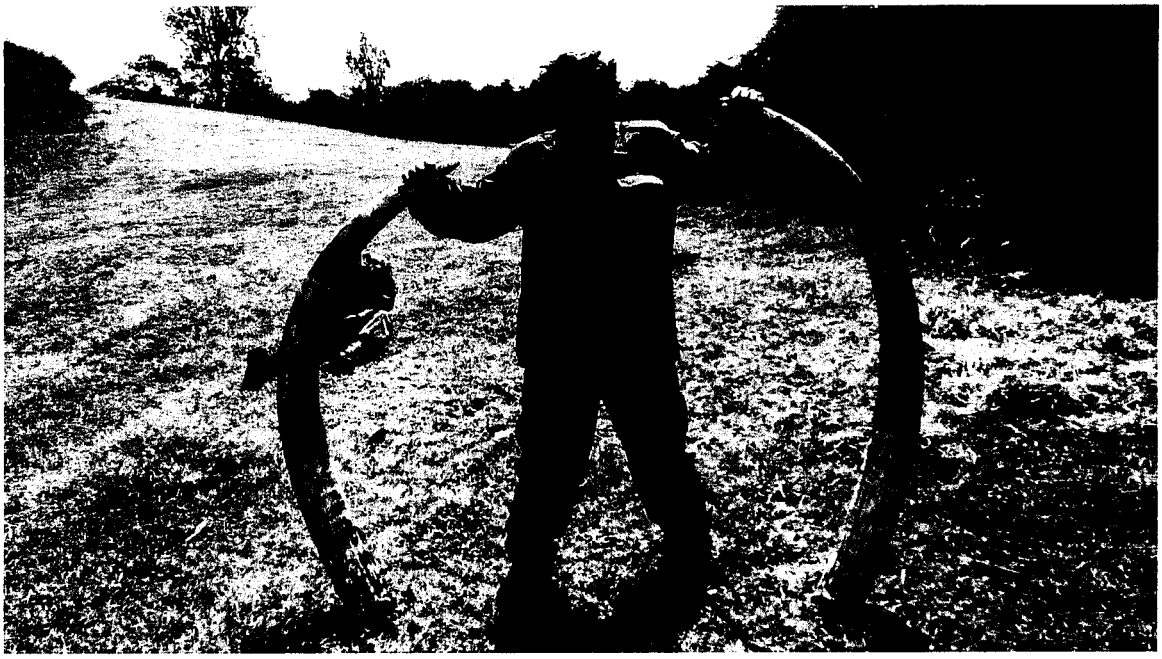
Additional carcass count data was provided by the National and Transnational Serious Crimes Investigation Unit (NTSCIU), during the mission in August, which showed that the number of new carcasses and poached elephants significantly reduced following proactive engagement by the NTSCIU in 2014 and a more strategic approach to tackle poaching, achieving impressive results within the first few months of operation.

Table 4: Carcass Counts (Data provided by NTSCIU, August 2016)[10]

Year	No. of new carcasses
2013	219
2014	57
2015	48
(up to June) 2016	16
Total	340

[10] Additional details on the census required, in particular the extent of the census area.

This trend appears to have continued[11] and further improved and the national NGO, PAMS Foundation Tanzania, claims that the national decline in elephants has slowed by an estimated two thirds since 2015, compared with the annual averages of the preceding six years *and is principally because of the intelligence led policing strategy effectively employed throughout Tanzania.* [PAMS Foundation, 2017]



[Plate 2: ivory recovered, Nogongoro Crater, August 2016. © MNRT]

[11] The CITES Programme for Monitoring of Illegal Killing of Elephants (MIKE) recently published a preliminary analysis of levels and trends of illegal killing of elephants in Africa to 31 December 2016. This report indicated that the number of carcass records from Tanzania dropped by 55% relative to 2015 from three MIKE sites (Katavi Rukwa, Ruaha-Rungwa and Selous-Mikumi). [CITES, 2017]

11. Elephant hunting restrictions and quota management

[Includes information provided by TAWA and adapted from presentation provided by MNRT, August 2016]

In some wildlife protected area categories (Game Reserves, Game controlled Areas, Open areas, Forest Reserves and Wildlife Management Areas), elephants are harvested consumptively through tourist hunting. These areas are divided into hunting blocks of which there are 157 (refer to Figure 6 on page 25). The hunting blocks are further categorised according to their location and viability for sustainable consumptive tourism, with block fees adjusted accordingly, ranging from 60,000 USD for a Category I hunting block to 5,000 USD for a Category V (based on 2013 prices). Outfitters are currently restricted to five or less blocks. In 2016, only 110 hunting blocks were occupied with many of the vacant blocks now considered no longer economically viable (*something hunting operators we met during the mission partly blamed on the current bans on trophy hunting imposed by the US and EU*). The outfitter of the concession then sells the hunting experience and elephant trophies to clients based upon quotas issued for their particular hunting blocks. The process for allocating hunting blocks for 2013 to 2018 concluded in 2011. To hunt elephant, clients have to purchase a 21-day safari permit (1,000 USD) and pay elephant trophy fees (20-25,000 USD per animal) as well as professional hunter fees, conservation fees, handling fees, etc. An assessment of outfitters quota utilization and financial contribution (block fee's, conservation fees, etc) was undertaken by the Wildlife Division between 2013 and 2015 which showed contributions of **USD 5,578,706.24** which help to fund anti-poaching activities and contribute to community development schemes.

11.1 Hunting Restrictions (including sex and age)

The hunting season in Tanzania is restricted to the dry months, beginning on July 1st and ending December 31st. From 2011, the quota was further restricted to adult males only, with each tusk weighing more than 20 kg and /or length of 160 cm [TAWA, 2016]. The idea being to restrict hunting to post-reproductive bulls that are no longer able to compete with the younger males, or to those that have attained an age where the molars have worn to such an extent that they can no longer get the nutrition needed to survive. Whilst estimating the age of elephants through molar progression has long been used to age carcasses, this isn't a technique that can be used to identify suitable trophy animals in the field. However, a correlation between age and tusk size has been established (Pilgrim & Western, 1986) and weight, length and circumference of a tusk has been assessed as a robust process for inferring the age.

The Hunting outfitters are obliged to make sure that clients are accompanied and assisted by professional hunters and government game rangers, for safety and compliance purposes. [*Discussions held with representatives from the Tanzanian Hunting Operators Associations [TAHOA]and documents held by TAWA confirmed the presence of government game rangers during hunts and submission of field reports*]

Any Professional hunter who is found to have guided a client to hunt any animal in contravention of the regulations is considered to have committed an offence and is liable on conviction to:

(a) a fine of US Dollars Two Thousand Five Hundred or imprisonment for a term not less than six months for the first time of commission of an offence;

(b) a fine of US Dollars five thousand or imprisonment for a term not less than one year for the second time of commission of an offence; and

(c) a fine of US Dollars ten thousand or imprisonment for a term not less than one year and cancellation of the Professional Hunters' license for the third time of commission of an offence.

In addition, a person who holds a licence, permit or written authority to hunt an animal of any species, hunts the young of that species or the female of that species which is apparently pregnant or is accompanied by its young, unless the hunting of such young or such female is expressly authorized by the licence, permit or written authority, commits an offence and shall be liable on conviction to a fine of not less than twice the value of such animal or to imprisonment for a term of not less than three years or to both.[12]

From talks with hunting operators in the field and with representatives from the Tanzanian Hunting Operators Association (TAHOA) it is clear that the mechanisms for monitoring and controlling elephant (& lion) trophy hunting are well accepted and the penalties for non-compliance, including the refusal to issue an export permit, are sufficiently severe to act as a deterrent.

11.2 Quota Allocation

Harvesting is strictly administered under a national quota system, set and controlled by the Director General of TAWA, as advised by the Quota Allocation Advisory Committee which is comprised of wildlife conservation experts from TAWIRI, the University of Dar es Salaam, Sokoine University of Agriculture, University of Dodoma, the College of African Wildlife Management, TAWA and the Wildlife Division. Quotas are allocated to each hunting block. Table 4 shows that 231 elephants have been harvested between 2010 and 2016 (average 33 per year) and exported as trophies to the US (60%) and EU (over 30%).

Table 5: Summary of elephant harvest 2010 – 2014 (TAWA, 2016)

Year	National Quota	Hunted by Tourist
2010	200	96
2011	200	45
2012	200	43
2013	200	35
2014	100	7
2015	100	3
2016	100	2

The reduction in the number of elephant hunted between 2010 and 2011 was apparently due to entry into force of the regulation on minimum size and weight. The low harvest figures in 2014 and following years were likely to be a direct result of the US Fish and Wildlife Service import suspension of elephants from Tanzania.

The current CITES quota of 100 elephants represent 0.24% of the total population (GEC, 2014), (0.20% on the basis of the updated 2015 population estimate), a percentage which is less than the 0.3% which is the minimum off-take to maintain high level trophy quality, and well below the standing population guidelines (0.5%) of the total population (Martin, R. B. 1986, Craig et. al 2011). As an additional precautionary measure, allocation of the elephant hunting quota uses an ecosystem approach, taking into account the results of the

[12] penalties for taking young animal as per Wildlife Conservation Act No. 5 of 2009

2015 elephant census. Table 5 indicates the allocation of quotas based on ≤0.24% of the total estimated population in each of the six main ecosystems that are forming the elephant range in Tanzania.

Table 6: Ecosystem based Quota Allocation [TAWA, 2016]

Ecosystem	Quota (No. of elephants)	2015 Population estimate	Quota as a percentage of population
Selous- Mikumi and surroundings	**36**	15,939	0.23%
Ruaha-Rungwa and surroundings	**19**	15,837	0.12%
Katavi-Rukwa and surroundings	**13**	5,738	0.23%
Tarangire-Manyara and surroundings	**10**	4,079	0.24%
Malagarasi-Muyovosi and surroundings	**7**	2,953	0.24%
Serengeti and surroundings	**15**	6,087	0.24%
Total	**100**		

12. Mitigating Human Wildlife Conflict and improving livelihoods for rural communities through sustainable trophy hunting practices.

The country's rapidly increasing human population (which increased from 12,313,469 in 1967 to 44,928,923 in 2012 and to an estimated 51.4 million by 2016)[13], poses a significant long-term threat to Tanzania's wildlife with growing demand for land reserved for wildlife protection and more human-wildlife conflicts and illegal killing. The government of Tanzania believes tourism, both consumptive and non-consumptive, holds great potential for the socioeconomic development of the country including rural communities through, for example the operation of Wildlife Management Areas in which private companies can invest.

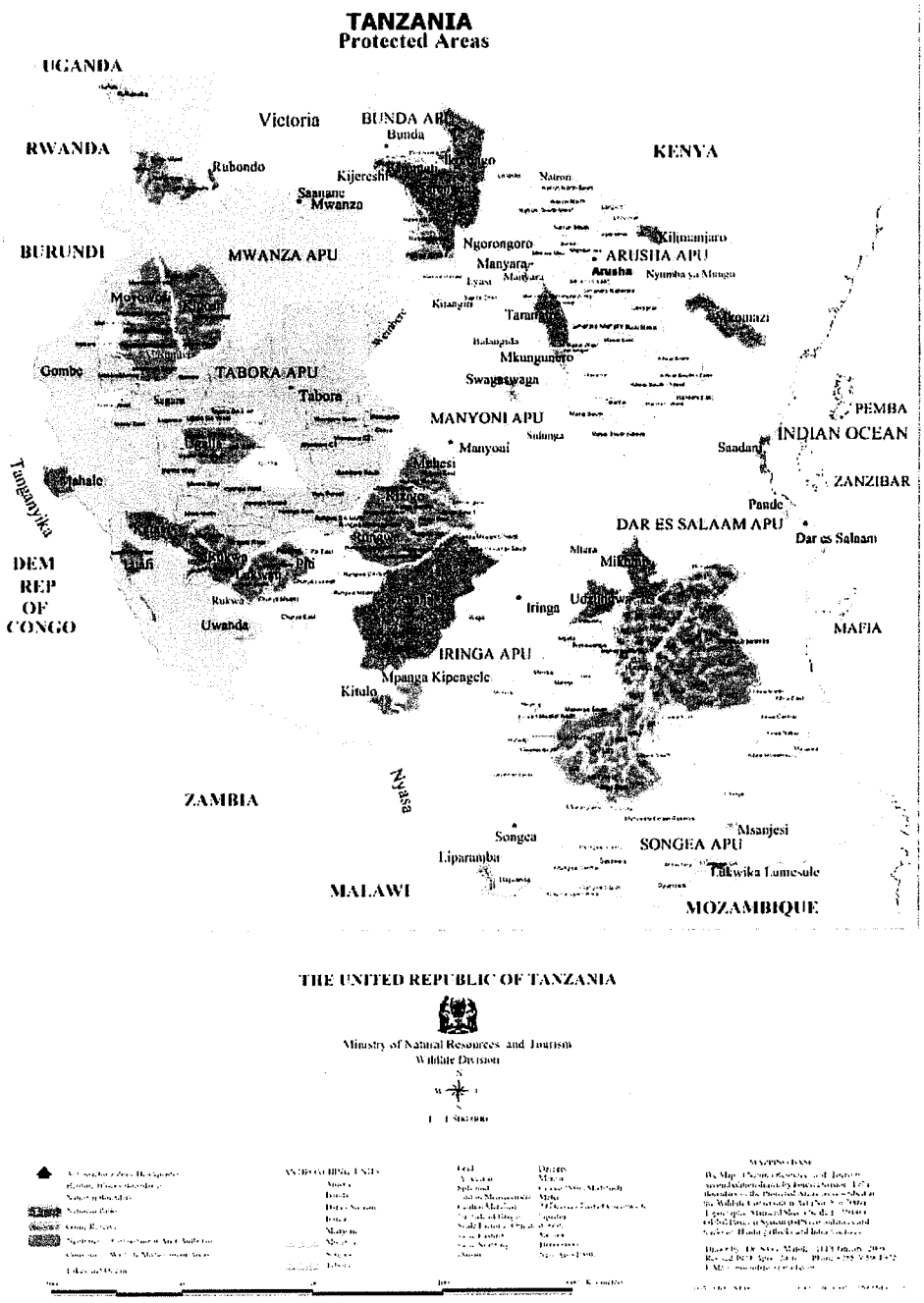
12.1 Wildlife Management Areas (WMAs)

Wildlife Management Areas (WMAs) are participatory community conservation areas established by a number of villages which come together and set aside a proportion of land as a wildlife conservation area. In return they receive community service improvements (such as improved roads, schools and healthcare). In addition, they are allowed to seek investment and earn revenue from sustainable wildlife practices, such as trophy hunting. WMAs were established following a pilot project set up in 2002, under the 2012 Wildlife Conservation Act (prior to that under the Wildlife Conservation (WMA) regulations 2005). They are seen as a key component of rural development and as one of the best weapons in the fight against illegal utilisation by generating incentives for villagers to conserve and restore wildlife. The WMA regulations provide for the sharing of income generated from tourist hunting and is seen as an important component of WMAs' activities and a useful component in mitigating human-wildlife conflicts. There are currently 38 WMAs established, covering an approximately 50,000km² (refer to Figure 6); 22 of them have user rights, with investments benefitting over 1 million rural people. In July 2015, Minister increased the game fee-sharing percentage for rural communities in wildlife management areas to 65%, and 70% of conservation, observation and permit fees from tourist hunting activities. It is also a legal requirement for Hunting Operators

[13] http://worldpopulationreview.com/countries/tanzania-population/

within a WMA to contribute a minimum of five thousand USD to the villages (this is in addition to the block, permit and conservation fees). Those WMAs without investors or where income generation is not sufficient to offset pressures from human encroachment, see land being converted to crops and grazing, leading to more human-wildlife conflict and, potentially engagement in illegal activities. Undoubtedly, it is these vulnerable Communities living on the edge of the Game Reserves that are the most vulnerable to extended bans on trophy hunting, with loss of investors or reduced income, leading to reduced incentives to conserve wildlife.

Figure 6: Tanzania's Protected Areas and hunting blocks



During the field mission EU delegates met with Community leaders and District Councillor's from two WMAs residing on the edge of the Selous Game Reserve, JUKUMU-WMA in the north that has secured an investor to operate trophy hunting in the area and NALIKA-WMA to the South of the reserve, currently without investment. In NALIKA, which lies within the Selous-Niassa migration corridor, we heard accounts and saw first-hand the challenges that some of the country's poorest rural communities have to deal with in terms of human-wildlife conflicts, in the form of damage to crops, predation of cattle and loss of life. However, we also saw many of the human-wildlife conflicts as a consequence of poor planning, with crops being planted along established elephant migration routes. In JUKUMU -WMA we heard and saw tangible benefits that can be derived from having functioning WMAs, with income derived from hunting operators being used to improve social provisions such as healthcare centres and infrastructure, and protection for crops and the wildlife benefitting through incentive schemes and community monitoring programmes, as well as acting as an effective buffer zone around the Selous Game Reserve.

Plate 3 & 4: EU delegates with Tunduru District Game officer and Community leaders from NALIKA–WMA surveying crop damage .

Plate 3

Plate 4

13. Anti-Poaching efforts and Impact (since 2014)

Plate 5: Anti-poaching Unit, Selous Game Reserve. (Copyright: G.Benyr)

13.1 Implementation of a National Strategy and Action Plan to combat poaching and illegal wildlife trade

In response to the rapid rise in wildlife crime, including poaching and illegal ivory trade and the consequent decline in wildlife populations, especially of African elephants, the Tanzanian government has undertaken a number of actions to intensify their efforts against poaching & other forms of wildlife crime. This included the launching of a five-year National Strategy and action plan to combat poaching and illegal wildlife trade, in 2014, produced in collaboration with the United Nations Development Programme (UNDP). The Strategy, aims to:

- provide national capacity for intelligence-led, highly coordinated law enforcement which includes the creation of a dedicated wildlife crime unit, better controls at ports and supporting the much needed infrastructure development in protected areas;
- improve rural livelihoods through enhanced community-based management of natural resources, including on-going support to their Wildlife Management Areas (WMA)programme;
- raise awareness and reduce demand in Tanzania and in collaboration with supply, transit and destination countries to help change attitudes towards wildlife crime and build international support to combat illegal wildlife trafficking.

We were made aware of a number of significant activities have taken place since its launch, including:

- A **National and Transnational Serious Crimes Investigation Unit** (NTSCIU) was established in 2014, in cooperation with Tanzania Police Force, Wildlife sector, State security and State Attorney [and also a **Wildlife and Forest Crime Task Force** within MNRT]. This Unit has the responsibility to lead, coordinate and support the overall effort to engage on serious and organized crime amongst Tanzanian law enforcement partners. It is the focal point for all wildlife and forest intelligence, investigation and prosecutions in the country and together with the Wildlife and Forest Crime Task

force appears to be making a significant difference in Tanzania's effort to curb poaching [see Table 6 for more details on arrests].

- From July, 2014 to June, 2015 the Government of Tanzania **recruited and deployed 3,198 wildlife wardens** in all protected areas countrywide. For instance, in Selous Game Reserve a total of 277 wildlife wardens were recruited which is an increase of 38%. Between July 2014 and November 2015, a total of 173,902 patrol man-days were conducted involving routine and special operations in and around the Selous Game Reserve, whereby 366 poachers were arrested and scores of weapons and trophies impounded. [Ref. MNRT, Feb 2016]
- Formation of a high level **National Multi-Agency Task Force (MATF)** in 2015 on intelligence and investigation incorporating the Ministry of Home Affairs, Wildlife Sector, Ministry of Livestock and Fisheries, Ministry of Finance (TRA), Ministry of Defense and Security, Ministry of Energy and Minerals and State Security. Together with other responsibilities, the task force is dealing with illegal trafficking of wildlife products;
- **Efforts to improve international and regional collaboration** include the adoption of a bi-lateral agreement with Mozambique to coordinate management and anti-poaching activities across the Selous-Niassa Ecosystem, the adoption of an MoU with China in July 2015 to improve cooperation on enforcement activities, and the adoption of the 'Arusha Declaration' in November 2014, to improve regional co-operation amongst eight African countries. The People's Republic of China have subsequently donated equipment to facilitate patrols, including all-terrain motor bikes, night vision and infrared goggles. Various forms of support have also been granted to Tanzania on the part of bi-lateral cooperation in particular with Germany, the U.S., NGOs and the private sector. In order to intensify aerial patrol surveillance, Frankfurt Zoological Society and GIZ have donated two light aircrafts that are used to conduct daily patrols. A wildlife security cross-border collaboration conference between Tanzania and Kenya was held in August 2015. This conference had an objective of fostering collaboration in tackling illegal trafficking of wildlife products and cooperation in joint trans-frontier operations;
- In 2015 the Ministry of Natural Resources and Tourism signed an MoU with African Wildlife Foundation (AWF) to train and deploy **sniffer dogs for inspection of ivory and other wildlife products** at exit and entry points (airports, harbours, bus terminals, warehouses); [Ref. MNRT, 2016]. Canine Units have been deployed at key border crossings since January 2016 and as of June 2016, had led to 26 wildlife seizures, including ivory and pangolin scales. [Ref. EIA, Hanoi Report]
- In the effort to **increase the number of public prosecutors and accelerating the rate of cases in the court,** an inter-agency law enforcement symposium on wildlife crimes and the role of judiciary in sustainable wildlife conservation were convened in December 2015. This symposium involved 46 officers from Magistrates, Prosecutors, Wildlife and Police in the two regions surrounding Selous Game Reserve.

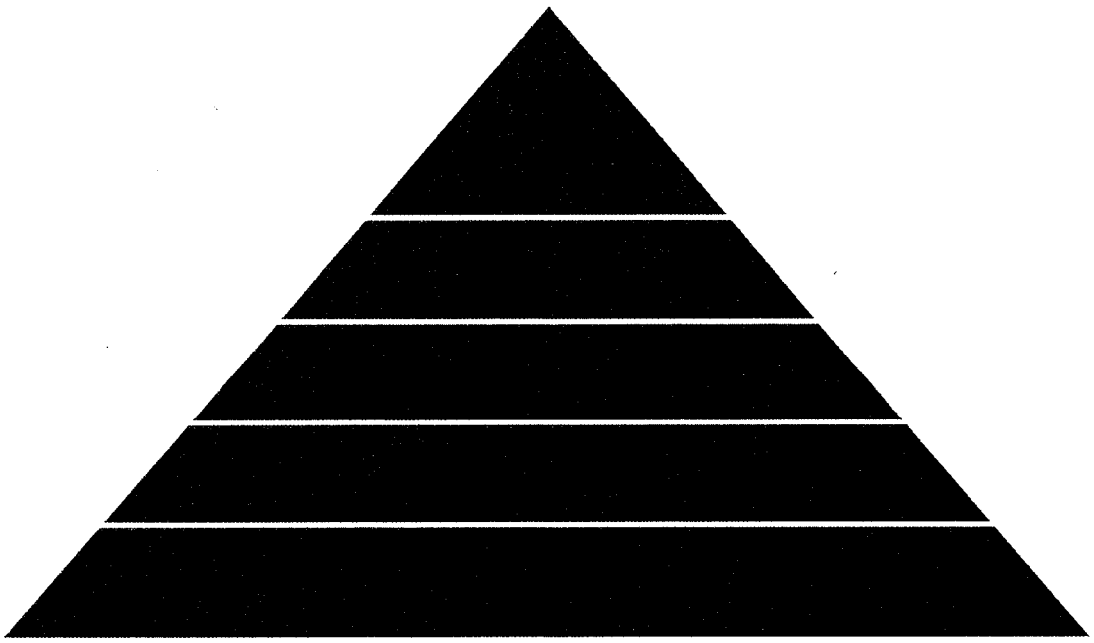
13.2 Wildlife and Forest Crime Task Force (WFCTF)

The Wildlife and Forest Crime Task Force (WFCTF) main function is to disrupt and reduce wildlife crime. It has 4 teams: Operations (including a rapid response unit), Intelligence, Investigation and Prosecution. The WFCTF also manages nine Tasking and Coordination Groups (TCGs), in the following ecosystem-level poaching hotspots: Serengeti, Tarangire, Moyowosi, Ruaha, Katavi and Selous. These form the operational field section and are resourced for leading intelligence-led law enforcement in conjunction with TAWA, TANAPA and Ngorongoro Conservation Area Authority. Each TCG unit reports to the national task force, transferring intelligence and evidence, enabling a co-ordinated and targeted response, ideally before crimes are committed. Infrastructure and information sources are clearly well advanced, but financial resources continue to be stretched. However, funding for the permanent taskforce is now being provided through core funding and

TCGs will receive funding from donors, such as UNDP (who were expected to make financial contribution from Sept 2016 to support a 20 day operation).

The WFCTF is employing a five-level pyramid model with which to assess the ivory poaching syndicates. [refer to: Figure 7]. This model attempts to capture the entire trade chain, from the poacher at the local level, to the end use buyer in destination countries.

Figure 7: Conceptual Framework of the Poaching Syndicate



The intelligence-led policing approach that Tanzania has adopted to address the poaching crisis follows advice from Interpol and UNDP and is an accepted model used by other countries, including Malawi and the United Kingdom.

13.3 Results and impact of intelligence-led law enforcement strategy

Table 7: Number of anti-poaching patrols and arrested suspects 2013 – 2016 (Ref: NTSCIU, August 2016)

Year	Patrol Days	No. of Arrests
2013-14	113,944	3,075
2014_15	130.376	1,430
2015_16	143,803	1,478
Total	**388.123**	**5,983**

Of those cases that have reached trial, 84% have been convicted, with the rest either in custody awaiting trial or turned state's witness; 65 offenders have been given prison sentences from 16 years to 40 years [PAMS Foundation, 2017].

As can be seen from the arrest figures the vast majority of arrests concern poachers at the lowest level of the pyramid (Level 1) and evidence in other countries (e.g. South Africa) suggests that arrests at this level make limited difference in the rate of poaching given an ever-ready, number of volunteers to fill this role. However, importantly, since October 2015, the NTSCIU and WFTCF have been responsible for arresting five Level 5 ivory traffickers in East Africa, and disrupted

eight out of ten organized crime groups (OCGs) identified as operating in Tanzania [NTSCIU, 2016]. This includes, the notorious 'queen of ivory' (Yang Feng Glan), who was a Chinese national arrested for smuggling 706 ivory tusks out of Tanzania, thought to have been involved in the trafficking of ivory since 2006.

Another key ivory smuggler, Boniface Matthew Mariango – nicknamed 'Shetani' or the 'Devil' – was also arrested in October 2015, allegedly managing up to 15 criminal poaching and ivory smuggling syndicates and supplying weapons, ammunition to poaching syndicates operating across the country. Both of these arrests led to other high-level arrests throughout Tanzania and in other countries they were operating in. Towards the end of 2015, they also arrested longtime Kingpin based in Arusha known as Frank Ojungu.

Tanzania's efforts are laudable with a significant increase in the number of individuals being detected and arrested through a range of enforcement actions since the establishment of the task force and a more intelligence-led approach adopted. But the critical question is whether these arrests are making any difference in the rate of poaching? In this regard, the arrest of five Level 5 traffickers and disruption of 8 organised crime groups is likely to have had a significant impact on the ground, which the most recent carcass counts provided by Tanzania appear to support. Tanzania, themselves recognize that when resources were diverted away from anti-poaching activities (2010-2013), with fewer patrols on the ground, the poachers were quick to exploit the situation with devastating consequences. However, with implementation of the National Action Plan and more resources being allocated to tackling poaching, and a more strategic intelligence led style of policing being adopted, there appears to have been a significant reduction in elephant poaching, particularly in the Selous Game Reserve. PAMS Foundation (Feb, 2017) which is an NGO which provides anti-poaching support to Tanzania in all of the major elephant ecosystems across the country, has stated that there has been *a dramatic reduction in elephant poaching since November 2014* which they directly attribute to the combined efforts of the Government in carrying out well organized intelligence-led operations, disrupting poaching syndicates and bringing to justice key players in the ivory trade.

14. Addressing questions raised by the EU Scientific Review Group

Q1: Are we satisfied with population status information?

A: *Yes – Tanzania have a dedicated aerial census team based in Arusha / methodologies are robust & peer reviewed / operate reasonable time frames for monitoring / they have provided an explanation for expanding survey area / conducting on-going research.*

Q2: Has the population stabilised?

A: *Overall, indications are that in the last 2 years (i.e. since 2014) the elephant population may be stabilising following a significant period of decline. Ecosystems showing a stable or positive trend since 2009, included Katavi-Rukwa (stable), Tarangire-Manyara (64% increase) and Serengeti (98% increase). After significant declines in Selous-Mikumi, the population appears to have stabilised since 2014, with levels of illegal killing brought under control through a suite of effective anti-poaching measures. However, some populations appear to remain severely threatened (Ruaha-Rungwa and Malagarasi-Muyovozi) and in decline and continued monitoring and research is essential to verify the trend, as well as the theories around the fluctuations in elephant populations and local migrations.*

Q3: Is the current quota sustainable?

A: *the current CITES quota of 100 elephants represent 0.24% of the total population (GEC, 2014), a percentage which is less than the 0.3% which is the minimum off-take to maintain high level trophy quality, and well below the standing population guidelines (0.5%) of the total population (Martin, R. B. 1986, Craig et. al 2011). Quota allocation is at the 'ecosystem level' and does not exceed 0.3%*

of each of the managed populations. In addition, the quota is restricted to old bull elephants with tusks weighing 20kg or 160cm in length. The hunting industry appears to be a very well regulated industry and was not the cause of the decline in elephants. Hunting was observed to make a significant contribution to the conservation of elephants in and around Selous by providing incentives for habitat conservation and valuable income for supporting anti-poaching measures. Although the quota allocated to the elephant ecosystems, Ruaha-Rungwa and Malagarasi-Muyovozi, (and Burigi-Biharamulo) do not exceed 0.3% of the managed population, the reported declines, high carcass ratio, together with the uncertainty over the theory of local migrations and lack of information on the extent or impact of anti-poaching measures in these regions on illegal killing, means a confident non-detriment finding for these ecosystems cannot be established at this stage.

Q4: Have TZ been able to demonstrate that anti-poaching measures and broader management systems are bringing the level of illegal killing under control?

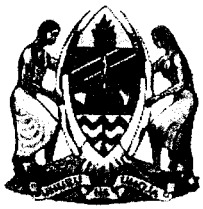
A: *It's early days, but Tanzania now have the high level political support and the institutional framework in place they need to tackle the problem. The National and Transnational Serious Crimes Investigation Unit (NTSCIU) established in 2014, in cooperation with Tanzania Police Force, Wildlife sector, State security and the Wildlife and Forest Crime Task Force (WFCTF), appear to be making a significant difference in Tanzania's effort to curb poaching with fewer incidents being recorded and higher number of arrests, including Level 4 & 5 criminals. 8 out of 10 organised criminal syndicates engaged in ivory smuggling have been disrupted. Carcass counts and anecdotal evidence from local rangers and NGOs also indicate fewer elephants being poached.*

In Selous-Mikumi levels of illegal killing have been brought under control through a suite of effective anti-poaching measures. This includes a total of 277 wildlife wardens being recruited (an increase of 38%) and being better equipped (aerial surveillance, night vision goggles, radio transmitters, weapons). Between July 2014 and November 2015, a total of 173,902 patrol man-days were conducted involving routine and special operations in and around the Selous Game Reserve, whereby 366 poachers were arrested and scores of weapons and trophies impounded. Indications are that the new intelligence-led enforcement measures introduced in 2014 to combat poaching and illegal wildlife trade do appear to be bringing the level of illegal killing under control.

PART 3: ASSESSMENT OF THE SUSTAINABILITY AND MANAGEMENT OF LION TROPHY HUNTING IN TANZANIA

See separate report for full account.

Annex 1



EU MISSION TO ASSESS THE SUSTAINABILITY AND MANAGEMENT OF ELEPHANT AND LION HUNTING TROPHY EXPORTS FROM TANZANIA

Session 1: Field visit

0720 – 0800 **Meeting with Representative from EU delegation to Tanzania** [*Programme Officer-Climate Change and Environment EU Delegation to Tanzania (Maria Chiara Femiano)*]

0800 – 0830 **Registration** *Ministry of Natural Resources and Tourism*

0830 – 0840 **Introduction of participants / travel to airport**

0840 – 0940 **Travelling to Selous Game Reserve HQ, Matambwe**
EU delegates and Selected Officials from TAWA and Selous GR

1030 – 1200 **Poaching Status in the Selous Game Reserve & discussion**
- Manager Selous Game Reserve

1200 - 1530 **Game Drive to Selected Sites:** *EU delegates and Selected Officials*

1530 – 1730 **Drive to JUKUMU – Wildlife Management Area**

1830 – 1945 **Meeting with representatives of JUKUMU- WMA**

1945 – 2230 **Return to HQ**

Session 2: Field visit

0730 – 0830 **Breakfast:** *de-brief / discussion with Selous Game Reserve Warden*

0830 – 0930 **Fly to Kingupira Sector of Selous**

0930 – 1000 **Meeting with Sector Manager, Game wardens and TAWIRI staff**

1000 – 1500 **Game Drive & meeting with Chairman of Tanzania Hunting Operators Association (TAHOA) in field**

1500 – 1530 **Lunch** – *informal discussions*

1530 – 1630 **Presentation on Ecological Monitoring of Key Species & discussion**
Director - Kingupira Wildlife Research Centre.

1700 – 1800 **Travelling back to Selous HQ:** *All*

1800 – 1900 **Game Drive**

2000 – 2100 **Discussion /Feedback and identification of actions and priorities**

Session 3: Field visit

0730 – 0830 **Breakfast:** *All*

0830 – 1045 **Travelling to Kalulu Sector in the Selous Game Reserve**

1100 – 1330 **Drive to selected sites/Elephant-human conflicts points:** *All*

1330 – 1430 **Meeting with Tunduru District Game Officer:** *All*

1430 – 1530 **Meeting with representatives of NALIKA - WMA**

1530 – 1630 **Meeting with NALIKA - WMA partners** (including WWF)

1630 – 1635 **Vote of Thanks:** *Manager Selous Game Reserve*

1635 – 1830 **Travel back to Dar es Salaam**

Session 4: Status of Export of African lion and African elephant trophies to EU

0900 – 0930 **Registration:** *All*

0930 – 0940 **Introduction of participants/Group photo:** *Facilitator*

0940 – 0950 **Opening Remarks**: *Permanent Secretary.*

0950 - 1000 **Objective of the study visit**: *Director General-TAWA*

1000 – 1030 **Tea/coffee break:** *All*

1030 -11:00 **Wildlife Policy and Regulatory Framework:** ***Director of Wildlife Division***

1100 – 1130 **Report on the Status of Export of Elephant and Lion Trophies to EU:** *CITES-Desk and Director General, TAWIRI*

1130 – 1230 **Comments and Discussion:** *Facilitator*

1230 – 1330 **Lunch Break:** *All [Permanent Secretary departs]*

Session 5: Priority Actions to Stop Wildlife Poaching and Enhancing Conservation of Elephant and Lion

1330 – 1400 **Establishment and Operationalization of the Tanzania Wildlife Management Authority-TAWA:** *Director General-TAWA)*

1330 – 1400 **Implementation of the National Strategy to Combat Poaching and illegal Wildlife trade:** *Assistant Director Anti poaching*

1430 – 1500 **Elephant Population Monitoring and Research**
Director General-Tanzania Wildlife Research Institute-TAWIRI

1500 – 1603 **Comments and Discussion**

1630 – 1700 **Summary of Agreed Actions**

1930 – 2200 **Dinner with Head of Regional Cooperation East African Community, German Embassy, KFW Development bank Project Coordinator, GIZ representatives** [Arranged by EU Delegation]

Session 6: The Role of Hunting Operators in Combating Poaching

0900 – 0930 **Overview of Hunting Industry in Tanzania:**
Director of Wildlife Utilization and Business Services –DWUBS

0930 – 1000 **Tea/coffee break:** *[Video produced by Tanzanian Hunting Operators Association]*

1000 – 1100 **Contributions of Trophy Hunting Operators to Wildlife Conservation:**
Tanzania Hunting Operators Associations (TAHOA)

Session 7: Community involvement in Wildlife Conservation

1130 – 1300 **Status of Wildlife Management Areas in Tanzania**
: *Assistant Director General-TAWA*

1300 – 1400 **Lunch Break:** *All*

1400 – 1430 **The Role of Communities in Enhancing Wildlife Conservation: lessons learned from selected case studies:** ***Chief Executive- Authorised Associations Consortium-AAC***

1430 – 1500 **Amendment of the Wildlife Conservation (Wildlife Management Areas) Regulations to improve benefit sharing:** *Director of Legal Services*

Session 8: Elephant and Lion status, trends and threats

1500 – 1700 **Most recent lion and elephant surveys and census data & methodologies:** ***Presentation & Discussion Session with TAWIRI & TAWA representatives.***

1700 – 1730 **Summary of Agreed Actions / outstanding issues**

[redacted]

Session 9: Problem Animal Control

0900 – 1000 **Presentation on Human Wildlife Conflicts:** *PAC- Desk*

Session 10: High Profile Issues for CITES CoP17

1000 – 1130 **Presentation on important agenda items and proposal:** *CITES Desk*

Sessions 11: Observations, Actions and Way forward

1130 – 1230 **Presentation – feedback and observations by EU delegates**

1230 – 1330 **Summary of the agreed actions and areas of collaboration***: Facilitator*

1330 – 1400 **Closing remarks & end of formal programme :** *Director of Wildlife*

Session 12: Follow-up Action

1400 – 1530 **Detailed discussion regarding survey / census methodologies, and other species issues *with CITES MA and SA (TAWA and TAWIRI)* including: *Haliaeetus spilogaster*** and *Kinyongia spp.*

Sessions 13: Ageing Verification Scheme

1530 – 1730 **Visit to Ministry office in Dar es Salaam where examination of lion trophy skulls takes place.** ***Examination of Safari Hunting returned permits, photos and ageing scheme***

[redacted]

Session 14: Meetings at Umoja House, Dar es Salaam

1000 – 1100 **De-brief EU Head of Delegation**

1100 – 1230 **Meeting with Chief Ecologist for Ecotourism Safari Company (*Malcolm Ryen, Essential Destinations*)**

13:00 – 1530 Lunch meeting with Dr. Kaush Arha
(Former US Deputy Secretary of Interior for Fish, Wildlife & Parks, 2008-9 / special adviser to TZ government)

Annex 2

List of participants & contacts

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55	Mr	Mr. Shabani Kolahili	JUKUMU WMA-Chairman			

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APPLICANT:

MARK MURPHY

TANZANIA ELEPHANT CENSUS RESULTS

WCS NEWS RELEASE

WCS Response to Tanzania Elephant Census Results

JUNE 03, 2015

RESPONSE TO TANZANIA NATIONAL ELEPHANT CENSUS RESULTS

NEW YORK (June 2, 2015) – The Tanzanian Government on June 1st through the Ministry of Natural Resources and Tourism announced the results of the national elephant census that was conducted from May to November 2014. The census aimed to provide knowledge and understanding of the current status of elephant populations across Tanzania. The surveys were conducted as part of the Great Elephant Census®, a Paul G. Allen Project.

The census revealed some encouraging increases in elephant populations in the north of the country, notably the Serengeti and Tarangire National Parks. These areas benefit from high levels of protection and tourism, and the former has also experienced elephant immigration from Kenya. However, the countrywide census results reveal an estimate of **43,330** elephants, compared to the 2009 census showing **109,051**. This represents a loss of **65,721** elephants in 5 years (a 60.3 percent decline nationally).

A key elephant stronghold is the Ruaha-Rungwa ecosystem. The population in 2009 was **30,000** before declining to **20,090** in 2013 and further to only **8,272** estimated in 2014; a **76 percent** decline between 2009 and 2014.

These results bring into focus the extent of elephant poaching for the ivory trade, and how this continues to threaten the existence of elephants in Tanzania. The Tanzanian government has taken some positive steps and are greatly commended for revealing these troubling figures so openly.

The U.S. Government is providing political and financial support to a number of elephant range states, including Tanzania, in a bid to encourage greater elephant protection. At the end of 2014, just after this census was conducted, the Wildlife Conservation Society (WCS) signed a 5-year agreement with USAID aimed in part at contributing to the protection of elephants across the Ruaha-Katavi Landscape. Working with Tanzania National Parks (TANAPA), the Wildlife Division (WD), the Southern Tanzania Elephant Project (STEP) and other partners, a number of actions including aerial surveillance will be implemented in a bid to reverse the drastic declines recorded. It is hoped these activities can begin immediately.

In the Tarangire ecosystem WCS has been studying the elephant population for over 20 years. Here WCS has worked with communities to protect elephant dispersal areas and migration corridors, hired community game scouts to patrol outside the Park and provided anti-poaching vehicles. For many years the population of elephants in Tarangire NP has been among the fastest growing in Africa, a testament to how elephants can increase when provided with good protection.

Protecting Tanzania's elephants is a global responsibility and requires a global response. WCS is working with partners across the African continent to tackle the continuing ivory crisis.

###

Wildlife Conservation Society (WCS)

MISSION: WCS saves wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature. **VISION:** WCS envisions a world where wildlife thrives in healthy lands and seas, valued by societies that embrace and benefit from the diversity and integrity of life on earth. **To achieve our mission,** WCS, based at the Bronx Zoo, harnesses the power of its Global Conservation Program in more than 60 nations and in all the world's oceans and its five wildlife parks in New York City, visited by 4 million people annually. WCS combines its expertise in the field, zoos, and aquarium to achieve its conservation mission. Visit: www.wcs.org; http://www.facebook.com/TheWCS; http://www.youtube.com/user/WCSMedia Follow: @thewcs.

96 Elephants

WCS is leading global efforts to save Africa's elephants and end the current poaching and ivory trafficking crisis. In 2013, WCS launched its 96 Elephants campaign to bring together world citizens, partners, thought leaders, and change makers to leverage collective influence to stop the killing, stop the trafficking, and stop the demand. The campaign, which has partners from around the world including 125 U.S. zoos, focuses on: securing effective moratoria on sales of ivory; bolstering elephant protection; and educating the public about the link between ivory consumption and the elephant poaching crisis. www.96elephants.org

About the Great Elephant Census: Flying over more than 18 countries and involving more than 50 scientists, covering thousands of transects and more than 600,000 km in 2014 and 2015, the Great Elephant Census is the most comprehensive project of its kind to form an essential baseline for future African elephant conservation efforts. Because of the remoteness of many wildlife areas in Africa, aerial counts continue to be an important tool for wildlife management and one of the most impactful ways we can drive conservation efforts for species like the elephant. Paul G. Allen has partnered with Elephants Without Borders and other organizations to conduct the Great Elephant Census, an urgently needed and bold undertaking.

Media Contacts

CATEGORIES

Global Conservation, Africa, Tanzania, Species, Protect, Elephants, Wildlife Managment

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2300 Southern Boulevard Bronx, New York 10460 (718) 220-5100

APPLICANT:

MARK MURPHY

THE BENEFITS OF LICENSED, REGULATED HUNTING IN TANZANIA

$9.83 million

$6.7 million

spent on anti-poaching by 27 safari hunting operators 2013-2015

$3.13 million

spent on community support by 27 safari hunting operators 2013-2015

THE BENEFITS OF LICENSED, REGULATED HUNTING IN TANZANIA

7,170 patrol days (over 19.6 years of anti-poaching patrols) + Helicopters, planes, and boats hired or purchased + 6,223 snares/gin traps collected • 1,557 rounds of ammunition collected + 1,409 poachers arrested + 1,118 knives, machetes, spears, bows, and other weapons collected + 670 bicycles + 216 fishing nets + 171 firearms + 65 canoes + 34 vehicles seized + more

24 classrooms built (two-thirds of a classroom/month for three years) + hundreds of wheelchairs donated + monthly mobile immunization clinics + networks of Village Health Workers + 1,575 eye ailments treated (~1.4 per day for three years) + $337,000 spent on education + $231,000 spent on direct incentives ($211/day distributed, over three years, in a country where over 40% of the population lives on less than $1.25 per day) + support for football clubs, community meetings, literacy + 1,241 jobs + more

Learn More

Licensed, regulated hunting in Tanzania provides secure habitats for lion and their prey base and secure livelihoods for humans living with lion.

Find out more: www.conservationforce.org/news-updates-alerts.

SHORT SUMMARY OF OPERATOR ENHANCEMENT REPORTS

Twenty-seven safari hunting operators, owned and marketed by thirteen parent companies and together protecting over 121,423 km in Tanzania, provided data to Conservation Force describing their contributions to anti-poaching, community assistance, habitat protection, wildlife monitoring, and more. In the 2013-2015 period, their contributions to anti-poaching, community assistance, and habitat protection alone topped $9.8 million. That $9.8 million in conservation spending is over and above any government fees, and has largely been unaccounted for and overlooked by the U.S. Fish and Wildlife Service, the media, and the general public. Yet that funding represents obvious "enhancement" (benefits) supporting the African lion in the wild.

These contributions are immense, but they are still under-representative. Not all safari hunting operators provided data to Conservation Force. For example, the well-documented anti-poaching program of the Friedkin Conservation Fund is not included in that $9.8 million. Conservation Force also discovered that U.S. hunting clubs have funded over $1 million in lion research since 2010. Taken together, and supported by over 2,700 pages of source documents, it has become clear that licensed, regulated hunting in Tanzania pays for most lion conservation in that country.

This short summary highlights the primary findings of Conservation Force's study, which focused on the past three years (2013-2015).

CONTRIBUTIONS TO ANTI-POACHING

All 27 hunting operators deploy anti-poaching units in their concessions. Their teams are accompanied by at least one government game scout with the authority to arrest, whose salary is paid by the operator. All operators surveyed maintain **year-round** anti-poaching patrols. Eleven operators maintain specific patrol records and recorded **7,170 patrol days**, representing **19.6 years** of anti-poaching patrols. These 11 operators reported the arrests or seizures listed below.

Arrests or Seizures

6,223 snares and gin traps

1,409 poachers

1,557 ammunition rounds

670 bicycles and 24 vehicles

1,118 knives, spears, weapons

216 fishing nets and 65 canoes

171 firearms

Operators fund these anti-poaching patrols primarily from hunting revenues and secondarily from client contributions. Anti-poaching expenses include: scout salaries and bonuses, and rewards for informants in the villages; vehicles (Land Cruisers, motorcycles, boats, custom anti-poaching vehicles, aircraft purchase or rental, etc.), fuel, and maintenance; cell or satellite phones and high frequency radios; uniforms; firearms and ammunition; tents and rations; road opening and maintenance; and support and equipment for government anti-poaching units. Examples of support for government scouts include a $31,500.00 equipment donation in 2015 to the Maswa and Selous Game Reserves, donation of 7,000 liters of diesel (over $9,000.00 value) to the Rungwa and Kizigo Game Reserves, and construction of a bridge costing over $4,800 to improve access to the Makawasa Game Post.

The 27 safari hunting operators spent

$6,717,160.65

for anti-poaching and road opening.

The sample operators also paid **$24,712,029.00** in government fees. These fund the Tanzania Wildlife Division's operating budget and are the primary funding for the Tanzania Wildlife Protection Fund and the new Tanzania Wildlife Authority. They support approximately 80% of ordinary government anti-poaching. These funds are usually "accounted for" in government reporting, unlike the operators' other anti-poaching spending, which is encouraged by but in addition to government requirements.

CONTRIBUTIONS TO COMMUNITY SUPPORT

The sample operators enforce wildlife laws through their anti-poaching patrols, but prefer to incentivize compliance with wildlife regulations and appreciation for wildlife as an asset through community benefits, employment, and education. The 27 operators focused their efforts in education, healthcare, village life, and food and water security, among other things.

The 27 safari hunting operators spent

$3,125,830.00

on community investment and support.

Community Support Examples

Education
$337,764

Examples: Constructing 24 classrooms, 3 teachers' homes, 3 school latrines, 2 libraries, 2 school labs, and 1 school kitchen, and equipping the same; funding $62,278.00 in school fees…

Healthcare
$254,238

Examples: Constructing 2 clinics and 2 dispensaries; conducting monthly vaccine clinics; installing solar power in a maternity ward; treating 1,575 eye ailments; providing hundreds of wheelchairs…

Village Benefits
$158,239+

Examples: Constructing 6 government offices; funding community celebrations; funding football clubs; installing solar panels for village homes and offices; delivering iron roofing…

The sample operators installed or rehabilitated water infrastructure and provided thousands of gallons of water during the worst of the drought. In addition, to enhance rural food supplies, most of the reporting operators have company policies by which they share large percentages of harvested game meat with local villages. In addition, at least six of the sample operators share hunting revenues directly with local villages. These six shared **$231,712.00** in cash incentives, which link hunting offtakes directly with community welfare and encourage rural residents to value dangerous game animals. In addition, at least 10 of the sample operators have agreements with the communities surrounding and within their concessions, which deter retaliatory lion killings by compensating community members for livestock killed by lion and other predators.

The operators reported **1,241** permanent jobs and **250-450** seasonal jobs, most of which are staffed by local residents.

CONTRIBUTIONS TO HABITAT PROTECTION

The operators' teams patrol against timber poaching and cattle encroachment in addition to meat and fish poaching. Eighteen operators recorded their timber and cattle seizures: **14,687** planks, **115** logs, **97** saws and chainsaws, and **six** trucks loaded with planks, as well as over **Tsh 231,760,000.00** in cattle fines and removal of **74,712** head of cattle from their concessions. By combatting threats to the concessions, which buffer the national parks, the operators protect the parks themselves. Examples of additional habitat support include drilling boreholes and constructing dams to increase wildlife access to water, and drilling boreholes to provide water outside the concession for Masai community use and decrease human-wildlife conflicts.

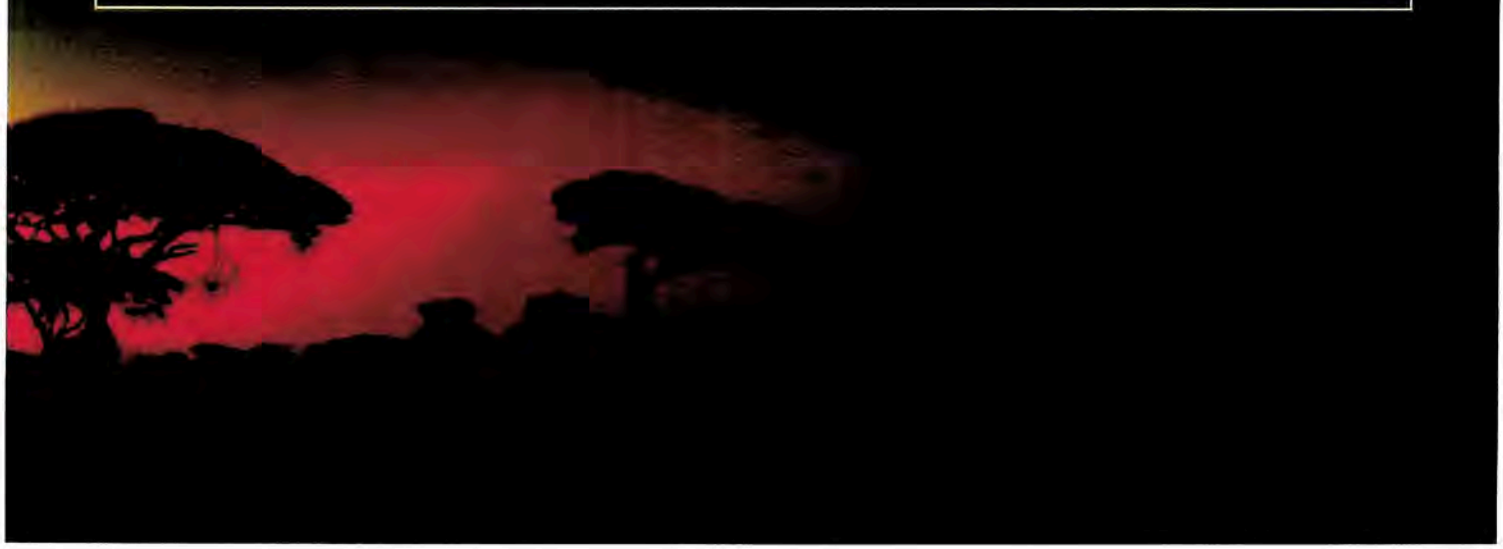
Habitat Seizures Examples

14,687 planks | **Tsh 231.8 million in cattle fines** | **74,712 head of cattle**

Learn More

Licensed, regulated hunting in Tanzania provides secure habitats for lion and their prey base and secure livelihoods for humans living with lion.

Find out more: www.conservationforce.org/news-updates-alerts.



APPLICANT:

BLAZE BARTLING

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

Blaze Bartling (b) (6) [redacted], Marietta, Oklahoma 73448

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta africana, African elephant

b. Sex (if known).

male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Matetsi Safari Area - Unit 3, Matabeleland North, Zimbabwe. Victoria Falls- city

b. Date wildlife was hunted:

November 25th, 2020

c. Approximate age of animal:

50 years of age

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Vexford Safaris - P.H. Fidelis Muchenje

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Matabeleland Taxidermist - 16 Birmingham Rd, Belmont, Bulawayo, Zimbabwe

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

   See provided hunting permits

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Freight Consultants
Address:	3 Trojan St., Belmont
City:	Bulawayo
State/Province:	Zimbabwe
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.

    See attached

11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Fidelis Muchenje
E-mail:	vexfordsafari@gmail.com
Phone number:	+263 (0) 773 068 498

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**).

    Applicant's signature: _____ Date: _____

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from the list of designated ports. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

BLAZE BARTLING

HUNTING PERMITS

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000083064
PRE_ACQUITTED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Vexford Investments (Pvt) Ltd	**Client's Full Name**	Bartling Blaze William
ZTA (HOP) No.	HOP0305	**Passport Number**	(b) (6)
		Country of Issue	UNITED STATES
Address	Plot 1 Tarquinnia farm Karoi vexfordsafari@gmail.com	**Address**	(b) (6) Marietta Oklahoma 73448 USA
Name of Professional Hunter	FIDELIS MUCHENJE	**Licence No.**	197
Telephone		**Fax**	0
Number of Accompanying Guests		0	
Are the trophies being exported after tanning and mounting?		No	
Are the trophies being exported after primary treatment?		No	
Name of Processing Agent or Taxidermist	MATABELELAND TAXIDERMIST	**Address**	16 BIRMINGHAM RD BELMONT BULAWAYO
Name of Shipping Agent	FREIGHT CONSULTANTS	**Address**	3 TROJAN STREET BELMONT, BULAWAYO
Name of Foreign Agent		**Address**	

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1	Matetsi Safari Area - Unit 3	Matabeleland North	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Date of Safari From	22-11-2020
Date of Safari To	08-12-2020
Daily Rate Charged For Big Game USD	350.00
Daily Rate Charged For Plains Game USD	350.00
Daily Rate Charged for Non hunting guests USD	.00
Number of Accompanying Guests	0

ZPWMA
Date Stamp

3. DETAILS OF DEPOSITS

(All inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1	12-JAN-2021	DMS/1298	29-JAN-2021	USD	30,895	30,895
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate	5,950.00	**Total Guests rate**	.00
Less Commission	.00	**Total Trophy fees**	24,945.00
Other fees (incidentals)	.00	**Grand Total USD**	30,895.00
Percentage Commission Charged	.00	**Total Processing Fees**	.00

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	W/K	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	0380906 7951332	26-NOV-2020	49.4	80
2	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	0382375 7949704	29-NOV-2020	49.3	80
3	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	0383284 7952001	27-NOV-2020	51.8	80
4	IMPALA	M	Killed	Matetsi Safari Area - Unit 3	0381959 7943228	29-NOV-2020	49.4	80
5	ZEBRA	M	Killed	Matetsi Safari Area - Unit 3	0783475 795466	07-DEC-2020		550
6	ZEBRA	M	Killed	Matetsi Safari Area - Unit 3	0380906 7951332	26-NOV-2020		550
7	BUFFALO	M	Killed	Matetsi Safari Area - Unit 3	0382911 7149800	22-NOV-2020	98.10	3,500
8	LEOPARD	M	Killed	Matetsi Safari Area - Unit 3	038354 7950617	07-DEC-2020	13.74	2,500
9	GIRAFFE	M	Killed	Matetsi Safari Area - Unit 3	0383754 7950617	22-NOV-2020		850
10	LION	M	Killed	Matetsi Safari Area - Unit 3	0383754 7950617	24-NOV-2020	23.94	5,000
11	KUDU	M	Wounded	Matetsi Safari Area - Unit 3	0376414 7955812	28-NOV-2020		600
12	ELEPHANT - WITH TUSKS	M	Killed	Matetsi Safari Area - Unit 3	0374697 7949826	25-NOV-2020		11,000
13	JACKAL	M	Killed	Matetsi Safari Area - Unit 3	0385887 7952993	28-NOV-2020		75
14								
15								
16								
17								
18								
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22								
23								
24								
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26								
27								
28								
29								
30								

I .....hereby certify that the information given in this return is, to the best of my knowledge, true and correct.

Signature of Foreign Client _____ Date _____

Signature of Professional Hunter _____ Date _____

Signature of Safari Operator _____ Date _____

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
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February 2, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Attn: Amy Brisendine
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803

Applicant: **Blaze Bartling**
RE: **Import Permit Application for an elephant from Zimbabwe**

Ms. Brisendine,

Enclosed you will find an import permit application for a sport-hunted elephant trophy for Mr. Blaze Bartling, who hunted in the Matetsi Safari area - Unit 3 region of Zimbabwe. Mr. Bartling took his Elephant on November 25th, 2020 with Vexford Investments (Pvt) Ltd. and Professional Hunter Fedelis Muchenje.

The Matetsi Safari area is situated in North Western Zimbabwe in the region of Matabeleland North, close to the famous Victoria Falls. Matetsi Unit 3 is located in the prime location which forms the corner bounded in the South by Hwange National Park, West by the Zimbabwe/ Botswana International border, the north by Matetsi Unit 2 and the East by Matetsi 5 (see the map we have provided). According to the Zimbabwe Elephant Management Plan, the Elephant range in Northwest Matabeleland covers an area of approximately 25,000 km^2 and includes national parks, safari areas, forest areas, commercial farmland, and communal land. The area has about 54,000 elephants, a major portion of those found in Hwange National Park. At the onset of the rains some elephants disperse from Zimbabwe into Botswana resulting in a shared population between the two countries.

In the operator enhancement report provided, you will find that the elephant population in Matetsi Unit 3 is dense. There are no communities in Matetsi due to its proximity to Hwange National Park and other Safari and Forest areas. This is good for the human-wildlife conflict in Zimbabwe as such large numbers of elephants inhabit the area. In the regional elephant management plan for Northwest Matabeleland they have identified that having highly trained rapid response anti-poaching units must be established in order to protect the elephant population. Vexford Investments works with 23 National Park Rangers that are dedicated to law enforcement and anti-poaching initiatives. Vexford has provided vehicles, fuel, and other equipment to these park rangers to support the anti-poaching endeavors. In addition, the ZPWMA has an office in the Matetsi safari area that is involved in measuring, monitoring, and analyzing trophy quality and

offtakes of all hunted animals. This is done to ensure that Safari hunting does not substantially alter natural selection or ecosystem processes. This type of science-based, managed, and regulated hunting has contributed to a flourishing but appropriate number of elephants for the area.

Mr. Bartling paid $30,000 in trophy fees alone for this trip. $11,000 was for just the elephant hunt. Hunting is able to generate revenues under a wider range of scenarios than eco-tourism, including in the remote areas lacking infra-structure, attractive scenery, or high densities of viewable wildlife. If Safari hunting were banned, "Consequently, elephant and other wildlife populations will be negatively affected through reduced conservation efforts arising from low funding and reduced goodwill from the communities, when in reality the elephant has the economic potential to raise adequate funds to support itself and other species" according to the Zimbabwe Elephant Management Plan (12).

ZimParks is in the process of revising is 2015-2020 National Elephant Management Plan with the financial help of the Safari hunting community and Conservation Force.

Please refer to the documents and responses included and previously submitted to the DMA by Conservation Force, Zimbabwe's wildlife authorities, professional hunters, and Safari operators when making an enhancement decision for this application.

Please contact me if you have any questions.

Sincerely,

Aimee Korver

Aimee F. Korver
Permits Paralegal – Conservation Force

Enclosed:

a. USFWS Import permit application for an elephant trophy
b. Notice of Representation
c. Hunting Permits
d. Operator Enhancement Report – Vexford Investments
e. Zimbabwe National Elephant Management Plan
f. Zimbabwe Elephant Management short fact sheet

CC: Blaze Bartling w/ enclosures

APPLICANT:

BLAZE BARTLING

NOTICE OF REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed ELEPHANT Trophy from ZIMBABWE.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

SIGNATURE

(b) (6)

PRINT FULL NAME

DATE 4/5/21

APPLICANT:

BLAZE BARTLING

OPERATOR ENHANCEMENT REPORT

ANNEX I OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: _Vexford Safaris_____
b. Years in business: _____11_____
c. Name of company conducting hunt: ____Vexford Safaris_____
d. Country: _____Zimbabwe_____ Concession

a. Name of Concession: _____Matetsi Unit 3_____
b. Area in km^2: _____355_____
c. Land tenure:
   _x___ Government Lease
   ____ Community
   ____ Private Ranch
   ____ Private Conservancy
d. Length of concession agreement:_____10 years_____
e. Can the concession be renewed? _____Yes_____
f. Length of renewal, if applicable: ____5_____
g. Estimated trophy fees: _____$350 000_____
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: _____No_____
i. Provide concession location and nearest city: ___ Matetsi Safari Area and _Victoria Falls Town_____
j. Please attach a map or maps with marked boundaries and nearest city
k. If the concession borders a National Park, provide park name: __Hwange National Park_____
l. Describe general and distinctive habitat/water features:

Matetsi Unit 3 is dominated by open Mopane woodland on basalt soils, stands of teak woodland on Kalahari sand, Combretum, mixed miombo and open savanna grassland. The area has numerous natural semi-permanent water sources for wildlife in the form of rivers springs and wet-grassland. These are supplanted by artificial pumped water from solar powered boreholes

Communities in the Concession

a. Are there any communities living in the concession? Yes____ No __x__
b. If so, estimated number of people/villages in the concession: _____
c. Are there communities bordering this concession? Yes ____ No ____
d. If so, estimated number of peoples/villages around the concession: _____n/a_____

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant	Dense	330	x	Aerial counts
Lion	Average	40	X	Camera Trap survey and Spoor
Prey Species (if applicable)				
Other: _____				

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____10_____
b. Total employment in the off-season:__5_____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	3	2	Nil
Trackers	6	6	2
Anti-poaching Scouts/Rangers	n/a		
Other Anti-poaching	n/a		
Cooks/Housekeepers	2	2	1
Community Coordinators			
Managers	1	1	1
Biologists			
Others: _____			

Anti-Poaching Efforts

a. Number of anti-poaching staff: _____23 National Parks Rangers dedicated for law enforcement_____
b. Are patrols conducted during the hunting season, off-season, or both? __Both_____
c. Months patrols are conducted: _____Right through the year_____
d. Number of patrols per month: _____ 270 Extended patrols and 30 local patrols with ad hoc Strategic patrols _____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: ____Nil, ZimParks handles the responsiblity_____
f. Description of anti-poaching equipment, vehicles, gear, etc. __4x4 Vehicle for Ranger deployments

_____
_____
_____

g. Do government-sponsored game scouts conduct patrols? _____Yes_____
h. If so, do they have the ability to arrest? _____Yes_____
i. Do you offer rewards to poaching informants leading to arrest? Yes x____ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes_x___ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (__2018___) Spending	Year 2 (__2019___) Spending	Year 3 (_2020____) Spending	Remarks
Scout Salaries				
Equipment				
Vehicles	$20 000	$15 000		
Fuel	$1000	$1 500		
Rewards				
Others:_____	$1500	$2 500	$1000	
Totals				

l. What currency are the expenditures given in? _____USD_____

Anti-Poaching Results

Type	Year 1 (__2018__)	Year 2 (__2019_)	Year 3 (_2020__)	Remarks
Poaching Incidents Discovered		1	1	
Elephant Carcasses Observed			-	
Lion Carcasses Observed			-	
Leopard Carcasses Observed			-	
Ivory Poachers Observed			-	
Bush Meat Poachers Observed			-	
Illegal Logging Observed			2	
Other Poachers Observed			-	
Poachers Convicted			-	
Snares/Traps Collected			-	
Firearms Confiscated			-	
Vehicles Confiscated			-	
Bicycles Confiscated			-	
Boats/Nets Confiscated			-	
Tusks Recovered			1	
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes __x__ No ____

b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? _____arbitrary basis_____

c. Does the company provide game meat to nearby communities? Yes _x___ No ____

d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: _: Around $ 15 000. The meat distribution is done through community leaders who have registers of the inhabitants. Settlement areas are allocated meat on a rotational basis

_____

e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. _____

_____ This is mainly the task of ZimParks

_____

f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks
Elephant					
Lion					
Leopard					
Other: _____					

g. What currency are the expenditures reported in? _____

h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (__2018__)	Spending, Year 2 (__2019__)	Spending, Year 3 (_2020___)	Remarks
Education (classrooms, offices)	1500	3000		
Education (supplies, fees)				
Health (clinics, offices)				
Health (equipment, salaries)				
Product/Service	**Spending, Year 1 (_2018___)**	**Spending, Year 2 (_2019___)**	**Spending, Year 3 (__2020__)**	**Remarks**
Community Scout Salaries				
Community Anti-Poaching				
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded	1500	2500		
Construction Materials Donated				
Other: _____				
Other: _____				

TOTALS	$3 000	$5 500		

i. What currency are the expenditures reported in? _____

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	**Lion**	**All Species**
Number of U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (2):
	Year 2 (____):	Year 2 (____):	Year 2 (26):
	Year 3 (____):	Year 3 (____):	Year 3 (9):
Percentage of U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (16%):
	Year 2 (____):	Year 2 (____):	Year 2 (65%):
	Year 3 (____):	Year 3 (____):	Year 3 (42.8%):
Trophy Fees Paid by U.S. Clients	Year 1 (____):	Year 1 (____):	Year 1 (_$240 000___):
	Year 2 (____):	Year 2 (____):	Year 2 (_$200 000___):
	Year 3 (____):	Year 3 (____):	Year 3 (__$180 000__):

b. Approximate amount/percentage of company's revenue from U.S. clientele: _____90 %_____

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):
Bush-craft, Firearm handling and Ballistics, and Ethical hunting standards as well as experience of taking down the big and dangerous game _____
_____

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): _____
_____

c. Are there hunt return forms that must be reported to officials? If so, please include a copuy of these forms or confirmation of their receipt for the past 3 years.

d.

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology if available):

Sex and trophy requirements for hunted animals

- Old non-breeding male individuals are taken off as trophy animals
- No female lions are hunted or taken as trophy animals

Methodology for Lions and leopards age/sex requirements

Photographs of a hunted trophy animal are taken from different angles of the animal body for later age and trophy quality determination (See attached Leopard and Lion Hunt Return Form)

POINTS SYSTEM FOR ADAPTIVELY MANAGING LION QUOTAS IN ZIMBABWE

The points system used to adaptively manage lion quotas has been developed following similar systems that have been implemented in countries such as Tanzania and northern Mozambique. The lion quotas are set per the age of the lions harvested during the previous hunting season. This adaptive quota management system for lion hunting based on the ages of lions hunted was agreed on in July 2013 in Harare, Zimbabwe, during a meeting hosted Non-Detrimental and Enhancement Finding: Conservation and Management of Lion by the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) and an independent non-governmental conservation organization. The approach adopted by Zimbabwe re cognizes four as opposed to three key age categories as shown in the example below:

Lions are aged by triangulating multiple different aging characteristics, including:

- The degree of facial scarring;
- The teeth colour and degree of wear;
- The mane development (particularly regarding the shape around the ear and the mohawk);
- Through post mortem analysis of the width of the pulp cavity of the second premolar (which becomes narrower with age).

c. Are there hunt return forms that must be reported to officials? If so, please include a copy of these forms or confirmation of their receipt for the past 3 years.

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

Hunting in Zimbabwe Matetsi Safari Area is strictly regulated and monitored in line with national hunting laws, regulations and ethics. All hunting activity are monitored to verify that quotas and sex/age restrictions of harvested animals are being met.

The legal and regulation framework applicable to the hunting, conservation and protection of all species includes:

- Parks and Wildlife Act; Chapter 20:14 (1996) as amended in 2001.
- Environmental Management Act; Chapter 20:27.
- Forest Act; Chapter 19:05.
- Statutory Instrument 362 of 1990: Parks and Wildlife (General) Regulations, 1990.
- Statutory Instrument 76 of 1998: Import and Export of Wildlife Products.
- Statutory Instrument 40 of 1994: Parks and Wildlife Act (General) Amendments.
- Statutory Instrument 26 of 1998: Parks & Wildlife Act (General) Amendment.
- Statutory Instrument 92 of 2009: Compensation Values for Wildlife.
- Statutory Instrument 93 of 2009: Compensation Values for Trapping of Animals.
- Trapping of Animals Control Act 20.16.

Further conservation strategies for individual and groups of similar species are available to guide conservation of species of conservation concern. These include the Lion Conservation strategy of 2006 and the National Elephant management Plan (2015-2020) which is reviewed every five years.

Maintenance of the concession

Law enforcement

Local, mobile (vehicle), extended and strategic patrols are conducted by ZPWMA rangers. The rangers use of Spatial Monitoring Reporting Tool (SMART) technology to collect and capture and produce reports on law enforcement

activities which enhances effectiveness and coverage of all concession area. Ranger support in the form of vehicle for deployment enhances timeous response to incursions across the concession which significantly reduce illegal offtake by poachers.

The concession undertakes fire management activities to: manage fuel load, improve habitat heterogeneity, control parasites and stimulate forage production and suppress unplanned veld fires during the dry season. Fire breaks along concession boundaries are carried out by ZPWMA in conjunction with the concession. The concession has an annual target of 50km2 of early block burning, minimum of 50km target of road grading and fire breaks.

Game water management is also a critical are of management given the high elephant numbers. Supplementary artificial game water is provided by means of solar power during the dry season. Care is taken to prevent the unplanned game water provisioning through guidance from Area Ecologist in order to maintain area integrity through limiting impact of high elephant densities during the drought months from surrounding protected area network (parks and forest estates). Veterinary matters such as diseases outbreak are managed and monitored by the ZPWMA Area Veterinary Doctor in conjunction with private wildlife veterinary institutions.

Research

Research in fire and habitat management, animal's survey is done by Area Ecologist and external researchers. The ZPWMA office at Matetsi Safari Area is involved in measuring, monitoring and analyzing trophy quality and offtakes of all hunted animals. This is done to ensure that Safari hunting does not substantially alter natural selection or ecosystem processes. The limited quota, as further limited by age restrictions, ensures that hunting offtakes do not negatively affect natural processes. This age-based policy for lions (Panthera leo) and Panthera pardus (leopard) was adopted in part to mitigate any social or population impacts from limited safari hunting.

Community involvement and out reach

The company support community involvement and outreach initiatives which are spear headed by ZPWMA through its Interpretation and Education Officers. This is done throughout the year. Awareness involve human wildlife conflict mitigation measures as well as co-existence, veld fire effects and management and zoonotic diseases.

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct.

X _____

Sign Name and Date

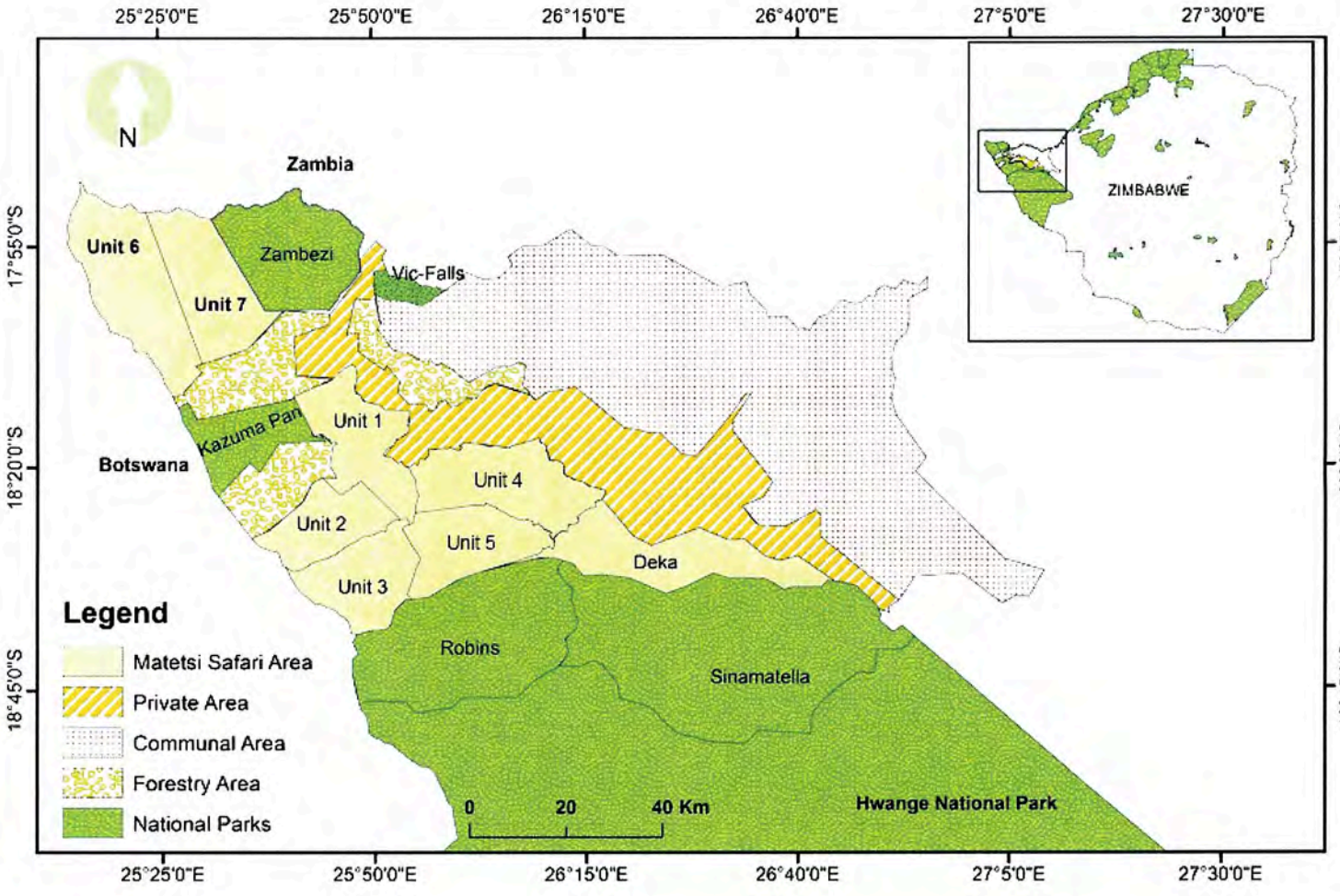
X _____

Print Name and Title

APPLICANT:

BLAZE BARTLING

MAP OF HUNT AREA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18°20'0"S
18°45'0"S
N
Zambia
Botswana
Unit 6
Unit 7
Zambezi
Vic-Falls
Kazuma Pan
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Deka
Robins
Sinamatella
Hwange National Park
ZIMBABWE
Legend
Matetsi Safari Area
Private Area
Communal Area
Forestry Area
National Parks
0
20
40 Km

APPLICANT:

BLAZE BARTLING

ZIMBABWE ELEPHANT MANAGEMENT SHORT FACT SHEET

SHORT FACT SHEET—ZIMBABWE ELEPHANT MANAGEMENT (updated May 2018)

- Zimbabwe maintains the second-largest elephant population in the world, which has grown from under 5,000 in 1900 to over 83,000 today. It is larger than the elephant populations of West and Central Africa combined. It is almost the same size as the populations of all of Eastern Africa.

Region / Country	Estimated Elephant Population (2016 Report)[1]
West Africa	11,489
Central Africa	24,119
Southern Africa - Zimbabwe alone -	293,447 - 82,630 -
Eastern Africa	86,373

- Zimbabwe's elephant population is almost 20% larger than in 1997, when it was downlisted to Appendix II of the Convention on International Trade in Endangered Species (CITES) and the FWS first made a positive enhancement finding to allow the import of elephant trophies.[2] Zimbabwe's elephant population is stable over the last 15 years, despite rapid growth of the country's human population, which increased by 24.33% between 2000 and 2016.[3]

- Hunting offtakes are a fraction of a percent and have no biological impact on the overall elephant population (i.e., do not cause population declines). Average annual offtakes between 2010-2013 were 0.276% of the total population. Moreover, hunters target older bull elephant that have already reproduced and spread their genes. Removal of older bulls tends to increase population growth rates.[4]

- Zimbabwe's wildlife authority, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA), is a "parastatal." It is separate and largely funded separately from the Central

[1] Within a 95% confidence limit, without the plus/minus interval, and without "Informed Guesses." IUCN African Elephant Specialist Group, African Elephant Status Report (2016), https://www.iucn.org/ssc-groups/mammals/african-elephant-specialist-group.

[2] This annotation is for "the exclusive purposes of allowing ... trade in hunting trophies," among other things. Zimbabwe's elephant population has grown from 66,000 to approximately 83,000. See Zimbabwe's downlisting proposal, https://www.cites.org/sites/default/files/eng/cop/10/prop/E-CoP10-P-27.pdf.

[3] Zimbabwe's population has grown from 12.22 million in 2000 to 16.15 million in 2016. World Bank, https://data.worldbank.org/country/zimbabwe?view=chart.

[4] ZPWMA (April 2014, July 2015); R.B Martin, Background Study (Apr. 2005).

government. ZPWMA was not disrupted by the 2017 Presidential transition. President Mnangagwa has confirmed that ZPWMA is proceeding with "business as usual."[5]

- Hunting areas in Zimbabwe are over three times the size of the national parks. The elephant habitat includes approximately 27,000 km^2 in National Parks, 18,900 km^2 in Safari Areas, over 50,000 km^2 in Communal (CAMPFIRE) Areas, and 7,000 km^2 in private conservancies.[6] Communal (CAMPFIRE) Areas (90%) and private conservancies are almost wholly funded by hunting revenues, which justify the dedication of this space to nature in place of alternative uses like livestock.

- Hunting fees make up a significant portion of ZPWMA's revenues. Trophy and concession fees generated almost $5.1 million for ZPWMA in 2014. Over half of these fees were paid by U.S. clients. Approximately 80% of ZPWMA's revenues are allocated for law enforcement. Put simply, hunting revenues from U.S. hunters pay for most of the anti-poaching across Zimbabwe's elephant range. And the FWS suspension of elephant trophy imports reduced ZPWMA's revenues by almost 14% in 2014 compared to 2013. The suspension has reduced the revenues available for ZPWMA (as well as CAMPFIRE communities and individual operators) to combat poaching.[7]

- Poaching in Zimbabwe has generally been kept under control so as not to have a national effect. Hunting operators support this successful control of poaching by funding their own patrol teams, paying salaries for community scouts, and assisting ZPWMA with equipment, rations, petrol, and other needs. Hunting operators are the first line of defense against poaching. For example, a sample of 15 operators spent approximately $1.32 million in 2015 to protect an area exceeding 28,000 km^2.[8] One operator, Charlton McCallum Safaris in the Dande/ Mbire areas, spends an average of $85,000/year on anti-poaching. From 2010 to 2016, their efforts led to an 80% decline in elephant poaching in an important border region.[9]

---

[5] ZPWMA Website, http://zimparks.org/about-zimparks/; see also news reports of the transition in Zimbabwe, e.g., http://www.thezimbabwemail.com/main/mnangagwa-swears-new-cabinet/; https://citizen.co.za/news/news-africa/1746240/mnangagwa-names-new-zimbabwean-cabinet/.

[6] UN Protected Planet, https://protectedplanet.net; CAMPFIRE Association of Zimbabwe Press Statement (November 2017), http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1. Elephant habitat in Zimbabwe also includes over 10,000 km^2 in Forest Areas managed by the parastatal Forestry Commission.

[7] Note that hunting and concession fees are considerably higher than this, but because of the grant of "appropriate authority," hunting fees accrue to the landholder on communal and private land, not to ZPWMA. "Appropriate authority" incentivizes landholders to maintain and increase wildlife populations because they retain the benefits of the sustainable use. ZPWMA (April 2014, July 2015).

[8] ZPWMA (October 2016).

[9] Dande Anti-Poaching Unit Website, http://dapuzim.com/.

- Regulated hunting also reduces poaching by incentivizing greater tolerance among the rural communities who live side-by-side with dangerous game species. Hunting provides most of the revenue in CAMPFIRE Areas and averaged $2.2 million/year prior to the FWS suspension of elephant trophy imports. Elephant hunting alone generated approximately $1.6 million per year (65-70% of the total on average). Most elephant are hunted in CAMPFIRE Areas (55 compared 49 in government areas in 2014).[10]

- Revenues from regulated hunting are invested in game monitoring and community projects such as boreholes, classrooms and clinics, food purchases, and other livelihood improvements for Zimbabwe's rural poor. Approximately 200,000 families directly and another 600,000 indirectly benefit from CAMPFIRE revenues. Because of these benefits, poaching and problem animal control are low in CAMPFIRE Areas. This tolerance exists even though elephant destroyed over 7,000 hectares of crops and claimed the lives of approximately 50 people in CAMPFIRE communities between 2010 and 2015.[11]

- There is no evidence that ivory poaching—in Zimbabwe or anywhere else—is tied to terrorism, and that claim has been debunked by credible research, although it is often repeated in popular media.[12] In any event, regulated hunting reduces the poaching: in the Southern African countries that depend upon regulated hunting as a conservation tool (including Zimbabwe), poaching levels are the lowest in Africa. According to CITES' Monitoring the Illegal Killing of Elephants (MIKE) data, Southern African countries have the lowest Proportion of Illegally Killed Elephant (PIKE). PIKE is used to assess whether poaching levels are unsustainable. It has never risen above the sustainability threshold in Southern Africa, even in 2011, when the recent poaching crisis was at its highest level. PIKE has declined in Zimbabwe's MIKE sites since 2011.[13]

- Zimbabwe's National Elephant Management Plan (2015-2020) is the most up-to-date plan in Africa. Responding to the FWS' concerns, this new plan identifies specific action items, outputs, and Key Performance Indicators to measure the success of plan implementation. The national plan is supplemented by four regional action plans with the same framework to address the unique challenges of each range.

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[10] ZPWMA (July 2015).

[11] CAMPFIRE Association Press Statement, http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1; CAMPFIRE Association (April 2014).

[12] This research is available at: https://rusi.org/sites/default/files/201509_an_illusion_of_complicity_0.pdf; see also https://www.nytimes.com/2015/10/30/opinion/the-ivory-funded-terrorism-myth.html.

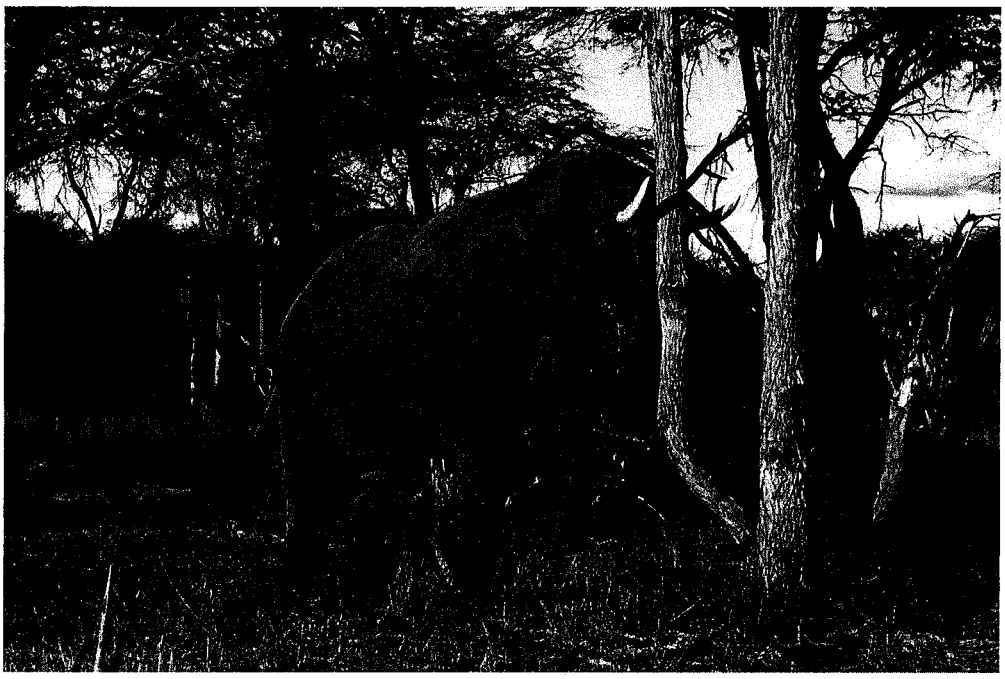
[13] CITES/MIKE Website, https://www.cites.org/eng/prog/mike/data_and_reports.

APPLICANT:

BLAZE BARTLING

ZIMBABWE NATIONAL ELEPHANT MANAGEMENT PLAN (2015-2020)

ZIMBABWE NATIONAL ELEPHANT MANAGEMENT PLAN (2015-2020)



Zimbabwe Parks and Wildlife Management Authority

FOREWORD BY THE MINISTER

The Government of Zimbabwe considers elephants as an important part of our national heritage, a keystone species ecologically, and a valuable natural resource that contributes to conservation and rural development. We presently have, here in Zimbabwe, the second largest elephant population on the African continent and both a national and international responsibility to protect and manage our elephant population responsibly for the benefit of our people and those beyond our borders.

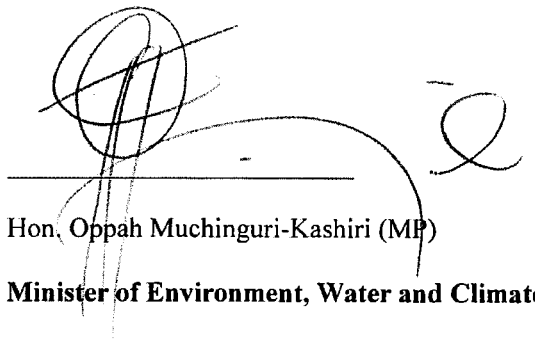
The 2014 National Elephant Aerial Survey provided an estimate of 82,000 elephants in the country. There are probably a further thousand elephants in small populations that were not surveyed. The country's elephants are dispersed in four populations. In two of these populations in the Zambezi Valley there was marked decline in numbers, mostly as result of illegal killing of elephants. Other countries have faced even more serious losses as a result of poaching, and so we have succeeded to a point. We as a country, in cooperation with the international community, need to strengthen our ability to protect and effectively manage our elephant populations to achieve our vision:

> *To conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage.*

In signing this Action Plan for Elephant Conservation and Management in Zimbabwe, the Government recognises and appreciates the heavy responsibility borne by those who dedicate themselves to conserving and managing elephant populations and their habitats in Zimbabwe. The Government is aware of the pressure in the current conservation environment that perceives an approaching extinction of elephant in Africa and opposes sustainable use of the species. The Government perceives this pressure to be a factor that limits the resources available to conserve elephants and their habitats, and the range of plant and animal species that occur in these wildlife areas. Sustainable use of natural resources has been and remains a central pillar of successful conservation in this country. The Government has every intention of maintaining its policy in this regard.

In signing this Action Plan, the Government recognises and supports the efforts that are being made on the ground and elsewhere, by a wide range of individuals and institutions, to protect and manage our elephant populations. We thank all of those involved in this vital and honourable work, and urge them to continue their efforts.

We believe this document will provide clear guidance on the way forward to improved protection and management of our elephants and a framework for effective and ongoing collaboration between all stakeholders involved in this noble effort.



Hon. Oppah Muchinguri-Kashiri (MP)

Minister of Environment, Water and Climate

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ACRONYMS AND ABBREVIATIONS

AM Area Manager
CA CAMPFIRE Association
CE Chief Ecologist
DC Conservation Director
DG Director General
EM Elephant Manager
HEC Human Elephant Conflict
HMS Head Management Services
HRM Head Human Resources
IM Investigations Manager
NGO Non Governmental Organisation
PRM Public Relations Manager
RDC Rural District Council
RM Regional Manager
SOAZ Safari Operators Association Zimbabwe
ZHA Zimbabwe Hunters Association
ZPGHA Zimbabwe Professional Guides and Hunters Association
ZRP Zimbabwe Republic Police
TFCA Transfrontier Conservation Area

1. Introduction and Background

By any standards Zimbabwe has a proud history of successful elephant conservation. Elephant populations in most of Africa were reduced to very low numbers by the late 19th Century. In 1897 approximately 100,000 tonnes of ivory was exported from Africa [42]. In 1900 it was feared that elephant might become extinct south of the Zambezi River [6]. Using historical accounts of elephant numbers, backwards extrapolations based on population growth rates, and known levels of elephant kills it is unlikely that Zimbabwe held more about 4,000 elephants in 1900 [8,10,14,16]. More than one hundred years later, in 2014, this number had increased twenty-fold to nearly 83,000 elephants (**Fig. 1 and Table 1**) despite attempts to limit elephant population growth between 1960 and 1989 by culling 45,000 elephant in tsetse control areas and state protected areas **(Fig. 1)** [5,32]. The primary rationale for limiting elephant numbers in protected areas was to reduce their impact on woodland habitats and the loss of plant and animal species as result of elephant-induced habitat change [9,12,44]. Elephant impacts on woodlands and associated and biodiversity is still a concern today [15, 46,47].

Between 1990 and 2006 elephant populations grew exponentially but growth has since been limited by an escalation of illegal killing [18]. However, the overall population in the country remains at more than 80,000 elephants **(Table 1)**, which is more than twice the national target population envisaged in the 1908s.

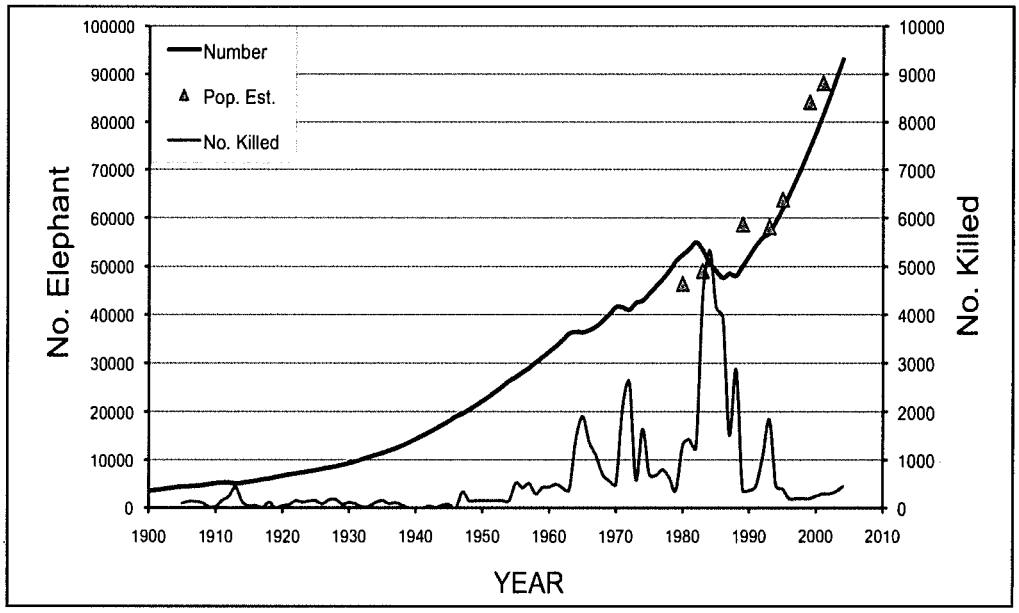

Figure 1. Growth of elephant population in Zimbabwe between 1900 and 2001, number of elephant killed (lower graph), and aerial census estimates (triangular point) in those years in which the entire elephant range was covered. The numbers killed before 1960 are based on the amount of ivory exported from the country. The high numbers killed in the 1980s represent the large-scale culls that were carried out during that period in an effort to reduce their environmental impact.

Zimbabwe is one of the key elephant range states and home to the second largest estimated elephant population of nearly 83,000 individuals following Botswana, which is estimated to hold

more than 130,000 elephants. Zimbabwe thus has a clear obligation to ensure the survival of the species for the benefit of present and future generations of all stakeholders[1].

Zimbabwe first adopted a specific Policy and Plan for Elephant Management in 1997 [33] with the long term vision to "*Conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage.*" As a matter of policy the plan required that at least four demographically and genetically viable populations of elephants be maintained, that elephant densities be kept below the levels at which they might compromise biodiversity, and that elephant range remain at or above the 1996 level. At the time illegal killing of elephants was at a very low level and the plan placed little emphasis on law enforcement. That situation has since changed drastically, with poaching at a crisis state in some countries, although not to the same extent in Zimbabwe. Furthermore, elephant range has been constrained by increasing human population densities in many rural areas. Accordingly, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) convened a participatory workshop in Hwange Safari Lodge (from 2nd to 4th December 2014) to develop an agreed "*Strategic Elephant Conservation Policy and Management Plan Framework*". The policy and primary objectives of the 1997 plan were incorporated into the December 2014 framework, and the objectives and action items were updated to reflect new challenges to elephant management that were not in focus in 1997. The framework developed at the December 2014 workshop, together with input from the two-day CAMPFIRE Association workshop held in November 2014, form the basis of the current elephant management plan. The national workshop included stakeholders with varied interests from the wildlife and tourism industry, conservation NGOs, technical experts from Zimbabwe and the international community, and government representatives from wildlife agencies in neighbouring countries that share elephant populations with Zimbabwe.

At the Hwange workshop, participants agreed that each of the four primary elephant ranges needed a regional plan to address the specific challenges and advantages of elephant in that area. Accordingly, from 30 April to 2 May, 2015, a workshop was held to discuss an antipoaching strategy for Mana Pools National Park, which was later expanded to cover the midZambezi Valley region. Similarly, in May and September 2015, workshops were held in the Sebungwe and the South East Lowveld, respectively, to develop action plans for each region. An anti-poaching strategy workshop for Hwange National Park was held in June 2015 and, together the management plan for the park, provided a basis for completing an action plan for Northwest Matabeleland. These action plans are appended in Annexes 9.4 to 9.7.

The current conservation status of African elephants is that they are listed as Vulnerable under the IUCN Red List, as Endangered in CITES Appendix I, apart from the populations of Botswana, Namibia, South Africa and Zimbabwe that are listed under CITES Appendix II. In Zimbabwe, African elephant are not included on the list of "specially protected animals" because their population is so large. However, they are listed on the "Schedule of Animals with High Economic Value."

1.1 Numbers, distribution and regional trends of elephant in Zimbabwe

Elephants are distributed in four main regional populations in Zimbabwe, namely, Northwest Matabeleland, the Sebungwe, the mid-Zambezi Valley, and the South East Lowveld (**Fig. 2**). Crude ecological densities vary between 2.16 elephant/km^2 in Northwest Matabeleland and

[1] Note that the African elephant comprises two species, namely the forest elephant and the savanna elephant. Given the high proportion of the continent's savanna elephants that occur in Zimbabwe this places increasing responsibility for their conservation on the country.

0.46 elephant/km² in the Sebungwe region **(Table 1).**

Table 1. Numbers and densities of elephants in the four regions of elephant range within Zimbabwe. (Source: Draft 2014 Elephant Survey results) [22, 23, 24, 25].

Name of Region & Area	Area (km²)	Estimated Number of Elephants	Density of Elephants/km²
NW Matabeleland	24,989	53,991	2.16
Hwange National Park	15,180	45,846	3.02
Matetsi Complex	4,402	4,843	1.10
Forest Areas	2,332	1, 101	0.47
Communal Lands	3,075	2,201	0.72
Sebungwe	15,529	3,407	0.22
Parks & Wildlife Estate	6,234	2,894	0.46
Forest Areas	261	16	0.06
Communal Lands	9,034	497	0.06
Mid-Zambezi Valley	16,014	11,656	0.73
Parks & Wildlife Estate	12,257	9,752	0.80
Communal Lands	3,757	1,904	0.51
South East Lowveld	8,835	13,037	1.48
Gonarezhou NP & Malapati SA	5,118	11,120	2.17
Save Conservancy	3,496	1,585	0.45
Communal Lands	221	332	1.50
Mozambique Border	*1,574*	*0*	*0*
National Total*	**65,367**	**82,091**	**1.23**
Parks & Wildlife Estate	43,191	74,455	1.75
Forest Areas	2,593	1,117	0.43
Save Conservancy	3,496	1,585	0.45
Communal Lands	16087	4,934	0.18

* The survey did not include Bubye Valley Conservancy or the Tuli Safari Area and some other small populations that likely add another 1,000 elephants to the estimated total for the country. The area surveyed in Mozambique is not included in the national total or in the South East Lowveld total area

The elephant range in Northwest Matabeleland covers an area of approximately 25,000 km² and includes national parks, safari areas, forest areas, commercial farmland, and communal land - mostly on Kalahari sands **(Fig. 2).** The population of some 54,000 elephants is part of the larger regional population of about 250,000 in south-eastern Angola, Botswana, Namibia and south-western Zambia. The major component of 45,000 elephants is found in Hwange National Park. At the onset of the rains some elephants disperse from Zimbabwe into Botswana resulting in a shared population between the two countries.

The elephant population in Hwange National Park was approximately 2,000 animals when it was first declared a Game Reserve in 1928 [10]. Elephant impacts on vegetation reached alarming levels by 1964 and a representative of WWF-US advised the then minister of natural resources to act on what was perceived to be an over-population of elephants. The first major cull of elephants took place in the park in 1965 [10]. A major factor contributing to the growth of the elephant population (with a current density of 3/km² in 2014), and of other species, was the provision of artificial water supplies through the dry season [10,37]. The Matetsi Safari Area to the north of Hwange National Park was established in 1972, on what had been a commercial farming area, and the complex, that includes two national parks, carries a lower density of elephant (1.1/km²). Estimated growth of the elephant population since 1980 in Northwest Matabeleland is shown in **Fig. 3** below.

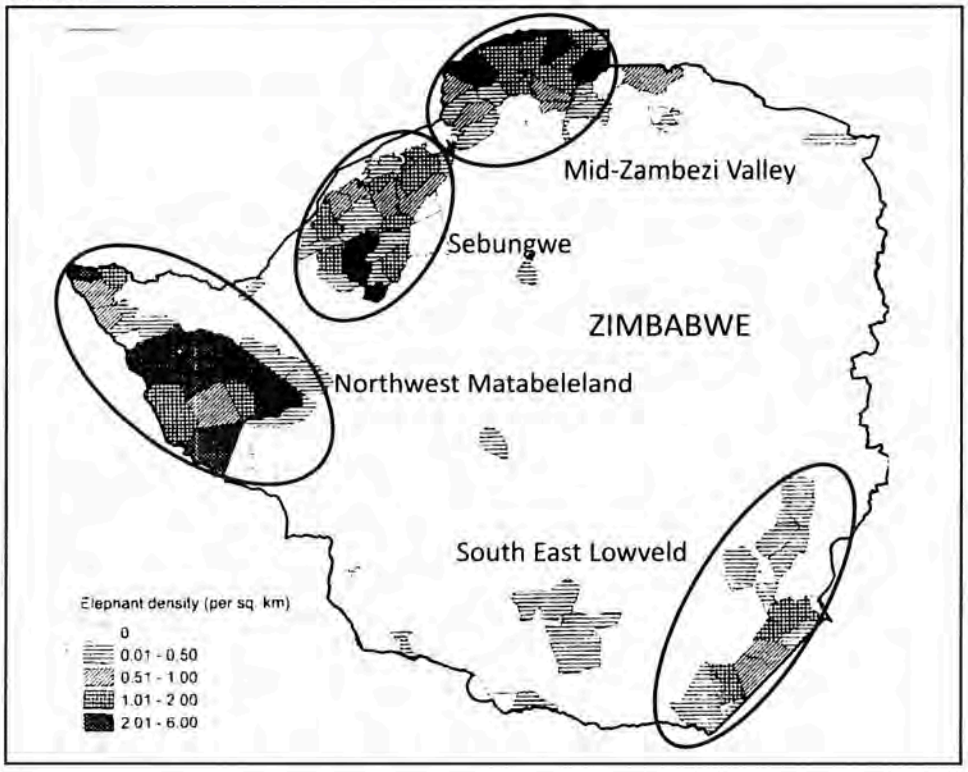

Figure 2. The four regional elephant populations occur within the encircled areas. (Elephant densities are from the 2001 survey [19])

Following the large culls of the 1980s the elephant population of Hwange National Park grew rapidly from 13,000 in 1986 to about 35,000 in the early 1990s and appeared to stabilise at about this number [7]. However, the 2001, 2007 and 2014 dry season estimates of between c. 35,000 and 45,000 [23] suggest that the elephant population in the park may now have stabilised at about this number (or a density of 2 to 3 elephants/km²), with rainfall and water supplies acting as limiting factors.

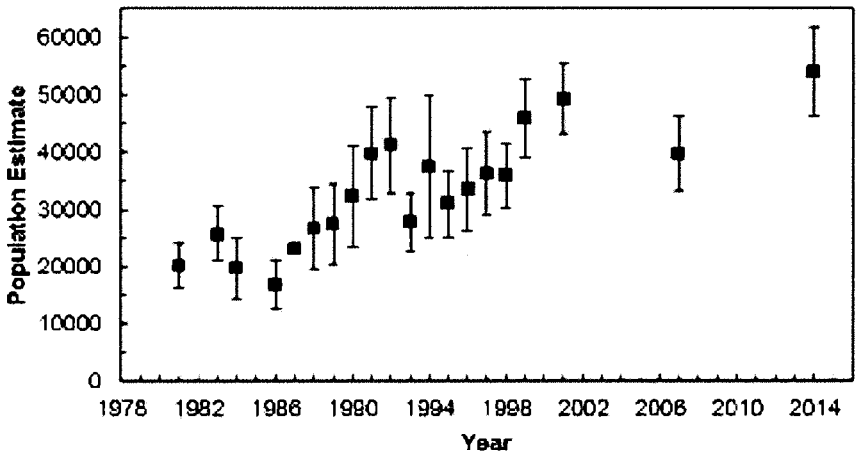

Figure 3. Number of elephant estimated to be NW Matabeleland since 1981. (Source: 2014 Aerial census [24]).

The Sebungwe region covers an arc of 15,000 km² to the south of Lake Kariba. Historically the area was demarcated by tsetse control fences that ran from Binga on the lakeshore in the west southwards to the Sengwa Wildlife Research Area and then north-eastwards to the Kanayati River and Matusadona National Park **(Fig. 2).** The Parks and Wildlife Estate covers 6,234 km² and includes two national parks and two safari areas. There is a single forest area within the region and the remaining area of c. 9,000 km² is communal land. As in the other regions the elephant population grew from about 2,000 elephant in the 1920s to c. 15,000 in 2006 [9,17]. It was recently reduced to an estimated population of 3,500 in 2014 [23] **(Fig. 4).** The human population in the three districts of the Sebungwe has increased from 45,000 in 1950 to some 700,000 in 2013 with population densities of more than 30 per km² in Gokwe North and Gokwe South. The threshold human density at which elephants disappear from settled areas is approximately 15 people/km² [27].

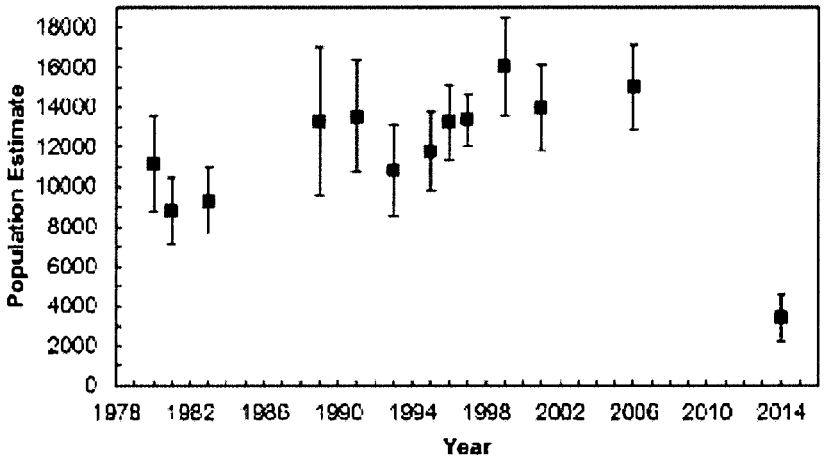

Figure 4. Number of elephant estimated to be in the Sebungwe since 1980 [23].

The mid-Zambezi Valley area of 11,000 km² includes Mana Pools National Park, six safari areas and small, adjacent areas of communal land. Returns from hunting leases and quotas provide an important source of revenue for ZPWLMA. Unlike the Sebungwe the protected areas are

contiguous. The elephant population reached a high of 19,000 in 2001 and between 2001 and 2014 was reduced to 11,000 elephants [22] (**Fig. 5**). Culling took place in the escarpment areas of Charara, Nyakasanga and Mana Pools during the 1980s. As in North West Matabeleland, the elephant population in the mid-Zambezi Valley is shared with Zambia in the Lower Zambezi National Park and with Mozambique.

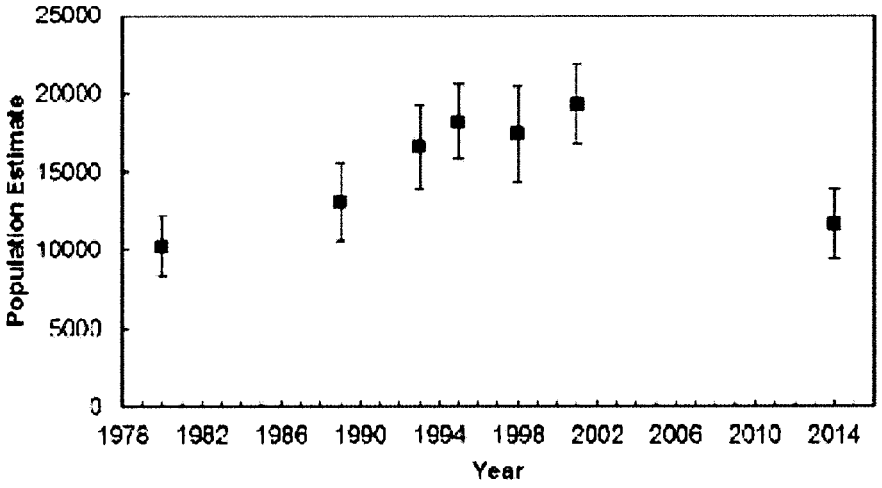

Figure 5. Number of elephants estimated to be in the mid-Zambezi Valley since 1980 [19].

Recent estimates of elephant in the adjacent 16,500 km² in Mozambique south of Cabora Bassa are 1,985 elephants in 2010 [19], and 1,600 in 2014 - a decline of 19%. In Zambia, an aerial survey of the Chiawa Game Management Area and of the Lower Zambezi National Park in Zambia in October 2013 [45] estimated elephant populations of 405 and 1,795 in the two areas respectively. The elephant density in Chiawa GMA was 0.16/km² and in the Lower Zambezi National Park was 0.41/km².

The South East Lowveld elephant population is centred on the Gonarezhou National Park population of c. 11,000 elephant in 5,000 km² that has been growing at about 5% per annum for the last 20 years (**Fig. 6**). The population falls within the Great Limpopo Transfrontier Conservation Area (TFCA) and there is some movement of elephant between Gonarezhou and Kruger National Park and across the park boundary into Mozambique. Separate elephant populations occur in the Malilangwe, Savé Valley, and Bubye Valley conservancies. There is also a small population in the Tuli Safari Area that is shared with South Africa and Botswana in the Mapungubwe TFCA. Overall there are about 13,000 elephant in this range [25]. The 2014 survey recorded no live elephants in the Mozambique blocks adjacent to Gonarezhou National Park but returned an estimate of more than 160 elephant carcasses [25].

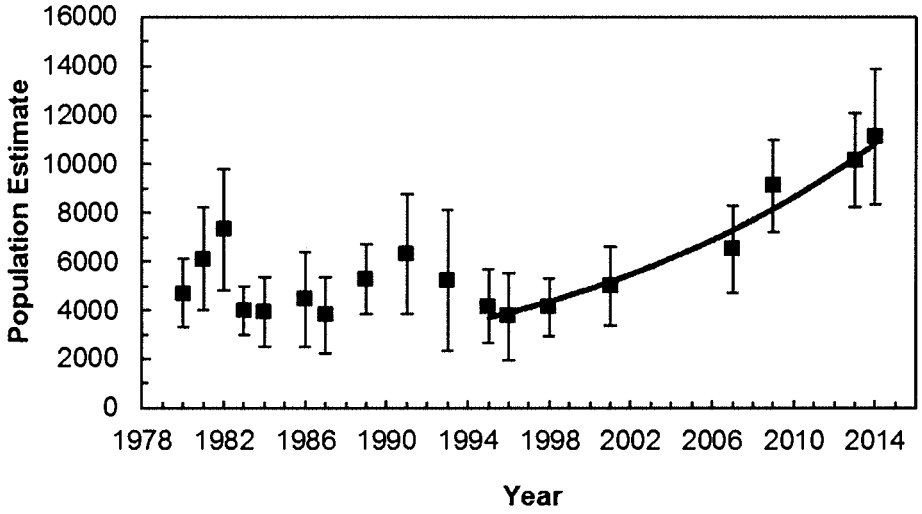

Figure 6. Trend in the number of elephant in Gonarezhou National Park since 1980 [25].

Summary Comment. Law enforcement, mitigating human-elephant conflict [27,35,36], and building supportive and beneficial relationships between protected areas and their neighbours [41] are key issues in all regions. In the Sebungwe, rapid human population growth and settlement in previously uninhabited areas is reducing the range available to elephants and limiting movement between protected areas. Here, rehabilitating protected areas and implementing strong incentives [43] for elephant conservation in the communal lands will be strategically important steps for that region. For all of the four elephant ranges in the country further key specific issues and actions to tackle them will be tackled through the action plans that have been developed for each region (Annexes 9.4 - 9.7). The development of regional action plans and the devolution this involves will also serve to reduce the risk of scale mismatches between institutional/social and ecological scales [17].

1.2 Targets for elephant numbers in relation to conserving biodiversity

Specifying a positive target figure for the number of elephants a country wishes to conserve is entirely appropriate where an elephant population has been greatly reduced as, in the Sebungwe region. In countries, or areas of countries, where there may be an over-population of elephant a legitimate objective may be to reduce their number. The three targets that were adopted as a matter of policy in 1997 by the Zimbabwe Government are:

1. *To maintain at least four demographically and genetically viable elephant populations in Zimbabwe*
2. *To maintain or increase core protected area range of elephant in Zimbabwe*
3. *To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe*

Maintaining four regional populations each of between 5,000 and 10,000 elephants would meet the first target of maintaining four demographically and genetically viable populations [2]. However, the third target is not likely to be met unless there is sufficient range, in each of the four regions, in which to hold these numbers without compromising the range of biodiversity that the

country is committed to protecting in terms of its policy and legislation. The core state protected area (National Parks and Safari Areas) of elephant range in Zimbabwe is close to 42,000 km^2. At present this area is carrying more than 70,000 elephants **(Table 1)** or a crude density of about 1.75 elephants/km^2, a density at which woodlands and biodiversity are compromised [1,3,9,12,15,31,46]. At densities as low as 0.3 elephants/km^2 woody plant species can be lost and species diversity of birds and invertebrates reduced [15,34]. In miombo woodlands, which form the predominant type of protected habitat in the Zambezi Valley, woody plant species and some animal species will be lost at elephant densities as low as one elephant to 10 km^2 [31]. As an example, in a miombo woodland area in the Sengwa Wildlife Research Area (southern Chirisa) elephants at a density of < 1/km^2 were responsible for removing 45% of the woody biomass in just four years [26]. In Chizarira National Park, with elephant densities in excess of 1 per km^2 tree canopy cover declined from 75% in 1979 to less than 10% in 1993 [44,11]. The only tall trees remaining with dead wood to provide refuges for hole-using birds were found on large termitaria [28].

These examples highlight the dilemma that arises between attempting to protect as many elephants as possible at all costs on the one hand, and to preserve a full range of plant and animal species in protected areas on the other hand [14]. These examples also highlight the consequences of making single resource decisions (e.g. preserve all elephants) that can result in multiple resource consequences (e.g. loss of large trees, plant species, and animal diversity). Recent work in Addo Elephant National Park in South Africa shows that high elephant densities do not increase eco-tourism opportunities and their associated ecological costs are not a requirement for eco-tourism financial sustainability [30].

It is clear that the choice of target elephant population size and density for a particular area or country depends on peoples' values and the values of decision-makers involved [4]. Ecological science can only provide guidance on the likely consequences of the targets that are chosen. For Zimbabwe the current elephant population is considerably higher than was envisaged in the 1980s when the target was to maintain a countrywide population of about 35,000 elephants [13,15]. Elephants are clearly a keystone species and primary ecological engineers in savanna ecosystems [12], and particularly so at high densities in confined ranges. A sensible strategy, therefore, would be to match targets to different areas and habitats and to vary these targets adaptively in time and space depending on long term trends and the results of appropriate programs monitoring the impacts of elephants on ecosystem structure, function and species diversity.

As a result of the above considerations a decision on a target number of elephant for the country is expressed in terms of an upper and lower limit of elephant density that is presently set at between one and two or three square kilometres per elephant (i.e. 0.3 to 0.5 elephants per km^2). However, ZPWMA recognises that density is only one factor to be considered as part of population target setting. All the regional population densities except Sebungwe already exceed these density limits, and this will be taken into account in each regional action plan in establishing thresholds of potential concern relating to ecological, economic and social impacts of elephants.

A series of regional action plans has been developed and in the Sebungwe a *tentative target* of 5,000 elephant has been set where the present population is approximately 3,000 in about 7,000 km^2 of available habitat. This is based on the likelihood that a population of 5,000 will be both genetically and demographically viable[2] and attainable given the land presently available to elephants. The elephant populations in the remaining regions are well above the thresholds established in the 1980s. An important component of the regional management plans is to carry

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[2] / This concept arose following the re-introduction of wolves into Yellowstone National Park in the USA. Elk avoided habitats in which they were likely to be killed by wolves and this allowed a rapid regeneration of woody plant species that had been over-browsed for years [29, 39].

out the necessary research on the ecological, economic and social impacts of elephants and to develop appropriate, spatially nuanced thresholds, for the management of these populations

Management approaches to maintain elephant populations within the still to be set acceptable upper and lower limits will vary with each region but will, in all areas, focus on improved protection and minimising the illegal killing of elephant. In some areas the management of water supplies may be used and the protection of sensitive habitats may require creating a "landscape or ecology of fear"[2] through appropriate disturbance of elephants visiting such areas. The most straightforward method of dealing with over-population of a species is culling. However, because the sale of ivory was previously required to cover the costs of large-scale population reductions this option was effectively closed in 1989 by the CITES listing of elephant on Appendix I. Despite the listing of Zimbabwe's elephant on Appendix II in 1997 and the subsequent sales of stockpiled ivory in 1998 and 2008 trade in ivory has since continued to be constrained by a nine-year moratorium on the sale of ivory. The moratorium is unlikely to be lifted in 2017. The present poaching crisis affecting elephant populations in central and eastern Africa and associated public sentiment also militates against the introduction of culling to manage elephant populations in Zimbabwe.

1.3 Implementation of the Strategy

1.3.1 Institutions and Roles

i) Zimbabwe Parks and Wildlife Management Authority

ZPWMA, through the Parks and Wildlife Act Chapter 20:14, has a national mandate to manage wildlife in the country. By the same instrument it is the lead agency in elephant management, i.e. protection, research, monitoring and sustainable utilization. It forms collaborative arrangements with other institutions to manage elephants in the country.

ii) Intra-governmental institutions

ZPWMA works jointly with security organizations such as Zimbabwe Republic Police (ZRP), Zimbabwe Defence Forces, and the President's Office to protect the elephant and curb illegal trade in elephant products. ZPWMA works with these institutions through the Joint Operation Command and also on bilateral arrangements. ZPWMA also works with Customs at ports of exit and entry to improve control of the illegal movement of wildlife products across boundaries. iii) **Intergovernmental organizations**

ZPWMA works closely with sister organizations from neighbouring countries such as Zambia, Mozambique, South Africa and Botswana in wildlife protection, information sharing and elephant monitoring through bilateral and regional arrangements (SADC). At international levels, ZPWMA is both the CITES Management Authority and CITES Scientific Authority and works with other countries through CITES and other inter-governmental agreements to control trade in elephants and to protect elephants.

iv) Non-governmental organizations

Both local and international organizations partner with ZPWMA in elephant management. They mobilize resources for protection, research and monitoring, and assist with elephant monitoring and research, information sharing and advocacy.

v) Private sector

The corporate community participates in elephant management mainly through resource mobilization. Safari operators report poaching and assist in anti-poaching patrols. Through lease and trophy fees they provide revenue to ZPWMA. They help develop infrastructure, provide funds to communities and supplement diets with meat from trophy animals.

Zimbabwe subscribes to the principle of sustainable utilisation of wildlife resources including elephants. Sport hunting is the principal form of wildlife utilisation whereby offtakes are adaptively managed and monitored through a participatory and science based process. This process allows for sustainable offtakes, and rigorous resource monitoring programmes that allow recruitment within a population to ensure the continued survival of the population in the wild. The high economic value conferred to the elephant through consumptive utilisation has also resulted in increased tolerance by local communities.

BOX 1: The Role of Sport Hunting in Elephant Conservation

Elephants are a charismatic species but can also be destructive when they destroy crops, threaten livestock and even human lives.

To have a future, elephants must have value. Value to the governing authorities and to the local people. The greater the value, the greater the tolerance of them is likely to be. The local people who live closest to them will determine the long-term survival of species like elephant.

Regulated sport hunting converts wildlife into assets for the benefit of local people and the country as a whole. Wildlife can be a most valuable asset and in turn empower local communities and provide basic necessities. When it is viewed as a valuable asset, wildlife becomes an economically competitive land use in Zimbabwe, which leads to habitat preservation instead of habitat destruction and conversion to agriculture or livestock production. Game animals have a survival advantage because of user-pay stewardship systems where use revenue generated from tourist hunters is paid through to wildlife authorities and local communities.

The presence of regulated hunting can also reduce illegal activities. Many hunting operators in Zimbabwe have specialised anti-poaching units. Private operators' lease agreements are being reviewed to include anti-poaching as an obligation of the concessionaire. Regulated hunting is the opposite of poaching. One is a lawful activity designed by government wildlife authorities and experts to perpetuate resources and the other is prohibited thievery outside of and away from the system. The first is like making a bank deposit and the second is like a bank robbery, without sustainable limits.

Trophy hunting revenues are vital because there are not enough tourists to otherwise generate income to support all protected areas. Eco-tourism revenues are typically sufficient to cover the costs of only some of the parks and certainly not to justify wildlife as a land use outside of protected areas. Hunting is able to generate revenues under a wider range of scenarios than eco-tourism, including in remote areas lacking infra-structure, attractive scenery, or high densities of viewable wildlife.

Consequently, elephant and other wildlife populations will be negatively affected through reduced conservation efforts arising from low funding and reduced goodwill from the communities, when in reality the elephant has the economic potential to raise adequate funds to support itself and other species. For these reasons, Zimbabwe confirms its commitment to the sustainable use of elephant and other wildlife in this Action Plan.

vi) Local communities

Local communities are involved in elephant management in CAMPFIRE areas, through sharing

BOX 2: The Importance of Community Based Conservation to the Future of Elephant Management in Zimbabwe

The Community Areas Management Programme for Indigenous Resources (CAMPFIRE) of Zimbabwe has been widely regarded as one of Africa's most successful contemporary conservation initiatives. It permits the residents of communal lands – basically the poor rural communities – to share in the benefits generated by wildlife utilization on those lands by granting Appropriate Authority to Rural District Councils (RDCs) to manage wildlife on communal lands and requiring a certain percentage of revenue to be paid to the wards and councils.

CAMPFIRE operates in about 50,000 km2 (12.7%) of land in Zimbabwe. This is roughly equivalent landmass to the Parks and Wildlife Estate. CAMPFIRE encompasses about 777,000 households with an average family size of five, who face food insecurity and deep poverty (average income $1 a day).

Between 1994 and 2012, CAMPFIRE generated $39 million of which $21.5 million was allocated to communities and used for resource management (22%), household benefits (26%), and community projects (52%). About 90% of CAMPFIRE's revenue comes from hunting, with elephant hunting contributing more than 70% of annual revenue.

Based on the Constitution of the CAMPFIRE Association as amended in 2007, all major hunting RDCs use CAMPFIRE revenue-sharing guidelines. In these districts safari operators pay revenue directly into community-controlled bank accounts using the following breakdown: CAMPFIRE community share (55%), RDC fees (41%), CAMPFIRE Association levy (4%).

Despite its achievements CAMPFIRE still faces fundamental challenges. In particular, the development strategies of households in CAMPFIRE areas focus on land uses that are incompatible with wildlife such as human immigration to rural areas, the extension of basic agricultural schemes and increased livestock numbers. Other CAMPFIRE challenges include: (i) the downturn in Zimbabwe's economy and tourism sector post-2000, (ii) great reliance on consumptive trophy hunting and less focus on other uses and non-consumptive uses of natural resources, (iii) increasing human populations averaging 16-20 people per km2 in some key wildlife districts, and (iv) lack of re-investment in development, fixed assets, human capital, and management and protection of wildlife in CAMPFIRE areas.

Despite these challenges, CAMPFIRE stands very high in the agenda of Zimbabwe's Government, and a review dedicated to improving the programme , including greater devolution of ownership of wildlife to communities, is ongoing and should be finalized by the end of 2015. Zimbabwe's Government recognizes that the survival of wild animals depends entirely on those among whom they live. Unless local people want to save them, wildlife will be poached to the point where just a few remain in fortified reserves. CAMPFIRE is meant to avoid this and the future of wildlife in communal areas rests on the success of this programme.

of information, advocacy and wildlife protection. They report human-elephant conflicts and carryout some of the conflict management activities.

1.3.2 Funding and resource mobilization

Adequate and sustainable funding and provision of other resources are important to effective protection of the elephant and curbing illegal trade in elephant products. Resources are mobilized from within ZPWMA, by the private sector, and by intergovernmental and nongovernmental organizations. Partnerships between ZPWMA and other stakeholders are some of the innovative measures being developed to secure funding for elephant conservation. There may be a need for the Government to provide additional support to the conservation of elephants given the present poaching crisis affecting the species continentally.

1.3.3 Coordination

i) ZPWMA

ZPWMA takes the lead in coordinating other institutions in elephant conservation activities in the country. It will convene and chair the Elephant Management Committee meetings. **ii) Elephant Manager**

This Action Plan provides for the appointment of an Elephant Manager within ZPWMA who will be responsible for coordinating elephant management in the country. The Elephant Manager will primarily work through various Elephant Management Committees that will be established pursuant to this Action Plan. The Elephant Manager will liaise with the International Conservation Office on international matters affecting elephant conservation and also liaise with the CAMPFIRE office for matters affecting the conservation of elephants in CAMPFIRE districts. The draft Terms of Reference for the Elephant Manager are provided in Annex 9.7. **iii) Elephant Management Committees**

A National Elephant Management Committee and four Regional Elephant Management Committees (Zambezi Valley, Sebungwe, Northwest Matabeleland and South East Lowveld) will be established. The National Elephant Management Committee will meet at least once annually to review progress in implementing the Action Plan. The National Committee will document that progress in implementing and any suggested revisions to the Action Plan, and make their report available to the Director General of ZPWMA.

The four Regional Elephant Management Committees will meet at least twice in a year to review the implementation of each regional plan. The Committees will strengthen links with various bodies at national and regional levels including within the TFCA framework. ZPWMA will convene and chair the regional Committee meetings. The draft Terms of Reference for the Elephant Management Committees are provided in Annex 9.5.

1.3.4 Monitoring and evaluation

Monitoring implementation of this Action Plan will be done using the Key Performance Indicators contained in Section 4. Monitoring the implementation will be done and reported on by the Elephant Manager on a monthly and annual basis. A major evaluation of progress will be done every five years. Monitoring and evaluation will be done at each area level in a given elephant region, at the regional level and at the national level.

1.3.5 Links with continental (African Elephant Action Plan / SADC) and other regional initiatives

This Action Plan recognizes the existence of the African Elephant Action Plan and initiatives that are currently taking place at a continental level, including by the African Union. These include the development of the Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa. At the SADC level initiatives involve developing a Plan of Action and implementing the SADC Protocol on Wildlife Conservation and Law Enforcement. This Action Plan will be reviewed periodically in the light of developments that are taking place in the SADC Region, Africa and beyond.

1.3.6 Regional strategies within Zimbabwe

The devolution of management oversight to regional levels, with more detailed action plans within the national plan, provides the basis for effective adaptive management at regional and local levels.

As set forth in the framework below (Sections 3 and 4), four regional plans have been drafted to address the unique challenges of each region, and will implement the broader goals of this national Action Plan at a more specific level.

In addition, Park-level plans for specific protected areas (including Hwange National Park, Mana Pools National Park, and Gonarezhou National Park) contribute to this Action Plan and govern the management of elephant within those protected areas.

BOX 3: Towards Greater Coordination with the AEAP

The African Elephant Action Plan (AEAP) was finalized and approved as a consensus document by all 37 African elephant range states in the margins of the 15th meeting of the Conference of the Parties to CITES (Doha, Qatar 13-25 March 2010).

The AEAP contains eight prioritised objectives identified as the most important measures required to protect African elephants across their range.

OBJECTIVE 1: Reducing illegal killing of elephants and illegal trade in elephant products

OBJECTIVE 2: Maintaining elephant habitats and restoring connectivity

OBJECTIVE 3: Reducing human-elephant conflict

OBJECTIVE 4: Increasing awareness on elephant conservation and management of key stakeholders (e.g. policy makers and local communities among other interest groups)

OBJECTIVE 5: Strengthening range states' knowledge on African elephant management

OBJECTIVE 6: Strengthening cooperation and understanding among range states

OBJECTIVE 7: Improving local communities cooperation and collaboration on African elephant conservation

OBJECTIVE 8: Implementing the AEAP

The objectives of the AEAP were considered and included in drafting this action plan. ZPWMA has been careful to address its international obligations in this Action Plan§.

1.3.7 Protecting elephant for the future

Poaching and the illegal wildlife trade are serious concerns for all range states. Poaching has decimated elephant populations in central and eastern Africa, and in Mozambique. Although the 1997 Policy and Plan for Elephant Management in Zimbabwe did not need to prioritise law enforcement, protecting elephant for the future has become a primary objective of this Action Plan, and will be a primary focus of resource utilisation by ZPWMA.

1.3.8 Human elephant conflict

As Zimbabwe's human population grows, elephant are being restricted to smaller areas and as their populations expand they increasingly move out of their designated habitat, and raid crops and sometimes threaten human lives. As a result in many rural areas where elephants exist in Zimbabwe, human-elephant conflicts are increasing, creating substantial negative attitudes to the conservation efforts of elephants. These are often among the poorest rural farmers, which makes the issue complex in social and economic terms. Unresolved conflicts stimulate poaching or retaliation. Poachers or retaliators can be seen as "local heroes" because they provide meat to the communities and resolve the conflict. A major challenge for elephant management is keeping human-elephant conflicts to a minimum.

Developing a Social, Economic, and Cultural Framework has been identified as a Key Component of this Action Plan in an effort to address and reduce human-elephant conflicts.

BOX 4: Towards a Comprehensive Strategy to Reduce Human-Elephant Conflict

Some methods of reducing human-elephant conflict focus on curing the effects, not the cause. Such methods include chilli sprays, fences, and evening patrols to scare off marauding elephants. However, these are not necessarily longterm solutions. Long-term solutions require growing the tolerance of local communities for elephant by ensuring the communities benefit from having elephant on their lands. Tolerance is likely to increase if communities realise and appreciate economic returns earned from the sustainable use of elephant. Economic returns may be generated by consumptive and non-consumptive tourism. The devolution of decision-making on aspects of problem animal control to communities may result in better outcomes for the management of the costs and benefits of this activity.

Problem animal control includes disturbing, removing, translocating, or ultimately killing those elephant that persist in damaging crops or threatening human life. Clearly, no one management option will successfully deal with all problem elephants and conflict situations. As part of this Action Plan, ZPWMA will undertake additional research on problem animal control and minimizing conflict, and will develop new solutions and a more comprehensive response to these issues.

2. LOGIC AND STRUCTURE OF THE PLAN

The strategic framework developed at the Hwange workshop in December was based on the Logical Framework structure and the development of clearly stated objectives, outputs and the necessary and sufficient activities (or actions) required to achieve the outputs within a specified time frame **(Table 2)**. The structure requires a set of key performance indicators that are intended, as far as possible, to be SMART, i.e. Specific, Measurable, Achievable, Realistic and Time-bound. The five key components of the plan are:

1. Protection and law enforcement
2. Biological monitoring and management
3. Socio-economic and cultural sustainability
4. Building conservation capacity
5. Coordination, collaboration and programme management

Table 2. Structure of the Action Plan for Elephant Conservation and Management in Zimbabwe

Long-term Vision	The Long-term Vision has retained the essential components of the 1997 plan and remains applicable to the period of this plan.
Targets	The three Targets included in the 1997 plan are retained but the provision to maintain or increase elephant range is not linked to a specific national benchmark as it was in 1997 because this will vary in the four elephant ranges or regions
Key Components	The five Key Components are the primary themes or headings of the strategy under which the framework is organised. The ten policy and management objectives included in the 1997 plan fall within these headings.
Strategic Objectives	The Strategic Objectives reflect briefly but more explicitly the policy intention for the respective components.
Outputs (expected outcomes)	The Outputs are statements that reflect the expected results that will be realised during the time frame of the Action Plan. Outputs are therefore expressed in the past tense.
Key Activities (actions)	Key Activities represent the necessary and sufficient actions that need to be completed to achieve the Outputs. They are the actions on which the major emphasis should be placed. *National level Activities can be cast as Outputs at the regional level, with more detailed time specific activities, KPIs and budgets at that level.*
Key Performance Indicators (KPIs)	The KPIs provide a basis on which to measure and monitor the success or otherwise of the Strategic Objectives, Outputs and Activities.
Means of Verifying the KPIs	It is clearly necessary for the verification and monitoring of KPIs that the manner in which they can be tracked and verified need to be clearly established. Equally important is the need for monitoring protocols to be standardised across local and regional levels so that national and regional level KPIs and statistics can be compiled. This will then allow valid comparisons of performance across regions and local areas to be made.
Implementation Strategy	ZPWMA, the Elephant Manager and the Elephant Management Committees will interact and collaborate with a wide range of agencies and stakeholders in the implementation of this Action Plan.

The top-level strategic components of the Action Plan encompassing the Long-term Vision, Targets, Key Components, Strategic Objectives and Outputs are summarised on page 17 in Section 3 below. The top-level components of the plan are then followed by a set of tables in Section 4 (page 18) that provide action plans for the expected Outputs (or outcomes) of each the five strategic components of the plan. The Activities and KPIs within these tables are set at a national strategic level. They will be taken up, as appropriate, during the development of Regional Action Plans for each of the four regional elephant populations in the country. **Activities** listed at the national level will, for the most part, form **Outputs** at the regional level. These Outputs have generated more detailed regional and local specific activities and actions with specific KPIs and means of verification.

The four regional Elephant Action Plans that have been developed as part of the National Action Plan are included in Annexes 9.1 to 9.4.

3. VISION, TARGETS, AND KEY COMPONENTS

Long-term Vision: To conserve elephants at levels that will enable them to contribute to the conservation of biodiversity, national development and Zimbabwe's cultural heritage

Targets:
1. To maintain at least four demographically and genetically viable elephant populations in Zimbabwe
2. To maintain or increase core protected range of elephant in Zimbabwe
3. To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe

Key Components	1. Protection and Law Enforcement	2. Biological Monitoring and Management	3. Social, Economic and Cultural Framework	4. Building Conservation Capacity	5. Coordination, Collaboration and Programme Management
Strategic Objectives	**Objective 1.** Ensuring effective protection of all populations of elephant in Zimbabwe	**Objective 2.** Implementing effective biological and ecological management to achieve populations that are within upper and lower acceptable limits in numbers and distribution	**Objective 3.** Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development	**Objective 4.** Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and used efficiently and effectively	**Objective 5.** Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives.
Outputs	**Output #1:** Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented	**Output #2:** Adaptive management to achieve viable populations in all four sub-populations implemented	**Output #3:** Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased	**Output #4:** Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational	**Output #5:** Coordination mechanisms to assess and review adaptive elephant population management and strategic planning established and operating

4. ACTION PLANS

4.1 Protection and Law Enforcement - Ensuring effective protection of all populations of elephant in Zimbabwe

Output: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented
KPI: Illegal losses of elephant from at least 90% of elephant populations reduced to less than 5% by 2020, and less than 5% of elephant habitats encroached by settlements by 2020
MV: National level monitoring data on illegal activity, successful convictions, carcass records, status and trends of all elephant populations; verified data on extent of encroachment and of available elephant habitat

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
1. For each key population establish a highly trained rapid response anti-poaching unit for deployment to areas under threat	1. An equipped rapid response unit established and operating jointly with ZRP in each region by June 2016	Inception report for each unit Monthly reports of operation from each unit Number of joint operations	By June 2016	ZPWA / ZRP DG, DC, RMs
2. Informer systems enhanced and supported at national, regional, national and local levels	1. An active informer system/network operating within each region at both regional and local levels by Jan. 2016 2. National level informer system targeting middle men and higher crime syndicates operating by Jan. 2016	Operational reports Records of arrests and successful prosecutions resulting from informer reports Records of payments for information	By January 2016 [	DG, IM, RMs

3. Improve investigation and prosecution of crimes	1. At least two of law enforcement staff trained in scene of crime collection and preservation of evidence, ballistics evidence, etc. in each area/station level 2. Percentage of investigations resulting in successful prosecutions from each region greater than in 2014 3. Monthly liaison sessions on wildlife crime and law enforcement held with members of the judiciary	Staff training records Monthly reports Court records Minutes of meetings with judiciary (prosecutors and magistrates)	Immediate and ongoing	IM, RMs, AMs
Key Activities/Actions	**Key Performance Indicators**	**Means of Verification**	**Time Frames**	**Responsibility**
4. Set up and maintain national and local intelligence databases	1. National, regional and local databases recording and analysing illegal activity (nature, time and locality of activity and profiles of those involved if known)	Inspection of operating databases	Immediate and ongoing	IM, RMs, AMs
5. Enhance social (community) involvement in law enforcement through incentive schemes and introduction of hotlines for reporting wildlife crime	1. Incentive schemes (see Section 4.3) that encourage the public and members of rural communities to contribute to law enforcement (e.g. through informer hotline) established in each region 2. Larger number of incidents of community contribution to law enforcement (e.g. whistle blowers) by Dec. 2017 3. Number of hotlines established and assessment of their performance	Record and analysis of operating incentive schemes and hotline reports Record and analysis of performance of hotlines	Immediate and ongoing	RMs and AMs
6. Reduce illegal settlement in all wildlife areas	1. Illegal settlements reduced to less than 5% of wildlife areas by 2020 (i.e. state and community protected areas)	Records and maps of illegal settlements and of wildlife land recovered	Ongoing to 2020	DG, AMs, CE, CAMPFIRE Assoc. RDCs
7. Ensure full compliance with hunting and guiding regulations and quotas set	1. Quota setting models reviewed and, if necessary, revised models implemented by Dec. 2015 annum by Dec. 2016	Proceedings of workshop and revised models Record of infringements and penalties and analysis of trends	Immediate and ongoing	DG, DC, RMs, IM, and SOAZ, ZHA, ZPGHA

8. Revisit the appointment of honorary officers to assist in law enforcement	1. Proposed revision to the Parks and Wildlife Act drafted and submitted to Ministry EWC by Dec. 2015	Draft of proposed revision to the Act and letters to Ministry	Dec. 2015	DG, legal officer in ZPWMA
9. Enhance international and transboundary collaboration in law enforcement	1. Quarterly meetings on law enforcement collaboration and activities between law enforcement agencies of neighbouring countries established at regional / transboundary park level by Oct. 2015 2. Broader collaboration with Interpol, TRAFFIC, TWENS, and other international law enforcement entities	Minutes of meetings Record of joint cross border law enforcement activities Records of participation in workshops, TWENS, etc.	Oct. 2015 Immediate and ongoing	DC, RMs,IM, AMs, TFCA Coordinator

An example of a National level **Activity** being used as an **Output** at the regional level is provided on below. The example is drawn from the Action plan for the Sebungwe region. It can be seen that what was an Activity (#2 in the table above) at the national strategic level can be defined more specifically to suit the local situation and in much greater detail at this level than is appropriate in the national Action Plan.

Example extracted from Sebungwe regional plan

LAW ENFORCEMENT						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time Frame**	**Indicative Costs**	**Lead agency**

2. Informer network, Investigation and intelligence system strengthened	1. Recruit informers and contacts 2. Maintain hotline for whistleblowers 3. Procurement of two vehicles and two motor bikes . Recruit and train investigators (6) and deploy strategically . Constant liaison with informers . Standardise rewards to informers	1. Number of arrests and successful convictions based on information from intelligence system 2. Number of incursions reported on/reacted to by local communities 3. Number of reports per informer leading to arrests and convictions	Validation of informer record Records and reports of training sessions Whistle-blower reports	Within one year and then ongoing	Vehicles Reward payments Telecommunications equipment Vehicle maintenance and fuel	ZRP/PWMA

4.2 Biological monitoring and management - Implementing effective biological and ecological management to achieve elephant populations that are within upper and lower acceptable limits to change in numbers and distribution

Output: Monitoring programmes and research to support science based adaptive management of elephants in all populations implemented

KPI: Elephant population within each sub-region is genetically and demographically viable and within the preferred lower and upper limits in 2020

MV: Results of aerial and other censuses and analyses of population structure and viability

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility

1. Monitor elephant population numbers, structure, mortality and trends using aerial, ground and ranger based methods among others	1. Elephant populations and carcass ratios estimated and distribution determined from aerial surveys at least every three years for each regional population 2. Records available for all areas of all elephant deaths with data on dates, locations, cause of death, reason killed (trophy hunting, problem animal control, natural mortality, management, illegally killed elephants, etc.), age, sex, tusk size	1. Survey and patrol reports 2. Completed annual returns for elephant mortality from all areas	1. Next aerial surveys due in 2017 2. Immediate and ongoing	DG, CE, RMs, AMs
2. Monitor impacts of elephants on habitats and diversity of selected indicator plants and animal species	1. Annual trends in tree canopy cover 2. Annual trends in species diversity 3. Annual trends in selected indicator species	Monitoring reports	Ongoing Annual reviews	DC, CE
3. Use research findings, expert opinion and informed public opinion to establish thresholds of potential concern (TPCs) to initiate management action in respect of elephant impacts on protected areas	1. Thresholds of potential concern (TPCs) established for at least five key areas / habitats and selected indicators of change monitored every two years	Documented TPCs	Ongoing through to 2019	DG, DC, CE, Universities (MOUs) and Researchers
4. Carry out appropriate management actions when populations exceed, or are projected to exceed, TPCs	1. Management actions taken in relation to TPCs being exceeded (e.g. manipulate water supplies)	Records of management actions considered and actions taken	2017-2019	DG, DC

Key Activities/Actions	**Key Performance Indicators**	**Means of Verification**	**Time Frames**	**Responsibility**

5. Monitor age and quality of trophies and adjust quotas to maintain desired levels of trophy quality	1. Database and field recording protocols and forms established and operating by Dec. 2015 2. Annual analysis of trophies taken as % of quota, and trend in trophy quality and ages of trophies	Consolidated annual records of trophies taken Annual report of trophy quality by region for quota setting workshop	Dec. 2015, then annual and ongoing	DC, CE, AMs, SOAZ
6. Define current elephant range and explore options for extending range and maintaining connectivity between fragmented populations	1. Map of current elephant range based on 2014 survey results and other information available 2. Estimates every two years of range expansion / contraction for each region based on all available information 3. Use and effectiveness of corridors assessed, inter alia, from aerial surveys, ground sightings and reports, satellite collared animals	Current estimate of elephant range and subsequent bi-annual estimates and associated maps Reports on elephant locations from ground and aerial sightings	Initial map by Dec. 2015 Immediate and at bi-annual intervals	DC, CE, RMs, AMs in conjunction with SOAZ, ZPGHA and CAMPFIRE Association
7. Reporting to international monitoring systems (e.g. AED, ETIS, and MIKE)	1. Timely reports submitted as required with copies to regional and national levels	Copies of reports lodged at regional and national levels	Annual or as required by international obligation	DC
8. Recognising the long response time of elephants to management interventions, use modelling to project alternative outcomes or scenarios of management	1. Number of instances in which models were used to project alternative outcomes of elephant management actions	Management and associated modelling reports	Ongoing	CE, Researchers

4.3 Social, Economic and Cultural Framework - Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development

Output: Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased

KPIs: 1. Annual assessment of elephant derived benefits reveals that they increasingly dispersed more equitably between deserving stakeholders and the contribution to national development is assessed. 2. Trends in elephant numbers and human wildlife conflict in non-protected areas assessed and reduced.

MV: Report on annual assessment of the distribution of revenues from consumptive and non-consumptive use of elephants and record of HWC incidents

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility

1. Provide incentives and promote partnerships and joint venture opportunities to strengthen elephant management, including across land use boundaries	1. Policy instruments that demonstrate and establish incentives to conserve elephants 2. Higher levels and growing trends of private and community investment in elephant conservation measures 3. Lower number of poaching incidents/ higher number of arrests based on prior information and leads from communities / land holders	Documented policies and list of operating partnerships / joint ventures that promote elephant conservation and management Record of investments in elephant conservation measures assembled by elephant programme manager/ coordinator	Ongoing	DG, CA, RDCs, Private sector
2. Explore additional elephant-based tourism and sustainable utilization opportunities	1. Higher number of elephant-based tourism and / or sustainable use projects established (e.g. PPCPs)	Record of projects initiated and their success rates	Ongoing	DG, CA, RDCs, Private sector
3. Facilitate the transparent distribution of the benefits and costs of elephant management and conservation	1. Policy instruments adopted that result in more transparent and equitable benefit distribution than benchmark assessed in 2015	Annual record of distribution of elephant derived benefits (revenue, development projects, products received by beneficiaries) and costs of elephant conservation	Ongoing	DG, CA, RDCs, Private sector
Key Activities/Actions	**Key Performance Indicators**	**Means of Verification**	**Time Frames**	**Responsibility**
4. Implement effective techniques and land use strategies, and protocols to mitigate human-elephant conflict	1. Higher levels of investment (funds and manpower) provided for mitigating human elephant conflict by ZWMA, communities and partners 2. Protocols for land use and HEC developed and implemented by June 2016 3. Conduct research and develop strategy for wildlife-based land use systems and promotion of the establishment of community conservancies for areas within the elephant range with high human population densities and human settlements	Records of human-elephant Conflict incidents (in HEC Database) Summaries from human-elephant conflict database reported at annual meetings of Elephant Management Committees Research report on strategies to develop wildlife-based land used system	Protocols developed by June 2016 and ongoing Research report by Dec. 2016	DG, CA, RDCs, Traditional Leaders, Private sector

5. Promote effective recovery and use of all products from dead elephants	1. Proportion of dead elephants from which products were recovered 2. Revenue from products recovered	Records of items recovered and revenue realised from raw products	Ongoing	AMs, RDCs, Private sector
6. Include information on elephants and their conservation in school curricula and promote environmental education in rural areas adjacent to key elephant populations	1. Number and quality of elephant information packages developed and delivered to schools 2. Proportion of schools in, or neighbouring, elephant areas receiving and using information on elephants	1. Information packages developed 2. Reports of delivery and use of elephant conservation information packages	By June 2017 and Ongoing	ZPWMA Extension and Interpretation, NGOs, Ministry of Education
7. Develop and implement an effective communication strategy for local, regional and international	Information strategy developed and launched by June 2016	Information strategy document	By June 2016 and ongoing	DG, PRM

Notes: 1. Activity #1 above is difficult to define precisely at this stage and will require further examination both in terms of policies that may be required and in terms of the precise mechanisms that may be introduced to encourage more active participation by a range of stakeholders in the conservation and management of elephants (and wildlife in general).

2. Activity #3 includes components of capacity building in partners/stakeholders in order for them to take on additional responsibilities that will merit a greater share of benefits.

4.4 Building Conservation Capacity - Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and use efficiently and effectively

Output: Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational

KPI: Law enforcement, monitoring and research staff are trained, equipped, and deployed at a levels that enables them to implement this action plan as specified in the activities under components 1, 2 and 3

MV: KPIs for components 1,2 and 3 are being met, staff training records, equipment register, staff deployed for elephant conservation

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility

1. Secure funding to initiate the implementation of this Action Plan	1. Funds and allocated budget for elephant conservation meet annual requirements for effective conservation as measured by KPIs for activities 2-8 below and those of Components 1, 2, and 3 2. More than 75% of revenue derived from elephants channelled into elephant conservation and management	Record of funds available (USD) and investment by ZPWMA, Private sector, NGOS, and CAMPFIRE in elephant conservation measures (Compiled annually by Elephant Manager)	Ongoing	DG, EM
2. Establish sustainable funding programs to build and maintain necessary human resources to strengthen elephant conservation and management capacity	1. Manpower density for protection of elephant (No. of km²/operational field person) 2. Level of effective deployment of field staff (e.g. record % of available man days spent on patrol in the field - see example of records envisaged under Section 8 Notes on monitoring, page 29)	Consolidated record of number of field personnel and days operational (law enforcement, research and monitoring, elephant management) for each area in the elephant range compiled and reported on at annual planning meetings Records of vehicle months, VHF radio operation, fully functional stations, operating research facilities, compiled and consolidated at station, area and regional levels and reported on to the Elephant Management Committees biannually	By June 2016 Immediate action for some key areas (e.g. Sebungwe and Zambezi Valley) and by June 2016 for all regions	DG, DC
3. Analyse current capacity and identify needs	1. Current capacity assessed, needs identified and plan developed to meet needs	Assessment and needs report	By Dec. 2015	DC, CE, HMS, HRM, RMs, AMs
Key Activities/Actions	**Key Performance Indicators**	**Means of Verification**	**Time Frames**	**Responsibility**
4. Maintain and/or initiate continuity in research and monitoring necessary for the conservation and adaptive management of elephants and habitats	1. Number of research programs 2. Research-person days spent on monitoring / assessing elephant impacts in relation to TPCs	Research reports and papers on elephant conservation and management	Ongoing	DC, CE

	3. Research person days spent on monitoring elephant population parameters in each population/region			
5. Strengthen research capacity in ZPWMA and collaborate with other research institutions	1. Number of researchers (internal and external), budgets, equipment, vehicles, and active research programmes increased by more than 25% by Jul 2016 and 50% by July 2017	Staff register, budget allocations, Asset register, research permits issued, MOUs with collaborators, reports and published papers on elephant conservation and management	Immediate and ongoing through 2016 and 2107	DC, CE
6. Establish training and inservice retraining of personnel in law enforcement, research and monitoring, education and awareness, community elephant management, etc.	Increased levels (50 to 100%?) compared to June 2015 levels in: 1. Number of training days and programmes initiated 2. Number of staff trained (rangers, ecologists, extension officers) 3. Number of communities trained and implementing elephant management programmes 4. Number of elephant management campaigns conducted	Record of staff training and re-training in staff files and annual summary report of training Record of communities trained Record of training programmes	Immediate and ongoing through to 2019	DC, CE, HMS, HRM
7. Strive to achieve best standards for elephant management, including any forms of utilization	1. Best standards for elephant management in Zimbabwe, based on international standards, drafted and distributed to all practitioners	Record of best practices complied with/ not complied with	By June 2016 and ongoing	**DG**, DC, CE, HMS
8. Engage available external expertise	1. Number of expert driven decisions made from consultations 2. Number of collaborative and outsourced projects with external experts	Reports and record of collaboration with external experts	Ongoing	CE, HMS

4.5 Coordination, collaboration and programme management - Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives

Output: Coordination mechanisms to assess and review adaptive elephant population management and strategic planning established and operating

KPI: National Elephant Manager (Coordinator?) appointed and national and regional elephant conservation committees with appropriate stakeholder participation appointed and information dissemination programme in place

MV: National Coordinator monthly reports, minutes of committee meetings and planned actions completed

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
1. Establish a national elephant conservation & management steering/implementing committee that includes stakeholders meetings at least bi-annually to review progress and to develop an annual implementation plan	1. National committee functional and meeting once a year (or more if required) 2. Committee meeting minutes, with actionable points approved, circulated within one month of meetings 3. Number of resolutions/action points, acted upon	Record of meetings, minutes, actions approved and completed	Immediate with first meeting by 30th Nov 2015	DC, EM
2. Establish four regional management committees to meet at least twice each year and implement regional plans	1. Four regional committee functional and meeting twice a year 2. Committee meeting minutes, with actionable points approved, circulated within one month of meetings 3. Number of resolutions/action points, acted upon	Record of meetings, minutes, actions approved and completed	Immediate with first meetings before 30th Nov 2015 Regional plans completed by 30 Oct.	RMs, AMs
3. Strengthen links with neighbouring states to confer on the management of shared elephant populations, particularly in relation to TFCA populations	1. Consultative meetings held with neighbouring states on shared elephant populations at least twice each year 2. Joint cross border projects initiated and completed	Record of attendance at and reporting to regional and international elephant conservation bodies of which Zimbabwe is a member Record of project initiated/completed	Ongoing and projects initiated in 2016	DG, DC, TFCA Coordinator

Key Activities/Actions	Key Performance Indicators	Means of Verification	Time Frames	Responsibility
4. Establish a full-time elephant manager to be responsible for coordinating the implementation of the Action Plan	1. Elephant manager appointed with full terms of reference 2. Monthly reports from elephant manager on implementation	Elephant manager's contract and date of appointment Record of reports by the person in the elephant management position	Immediate and by November 2016	DG
5. Strengthen coordination between the hunting industry and the elephant management programme	1. Regular meetings and a workshops convened with the hunting industry on hunting and elephant management issues 2. Key issues resolved by June 2016	Record of meeting and workshop proceedings Record of elephant hunting issues resolved	Immediate and ongoing	DC, EM
6. Implement an effective information dissemination and communication strategy, including regular progress reports on the implementation of the plan	1. Outreach programmes conducted 2. Information packages produced on elephant conservation 3. Research papers published	Reports, brochures, flyers, web site Published papers	Ongoing	PR, CE, HMS

5. NOTES ON MONITORING

Monitoring of a wide range of activities and actions will necessarily form an important, if not vital, component in the implementation of the action plans. It will require careful thought as to precisely what should be monitored and in the design of the recording protocols and forms that will be used. Ideally records should in a form that can be aggregated from field to head office level to provide local, regional and national level statistics of progress in elephant conservation and management. The following table (adapted from the Zimbabwe rhino policy and management framework 2011-12016) provides an example of the data that needs to be compiled for each population to gauge progress in population status, performance and law enforcement.

SEE NOTES BELOW						
	Name of person completing this data form					
	Date on which this data from was completed					
	Name of area covered					
	Size of area in km²					
	YEAR	2015	2016	2017	2018	2019
	Date of aerial census population estimate					
	Aerial census elephant population estimate (number)					
	Aerial census carcass ratio (%)					
	No of natural mortalities					
	No of tusks recovered					
	No killed illegally					
	No killed on PAC					
	No killed for rations					
	No killed on trophy hunts					
	No of carcasses found that died in previous years					
	Total mortalities					
1	No of elephant poaching incursions/attempts detected					
	No of incursions/poaching attempts intercepted					
	Elephant poachers arrested during the year					
	- How many were given bail					
	- How many were given jail sentences					
2	- Of these how many received mandatory sentences					
	Number of poachers killed during the year					
	Number of firearms recovered from poachers					
3	Total man-days spent on patrol					
4	Average number of staff available to patrol at any one time					
5	Total number of vehicle months available during the year					
6	% of the area that has secure HF radio communications					
7	% of the year that that the VHF system was functional					
8	Number of incursions reported on / reacted to by local community					

9	Hunting regulations infringements					

NOTES:

1	These are incursions into the area by poachers clearly intending to use firearms, poison, heavy snares, etc to kill elephants and/or rhinos, or attempted incursions that were intercepted before they took place
2	Mandatory sentences for elephant / rhino poachers or dealers are 9 years for first offence and 11 years on second
3	This is actual patrolling effort expressed in patrol man-days carried out per year (not total staff x 365 days)
4	This is the average number of men (including deployments from other areas) in the field at any one time
5	Each vehicle available for law enforcement operations should be multiplied by the number of months it was available for field operations
6	e.g. if only three-quarters of the area has VHF radio reception then this figure will be 75
7	e.g. if the VHF radio system was only functional for 3 months of the year then this figure would be 25
8	Refers to the number of times the local community (not paid informers) volunteered information on actual or potential incursions of elephant/rhino poachers, and/or freely provided information/help leading to interception/ arrests
9	Refers to infringements of the regulations by safari operators/hunters/guides (e.g. shooting under age trophies, exceeding quotas, transfers of quotas from other areas, hunting from vehicles, etc.

6. CONCLUDING COMMENT

This is an ambitious plan that will require the cooperation of all stakeholders to achieve its aims. The provision in the plan to establish regional elephant management committees that will include representative from the range of stakeholders that have a strong interest in elephant conservation is a major step in devolution of responsibility.

Implementing the action plan will also require more human and financial resources than are currently available for the conservation and management of elephant in Zimbabwe. An urgent requirement is for more fully equipped men on the ground to combat illegal killing of elephant, improved monitoring and research, and incentives to maintain, if not increase, elephant range. They will require resources to cover the ground effectively and at a rough estimate it will require at least $12,000,000 per annum in operational budget alone to protect the nearly 60,000 km^2 of elephant range in the country. This estimate is based on the rule of thumb of $200 per km^2. If the threat of poaching escalates this requirement may double.

Elephant are an ecologically and economically keystone species and, if effectively conserved and managed, will act as an umbrella species for the conservation of a full range of wildlife within their range. Investment in elephant conservation will thus have wide-ranging effects on wildlife conservation in Zimbabwe.

These considerations suggest that an initial injection of substantial funding will be required to kick-start the Action Plan while providing the basis for a much wider investment in biological conservation.

7. ACKNOWLEDGEMENTS

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9. ANNEXES

9.1 Terms of Reference for the National Elephant Management Committee

Function: To annually review the Action Plan for Elephant Management and Conservation in Zimbabwe and progress in implementing the Action Plan; to review budget and policy decisions by the Elephant Manager; to guide the Ministry of Environment and Tourism and Parks and Wildlife Management Authority; to assume overall executive responsibility for elephant conservation and management in Zimbabwe.

Role of Individual Committee Members: The role of the individual members includes:

- Understanding the strategic implications and outcomes of initiatives being pursued through the Action Plan Outputs;
- Appreciating the significance of the Action Plan's implementation for major stakeholders and for the future of elephant conservation;
- Being committed to and actively involved in, implementing the most efficient and effective Action Plan;
- Being willing to suggest changes to the Action Plan or any regional action plan to achieve efficiency and effectiveness.

Duties: The Committee's primary responsibilities include:

- Ratifying major technical decisions concerned with elephant conservation and management;
- Developing and implementing elephant policy;
- Ensuring the successful implementation of all required actions; • Advising the Elephant Manager and PWMA on sourcing of funds;
- Monitoring funding, expenditure and effectiveness.

Composition: The members of the National Elephant Management Committee include:

- Director ZPWMA (Chair);
- Elephant Manager (Secretary);
- Representatives of ZPWMA , Ministry, CAMPFIRE, ZRP;

Time Frame: The Committee will meet at least twice a year, and can be called upon to meet more frequently as the need arises.

Minutes and Meeting Papers: Minutes will be kept by the Elephant Manager. Minutes will be circulated within one month of Committee meetings. Resolutions and action points will be kept by the Elephant Manager.

Actions may be taken without a meeting by a signed unanimous consent circulated, compiled, and maintained by the Elephant Manager.

Quorum Requirements: A quorum exists when [75%] of the Committee members are present.

9.2 Terms of Reference for the Regional Elephant Management Committees

Function: To semi-annually review implementation of each regional action plan; to review budget and policy decisions in each specific region; to strengthen links with various bodies at the national and regional levels (including within the TFCA framework).

Duties: Each regional Committee's primary responsibilities include:

- Ratifying major technical decisions concerned with elephant conservation and management in the specific region;
- Developing and implementing elephant policy in the specific region, in keeping with the regional action plan and national Action Plan;
- Developing and implementing elephant policy in the specific region, in keeping with the regional action plan and national Action Plan;
- Ensuring the successful implementation of all required actions;
- Advising the Elephant Manager, PWMA, and regional stakeholders on sourcing of funds;
- Liaising with regional stakeholders to appropriately represent concerns and local issues at the national level;
- Participating in quota-setting for the region.

Composition: The members of each regional Committee will include:

- ZPWMA (Chair);
- Area Ecologist (Secretary);
- Elephant Manager;
- Senior Parks Wardens;
- Research Scientists;

Time Frame: Each regional Committee will meet at least twice a year, and can be called upon to meet more frequently as the need arises.

Minutes and Meeting Papers: Minutes will be kept by the Secretary. Minutes will be circulated within one month of Committee meetings. Resolutions and action points will be kept by the Secretary.

Actions may be taken without a meeting by a signed unanimous consent circulated, compiled, and maintained by the Secretary.

Quorum Requirements: A quorum exists when [75%] of the Committee members are present.

9.3 Terms of Reference for the National Elephant Manager

Function: To coordinate elephant management in Zimbabwe; to work with stakeholders including the National and Regional Committees, ZPWMA, communities, private landowners, safari operators, and researchers

Duties: The Elephant Manager's duties include:

- Coordinating major technical decisions concerned with elephant conservation and management;
- Developing and implementing elephant policy;
- Ensuring the successful implementation of all required actions;
- Advising the Elephant Committees;
- Liaising with stakeholders;
- Collecting, collating and disseminating required reports under the Action Plan;

The following regional action plans are appended below

9.4 Northwest Matabeleland Elephant Management Action Plan

9.5 Sebungwe Elephant Management Action Plan

9.6 Mid-Zambezi Valley Elephant Management Action Plan

9.7 South East Lowveld Elephant Management Action Plan

ANNEX 9.4 Northwest Matabeleland Action Plan

9.4.1. Protection and Law Enforcement (Northwest Matabeleland)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
1.1 Highly trained rapid response anti-poaching units established/ strengthened	- Assess / audit current law enforcement capacity, prioritise needs - Mobilise resources to meet shortfalls in personnel and equipment and new technology - Recruit rangers, train and retrain staff - Review / establish Standard Operating Procedures (SOPs) for all law enforcement operations	- Assessment of enforcement capacity completed - Fully staffed and trained antipoaching units in place and operating - SOPs established and being implemented - Trends in illegal killing of elephants documented	- Assessment report - Staff recruitment and training records - Monthly and annual reports of operations - Illegal activity reports and records	Immediate and ongoing	- Staff salaries - Vehicles and S&T - Equipment	ZPWMA, FC RM, AMs ZRP
1.2 Informer network, investigation and intelligence system strengthened / established and operating	- Recruit informers and contacts - Recruit investigators and deploy strategically - Train investigators - Set up anonymous whistle-blowing system (through hotline) - Carry out awareness campaign within communities on value of conservation and how to report illegal activity (to stimulate social involvement) - Establish intelligence database	- Number of arrests based on information from intelligence system - Number of investigators recruited and trained - Number of calls to whistle blowing system that result in effective follow up - Number of incursions reported on by local communities and reacted to by ZPWMA/ZRP	- Inspection of informer reports / database - Records and reports of training session - Whistle-blower system reports - Records / reports	Established over the first year, then ongoing	- Staff salaries - Vehicles and S&T - Rewards and payments to informers - Telecommunications costs -	ZPWMA, FC ZRP
1.3 Investigation and prosecution of wildlife crimes improved	- Establish Standard Operating Procedures (to include guidelines in collaboration with ZRP, Prosecutors, Magistrates, EMA, etc., and evidence gathering - Identify gaps (e.g. ballistics and forensics) and solicit external expertise - Establish regular training and retraining schedule - Procure / hire specialized equipment that may be required	- Proportion of arrests leading to prosecution - Proportion of successful prosecutions	- Court records - Law enforcement data base	SOPs to be established within 3 months. On going	Training costs Expert costs Specialized equipment	ZPWMA, FC, ZRP Judiciary NGOs

9.4.1. Protection and Law Enforcement (Northwest Matabeleland)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
1.4 Database that is compliant with national database established	- Set up databases at regional HQ and field stations that can feed compliant information through to regional and national databases - Train staff in appropriate data collection and data capture using standardised recording forms and procedures	- Databases bases established and operational - Recording protocols in place and being used	- Database system being used and operational - Reports from database	Immediate and ongoing	Computers and software Database design and roll out	ZPWMA, FC
1.5 Joint law enforcement operations within the NWM region	- Conduct joint operations - Convene joint meetings of law enforcement agencies - Conduct awareness campaigns for other law enforcement agencies - Agree on operational order / SOPs (including information sharing)	- Number of joint operations leading to arrests and successful prosecutions - Number of meetings held per year - Number of successes from shared wildlife crime information -	- Minutes - Joint operation reports - Records - Manpower involved (by agency)	Immediate and on going Meetings: Quarterly and Monthly (crossborder)	Meeting costs (travel, etc.) Operational costs	ZPWMA ZRP ZDF FC
1.6 Full compliance with hunting and guiding regulations enforced	- Ensure all operators within the region are fully aware of regulations - Appropriate measures are taken to fine / apprehend / prosecute breaches of regulations	Implementation of revised quota setting models in the NWM	Proceedings of hunting workshop and revised models Record of infringements and penalties and analysis of trends	Immediate and ongoing	Staff time and meeting costs	ZPWMA, FC SOAZ, ZPGHA ZHA
1.7 Illegal settlement / human encroachment in designated wildlife areas reduced / reversed	- Liaise with RDCs, Traditional Leaders, ZRP and DA's office, and Lands Office - Conduct awareness, education, extension programmes in areas affected - Conduct regular satellite monitoring of areas likely to be affected	Percentage of designated wildlife area in the NWM that are settled has not increased, or has declined, from 2015 levels	Satellite monitoring records	Immediate and ongoing	Satellite imagery Meeting costs Awareness and educational materials	ZPWMA, FC, RDCs Traditional Leaders

1.8 Collaboration in law enforcement with neighbouring countries established	- Convene joint meetings of law enforcement agencies - Agree on standard operational procedures - Conduct joint cross border operations	- Agreed SOPs for cross border law enforcement operations - Number of joint operations leading to arrests and successful prosecutions	Minutes of joint meetings Record of agreed SOPs Reports of cross border operations Record of arrests and prosecutions	Immediate and ongoing	Travel and meeting costs	ZPWMA, FC ZRP JOC

9.4.2. Biological Monitoring and Management (North West Matabeleland)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
2.1 Elephant population numbers, structure, mortality (using aerial, ground, and ranger based methods) regularly monitored	- Carry out regular surveys - Carry out aerial monitoring of wildlife and illegal activities - Adopt standardized databases for all stations, forest areas, and RDCs in NWM - Introduce ranger-based monitoring across all stations in NWM - Analyze the data and report on trends - Annual water hole count continued	- Information on trends in elephant numbers, structure and mortality analysed and available	- Databases and reports	Aerial surveys every 3 years Ground and waterhole counts annually Illegal activities and ranger patrol ground counts reported monthly Database and monitoring ongoing	Aerial survey – USD 150,000 Computers and software Training in SMART, MIKES, etc Travel & Subsistence and equipment	ZPWMA FC Research Partners
2.2 Impacts of elephants on selected habitats, selected indicator plant and animal species, and water use and supplies monitored and assessed	- Measure and monitor vegetation indicators, e.g. woodland cover and changes in specific species e.g. Baobabs - Measure and monitor functional biodiversity indicators, e.g. bird species richness and responses to structural changes in woodlands - Measure and assess water use and its sustainability	Elephant impacts on selected habitats monitored, analysed and reported Elephant impacts on indicator species measured analysed and reported Sustainability of water use completed	Copies of research and monitoring reports	2016-2019	Staff salaries and S&T Field equipment	ZPWMA FC Research partners

2.3 Upper and lower thresholds of potential concern (TPCs) related to spatial and temporal impacts (ecological, social, economic) of elephants established	- Compile and analyse historical trends in habitats, selected species, economic performance of consumptive and non-consumptive use, and HWC in the region - Consultations with experts and the public on acceptable limits to change - Propose TPCs for elephant impacts and densities	- Research reports completed - PCP consultation results analysed and reported - TPC recommendations submitted - Results of timely analyses and expert and public opinion being used in determining adaptive management measures	- Copies of reports, papers and recommendations -	Provisional TPCs provided with in 3 years	Staff salaries and S&T Aerial photos Satellite imagery Stakeholder meetings	ZPWMA FC Research partners

9.4.2. Biological Monitoring and Management (North West Matabeleland)						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time Frame**	**Indicative inputs/costs**	**Lead Agencies**
2.4 Appropriate adaptive management actions undertaken when TPCs approached or exceeded	- Regularly monitor levels and trends in TPC indicators that have been developed - Alert management when and if trends indicate that TPCs are likely to be exceeded - Decide on and implement appropriate management action	- Adaptive management actions taken in response to elephant impacts	- Monitoring records and reports - Use of monitoring and research results in determining management actions - Management action taken in respect of TPCs being approached or exceeded	2018	Monitoring and implementation of management actions	ZPWMA, FC RDCs SOAZ ZPGHA ZHA Traditional Leaders
2.5 Age and quality of all elephant killed (trophies, PAC, rations, culls, poached) monitored and quotas to meet desired trophy quality adjusted	- Record age, sex and tusk size (length and weights) of all elephants killed each year - Set up and maintain database - Analyse trends and adjust quotas as necessary to meet desired trophy size - Introduce flexible and adaptable quota system (review fixed quota system) - Produce annual report	Age, sex and tusk sizes for all elephant killed recorded Elephant trophy quality is maintained or improved in relation to the stipulated desired age and trophy size.	Record of trophy quality of elephants obtained in each year	Immediate and ongoing	Staff training and time, Safari operators training and time	ZPWMA, FC SOAZ ZPGHA ZHA

2.6 Elephant range defined and managed to maintain (and/or recover) habitats and elephant populations, and connectivity between fragmented populations and buffer zone populations initiated	- Define elephant range use and existing buffer zones and potential connectivity - Identify priority corridors and land use barriers - Conduct spatial analyses to inform land use planning to facilitate connectivity and reduce human-wildlife conflict	- Elephant range maintained and lost habitats recovered - Corridors between fragmented elephant populations maintained/ established	Elephant range use maps and reports	2016 - 2019	Staff time, S&T, satellite imagery and mapping, GIS software	ZPWMA, FC RDCs Traditional Leaders Neighbouring countries
2.7 Reports to international monitoring systems prepared and submitted (e.g. AED, ETIS, MIKE, MIKES)	- Timely reports prepared and submitted as required to regional and national levels for transmission to international agencies	- Required reports submitted on time	Record of reports submitted	Ongoing	Staff time	ZPWMA RM, AM

9.4.3. Social, Economic and Cultural Framework (North West Matabeleland)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
3.1 Joint venture and sustainable use opportunities to strengthen elephant conservation and management explored	- Initiate policy formulation and /or protocols for the development of joint ventures involving public, private, community partnerships (PPCPs) - Involve all relevant stakeholders in identifying potential areas and in the planning / selection process for potential joint ventures / PPCPs - Implement identified and feasible joint ventures / PPCPs	- Policy framework and protocols for establishing Joint Ventures /PPCPs in NWM adopted - At least three Joint Ventures / PPCPs initiated and operating by 2018	Policy framework document Record of operational Joint ventures / PPCPs	2016-2018	Workshops, facilitating PPCPs, drafting policy	ZPWMA, FC RDCs Traditional Leaders CAMPFIRE Association

3.2 Transparent distribution of the benefits and costs of elephant management and conservation facilitated	- Develop instruments / protocols to: o Increase elephant revenues at the ward level. o Provide for traditional leaders to be involved in the management and distribution of elephant related benefits. - Revise CAMPFIRE guidelines to increase the share of revenues at the ward level beyond 55%. - Develop a system to ensure accountability of the revenue sharing mechanism from District to ward level. - Periodically audit the revenue sharing system	- A greater proportion of revenues from wildlife utilisation accrue to communities - Traditional leaders involved in elephant management and revenue sharing - Revenues from wildlife accounted for and audited	Records of revenue earned by and disbursed to communities Report on annual consultation with Traditional Leaders Audit reports	By Dec 2016	Meetings, Drafting Legal review	ZPWMA, FC RDCs CAMPFIRE Association Traditional Leaders
3.3 Effective techniques and land use strategies and protocols to mitigate human-wildlife conflict (HWC) implemented.	- Review current human-elephant conflict mitigation measures and potential incentives / policies to reduce conflict - Implement proposals / options emerging from review - Monitor levels of HWC, enter data in database, analyse trends	Land use strategies and protocols for mitigating HWC adopted and implemented Trends in HWC incidents show reduced levels of conflict	Reports and records of implementation Database records and trend analysis reports	Immediate and ongoing	Equipment Review costs Monitoring costs	ZPWMA RDCs Traditional Leaders
3.4 Recovery and use of all products from legally killed elephants improved	- Provide guidelines for the effective recovery, treatment, storage, and sale of elephant products -	Proportion of legally killed elephants from which products were effectively recovered Revenue earned	Database records and reports	Immediate and ongoing		ZPWMA, FC RDCs, Community leaders

9.4.3. Social, Economic and Cultural Framework (North West Matabeleland)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies

3.5 Information on elephant conservation, management and benefits in communal areas neighbouring key elephant populations included in school curricula	- Liaise with Ministry of Primary and Secondary Education on the development, production, and inclusion of elephant conservation material in school curricula - Engage with specialists and communities to develop suitable educational material on elephant conservation and management for NWM - Distribute material developed and undertake awareness campaigns on elephant conservation in selected areas	- Number and quality of elephant information items developed and delivered to schools in NWM - Proportion of schools within or neighbouring elephant areas receiving and using information provided	Elephant information items produced and distributed Reports/ records of delivery and use of elephant conservation information packages	By June 2016 and ongoing	Design and production of educational material Printing and distribution costs	ZPWMA, FC NGOs Min Education RDCs Traditional Leaders

9.4.4. Building Conservation Capacity (North West Matabeleland)						
Output	**Activities**	**Key Performance Indicators**	**Means Of Verification**	**Time Frame**	**Indicative inputs/Costs**	**Lead Agencies**
4.1 Funding to initiate and sustain the implementation of this plan secured	- Develop and submit bankable project proposals to identified potential funders - Explore potential partnerships (NGOs, Private Sector) - Review fee structure for elephant hunting and the potential generation and distribution of revenues for conservation and communities from alternative models	- Value of funding and support in kind for conservation of elephants in NWM realised each year	Records maintained by ZPWMA, NGOS, RDCs, Tour and Safari Operators	Annual assessment		ZPWMA, FC, NGOs, RDCs Tour and Safari Operators
4.2 Current capacity and staff, training, and equipment needs identified	- Carry out full audit of current human and financial resources required to implement this plan and identify needs	Capacity needs assessment (audit) completed by June 2016	Capacity needs assessment report	By June 2016	Time and travel costs of lead agencies and travel costs Consultant costs?	ZPWMA, FC
4.3 Capacity for sustained research and monitoring strengthened and collaboration with research institutions enhanced [Linked to and informed by Components 2 and 3]	- Develop and implement a multidisciplinary research and monitoring strategy for the NWM - Develop and implement a research programme based on that strategy - Provide appropriate tertiary level training for ZPWMA - Engage universities to establish inservice mentoring system - Identify and provide needed equipment - Identify and recruit community research/ monitoring personnel - Identify and train community monitors in the use and application of the Event Book System	- Explicit research strategy for the LZV developed by June 2016 - Functional research programme in place by June 2017 - No of research proposals developed, submitted, funded, and equipped - 2 persons trained per annum - No of research personnel on the ground - Research publications - No of active community monitors using the Event Book system	- Copy of research Strategy - Trained personnel in place for stipulated minimum period of time - Project proposals Technical reports and research papers - Annual State of the LZV Report - Event Book records / reports	Immediate and ongoing Annual NWM report commencing with baseline report for 2015	A range of training costs	ZPWMA, FC, Universities, NWM Working Group, NGOs
9.4.4. Building Conservation Capacity (North West Matabeleland)						
Output	**Activities**	**Key Performance Indicators**	**Means Of Verification**	**Time Frame**	**Indicative inputs/Costs**	**Lead Agencies**

4.4 Training and in-service retraining of personnel in law enforcement, research and monitoring, education awareness community elephant management, etc., established & operating	- Use capacity training needs assessment (4.2) to develop training modules / curricula - Draw up training/retraining programme	- Training modules and curricula developed and being used - 50 to 100% increase in: a) No. of training days and programmes initiated b) No. of staff trained c) No. of communities trained and implementing elephant management programmes d) No. of elephant management campaigns conducted	Record of training modules Record of training courses completed Records of personnel / communities trained Individual staff files	Initiated by March 2016	Cost of training staff and retraining	ZPWMA, FC NGOs Universities
4.5 Infrastructure and housing to facilitate effective protection, conservation and management of elephant in the NWM developed	- Rebuild / refurbish all main access and internal roads within NWM wildlife areas - Maintain / establish necessary airstrips - Undertake a feasibility study for the strategic development of new bases and pickets to support effective law enforcement, research and monitoring - Review staff accommodation requirements for the NWM - Renovate existing buildings - As needed develop staff accommodation and associated infrastructure	- Roads, bridges, airstrips refurbished and maintained as planned - Feasibility study of required field stations completed by June 2016 - Identified infrastructure requirements prioritized and required developments undertaken and completed by 2018	Housing, field units, feasibility study review report On site inspection of roads, airstrips and constructed housing units	Immediate and ongoing through 5-year period	USD 3 million+	ZPWMA FC RDCs ZINARA Donor support
4.6 Effective, secure communications network across the region established	- Establish digital VHF and GPS communication and tracking systems across the NWM (repeater links, base sets, handhelds, mobile radio sets, computers for monitoring purposes	Fully operational secure communications system in place and being maintained	Reports and tests of system	Immediate ongoing	USD 310,000	ZPWMA, FC NGOs/Donors

9.4.5. Coordination, Collaboration and Programme Management (North West Matabeleland)						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time Frame**	**Indicative inputs/costs**	**Lead Agencies**

5.1 Regional elephant management committee with membership from key stakeholders established and operating	- Appoint committee members - Hold meetings twice each year - Circulate minutes and actionable points within one month of each meeting	- Timely minutes of each biannual meeting produced and circulated - Number of committee resolutions and actionable points initiated and acted upon	Meeting minutes Actions and recommendations approved and implemented	Immediate and ongoing	Costs of meetings (venue and travel)	ZPWMA, FC Private sector agencies, RDCs Traditional Leaders
5.2 Technical support team to assist in implementation of the plan established and operational	- Convene technical support team of volunteers - Establish Terms of Reference for the team with ZPWMA & FC	- Functional team established - Technical support provided in keeping with TORs and planned activities implemented	Meeting minutes Technical activities implemented	Immediate and ongoing	Costs of meetings (venue and travel) Equipment	ZPWMA, FC NGOs
5.3 Effective communication and collaboration between Private sector, NGOs, State Agencies, and neighbouring communities (via a Forum) established	- Establish a formal forum for private sector agencies to interact with ZPWMA and FC - Establish terms of reference and recognition as a formal entity - Establish effective engagement with RDCs, and Traditional Leaders in NWM and neighbouring communities	- Formal recognition by ZPWMA / FC achieved - Meetings held - Effective engagement with neighbours	Minutes of meetings	By early 2016	Costs of meetings (venue and travel	NGOs, Private Sector ZPWMA, FC
5.4 Links with neighbouring Botswana, Namibia and Zambia to confer on the management of shared elephant populations established / strengthened	- Establish links with Botswana, Namibia and Zambia to confer on cross border elephant management issues	- Links established and operating	Records of meetings and any joint elephant management initiatives	By June 2016 and ongoing	Costs of meetings (venue and travel	ZPWMA, FC RDCs NGOs Researchers
5.5 Information dissemination strategy developed and implemented	- Undertake an awareness campaign to promote and market the plan locally and internationally - Produce and disseminate regular progress reports on the implementation of the plan	- At least one awareness campaign conducted each year - Annual progress reports produced - Number of briefs / news releases on major developments or progress released - Funds raised to support elephant conservation	Reports Campaign materials Press releases Funds raised	Initial campaign by June 2016	Preparation of campaign material	ZPWMA NGOs Private sector

ANNEX 9.5 Sebungwe Action Plan

9.5.1 Protection and Law Enforcement (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies
1. Joint operation reaction team established and existing base renovated at Bumi Hills old ZRP Camp as primary base. Followed by 3 others (Binga, Siabuwa, Old Chizarira Lodge/ Sengwa Wildlife Research Institute) *Manpower* *Vehicles* *Aircrafts* *Communication – eg radios* *Equipment eg firearms, boats* *Training* *Central database* *Intelligence networks*	**Manpower** – Draw up 20 man reaction team from law enforcement agencies and other stakeholders from the whole Sebungwe sub-region. (Prioritise Bumi, Sengwa) **Refurbish main base** **Training** – Initial database training Refresher course **Transport and Equipment** Procurement of 3 vehicles (land cruisers) Procurement of 3 boats (speedboats – 1 mothership and 2 patrol boats) **Communications** -- establish an independent inter-agency communication network	- Number of arrests - Number of cases detected - Number of recoveries made (eg ivory, firearms etc) - Number of patrols conducted - Number cases finalized (convictions) - Number of carcasses detected - Number of joint operations carried out - Number of refresher courses carried out - Number of failed cases	Population census (elephant carcass ratios) MIKE site data Patrol effort indices Number of arrests and convictions Number of reports received from communities Number of reports on training sessions carried out	1 year June 2015 to May 2016 and then ongoing	S&T, Incentives - $54,000 Good accommodation – $100,000 Medical aid support , insurance - $30,000 year trained medic on deployment, CASEVAC – $165,000 Assistance benefits on bereavement Transport – $333,000 Boats – $182,000 Aircraft hire – $25,000 year Communications – $120,000 Total Capex - $600,000? Recurrent = $300,000? Sub-station budget considerations	ZRP/ZPWMA
1.2 Informer network, Investigation and intelligence system strengthened	- Recruit informers and contacts - Maintain hotline for whistle-blowers - Procurement of 2 vehicles and 2 motorbikes - Recruit investigators (6) and deploy strategically - Train investigators - Constant liaison with informers - Rewards to informers standardized	- Number arrests and successful convictions based on information from intelligence system - Number of incursions reported on/reacted to by local communities - Number of informer reports per informer leading to arrests and convictions	Validation of informer record Records and reports of training session Whistle blower system reports	1 year and then ongoing	Transport – $132,000 Rewards and payments to informers – $40,000 Telecommunications costs -$60,000 Repair and Maintenance, fuel - $66,000 Total $298,000	ZRP/ZPWMA

9.5.1 Protection and Law Enforcement (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies
1.3 Zambezi Valley deployment tactics revisited and implemented	-ZV deployment tactics revised -Identification of OP sites, crossing points etc -Identification and procurement of specialized equipment (eg night vision) -Provision of dry rations for operations -Introduction of aerial surveillance flights	-Resource books -Number of successes on detections -Number of contacts -Number of recoveries -Patrol effort (surveillance)	Exhibits register Crime register Reports Briefing and debriefing register	3-4 months	Field allowances – $30,000 Specialised equipment costs – $80,000 Aircraft hire and maintenance Staff dry rations costs $100,000 pa Camping equipment costs – $60,000 Total $270,000	ZRP/ZPWMA
1.4 Ranger patrols strengthened	-Establish effective patrolling force of deployable rangers -Establish (or review) standard operating procedures (SOP) -Establish well-equipped reaction teams -Honorary Officer system re-established to support ranger patrols -Increase support for establishing/ improving dedicated APU for every concession.	-Number of deployable rangers at any one time -Total man-days spent on patrol -SOPs in place -Area patrolled each month -Reaction time to incidents -Number of APUs established	Monthly reports Subsistence claims Number of approved honorary officers Monthly Reports from APUs	SOPs to be established in 3 months Staffing established within 6 months Ongoing Six Months?	Salaries Equipment Vehicles	ZPWMA
1.5 Training of staff enhanced	• Establish regular training and retraining schedule (includes training on weaponry, bushcraft, tracking, information gathering, crime scene management, Judiciary procedures etc • Training on standard operation procedures (harmonization)	□ Number of training and retraining sessions carried out	□ Individual training records	Immediate and ongoing	$100,000	ZRP/ZPWMA

9.5.1 Protection and Law Enforcement (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies
1.6 Conviction rates improved	• Judiciary sensitization (incl. workshops) • Formulation of proper charges, indictment and summons • Gathering all evidence available using legal means • Completion of dockets timeously, submission and concluding cases in a reasonable time • Creation of a district sub-committee on elephant and wildlife issues • Hold workshops to share information on wildlife issues	• Number of successful prosecutions • Decrease in number of crimes committed • Number of workshops or meetings held	• Crime records • Dockets	Ongoing	$50,000	ZPWMA/ZRP

9.5.2 Biological Monitoring and Management (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies
2.1 Viable population, geographical distribution, and habitat connectivity targets established.	- Establish TPC for all areas to set viable population target. - Collect spatial data (livestock densities, human population densities, forest cover, and agricultural cover) to map potential geographic distribution of elephants - Identify potential connectivity areas and promote wildlife-based land uses in those areas.	- Viable population target of minimum 5,000 for the region with minimum and maximum thresholds in different land categories - Updated geographical distribution map and spatial datasets - Number of conservancies approved/ green-lighted by communities	Censuses of elephants Distribution and records of elephant movement Records of meetings to establish conservancies	One year, then ongoing	Computers and software, transport for ground surveys and truthing $50,000 Meeting logistics, and transport, $15,000	ZPWMA with participation from the Tashinga Initiative, WWF HSBCP, and the private sector
2.2 Monitoring system for population trends, habitat, and impacts designed and implemented.	-Establish regional database for data on population, habitat, HEC, patrolling, poaching, and trophies (for trophies, see also Output 5). -Design and adopt standardized reporting formats. (i.e. MOMS) -Report to the regional management committee to review data and decide on management actions. -Conduct annual aerial surveys for the "core area" (to be defined).	-Regional database operational -Number of reporting formats designed and distributed -Number of persons, patrols, and sectors submitting data -Quarterly reports -Quarterly reviews	Database Reporting formats Records of data submitted Reports and reviews	One year for having the database established and the first committee meeting, then ongoing Immediate, quarterly and ongoing	For the first year, $300,000, with $150,000 for subsequent years	ZPWMA, with participation by RDCs, NGOs, and safari/tour operators
2.3 Direct and indirect causes of decline (2006-2014) researched.	-Causes of mortality quantified using the regional database. -Gather information from local communities and experts. -Examine potential socio-economic factors related to decline -Research habitat changes. -Publish research in scientific publication.	Data and analyses	Reports and publications	One year (published or submitted to peer reviewed journals)	$25,000	ZPWMA

9.5.2 Biological Monitoring and Management (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies

2.4 Viable population, geographical distribution, and habitat connectivity achieved and maintained.	- Establish wildlife-based land-use system (not a land use plan) with community conservancies acting as corridors between protected areas - Reduce human-elephant conflict to acceptable levels. - Implement responsible habitat management (with regard to fires, REDD+, mining, illegal and legal settlement) - Conduct integrated land-use planning. - Support extension of REDD initiative	- Number of operational conservancies/ corridors - Elephant Population data - Number of elephants and people involved in "serious HEC incidents" - Effective, non-lethal elephant deterrents in place - Regional land-use plan - Number of stakeholders, meetings in planning process - Utilization of corridors by elephants	Censuses of elephants Distribution and records of elephant movement Records of meetings to establish conservancies Legal instruments for conservancy establishment (*e.g.* via Town & Country Planning Act, Communal Land Act)	Starting in 2016 and ongoing	Unknown, but large expenditure	ZPWMA, conservancies, etc.
2.5 Sustainable offtakes established through participatory quota setting and monitored through adaptive management.	- Establish a database of offtakes, trophy qualities, and age classes (See Output 2, Activity 1). - Using participatory quota setting following best practices, set optional quotas based on scientific survey data, with no more than 0.5% of the estimate as the elephant quota for the region. - Revisit quota system and establish optional quotas as opposed to fixed quotas - Set minimum trophy size and a variable trophy fee with large increments based on size - Identify and enforce best hunting practices through a code of conduct incorporated in lease agreements and hunting permits.	- Trophy quality improving - Record of hunting practice transgressions	Trophy database	Database and code of conduct review within 6 months Revised quotas set annually Minimum trophy size defined before first revised quota	$20,000	ZPWMA and RDCs

9.5.2 Biological Monitoring and Management (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies

2.6 Robust and comprehensive research program enhanced and maintained.	- Research the impact of decline on population dynamics. - Investigate migration hypothesis. - Develop applied research projects, especially interdisciplinary and multidisciplinary research. - Establish research oversight body, building on existing approval processes.	Publications, particularly with management guidance	Publications and raw data	Ongoing and longterm	Annual budget: $200,000	ZPWMA, local government, and academic institutions

9.5.3 Social, Economic and Cultural Framework (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative Inputs / Costs	Lead agencies
3.1 Transparent and equitable distribution of benefits established	-Develop an instrument to increase elephant revenues at the ward level. -Instrument to provide for traditional leaders to be involved in management and distribution of elephant related benefits. -Revise CAMPFIRE guide lines to increase the share of revenues at the ward level beyond 55%. -Develop a system to ensure accountability of the revenue sharing mechanism from District to ward level. -Periodic auditing of the revenue sharing system.	-Instrument approved. -CAMPFIRE guidelines revised and approved -Revenue accountability system established -Number of audits	Publication of instruments and guidelines. Audit documents	One year		ZPWMA/ CAMPFIRE
3.2 Economic management of consumptive and non-consumptive tourism of elephants in Sebungwe improved.	-Preventing human settlement in protected areas -Review length of concession leases to encourage greater investment. -Rehabilitate the depleted Safari areas -Promote PPCPs	-Number of eviction notices issued. -Number of reviewed leases -Number of safari areas under proper management/concessions -Record of PPCPs established.	Records and reports of the points (6)KPI	Over a year		ZPWMA/ CAMPFIRE, Safari/ tour operators
3.3 Land use strategies to mitigate human elephant conflicts (HEC) established	-Review of human elephant conflict measures (consultancy) -Increase sense of ownership of wildlife as a mitigation measure to HEC (review) -Traditional leaders to set up a compensation scheme for land holders directly affected by HEC. -Support review and development of land – use plans to optimize agricultural livestock and farming activities	-Reports -Link with activity 1 and 2 output1(benefits) -Compensation scheme functioning and record of HEC in place. -Land use plans supported	Reports endorsed at local level Revenues increased. Records of HEC available Plans approved and published.	1 to 3 years		ZPWMA/ CAMPFIRE

9.5.3 Social, Economic and Cultural Framework (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative Inputs / Costs	Lead agencies
3.4 Investment of wildlife revenue in income generating community products established	-Revitalize technical support services to communities/ community initiatives -Participatory business plan at community level. -Explore micro financing opportunities -Explore markets for community projects related to elephant conservation	-Technical support services established through proper instrument. -Participatory business plan adopted.	Micro finance projects Record of business plan Inventory of support services	Ongoing		CAMPFIRE Private Sector
3.5 Relationship and communication mechanism established	-Sebungwe WG to include Traditional leaders and RDCs -Methodologies for regular communication with communities and their leaders established	-Traditional leaders and RDC included in the WG -Communication strategy developed	Reports of the WG, Communication strategy reports.	6 Months		CAMPFIRE/ZP WMA/RDC/ Traditional Leaders
3.6 Education on elephant conservation in the community increased	-Information campaign explaining reasons for quota decrease (see Biological Component for cross check) -Explain what trophy hunting means and how it links to benefits -Share census results and explain implications -Extend conservation education to Sebungwe wards (NGOs?)	- Number of Outreach meetings with Traditional leaders / Wards/ RDC including the 4 key activities	Outreach meetings reports	One Year		CAMPFIRE/ZP WMA/RDC/ Traditional Leaders

9.5.4 Building Conservation Capacity Component (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies
4.1 Capacity needs for elephant management in Parks and CAMPFIRE areas analysed and identified	-Draw up TOR -Appoint consultant	Report produced	Report	3 months	10,000	Sebungwe WG

4.2 Training provided	-Analyse training needs -Prioritise and develop training curricula if not already available -Implement in-service training and retraining	Numbers of people trained and certified	Training reports	Ongoing over 5 years	500,000	Sebungwe WG
4.3 Best practice standards for elephant management in place	-Standards defined by and through National Elephant Policy and CAMPFIRE Principles and Guidelines -Define clear objectives for elephant management in the Sebungwe -Support CITES MIKES site(s) and application of SMART and RBM	-MIKES PIKE database -SMART database	CITES MIKE Reports SMART Reports	Minimum 5 years	10,000	Sebungwe WG
4.4 Research and monitoring capacity strengthened	-Provide appropriate tertiary level training for ZPWMA -Engage universities to establish inservice mentoring systems -Identify equipment needs, source and provide -Identify and recruit community research/ monitoring personnel -Identify and train community monitors in the use and application of the Event Book System	-2 persons trained per annum -5+ people in mentoring system each year -Equipment procured and in place -Active community research programme underway -Event Book System functional and operationalised	Trained personnel in place for stipulated minimum period of time Technical reports and research papers Annual State of the Sebungwe Report	Immediate and ongoing Sebungwe report annually commencing with baseline report 2015		ZPWMA, Universities, Sebungwe WG (Also in many paces in plan SWG)
4.5 Funding secured	-Complete Sebungwe Elephant Management Plan and disseminate for funding purposes -Development of funding proposals for each of the components, if necessary -Identify donors (e.g. bilateral, WB GEF, NGO, other) -Submit proposals -Develop Sebungwe branding and marketing campaign	Number of successfully funded proposals	Record of funding proposals developed and funded	Immediate and ongoing		ZPWMA, Sebungwe WG NGOs Universities

9.5.4 Building Conservation Capacity Component (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative inputs/Costs	Lead agencies

4.6 Infrastructure refurbished and functioning	- Roads rehabilitation: Parks and CL - Karoi-Binga road - Airstrips	- 2,000 km repaired to standard - Airstrips registered and functioning	Roads in regular use	5 years	10,000,000 7,500,000 1,200,000 **~20,000,000**	Min Transport, DDF, RDCs ZPWMA Private Sector Sebungwe WG
4.7 Communications	- Procure and install radio communications systems	System installed and operational	Effective repeater linked radio communication throughout Sebungwe	1 year	500,000	Sebungwe WG

9.5.5 Coordination and Programme Management (Sebungwe)

Output	Activities	Key Performance Indicators	Means of Verification	Timeframe	Indicative Inputs/Costs	Lead agencies
1. Sebungwe Management Committee with an Elephant Working Task Force and Project Coordinator established	-Identify committee members, select WTF and appoint Coordinator -ToR for each institution (from national plan)	Committee meeting twice yearly; WTF meets quarterly, identifies priority activities and oversees implementation by Coordinator	Meeting minutes Identified implementation activities completed as per milestones	Annual	3,000 3,000 50,000	ZPWMA & CAMPFIRE to establish structures
2. Coordination and communication between Traditional Authorities, their communities and the elephant management programme and plan strengthened	- Address the community through CAMPFIRE and traditional leadership - Introduce elephant management plan in easily understandable format – maps and graphs – and disseminate through all levels/actors in Sebungwe	□ Management plan documents for dissemination	Record of meetings	On-going process	20,000 pa	SEWTF and RDC
3. Coordination between Sebungwe safari operators and implementation of the elephant management plan strengthened	- SOAZ, ZPHGA appoint liaison officer for Sebungwe elephant management plan - Encourage non-members of associations to participate in plan implementation	Liaison officer appointed and operating and non-members of associating participating in implementation of the action plan	Report by Liaison Officer	Immediate and ongoing		SOAZ, ZPHGA, ZPWMA
3. Links with neighbouring states established – shared elephant management	- Establish relationship with KAZA Secretariat - Establish links and synergies with transboundary natural resource mgmt - Bilateral JOC to focus on illegal wildlife trade and trade routes - Establish links with TRAFFIC	• KAZA Secretariat aware of Sebungwe elephant management plan • TBNRM established and functional • Reduced illegal trade	• Correspondence • Records of minutes meetings held	Ongoing	Nominal	SEMG JOC Permanent Commissions etc ZPWMA

ANNEX 9.6 Lower Zambezi Valley Action Plan

9.6.1. Protection and Law Enforcement (Lower Zambezi Valley)

Output	Activities	KPIs	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
1.1 Highly trained rapid response anti-poaching units established/ strengthened	-Assess / audit current law enforcement capacity, prioritise needs -Mobilise resources to meet shortfalls in personnel and equipment and new technology -Recruit rangers, train and retrain staff -Review / establish Standard Operating Procedures (SOPs) for all law enforcement operations	-Assessment of enforcement capacity completed -Fully staffed and trained antipoaching units in place and operating -SOPs established and being implemented -Trends in illegal killing of elephants	- Assessment report - Staff recruitment and training records - Monthly and annual reports of operations - Illegal activity reports and records	Immediate and ongoing	- Staff salaries - Vehicles and S&T - Equipment	ZPWMA RM, AMs ZRP
1.2 Informer network, investigation and intelligence system established	- Recruit informers and contacts - Recruit investigators and deploy strategically - Train investigators - Set up anonymous whistle-blowing system (through hotline) - Carry out awareness campaign within communities on value of conservation and how to report illegal activity (to stimulate social involvement) - Establish intelligence database	-Number of arrests based on information from intelligence system -Number of investigators recruited and trained -Number of calls to whistle blowing system that result in effective follow up -Number of incursions reported on by local communities and reacted to by ZPWMA/ZRP	- Inspection of informer reports / database - Records and reports of training session - Whistle-blower system reports - Records / reports	Incremental set up over 1 year, then ongoing	- Staff salaries - Vehicles and S&T - Rewards and payments to informers - Telecommunications costs -	ZPWMA ZRP

1.3 Investigation and prosecution of wildlife crimes improved	-Establish Standard Operating Procedures (to include guidelines on collaboration with ZRP, Prosecutors, Magistrates, EMA, etc., and evidence gathering) -Identify gaps (e.g. ballistics and forensics) and solicit external expertise -Establish regular training and retraining schedule -Procure / hire specialized equipment that may be required	- Proportion of arrests leading to prosecution - Proportion of successful prosecutions	-Court records -Law enforcement data base	SOPs to be established within 3 months. On going	Training costs Expert costs Specialized equipment	ZPWMA ZRP Tikki Hywood Trust
9.6.1. Protection and Law Enforcement (Lower Zambezi Valley)						
Output	**Activities**	**KPIs**	**Means of Verification**	**Time Frame**	**Indicative inputs/costs**	**Lead Agencies**
1.4 Database that is compliant with national database established	-Set up databases at regional HQ and field stations that can feed compliant information through to regional and national databases -Train staff in appropriate data collection and data capture using standardised recording forms and procedures	-Databases bases established and operational -Recording protocols in place and being used	- Database system being used and operational - Reports from database	Immediate and ongoing	Computers and software Database design and roll out	ZPWMA
1.5 Joint law enforcement operations within the LZV	-Convene joint meetings of law enforcement agencies -Conduct awareness campaigns for other law enforcement agencies -Agree on operational order / SOPs (including information sharing) - Conduct joint operations	-Number of meetings held per year -Number of successes from shared wildlife crime information -Number of joint operations leading to arrests and successful prosecutions	-Minutes -Joint operation reports -Records -Manpower involved (by agency)	Meetings: Quarterly (national) and Monthly (crossborder) On going	Meeting costs (travel, etc.) Operational costs	ZPWMA ZRP ZNA
1.6 Full compliance with hunting and guiding regulations enforced	-Ensure all operators within the region are fully aware of regulations -Appropriate measures are taken to fine / apprehend / prosecute breaches of regulations	Implementation of revised quota setting models in the LZV	Proceedings of hunting workshop and revised models Record of infringements and penalties and analysis of trends	Immediate and ongoing	Staff time and meeting costs	ZPWMA SOAZ, ZPGHA ZHA

1.7 Illegal settlement / human encroachment in designated wildlife areas reduced / reversed	- Liaise with RDCs, Traditional Leaders, ZRP and DA's office, and Lands Office - Conduct awareness, education, extension programmes in areas affected - Conduct regular satellite monitoring of areas likely to be affected	Percentage of designated wildlife area in the LZV settled has not increased, or has declined, from 2015 levels	Satellite monitoring records	Immediate and ongoing	Satellite imagery Meeting costs Awareness and educational materials	ZPWMA, RDCs Traditional Leaders
1.8 Collaboration in law enforcement with neighbouring countries established	- Convene joint meetings of law enforcement agencies - Agree on standard operational procedures - Conduct joint cross border operations	- Agreed SOPs for cross border law enforcement operations - Number of joint operations leading to arrests and successful prosecutions	Minutes of joint meetings Record of agreed SOPs Reports of cross border operations Record of arrests and prosecutions	Immediate and ongoing	Travel and meeting costs	ZPWMA ZRP JOC

9.6.2. Biological Monitoring and Management (Lower Zambezi Valley)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
2.1 Elephant population numbers, structure, mortality (using aerial, ground, and ranger based methods) regularly monitored	- Carry out regular surveys - Carry out aerial monitoring of wildlife and illegal activities - Adopt standardized databases for all stations and RDCs in LZV - Introduce ranger-based monitoring (SMART, MIKE, ETIS) across all stations in LZV - Analyze the data and report on trends	- Information on trends in elephant numbers, structure and mortality analysed and available	- Databases and reports	Aerial surveys done every 3 years (LZV) Ground and waterhole counts annually Illegal activities and ranger patrol ground counts reported monthly Database and monitoring ongoing	Aerial survey – USD 150,000 Computers and software Training in SMART, MIKE, etc.	ZPWMA Research Partners
2.2 Impacts of elephants on selected habitats and selected indicator plant and animal species monitored and assessed	- Measure and monitor vegetation indicators, e.g. woodland cover and changes in specific species e.g. Baobabs - Measure and monitor functional biodiversity indicators, e.g. bird species richness and responses to structural changes in woodlands	Elephant impacts on selected habitats monitored, analysed and reported Elephant impacts on indicator species measured analysed and reported	Copies of research and monitoring reports	2016-2019	Staff salaries and S&T Field equipment	ZPWMA Research partners

2.3 Upper and lower thresholds of potential concern (TPCs) related to spatial and temporal impacts (ecological, social, economic) of elephants established	-Compile and analyse historical trends in habitats, selected species, economic performance of consumptive and non-consumptive use, HWC, in the LZV -Consultations with experts and the public on acceptable limits to change -Propose TPCs for elephant impacts and densities	-Research report completed -Survey results analysed and reported -TPC recommendations submitted -Results of timely analyses and expert and public opinion being used in determining adaptive management measures	- Copies of reports, papers and recommendations -	Provisional TPCs provided with in 3 years	Staff salaries and S&T Aerial photos Satellite imagery Stakeholder meetings	ZPWMA Research partners

9.6.2. Biological Monitoring and Management (Lower Zambezi Valley)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
2.4 Appropriate adaptive management actions undertaken when TPCs approached or exceeded	-Regularly monitor levels and trends in TPC indicators that have been developed -Alert management when and if trends indicate that TPCs are likely to be exceeded -Decide on and implement appropriate management action	- Adaptive management actions taken in response to elephant impacts	-Monitoring records and reports -Use of monitoring and research results in determining management actions -Management action taken in respect of TPCs being approached or exceeded	2018	??	ZPWMA RDCs SOAZ ZPGHA ZHA Traditional Leaders
2.5 Age and quality of all elephant killed (trophies, PAC, rations, culls, poached) monitored and quotas to meet desired trophy quality adjusted	- Record age, sex and tusk size (length and weights) of all elephants killed each year - Set up and maintain database - Analyse trends and adjust quotas as necessary to meet desired trophy size - Introduce flexible and adaptable quota system (review fixed quota system) - Produce annual report	Elephant trophy quality is maintained or improved in relation to the stipulated desired trophy size.	Record trophy quality of elephants obtained in each year	Immediate and ongoing	Staff training and time, Safari operators training and time	ZPWMA SOAZ ZPGHA ZHA
2.6 Current elephant range defined and management to recover habitats and elephant populations and maintain connectivity between fragmented populations and buffer zone populations initiated	-Define elephant range use and existing buffer zones and potential connectivity -Identify priority corridors and land use barriers -Conduct spatial analyses to inform land use planning to facilitate connectivity and reduce human-wildlife conflict	-Elephant range and maintained and lost habitats recovered -Corridors between fragmented elephant populations maintained/ established	Elephant range use maps and reports	2016 - 2019	Staff time, S&T, satellite imagery and mapping, GIS software	ZPWMA RDCs Traditional Leaders Neighbouring countries

2.7 Reports to international monitoring systems prepared and submitted (e.g. AED, ETIS, MIKE, MIKES)	- Timely reports prepared and submitted as required to regional and national levels for transmission to international agencies	- Required reports submitted on time	Record of reports submitted	Ongoing	Staff time	ZPWMA RM, AM

9.6.3 Social, Economic and Cultural Framework (Lower Zambezi Valley)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
3.1 Joint venture and sustainable use opportunities to strengthen elephant conservation and management explored	- Initiate policy formulation and /or protocols for the development of joint ventures involving public, private, community partnerships (PPCPs) - Involve all relevant stakeholders in identifying potential areas and in the planning / selection process for potential joint ventures / PPCPs - Implement identified and feasible joint ventures / PPCPs	- Policy framework and protocols for establishing Joint Ventures /PPCPs in the LZV adopted - At least three Joint Ventures / PPCPs initiated and operating by 2018	Policy framework document Record of operational Joint ventures / PPCPs	2016-2018	?	ZPWMA RDCs Traditional Leaders CAMPFIRE Association
3.2 Transparent distribution of the benefits and costs of elephant management and conservation facilitated	- Develop instruments / protocols to: o Increase elephant revenues at the ward level. o Provide for traditional leaders to be involved in the management and distribution of elephant related benefits. - Revise CAMPFIRE guidelines to increase the share of revenues at the ward level beyond 55%. - Develop a system to ensure accountability of the revenue sharing mechanism from District to ward level. - Periodically audit the revenue sharing system	- A greater proportion of revenues from wildlife utilisation accrue to communities - Traditional leaders involved in elephant management and revenue sharing - Revenues from wildlife accounted for and audited	Records of revenue earned by and disbursed to communities Report on annual consultation with Traditional Leaders Audit reports	By Dec 2016	Meetings, Drafting Legal review	ZPWMA RDCs CAMPFIRE Association Traditional Leaders

3.3 Effective techniques and land use strategies and protocols to mitigate humanwildlife conflict (HWC) implemented.	-Review current human-elephant conflict mitigation measures and potential incentives / policies to reduce conflict -Implement proposals / options emerging from review -Monitor levels of HWC, enter data in database, analyse trends	Land use strategies and protocols for mitigating HWC adopted and implemented Trends in HWC incidents show reduced levels of conflict	Reports and records of implementation Database records and trend analysis reports	Immediate and ongoing	??	ZPWMA RDCs Traditional Leaders
3.4 Recovery and use of all products from legally killed elephants improved	- Provide guidelines for the effective recovery, treatment, storage, and sale of elephant products -	Proportion of legally killed elephants from which products were effectively recovered Revenue earned	Database records and reports	Immediate and ongoing	??	ZPWMA RDCs, Community leaders

9.6.3 Social, Economic and Cultural Framework (Lower Zambezi Valley)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies
3.5 Information on elephant conservation, management and benefits in communal areas neighbouring key elephant populations included in school curricula	-Liaise with Ministry of Primary and Secondary Education on the development, production, and inclusion of elephant conservation material in school curricula -Engage with specialists and communities to develop suitable educational material on elephant conservation and management for the LZV -Distribute material developed and undertake awareness campaigns on elephant conservation in selected areas	-Number and quality of elephant information items developed and delivered to schools in the LZV -Proportion of schools within or neighbouring elephant areas receiving and using information provided	Elephant information items produced and distributed Reports/ records of delivery and use of elephant conservation information packages	By June 2016 and ongoing	Design and production of educational material Printing and distribution costs	ZPWMA NGOs Min Education RDCs Traditional Leaders

9.6.4 Building Conservation Capacity (Lower Zambezi Valley)						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time Frame**	**Indicative inputs/costs**	**Lead Agencies**
4.1 Funding to initiate and sustain the implementation of this plan secured	- Develop and submit bankable project proposals to identified potential funders - Explore potential partnerships (NGOs, Private Sector) - Review fee structure for elephant hunting and the potential generation and distribution of revenues for conservation and communities from alternative models	- No of project proposals developed, submitted and funded - Value of funding and support in kind for conservation of elephants in LZV realised each year	Records maintained by ZPWMA, NGOS, RDCs, Tour and Safari Operators	Annual assessment		ZPWMA, NGOs, RDCs Tour and Safari Operators
4.2 Current capacity and staff, training, and equipment needs identified	- Carry out full audit of current human and financial resources required to implement this plan and identify needs	Capacity needs assessment (audit) completed by June 2016	Capacity needs assessment report	By June 2016	Time and travel costs of lead agencies and travel costs Consultant costs?	ZPWMA
4.3 Capacity for sustained research and monitoring strengthened and collaboration with research institutions enhanced [Linked to and informed by Components 2 and 3]	- Develop and implement a multidisciplinary research and monitoring strategy for the LZV - Develop and implement a research programme based on that strategy - Provide appropriate tertiary level training for ZPWMA - Engage universities to establish inservice mentoring system - Identify equipment needs and provide - Identify and recruit community research/ monitoring personnel - Identify and train community monitors in the use and application of the Event Book System	- Explicit research strategy for the LZV developed by June 2016 - Functional research programme in place by June 2017 - No of research proposals developed, submitted, funded, and equipped - 2 persons trained per annum - No of research personnel on the ground - Research publications - No of active community monitors using the Event Book system	- Copy of research Strategy - Trained personnel in place for stipulated minimum period of time - Project proposals Technical reports and research papers - Annual State of the LZV Report - Event Book records / reports	Immediate and ongoing Annual LZV report commencing with baseline report for 2015	A range of training costs	ZPWMA, Universities, LZV Working Group

9.6.4 Building Conservation Capacity (Lower Zambezi Valley)						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time Frame**	**Indicative inputs/costs**	**Lead Agencies**

4.4 Training and in-service retraining of personnel in law enforcement, research and monitoring, education awareness community elephant management, etc., established & operating	- Use capacity training needs assessment (4.2) to develop training modules / curricula - Draw up training/retraining programme	- Training modules and curricula developed and being used - 50 to 100% increase in: a) No. of training days and programmes initiated b) No. of staff trained c) No. communities trained and implementing elephant management programmes d	Record of training modules Record of training courses completed Records of personnel /c communities trained Individual staff files	Initiated by March 2016	Cost of training staff and training	ZPWMA NGOs Universities
4.5 Infrastructure and housing to facilitate effective protection, conservation and management of elephant in the LZV developed	- Rebuild / refurbish all main access roads to the LZV (c.150 km) - Repair, clear, grade where necessary some 600 km of internal roads and several bridges - Maintain / establish necessary airstrips - Undertake a feasibility study for the strategic development of new bases and pickets to support effective law enforcement, research and monitoring - Review staff accommodation requirements for the LZV - Renovate existing buildings - As needed develop staff accommodation and associated infrastructure	Roads, bridges, airstrips refurbished and maintained as planned Feasibility study of required field stations completed by June 2016 Identified infrastructure requirements prioritised and required developments undertaken and completed	Housing, field units, feasibility study review report On site inspection of roads, airstrips and constructed housing units	Immediate and ongoing through 5year period	USD 3 million+ ??	ZPWMA Donor support
4.6 Effective, secure communications network across the region established	- Establish digital VHF and GPS communication and tracking systems across the LZV (repeater links, base sets, handhelds, mobile radio sets, computers for monitoring purposes	Fully operational communications system in place and being maintained	Reports and tests of system	Immediate ongoing	USD 310,000	Tashinga Initiative ZPWMA

9.6.5 Coordination, Collaboration and Programme Management (Lower Zambezi Valley)

Output	Activities	Key Performance Indicators	Means of Verification	Time Frame	Indicative inputs/costs	Lead Agencies

5.1 Regional elephant management committee with membership from key stakeholders established and operating	- Appoint committee members - Hold meetings twice each year - Circulate minutes and actionable points within one month of each meeting	Timely minutes of each meeting produced and circulated Committee resolutions and actionable points initiated and acted upon	Meeting minutes Actions and recommendations approved and implemented	Immediate and ongoing	Costs of meetings (venue and travel)	ZPWMA Private sector agencies, RDCs Traditional Leaders
5.2 Technical support team to assist in implementation of the plan established and operational	-Convene technical support team of volunteers -Establish Terms of Reference for the team with ZPWMA	Functional team established Technical support provided in keeping with TORs and planned activities implemented	Meeting minutes Technical activities implemented	Immediate and ongoing	Costs of meetings (venue and travel	TTI ZPWMA NGOs
5.3 Effective communication and collaboration between Private sector, NGOs, State Agencies, and neighbouring communities (via a Forum) established	- Establish a formal forum for private sector agencies to interact with ZPWMA - Establish terms of reference and recognition as formal entity - Establish effective engagement with RDCs, and Traditional Leaders in the LZV and neighbouring communities	Formal recognition by ZPWMA achieved Meetings held Effective engagement with neighbours	Minutes of meetings	By early 2016	Costs of meetings (venue and travel	TTI Private Sector ZPWMA
5.4 Links with neighbouring Zambia and Mozambique to confer on the management of shared elephant populations established / strengthened	- Establish links with Zambia and Mozambique to confer on cross border elephant management issues	Links established and operating	Records of meetings and any joint elephant management initiatives	By June 2016 and ongoing	Costs of meetings (venue and travel	ZPWMA RDCs NGOs Researchers
5.5 Information dissemination strategy developed and implemented	-Undertake an awareness campaign to promote and market the plan locally and internationally -Produce and disseminate regular progress reports on the implementation of the plan	At least one awareness campaign conducted each year Annual progress reports produced Briefs / news releases on major developments or progress released Funds raised to support elephant conservation	Reports Campaign materials Press releases Funds raised	Initial campaign by June 2106	Preparation of campaign material	ZPWMA NGOs Private sector

ANNEX 9.7 South East Lowveld Action Plan

9.7.1 Protection and Law Enforcement (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
1.1 Highly trained rapid response anti-poaching units strengthened	– Appoint anti poaching coordinator (for region and/or separate areas) – Recruit staff – Train staff – Procure vehicles and equipment – Deploy unit – Support existing units	Trained and fully equipped units established and operating with relevant security agency by June 2016	Inception reports Daily and monthly reports, including details on patrols, arrests, and incursions Training reports	Established where needed by June 2016	US$ 230,000	ZPWMA ZRP Conservancies + MT
1.2 Informer and intelligence systems established and/or strengthened	– Identify and recruit informers – Establish and implement incentive protocols – Set up, implement hotline for anonymous reports and communicate it to the public – Analyse and use information – Ensure information is included in database outlined in Output 1.6	An active informer system/network operating within the SEL by Jan. 2016 Hotline widely advertised and operational by Jan 2016	Operational reports Recoveries Records of arrests and successful prosecutions Records of payments for information Records of hotline reports	By Jan 2016	Informer incentives Airtime Cost of setting up hotline	ZPWMA Security agencies Conservancies + MT
1.3 Investigation of wildlife crime improved	– Implement training programmes for investigation personnel – Ensure collaboration between Parks, ZRP and intelligence officers – Recruit more investigators – Put in place Investigator incentive system – Collaborate with forensic scientists and ballistic experts, as well as agencies such as EMA and approved universities (e.g. Chinhoyi University of Technology, University of Zimbabwe, National University of Science and Technology)	At least two law enforcement staff trained in scene of crime collection and preservation of evidence, ballistics evidence, etc. in SEL. Percentage of investigations resulting in successful prosecutions in SEL greater than in 2014	Reports on intelligenceled operations (arrests, dockets, convictions, multi-agency involvement) Training reports, including investigators wildlife crime manual	3 Months Ongoing 3 Months Ongoing Ongoing	$25,000	ZRP ZPWMA
1.4 Prosecution of wildlife crimes improved	– Train prosecutors on legislation and processes available to deal with wildlife crimes – Conduct awareness / outreach programs with Prosecution, Judiciary – Utilize ancillary laws, such as those dealing with economic crime, organized crime, money laundering, – Communicate status of prosecutions to the public via ZPWMA website – Clear backlog of wildlife cases – Explore the possibility of appointing dedicated wildlife crime prosecutors at Regional and National level	Monthly liaison sessions on wildlife crime and law enforcement held with members of the judiciary Relevant legislation available and being used Wildlife crime prosecutors available and being used in SEL	Reports on arrests, dockets, convictions, sentences Court records Monthly liaison meeting reports ZPWMA website	Starting 3 months, and fully operational by December 2016		ZPWMA Judiciary Prosecutor-General's Office District and Provincial Public Prosecutors
9.7.1 Protection and Law Enforcement (South East Lowveld)						

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
1.5 Law enforcement in collaboration with communities enhanced	– Engage and collaborate on curbing wildlife crimes (ZRP & Communities) – Establish anti-poaching clubs/ community natural resource monitors that collaborate with ZPWMA and ZRP – Lobby support from Chiefs to deal with local poachers – Hold workshops with Chiefs and communities about wildlife and wildlife crimes – Establish incentives for communities to provide information	Incentive schemes that encourage the public and members of rural communities to contribute to law enforcement (e.g. through informer hotline) established in SEL Increasing number of incidents of community contribution to law enforcement (e.g. whistle blowers) by Dec. 2017	Reports received through informers or hotlines Trends in reporting from communities Intelligence reports and minutes of meetings Reports on poaching incidents dealt with through traditional leaders Reduced levels of wildlife and environmental crime in the SEL	Ongoing Ongoing	$5,000	ZPWMA RDCs Traditional Leaders ZRP
1.6 Local wildlife law enforcement database established	– Set up database, as per national database – Ensure inclusion of prosecution status in database – Implement national data recording protocols – Train data entry staff and crime analysts	Local database established and operating Illegal activities recorded and analyzed	Inspection of database Operational database Monthly and annual analysis reports	6 months	$10,000 -Computer -Software -Training	ZPWMA Conservancies + MT Security agencies
1.7 Illegal settlements / grazing in wildlife areas reduced [Links to activities on land use mapping and planning in Component 2 – Output 2.2 and incentivization / alternative livelihood activities in Component 3]	– Liaise with RDC, Traditional Leaders and ZRP, DA's Office – Conducted Education programmes – Regular updated satellite mapping	Illegal settlements reduced to less than 5% of wildlife areas by 2020 (i.e. state protected areas, conservancies and community wildlife areas)	Records and maps of illegal settlements and of wildlife land recovered	Ongoing to 2020		ZPWMA CAMPFIRE RDCs Conservancies + MT

9.7.2 Biological Monitoring and Management (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Lead Agencies
2.1 Research programme to understand temporal and spatial drivers of elephants established	– Create enabling opportunities and environment for research – Prioritise research needs – Conduct localised case studies and research projects – Monitor and evaluate poaching and other drivers - hunting, water, food, human disturbance – Explore possibility of GLTFCA flagship research programme for elephants [linked to Component 5] – Carry out ground surveys to monitor distribution and density	Research programme that enables local and international researchers, and links with the GLTFCA research programme, in place and producing reports	Annual summary research report Number of research projects Number of essential research projects Number of affiliations with national, regional and international institutions Reports and reviews Publications	5 year plan and annual review	Aerial surveys Ground counts Satellite collars Remote sensing data layers Research operations Research permit costs	ZPWMA Conservancies + MT Universities FZS GLTFCA Joint Management Board / Coordinator RDCs Technical colleges
2.2 Current elephant range defined and options for extending range and maintaining connectivity between fragmented populations explored	– Define elephant range use, and existing and potential connectivity – Identify priority corridors and human land use barriers – Conduct spatial analyses to inform land use planning – Advocate land use planning to facilitate connectivity and reduce human wildlife conflict – Explore options for translocating elephants to understocked areas	Identified priority corridors for elephant connectivity within SEL, between SEL and other areas in Zimbabwe, and with neighbouring countries	Elephant and human range use reports and maps	December 2016	Aerial surveys Satellite collars Remote sensing data layers Research operations Permit costs	ZPWMA Conservancies + MT Universities FZS DA's Office RDCs

9.7.2 Biological Monitoring and Management (South East Lowveld)						
Output	**Activities**	**Key Performance Indicators**	**Means of Verification**	**Time frame**	**Indicative costs**	**Lead Agencies**

2.3 Elephant population numbers, structure, mortality and trends monitored, quotas adjusted, and desired levels of trophy quality maintained	– Undertake standardised, regular, aerial and ground surveys of the elephant range – Explore methods to monitor elephant presence and abundance in Mozambique (to Zinave) and up to the Chimanimani range – Undertake trend analysis – Define elephant age and sex structures and extract birth and death rates – Establish annual monitoring plans – Record and analyse elephant mortalities (all causes e.g. poaching, PAC, natural, hunting, etc.) – Monitor trophy quality and age – Develop and implement an age-based and sizebased trophy quota	Elephant range surveyed at regular intervals Demographic data available and analysed Annual monitoring plans implemented Evidence-based and research-based information and recommendations (consumptive, nonconsumptive) provided to managers and used in quota setting	Aerial survey reports Minutes of the elephant management committee meeting Minutes of quota setting meetings Reports on mortality, population structure, and trophy quality and age	Aerial surveys - at least every three years Ongoing monitoring Annual reports	Aerial surveys Remote sensing data layers Monitoring operations Permit costs	ZPWMA Conservancies + MT Universities FZS International donors
2.4 Elephant impacts on their habitats and selected indicator species of biodiversity monitored	– Establish annual monitoring plans – Measure vegetation indicators such as woodland cover – Measure other functional biodiversity indicators e.g. bird responses to structural changes to woodlands – Measure ecosystem functions – Relate desired impact to measures of elephant abundance and spatial use – Research other drivers of ecological impact (climate change, change in land use, water provision, and fencing, amongst others) – Use research findings, expert opinion and informed public opinion to establish thresholds of potential concern (TPC or limits to change) to initiate management action in respect of elephant impacts in protected areas and effects in communal land – Identify areas with key vegetation communities that are utilized by elephants	Annual monitoring plans defined and implemented for selected indicator species of biodiversity TPC's established Evidence-based and research-based information and recommendations (consumptive, nonconsumptive) provided to managers	Annual ecological impact monitoring reports Published research papers and reports Minutes of the elephant management committee meeting	Annual	Ecological surveys Remote sensing data layers Monitoring operations Permit costs	ZPWMA Conservancies + MT Universities FZS GLTFCA Coordinator
9.7.2 Biological Monitoring and Management (South East Lowveld)						

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Lead Agencies
2.5 Costs and benefits of elephants to local and national economy monitored and costs of elephants to local communities reduced	– Monitor and evaluate extent and costs of humanwildlife conflict incidents – Relate human-wildlife conflict to elephant abundance and spatial use – Understand drivers and social and economic consequences of human-wildlife conflict – Evaluate the direct and indirect contribution (financial, economic and social) and the direct and indirect costs of elephants to the well-being of people and to conservation, through both consumptive and non-consumptive uses – Implement ongoing and new mitigation for humanwildlife conflict	Annual monitoring plans implemented Evidence-based and research-based information and recommendations (consumptive, nonconsumptive) provided to managers	Annual monitoring reports Human Wildlife Conflict Reports Research reports provided to managers Minutes of the elephant management committee meeting	Annual	Questionnaire Surveys Centralized database setup and maintenance Monitoring operational costs	ZPWMA Conservancies + MT Universities FZS
2.6 Adaptive elephant management framework adopted and implemented	– Ensure collaboration between Regional Elephant Management Committee and regional and local resource management committees (e.g. LOCAL Forum) – Implement annual process of adaptive planning, implementation and monitoring in line with elephant management objectives and TPCs within the SEL – Develop and implement localised management plans (e.g. SVC plan) – Ensure alignment and harmonisation with other Zimbabwean, regional and international plans	Annual elephant management plans developed, adopted and implemented	Elephant Management Committee Minutes Planning and monitoring reports Annual elephant management plans	Annual	Meeting costs Monitoring and analysis costs	ZPWMA Regional Elephant Management Committee
2.7 Alternative outcomes modelled	– Develop framework for examining and modelling potential linked impacts between biodiversity issues, elephant issues, and societal issues, including any 'surprises', such as disease or extreme weather events. – Implement the modelling framework to define the outcomes of various management scenarios	Established modelling framework being used to guide adaptive management Scenario outcome recommendations and being used in management	Elephant Management Committee Minutes Reports on models and scenarios Recommendations	Begin immediately Ongoing annual reports through 2020	Meeting costs Staff and consultants costs Software costs	ZPWMA Regional Elephant Management Committee Research institutions Researchers
2.8 SEL reporting to meet national / international standards achieved	– Advocate key summary set of elephant KPIs/outcomes for national reporting (e.g. potential population sizes against actual population sizes) – Comply with national and international legal obligations – Explore the designation of GNP as a MIKE site	CITES reporting requirements met National reporting compliance requirements	SEL regional Reports CITES Reports	Annual	Monitoring costs	ZPWMA Regional Elephant Management Committee

9.7.3 Social, Economic and Cultural Framework (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
3.1 Community partnerships and joint venture oportunities are incentivised and facilitated	– Establish protocols, policies and models for development of joint ventures (PPCPs) – Identify potential areas – Facilitate development of new, and strengthen existing, institutional frameworks and legal entities for beneficiaries at sub-district level – Develop concepts, business plans and prospectuses for different areas through consultative processes with Communities – Develop a SEL Tourism plan and review potential concessions within the framework of this Plan – Develop mechanisms for inclusive and transparent engagement and selection of operators and JV partners. – Facilitate communication, endorsement and support of JVs – Explore potential incentives and avenues of material and technical support that can be provided by Local Government and Authorities to promote establishment and sustainability of Community JVs – Promote access to affordable capital funding – Enhance capacity of community members to engage in wildlife and tourism management through training and employment	Models and protocols for joint ventures established Community institutions to engage in joint ventures established Joint ventures established and operating, resulting in financial benefit to communities SEL tourism developed and potential concessions identified Mechanisms of support and incentivisation to JVs established	Community institution documents (e.g. Trust deeds) Concept notes, business plans and prospectuses for JVs JV agreements and leases Records of meetings, negotiations and consultations SEL Tourism Plan RDC resolutions Community resolutions Record of incentives Project reports & accounts Training reports	Within 12-24 months, and then ongoing	Travel Meetings Drafting Consultants NGO support	RDCs Traditional Leaders and relevant community institutions NGOs Pvt Sector ZPWMA
3.2 Elephant management in community wildlife areas improved	– Promote improved and professionalized elephant management and security in community wildlife areas through establishment and maintenance of improved capacity, infrastructure, security and management systems – Develop and implement a transparent Performance Based Quota system which incentivises improved management and security systems for elephant in community hunting areas and which promotes effective buffering of source populations – Update terms of lease agreements in community wildlife areas to confer a broader range of roles and responsibilities on operators including resource management and protection; reinvestment and infrastructure development; employment targets; local sourcing; etc. – Review key cooperation opportunities across different land uses and countries within GLTFCA, e.g. Sengwe-Tshipise Wilderness Corridor	Infrastructure, equipment and systems for elephant management in community wildlife areas established and operational Reduced human-elephant conflict Community capacity for wildlife management improved Opportunities for cooperation within GLTFCA identified	Project reports Asset / infrastructure register Number of rangers / employees Leases, Business Plans Resource monitoring data Trophy data Number of people / locals employed Invoices and receipts for local goods and services Meeting records Constitutions and agreements signed Workshop reports	Ongoing Within 12 months	Capital expenditure on infrastructure and equipment Maintenance Electricity Communications Operational costs: Staff and training, Travel, Research and Monitoring, Workshops	JV partners NGOs & donors Local authorities GLTFCA
3.3	– Promote awareness and marketing of iconic tuskers	Corridors identified and	Tourism records	As part of	As part of SEL	All

9.7.3 Social, Economic and Cultural Framework (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
3.3 Additional elephantbased tourism and sustainable utilisation oportunities explored	– Explore opportunities for expansion of community wildlife areas in viable wildlife corridors to enable establishment of additional sustainable utilisation areas and enterprises. [Links to Output 2.2 – identification of corridors]	Agreements concluded Tourism and awareness campaigns undertaken	Marketing materials Business plans Meeting and workshop reports Agreements signed Reports and maps of corridors	SEL Tourism Plan Within 12 months and ongoing	Tourism Plan, workshops and consultations	stakeholders RDCs Communities
3.4 Transparent distribution of the benefits and costs of elephant management and conservation facilitated [Links to Output 2.5]	– Conduct regular and comprehensive Community Awareness campaigns regarding quotas, revenues and distribution within Communities – Capacitate and incorporate direct community involvement in management of Community Wildlife Areas, enterprises and JVs. – Diversify downstream natural resources enterprises to multiply the revenues from CBNRM, e.g. NTFPs	Awareness campaigns conducted Community structures have improved capacity to manage NRs and wildlife areas CBNRM revenues are invested in establishment of natural-resource based enterprises Community realises greater employment and financial benefit from CBNRM revenues	Meeting records Training materials & records Number of enterprises established Books of account Number of employees & beneficiaries	Within 12 months and ongoing	Consultations Scoping and feasibility studies Awareness campaigns Company set up and administration	ZPWMA Traditional leaders Communities RDCs Pvt Sector NGOs
3.5 Effective techniques and land use strategies to mitigate human-elephant conflict are implemented	– Review land use zonation through consultative processes [link to Output 2.2] – Promote awareness and adoption of effective HEC mitigation measures – Promote improved rangeland rehabilitation and grazing management to reduce competition between livestock and wildlife. – Promote improved and rationalised crop production and alternative mechanisms to promote food security to reduce habitat destruction for inefficient dry land cropping (e.g. irrigation development; carbon sequestration credits to generate income & purchase of staple grains).	HEC is effectively reduced Availability and application of HEC mitigation measures improved There is participation in effective grazing management schemes Grazing is better managed and rangeland health is improved There is increased uptake of improved cropping techniques Crop yields are improved Alternative land uses evaluated	Land use plans Meeting records Land use plans & agreements concluded Training & awareness materials HEC data Pasture monitoring data Crop production data	Within 12 months and ongoing	Workshops and consultations Training materials Consultants Input costs Irrigation development	Communities RDC ZPWMA Pvt Sector NGOs (technical & financial support)

9.7.3 Social, Economic and Cultural Framework (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
3.6 Information on elephants and their conservation is included in school curriculae and environmental education adjacent to key elephant populations in the SEL is promoted	– Promote awareness of elephant conservation (and other issues) through cultural events, art, plays, sport, etc. – Participate in syllabus review of national environmental science curriculum approved by the Ministry of Education – Develop approved environmental training and extension material and promote dissemination to different stakeholder groups within the community – Promote the formation of environmental science clubs at schools – Coordinate various education, training and extension campaigns operating within the district	School children and communities have greater appreciation of elephant conservation issues Greater participation in environmental clubs at schools with greater understanding of environmental issues More social events linked to environmental and conservation awareness are held Elephant conservation messages are conveyed through art and cultural events & competitions Parallel education programmes are coordinated through stakeholder planning sessions at district level	Test Results Competitions Community focus groups Attendance registers Event documentation Number and type of events Workplans Meeting outputs & records	12 months and ongoing	Consultants Endorsements Community consultations Materials and dissemination School visits Training of trainers / teachers Event costs Marketing Sport kit Coordination costs	NGOs RDCs ZPWMA DEO Communities
3.7 Cultural tourism is developed and marketed as a centre-piece of SEL attractions and linked explicitly to conservation of flagship species including elephant	– Promote existing cultural tourism events and attractions and promote incorporation of messages of elephant conservation within these – e.g. Machangana Cultural Festival; GL-Cultural Festival – Explore and develop additional cultural tourism opportunities – including development of interpretive centres, craft centres, museums, monuments, events, etc. and market these – Document and communicate the specific cultural importance of elephant to communities in the SEL and incorporate this into education, marketing, event and cultural messages and interpretative centres.	Community participation and tourist attendance of cultural events is increased Messages relating to elephant conservation and environmental issues are key themes The number of cultural tourism developments and enterprises is increased Anecdotes, artifacts and oral tradition regarding cultural importance of elephants are recorded and insinuated into marketing strategies and event messages	Tourism records Event records & themes Number of enterprises registered Documents compiled	Ongoing	Costs for : Cultural events Planning Awareness and marketing Travel and events Scoping, feasibility and planning Workshops and consultations Establishement and registration Capex, Opex Marketing Travel & meeting costs Workshops and publications	Communities Traditional leaders Local authorities, Private sector NGOs JV partners Consultants

9.7.3 Social, Economic and Cultural Framework (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies
3.8 Regional tourism is promoted	– Promote the development of infrastructure critical to accessibility of the region: e.g. border crossing at Pafuri; road development and maintenance; scheduled flights to Chiredzi; etc. – Promote diversification, branding and marketing of SELspecific tourism products linked within the region and with other attractions in Zimbabwe and neighbouring countries. – Focus special attention on development of community-led tourism initiatives that contribute to the sustainability of the STWC as a movement corridor for elephant – Clear mines from STWC	Increased tourism traffic and arrivals Infrastructure upgrades Scheduled flights established Pafuri border crossing operational Tourism products are diversified Marketing and branding consultants engaged to develop branding and strategy Scoping, feasiblity studies are undertaken Increased number of CB enterprises are operational	Tourism & economic data Upgraded infrastructure Border post Flight schedules Tourism enterprise info Marketing materials Scoping and feasiblity documents Business plans and registrations	ongoing	Scoping studies Tenders Workshops and consultations Scoping studies Consultants Development of business plans Infrastructure, equipment, operational costs Marketing	Central Government Local Authorities Communities GLTFCA Donors Private sector RDCs NGOs JV partners
3.9 Policy framework for conservation and CBNRM is well understood by communities and other stakeholders in SEL	– Compile factsheets on policy framework for conservation and CBNRM and disseminate to communities and other stakeholders	Communities have access to existing CBNRM and Policy frameworks	Awareness materials Focus groups & attendance registers Enterprise records Employment records	12 months ongoing	Consultation & document compilation Drafting and production of awareness materials Dissemination of materials	Traditional Leadership Communities RDCs ZPWMA NGOs
[Consider moving to national plan]	– Consider innovative mechanisms for transboundary resource sharing and expanding "space for elephants" [National level activity]	Workshops conducted	Workshop outputs and resolutions	Within 12 months	Stakeholder workshops (and attendant costs) Community consultations (AAC)	All stakeholders GLTFCA

9.7.4 Building Conservation Capacity (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies

4.1 Funding to implement the plan secured	– Implement variable / graduated trophy fee structure based on trophy size [national-level decision] – Review levy / fee structure for elephant hunting and the distribution of these revenues for conservation and communities – Develop and submit bankable project proposals to potential funders – Explore potential business partnerships – Increase capacity and law enforcement coverage by ensuring that all key stakeholders contribute to and are engaged in law enforcement activities: hunting operators, tour operators, and community antipoaching teams [Links to Output 1.1] – Explore the potential for a dedicated elephant fund for SEL.	Revised trophy fee structure developed, resulting in increased funds available or secured for elephant conservation Number of project proposals developed submitted and funded Number of developed and functional partnerships contributing to improved elephant management	Record of funds available for elephant conservation Record of project proposals	2016 and ongoing		ZPWMA Conservancies + MT NGOs
4.2 Current capacity analyzed and needs identified	– Analyze current capacity – Carry out a needs assessment across the full range of human resources – Carry out a needs assessment for equipment and infrastructure – Develop a strategy to address the identified needs	Needs assessment report	Records and reports	2016 and ongoing		ZPWMA
4.3 Capacity for research and monitoring strengthened and collaboration with research institutions enhanced [Linked to and informed by Components 2 and 3]	– Develop and implement a multi-disciplinary research and monitoring strategy – Develop and implement a research programme based on that strategy, including graduate studies, post graduate and external researchers as well as ZPWMA researchers – Undertake periodic research meetings / conferences – Recruit and meet demands and requirements for research personnel in Parks and surrounding areas – Collaborate with external research institutions – Develop and implement a mentoring programme for researchers – Procure relevant research equipment	Functional research programme in place Research meetings held Publications Number of research projects developed and implemented Number of research personnel on the ground Number of collaborative projects Mentoring plan / number of days spent with experienced researchers Inventory of equipment for research procured	Reports and publications Minutes of meetings Records of field personnel	2016 and ongoing	USD 100,000?	ZPWMA, Universities, NGOs, External Researchers ZPWMA, Universities, NGOs, External Researchers, SVC

9.7.4 Building Conservation Capacity (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Agencies

4.4 Training and retraining programmes established	– Carry out a training needs assessment for law enforcement, resource and wildlife management, research and monitoring, education and awareness, community elephant management, etc. – Develop and implement strategies based on the needs assessment – Standardise and harmonize training in law enforcement	Training needs assessment report Training programmes established	Inventory records / assets check list	2016 and ongoing		ZPWMA, RDCs, NGOs, Universities

9.7.5 Coordination, Collaboration and Programme Management (South East Lowveld)

Output	Activities	Key Performance Indicators	Means of Verification	Time frame	Indicative costs	Lead Agencies
5.1 SEL Regional elephant conservation and management steering committee of 8 established (ZPWMA, SVC, MT, Bubi Conservancy, Chiefs' rep, GCP, ZRP, RDC) This committee should include a core set of competencies (and can co-opt expertise if needed).	– Develop TOR for the steering committee – Identify members – Oversee the implementation of the regional elephant strategy as per national mandate – Meet biannually – Attend national elephant management meetings	Functional committee meetings held biannually with adequate attendance	Minutes with action points	Established within 60 days of the Regional strategy final document	$1500 (Fuel, Accommodation) $3,000 (Biannual Meeting) National Elephant Management Meeting - Cost Total Budget $4500.00	Regional Manager, Southern Region, ZPWMA
5.2 Links with neighbouring states to confer on the management of shared elephant populations strengthened	– GLTFCA coordinator to identify relevant stakeholders to participate in the implementation of the regional elephant action plan – Sustain collaboration with regional partners+(one committee member for the regional committee meetings) – Share knowledge / data of all 5 key components of the plan with the regional partners	Number of consultative meetings held Tangible regional collaboration and participation	Minutes and action items	Ongoing	*To get confirmation from the GLTFCA coordinator,* 1xcommitte member travelling to SA or MZ MZ=$1440 SA=$1320 Zim=$1540 Total=$4500	Regional Manager, Southern GLTFCA Coordinator
5.3 Coordination between the tourism industry (consumptive and non-consumptive) and the elephant management programme strengthened	– Identify consumptive and non-consumptive operators in SEL – Liaise with SOAZ, ZPHGA, ZATSO, ZHA, etc. – Encourage non-members to be affiliated to relevant associations – Hold quarterly meetings with operators – Consider scale of operations in non-consumptive tourism	Regular meetings and workshops convened with the operators	Record of meetings and workshop proceedings Database of operators	Immediate and ongoing	-Sunk -Sunk -Sunk -11 people x one night x 4 times/year=$3080 Fuel=$546x4times=$2184 Total Budget=$5400	Regional Manager, Southern-ZPWMA ZPHGA SOAZ ZATSO ZHA
5.4 Effective information dissemination and communication strategy implemented	– Ensure clear communication of progress against action plan to all relevant stakeholders – Identify target groups, i.e. traditional leaders, school groups, amongst others – Develop a communications strategy, making use of relevant media (print, social, road shows) – Implement communication strategy – Monitor and evaluate	Outreach programmes conducted	Community strategy document Flyer, brochure, websites, published papers, videos, dramas	Ongoing	-Sunk -Sunk -Website setting, double side flyers and media, outreach costs=$10,000	Regional Manager, Southern Steering Committee

Approval Page

The Honourable Minister of Environment, Water and Climate, Zimbabwe Parks and Wildlife Management Authority Board of Directors and the Director General have approved the implementation of the Zimbabwe National Elephant Management Plan (2015-2020).

Signature: _____ Date: 20/1/16

Mr. Edson Chidziya

Director-General - Zimbabwe Parks and Wildlife Management Authority

Signature: _____ Date: 26/1/16

Mr. Prince Mupazviriho

Secretary, Ministry of Environment, Water and Climate

Approved by the Minister, Ministry of Environment, Water and Climate

Signature: _____ Date: 21/1/16

Hon. Oppah Muchinguri-Kashiri (MP)

APPLICANT:

KUHIA FISHER

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

FWS Form 3-200-20 (Rev. 01/2020)
U.S. Department of Interior

OMB Control No. 1018-0093
Expires 08/31/2023

IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

■New ☐Reissue/Renew ☐Amendment

Complete Sections **A or B**, and C, D, and E of this application. U.S. address may be required in Section C.**

A. Complete if applying as an individual

1.a. Last name	1.b. First name	1.c. Middle name or initial	1.d. Suffix
Fisher	Kuhia	Loren	

2 Date of birth (mm/dd/yyyy)	5.a. Telephone number	5.b. Alternate telephone number	6. E-mail address
(b) (6) [redacted]			

B. ~~Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution~~

~~1.a. Name of business, agency, Tribe, or institution~~	~~1.b. Doing business as (dba)~~		
~~2. Tax identification no.~~	~~3.a. Description of business, agency, Tribe, or institution~~		~~3.b. Website URL (if applicable)~~
~~4.a. Principal officer (P.O.) last name~~	~~4.b. P.O. first name~~	~~4.c. P.O. middle initial~~	~~4.b. P.O. Title~~
~~5. Primary contact name~~		~~6. Primary e-mail address~~	
~~7.a. Business telephone number~~	~~7.b. Alternate phone no.~~		~~8.a. Primary contact telephone no.~~

C. All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)

(b) (6) [redacted]

1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
Lindon	UT	84042	Utah	USA

2.a. Mailing Address (include if different than physical address; include name of contact person if applicable)

2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f. Country

D. All applicants MUST complete

1. Include a check or money order, payable to the U.S. FISH AND WILDLIFE SERVICE, **a nonrefundable processing fee [50 CFR 13.11(d)(4)]**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – ***attach documentation of fee exempt status as outlined in instructions.*** (50 CFR 13.11(d)).

2. If you are requesting a reissue/renew/amendment, what is your permit/file number?

3. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13 of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter I of Title 50, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

The individual/principal officer of the business must print and sign the application. (No photocopied or stamped signatures) Date (mm/dd/yyyy)

** Further instructions for the above application may be found on our ePermits website. See the last page for information on the Privacy Act, Paperwork Reduction Act, Estimated Burden, and Freedom of Information Act aspects of this application form.

Mail your application(s) to Division of Management Authority, Branch of Permits, MS:IA 5275 Leesburg Pike, Falls Church, VA 22041-3803.

OMB Control No. 1018-0093
Expires 08/31/2023

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

Kuhia Fisher (b) (6) Lindon, UT 84042

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta africana, African elephant

b. Sex (if known).

Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Hwange Colliery, Zimbabwe - near Hwange Town.

b. Date wildlife was hunted:

July 6, 2013

c. Approximate age of animal:

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

ZimAfrica Safaris, Outfitters Wayne Jardine and Rebecca Steyn. P.H.- Heath Jardine

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Eagle Eye Import and Export Specialists - 95 Phlox Road, Welgedacht Springs, 1559

Gauteng, South Africa

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

See provided

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	Eagle Eye Import and Export Specialists
Business Name:	95 Phlox Road
Address:	
City:	Welgedacht Springs 1559
State/Province:	Gauteng
Country, Postal Code:	South Africa

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
Not required
11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Heath Jardine
E-mail:	heathjardine@yahoo.com
Phone number:	+ 263 77 324 0771

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

OMB Control No. 1018-0093
Expires 08/31/2023

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**).

    Applicant's signature: [redacted] Date: 8/16/2024

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

KUHIA FISHER

HUNTING PERMITS

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000067975
ACQUITTED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Zim-Africa Wildlife Safaris	**Client's Full Name**	Kuhia Fisher
ZTA (HOP) No.	HOP0066	**Passport Number**	(b) (6)
		Country of Issue	UNITED STATES
Address	P O Box 1472, Bulawayo - zimef@mweb.co.zw	**Address**	(b) (6) Linden UT 84042 USA
Name of Professional Hunter	H JARDINE	**Licence No.**	483
Telephone		**Fax**	256209
Number of Accompanying Guests		0	
Are the trophies being exported after tanning and mounting?		No	
Are the trophies being exported after primary treatment?		Yes	
Name of Processing Agent or Taxidermist	COLLETTS WILDLIFE ARTISTRY	**Address**	15 JOSIAH CHINAMANO ROAD BELMONT BULAWAYO ZIMBABWE
Name of Shipping Agent		**Address**	
Name of Foreign Agent		**Address**	

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Date of Safari From	04-07-2013
Date of Safari To	15-07-2013
Daily Rate Charged For Big Game USD	600.00
Daily Rate Charged For Plains Game USD	.00
Daily Rate Charged for Non hunting guests USD	.00
Number of Accompanying Guests	0

ZPWMA
Date Stamp

3. DETAILS OF DEPOSITS

(All inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1	07-AUG-2013	MEP/16485	29-SEP-2013	USD	26,740.2	26,020.2
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1	08-NOV-2016	GEP/2506	20-FEB-2017	USD	26,740.2	2,656
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate	7,200.00	Total Guests rate	.00
Less Commission	720.00	Total Trophy fees	19,030.00
Other fees (Incidentals)	510.20	Grand Total USD	24,066.18
Percentage Commission Charged	10.00	Total Processing Fees	2,656.00

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	W/K	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	IMPALA	M	Killed	Hwange District Area 1 - Communal Area	18 1835 545	05-JUL-2013	20	180
2	ZEBRA	M	Killed	Sondelani	21 52 2671	12-JUL-2013	0	850
3	HONEY BADGER	M	Killed	Colliery Option Area	18 12 7865	15-JUL-2013	0	250
4	BUFFALO	M	Killed	Hwange District Area 1 - Communal Area	181149358 26 4622 15	06-JUL-2013	41	3,500
5	LEOPARD	M	Killed	Rooiberg	20 27 08435	13-JUL-2013	9	4,000
6	WARTHOG	M	Killed	Sondelani	20 42 28 605	14-JUL-2013	12	250
7	ELEPHANT - WITH TUSKS	M	Killed	Colliery Option Area	182928445	09-JUL-2013	0	10,000
8								
9								
10								
11								
12								
13								
14								
15								
16								
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28								
29								
30								

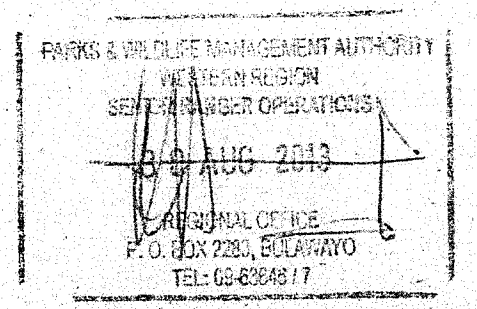
APPLICANT:

KUHIA FISHER

IVORY CERTIFICATE

CERTIFICATE OF OWNERSHIP OF IVORY AND RHINOCEROS HORN

(Issued in terms of section 77 of the Parks and Wildlife (General) Regulations, 1990)



Specified officer's signature and date-stamp

Cert. Nº 114158

Name KUTTA FISHER

Addr [redacted]

LONDON UT S4 0HZ UK

Tusk serial number	ZH2013230
Tusk mass (kg)	20 KG
Tusk length (metric)	148 cm
Sex	MALE

Authority TR2 NS 067975

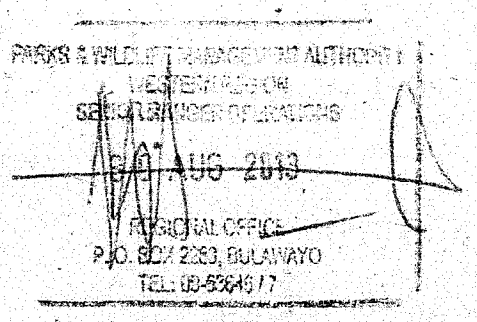
Signature of holder .....

Notes

1. This certificate must be returned to the *Director, Department of National Parks and Wildlife Management, P.O. Box CY 140, Causeway*, in the event of the tusk being cut up for manufacturing purposes, lost, stolen or exported.
2. Transfer/sale of ivory or horn is to be done at National Parks offices.

CERTIFICATE OF OWNERSHIP OF IVORY AND RHINOCEROS HO

(Issued in terms of section 77 of the Parks and Wildlife (General) Regulations, 1990)



Specified officer's signature and date-stamp

Cert. Nº 114157

Name KUTTA FISHE

Address [redacted]

LONDON UT S4 0HZ

Tusk serial number	ZH2013230
Tusk mass (kg)	19 KG
Tusk length (metric)	141 cm
Sex	MALE

Authority TR2 NS 067975

Signature of holder .....

Notes

1. This certificate must be returned to the *Director, Department of National P and Wildlife Management, P.O. Box CY 140, Causeway*, in the event o tusk being cut up for manufacturing purposes, lost, stolen or exported.
2. Transfer/sale of ivory or horn is to be done at National Parks offices.

APPLICANT:

KUHIA FISHER

CITES

IMPORT AND EXPORT PERMITS

221640

PERMIT / CERTIFICATE № 221640

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

☐ EXPORT
☑ RE-EXPORT
☐ IMPORT
☐ OTHER

ORIGINAL

2. Valid until 2020/02/06

3. Importer (name and address)

KUHIA FISHER
(b) (6)
LINDON, UTAH
84042 UNITED STATES OF AMERICA

3a. Country of import UNITED STATES OF AMERICA

4. Exporter / Re-exporter (name, address and country)

ACE
PLOT 15 WILLEM STASIE, TURFBULT
BELA BELA 0480, LIMPOPO PROVINCE
SOUTH AFRICA

5. Special conditions

PERMIT IS INVALID WITHOUT ANNEX A
ZA IMPORT PERMIT #: 217889 DD 31/05/2017
TUSK #S: ZW2013 23079 19 & ZW2013 23080 20.
ADDENDUM SECURITY STAMP: 1651364
For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1651362

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. TUSK[TUS]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZW	Permit No. ZW/4309/2017	Date 2017/05/10	12a. Country of last re-export	Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
B	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. TRUNK[DER]	10. II W	11. 1 ONE	11a.
	12. Country of origin* ZW	Permit No. ZW/4309/2017	Date 2017/05/10	12a. Country of last re-export	Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
C	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. FOOT [FOO]	10. II W	11. 2 TWO	11a. CURRENT MARK 21 x 26cm SKINS
	12. Country of origin* ZW	Permit No. ZW/4308/2017	Date 2017/05/10	12a. Country of last re-export	Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
D	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. EAR [EAR]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZW	Permit No. ZW/4308/2017	Date 2017/05/10	12a. Country of last re-export	Certificate No	Date	12b. No. of the operation ** or date of acquisition ***

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY:

CHIMANZI IA

1651362

PIETERSBURG POLOKWANE — 2019/08/06 — Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export | Date | Signature | Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE № 221640

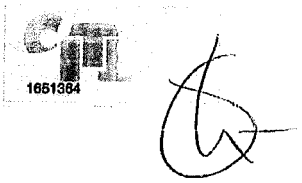
Annexure A

ADDENDUM TO SOUTH AFRICAN CITES EXPORT / IMPORT PERMIT NUMBER 221640

ALSO ISSUED ACCORDING TO NEMBA ACT 10 OF 2004: TOPS REGULATIONS

Item Number	Scientific Name	Common Name	Description	Appendix / Source	Quantity
1	Loxodonta africana	African Elephant	Small leather Products (2 gun bag, 3 belts, 6 rifle slings, 6 bags and 1 folder)	II W	18

SECURITY STAMP NUMBER: 1651364



ISSUED BY: CHIMANZI IA
AT: POLOKWANE **DATE:** 2019/08/06

EXPORT ENDORSEMENT:					
ITEM NUMBER	QUANTITY				
1		---------- Port of export	---------- Date	---------- Signature	---------- Official stamp & title

Annexure A
FOR PERMIT NO./221640

ALSO ISSUED ACCORDING TO NEMBA ACT 10 OF 2004: TOPS REGULATIONS

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES SPECIES AND ANY PRODUCTS THEREOF;

(A) CITES PERMIT BOX 5, SPECIAL CONDITION

(B) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS [INCLUDING AIR, MAIL, RAIL, ROAD, AND SEA] OF CITES SPECIES AND ANY PRODUCTS THEREOF;

THIS PERMIT:

1. a) Shall not be transferable;
   b) This permit is not valid unless it has been endorsed and released by an authorized Environmental Officer prior to the import, export or re-export taking place.
   c) In cases of importation of live animals, which are to be quarantined, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Officers, per telephone ***and*** confirm per e-mail a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection, applicable for shipments done over weekends and public holidays, with the following information:

   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection w
   c) Date and Time of intended inspection (subject to approval);
   d) Agents particulars (if applicable), Carrier Name, Flight Number ill take place;
   e) Date and Time of Import / Export / Re-Export;
   f) , Flight Time and Waybill Number;
   g) The applicable permit number/s and relevant expiry dates; and
   h) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental/Biodiversity Officer may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30):*** ***OR 015 290 7176 if using the Beit Bridge Boarder Post***
   Office: +27 (11) 390-3687/ 2311 Fax: 015 295 5018
   Fax: +27 (11) 390-1720

4. Only designated ports of exit / entry according to CITES regulations should be used unless special approval is received from the National Office.

5. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s in order to have the CITES permit to be endorsed.

6. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

7. Detailed completed packing list/s on the prescribed format, which are signed and dated, must accompany the consignment/s.

8. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the Limpopo CITES Management Authority within ***14 working*** days after expiry thereof. Import permits must be returned to the Limpopo CITES Management Authority within ***14 working days*** after use. Export permits must be handed to a CITES Management Authority of the importing country within ***14 working days*** after use.

9. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Limpopo CITES Management Authority with the application.

10. Only a Biodiversity Officer delegated by the Member of the Executive Council of the component responsible for environmental affairs in Limpopo may make an alteration on the permit upon a written request from the exporter/importer.

11. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

12. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

13. Permit holders or their delegated agents must inform the Limpopo CITES Management Authority if an inspection needs to be cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

.....	2019/08/06	Stewart	20/08/19
Signature of Issuing Officer	Date	Signature of Recipient	Date
.....CHIMANZI IA.....		Debbie Stewart	
Full Name		Full Name	

Conditions to this permit are issued subject to the provisions of Section 88 (2) (c) of NEMBA

221640

PERMIT / CERTIFICATE No 221640

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

- [ ] EXPORT
- [x] RE-EXPORT
- [ ] IMPORT
- [ ] OTHER

2. Valid until: ~~2020/02/06~~

3. Importer (name and address)

KUHIA FISHER
(b) (6)
LINDON, UTAH
~~84042~~

3a. Country of import: ~~UNITED STATES OF AMERICA~~ UNITED STATES OF AMERICA

4. Exporter / Re-exporter (name, address and country)

ACE
PLOT 15 WILLEM STASIE, TURFBULT
BELA BELA 0480, LIMPOPO PROVINCE
SOUTH AFRICA

5. Special conditions

PERMIT IS INVALID WITHOUT ANNEX A
ZA IMPORT PERMIT #: 217889 DD 31/05/2017
TUSK #S: ZW2013 23079 19 & ZW2013 23080 20.
ADDENDUM SECURITY STAMP: 1651364

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1651362

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. TUSK[TUS]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZW / Permit No. ZW/4309/2017 / Date 2017/05/10	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***	
B	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. TRUNK[DER]	10. II W	11. 1 ONE	11a.
	12. Country of origin* ZW / Permit No. ZW/4309/2017 / Date 2017/05/10	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***	
C	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. FOOT [FOO]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZW / Permit No. ZW/4308/2017 / Date 2017/05/10	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***	
D	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. EAR [EAR]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZW / Permit No. ZW/4308/2017 / Date 2017/05/10	12a. Country of last re-export / Certificate No	Date	12b. No. of the operation ** or date of acquisition ***	

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY:

CHIMANZI IA

Place: POLOKWANE — Date: ~~2019/08/06~~ 2019/08/06 — Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export | Date | Signature | Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE No 221640

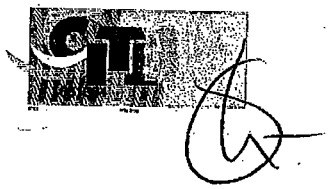
Annexure A

ADDENDUM TO SOUTH AFRICAN CITES EXPORT / IMPORT PERMIT NUMBER 221640

ALSO ISSUED ACCORDING TO NEMBA ACT 10 OF 2004: TOPS REGULATIONS

Item Number	Scientific Name	Common Name	Description	Appendix / Source	Quantity
1	Loxodonta africana	African Elephant	Small leather Products (2 gun bag, 3 belts, 6 rifle slings, 6 bags and 1 folder)	II W	18

SECURITY STAMP NUMBER: 1651364



ISSUED BY: CHIMANZI IA
AT: POLOKWANE

DATE: 2019/08/06

EXPORT ENDORSEMENT:					
ITEM NUMBER	QUANTITY				
1		---------- Port of export	---------- Date	---------- Signature	---------- Official stamp & title

PERMIT / CERTIFICATE № 226536

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

☐ EXPORT
☑ RE-EXPORT
☐ IMPORT
☐ OTHER

ORIGINAL

2. Valid until 2020/06/03

3. Importer (name and address)

KUHIA FISHER
(b) (6)
LINDON, UTAH
84042 UNITED STATES OF AMERICA

3a. Country of import: UNITED STATES OF AMERICA

4. Exporter / Re-exporter (name, address and country)

ACE
PLOT 15 WILLEM STASIE, TURFBULT
BELA BELA 0480, LIMPOPO PROVINCE
SOUTH AFRICA

5. Special conditions

PERMIT IS INVALID WITHOUT ANNEX A
ZA IMPORT PERMIT #: 217889 DD 31/05/2017
PERMIT IS PART OF 221640 DD 06/08/2019

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1656580

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. SKIN PIECE[SKP]	10. II W	11. 1 ONE	11a.
	12. Country of origin* ZW	Permit No. ZW/4308/2017	Date 2017/05/10	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
B	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
C	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
D	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export / Certificate No	Date	12b. No. of the operation ** or date of acquisition ***

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY:

CHIMANZI IA

1656580

Place: POLOKWANE Date: 2019/12/03 Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export | Date | Signature | Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE № 226536

Annexure A
FOR PERMIT NO./226536

ALSO ISSUED ACCORDING TO NEMBA ACT 10 OF 2004: TOPS REGULATIONS

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES SPECIES AND ANY PRODUCTS THEREOF;

(A) CITES PERMIT BOX 5, SPECIAL CONDITION

(B) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS [INCLUDING AIR, MAIL, RAIL, ROAD, AND SEA] OF CITES SPECIES AND ANY PRODUCTS THEREOF;

THIS PERMIT:

1. a) Shall not be transferable;
   b) This permit is not valid unless it has been endorsed and released by an authorized Environmental Officer prior to the import, export or re-export taking place.
   c) In cases of importation of live animals, which are to be quarantined, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Officers, per telephone ***and*** confirm per e-mail a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection, applicable for shipments done over weekends and public holidays, with the following information;

   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection w
   c) Date and Time of intended inspection (subject to approval);
   d) Agents particulars (if applicable), Carrier Name, Flight Number ill take place;
   e) Date and Time of Import / Export / Re-Export;
   f) , Flight Time and Waybill Number;
   g) The applicable permit number/s and relevant expiry dates; and
   h) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental/Biodiversity Officer may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30):*** ***OR 015 290 7176 if using the Beit Bridge Boarder Post***
   Office: **+27 (11) 390-3687/ 2311** Fax: 015 295 5018
   Fax: **+27 (11) 390-1720**

4. Only designated ports of exit / entry according to CITES regulations should be used unless special approval is received from the National Office.

5. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s in order to have the CITES permit to be endorsed.

6. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

7. Detailed completed packing list/s on the prescribed format, which are signed and dated, must accompany the consignment/s.

8. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the Limpopo CITES Management Authority within ***14 working*** days after expiry thereof. Import permits must be returned to the Limpopo CITES Management Authority within ***14 working days*** after use. Export permits must be handed to a CITES Management Authority of the importing country within ***14 working days*** after use.

9. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Limpopo CITES Management Authority with the application.

10. Only a Biodiversity Officer delegated by the Member of the Executive Council of the component responsible for environmental affairs in Limpopo may make an alteration on the permit upon a written request from the exporter/importer.

11. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

12. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

13. Permit holders or their delegated agents must inform the Limpopo CITES Management Authority if an inspection needs to be cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

.....	2019/12/03	.....	03/12/2019
Signature of Issuing Officer	Date	Signature of Recipient	Date
.....CHIMANZI IA.....		NATIICA GERHARD	
Full Name		Full Name	

Conditions to this permit are issued subject to the provisions of Section 88 (2) (c) of NEMBA

PERMIT / CERTIFICATE № 226536

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

- [ ] EXPORT
- [x] RE-EXPORT
- [ ] IMPORT
- [ ] OTHER

2. Valid until: ~~2020/06/03~~

3. Importor (name and address)

KUHIA FISHER
(b) (6)
LINDON, UTAH
~~84042~~

3a. Country of import: ~~UNITED STATES OF AMERICA~~ UNITED STATES OF AMERICA

4. Exporter / Re-exporter (name, address and country)

ACE
PLOT 15 WILLEM STASIE, TURFBULT
BELA BELA 0480, LIMPOPO PROVINCE
SOUTH AFRICA

5. Special conditions

PERMIT IS INVALID WITHOUT ANNEX A
ZA IMPORT PERMIT #: 217889 DD 31/05/2017
PERMIT IS PART OF 221640 DD 06/08/2019

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1656580

	7.8 SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.8 AFRICAN ELEPHANT *loxodonta africana*	9. SKIN PIECE[SKP]	10. II W	11. 1 ONE	11a.
	12. Country of origin* ZW	Permit No. ZW/4308/2017	Date 2017/05/10	12a. Country of last re-export	Certificate No.
				Date	12b. No. of the operation ** or date of acquisition ***
B	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export	Certificate No.
				Date	12b. No. of the operation ** or date of acquisition ***
C	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export	Certificate No.
				Date	12b. No. of the operation ** or date of acquisition ***
D	7.8 NIL *nil*	9.	10.	11. 0	11a.
	12. Country of origin*	Permit No.	Date	12a. Country of last re-export	Certificate No
				Date	12b. No. of the operation ** or date of acquisition ***

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY:

CHIMANZI IA

Place POLOKWANE — Date ~~2019~~/12/03 — Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	
B	
C	
D	

15. Bill of Lading/Air Waybill Number:

Port of Export — Date — Signature — Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE № 226536

PERMIT / CERTIFICATE Nº 217889

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

☐ EXPORT
☐ RE-EXPORT
☑ IMPORT
☐ OTHER

ORIGINAL

2. Valid until 2018/05/31

3. Importer (name and address)

KUHIA FISHER C/O ACE TAXIDERMY
PLOT 15 WILLEM STASIE, TURFBULT
BELA BELA, 0480
~~LIMPOPO~~ ~~SOUTH AFRICA~~

3a. Country of import: SOUTH AFRICA

4. Exporter / Re-exporter (name, address and country)

COLLETTS WILDLIFE ARTISTRY
15 JOSIAH CHINAMANO ROAD, BELMONT
BULAWAYO
ZIMBABWE

5. Special conditions

PERMIT IS INVALID WITHOUT ANNEX A. ZW/4309/2017 & ZW/4308/2017 DD 09/03/2017. TAG#S : ZW2013 23079 19 & ZW2013 23080 20. SECURITY STAMP # SEE ADDENDUM.

For live animals, this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations. Permit / certificate valid for one consignment only.

6. Name, address, national seal / stamp and country of Management Authority

Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
SOUTH AFRICA

5a. Purpose of the transaction (see reverse): H

5b. Security stamp No.: 1374539

	7.a SCIENTIFIC NAME (genus and species) AND COMMON NAME OF ANIMAL OR PLANT	9. Description of specimens, including identifying marks or numbers (age/sex) if live	10. Appendix No. and source (see reverse)	11. Quantity (including unit)	11a. Total exported / quota
A	7.a AFRICAN ELEPHANT *loxodonta africana*	9. TUSK[TUS]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZA	Permit No.	Date	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
B	7.a AFRICAN ELEPHANT *loxodonta africana*	9. TRUNK[DER]	10. II W	11. 1 ONE	11a.
	12. Country of origin* ZA	Permit No.	Date	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
C	7.a AFRICAN ELEPHANT *loxodonta africana*	9. FEET	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZA	Permit No.	Date	12a. Country of last re-export / Certificate No.	Date	12b. No. of the operation ** or date of acquisition ***
D	7.a AFRICAN ELEPHANT *loxodonta africana*	9. EAR [EAR]	10. II W	11. 2 TWO	11a.
	12. Country of origin* ZA	Permit No.	Date	12a. Country of last re-export / Certificate No	Date	12b. No. of the operation ** or date of acquisition ***

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export)
** Only for specimens of Appendix I species bred in captivity or artificially propagated for commercial purposes
*** For Pre-Convention specimens

13. THIS PERMIT / CERTIFICATE IS ISSUED BY:

VAN WETTEN AA

PRETORIA — 2017/05/31

Security stamp, signature and official seal

14. EXPORT ENDORSEMENT:

Block	Quantity
A	02 (TWO)
B	01 (ONE)
C	02 (TWO)
D	02 (TWO)

15. Bill of Lading/Air Waybill Number: 083 5877 5802

TNB — Port of Export

Date

Signature

Official stamp and title

V & R Printing Works (Pty) Ltd (012) 333 2462 (2621)

PERMIT / CERTIFICATE Nº 217889

CONDITIONS FOR PERMIT NO./s 217889

Page 1

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES SPECIES AND ANY PRODUCTS THEREOF;

(A) CITES PERMIT BOX 5, SPECIAL CONDITIONS

(B) (B) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS [INCLUDING AIR, MAIL, RAIL, ROAD, AND SEA] OF CITES SPECIES AND ANY PRODUCTS THEREOF;THIS PERMIT:

1. a) Shall not be transferable;
   b) This permit is not valid unless it has been endorsed and released by an authorized Environmental Officer prior to the import, export or re-export taking place.
   c) In cases of importation of live animals, which are to be quarantined, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Officers, per telephone ***and*** confirm per e-mail a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection, applicable for shipments done over weekends and public holidays, with the following information:
   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection will take place;
   c) Date and Time of Import / Export / Re-Export;
   d) Date and Time of intended inspection (subject to approval);
   e) Agents particulars (if applicable), Carrier Name, Flight Number, Flight Time and Waybill Number;
   f) The applicable permit number/s and relevant expiry dates; and
   g) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental/Biodiversity Officer may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30)***:

4. Office: +27 (11) 390-3687/ 2311 *OR 015 290 7176 if using the Beit Bridge Boarder Post*
   Fax: +27 (11) 390-1720 Fax: 015 295 5018

5. Only designated ports of exit / entry according to CITES regulations should be used unless special approval is received from the National Office.

6. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s in order to have the CITES permit to be endorsed.

7. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

8. Detailed completed packing list/s on the prescribed format, which are signed and dated, must accompany the consignment/s.

9. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the Limpopo CITES Management Authority within ***14 working*** days after expiry thereof. Import permits must be returned to the Limpopo CITES Management Authority within ***14 working days*** after use. Export permits must be handed to a CITES Management Authority of the importing country within ***14 working days*** after use.

10. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Limpopo CITES Management Authority with the application.

11. Only a Biodiversity Officer delegated by the Member of the Executive Council of the component responsible for environmental affairs in Limpopo may make an alteration on the permit upon a written request from the exporter/importer.

12. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

13. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

14. Permit holders or their delegated agents must inform the Limpopo CITES Management Authority if an inspection needs to be cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

..... Signature of Issuing Officer	.....2017/05/31..... Date
.....VAN WETTEN AA..... Full Name	Signature of Recipient Date 12/6/2017
	Joanett Legodi Full Name

Conditions to this permit are issued subject to the provisions of Section 88 (2) (c) of NEMBA

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

CITES PERMIT/CERTIFICATE ZW/4308/2017

NB CITES FORM 2

Permit/Certificate No ZW/4308/2017

- [X] Export
- [ ] Re-Export
- [ ] Import
- [ ] Other

Original

2. Valid Until: 09-09-2017

3. Importer (name and address):
KUHIA FISHER
C/O ACE TAXIDERMY
PLOT 15 TURFBULT
BELA BELA
LIMPOPO PROVINCE

4. Exporter (name, address and country Zimbabwe
COLLETTS WILDLIFE ARTISTRY
15 JOSIAH CHINAMANO ROAD
BELMONT
BULAWAYO
ZIMBABWE

3a. Country Of Import: Republic of South Africa

5. Special Conditions
For live animals this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations

5a. Purpose of transaction (see reverse): H

5b. Security stamp no. 129973

6. Name, address, stamp and country of Management Authority

Zimbabwe Parks and Wildlife
Management Authority
P.O. Box CY 140
Causeway
Harare, Zimbabwe

6a. Declaration by Exporter or Agent
I hereby declare that I am aware of the provision of the Convention contained in the *Statutory Instrument 76 of 1998*, for the purpose of Exporting / Re- exporting / Importing the Wildlife listed below.
The total value of this consignment is:
$US 21,260.00 .....Signature of applicant.....

7. Scientific Name	8. Common Name	9. Description of specimens including no. (age/sex if live)	10. Appendix and Source (see reverse)	11. Quantity (including unit)	11a. Total exported quota	11b. Tag Number	11c. Mark
yncerus caffer	*Buffalo*	*backskin :*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
yncerus caffer	*Buffalo*	*skin pieces : cape*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
yncerus caffer	*Buffalo*	*skulls :*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
oxodonta africana	*Elephant*	*feet :*	*II W*	*2 no*	*47-500-2017*	*ZW126/500/2013*	*n/a*
oxodonta africana	*Elephant*	*panels :*	*II W*	*6 no*	*47-500-2017*	*ZW126/500/2013-LOX*	*n/a*
oxodonta africana	*Elephant*	*panels : head*	*II W*	*1 no*	*47-500-2017*	*ZW126/500/2013-LOX*	*n/a*
oxodonta africana	*Elephant*	*ears :*	*II W*	*2 no*	*47-500-2017*	*ZW126/500/2013-LOX*	*n/a*

7. Country of origin:	Permit No	Date of issue	12a. Country of last re-export	Certificate No	Date:
			ZIMBABWE		

This permit is issued by

Place: Bulawayo

Date: 08-03-2017

STANBIC BANK ZIMBABWE LIMITED
EXCHANGE CONTROL DEPARTMENT

Security stamp, signature and official seal

Exchange Control Information
number 782538
10 MAY 2017 ...../or
not applicable to export (delete)

15. Date Stamp of Zimbabwe Revenue Authority Inspector

ZIMBABWE REVENUE AUTHORITY
BW 89 29 JUN 2017 89 BW
P.O. BOX 708 BULAWAYO

Name stamp and signature of authorized official):.....
N.B.: Permit/certificate invalid unless this section is completed.

BELMONT BULAWAYO

Export endorsement:

Specimens	Quantity	Specimens	Quantity
Globiceps	1	Elephant panels	1
II Skeleton	1	II II ears	2
II Skull	1		
II Feet	2		
II panels	6		

17. Bill of landing/Air waybill number: SSTT 5802

Harare Airport
Port of export

Date 01 [illegible]

Signature

MANAGEMENT AUTHORITY

CITES PERMIT/CERTIFICATE ZW/4309/2017

NP CITES FORM 2

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

1. Permit/Certificate No ZW/4309/2017

[X] Export
[ ] Re-Export
[ ] Import
[ ] Other

Original

2. Valid Until: 09-09-2017

3. Importer (name and address):
KUHIA FISHER
C/O ACE TAXIDERMY
PLOT 15 TURFBULT
BELA BELA
LIMPOPO PROVINCE

4. Exporter (name, address and country Zimbabwe
COLLETTS WILDLIFE ARTISTRY
15 JOSIAH CHINAMANO ROAD
BELMONT
BULAWAYO
ZIMBABWE

3a. Country Of Import Republic of South Africa

5. Special Conditions
For live animals this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations

5a. Purpose of transaction (see reverse)
H

5b. Security stamp no.
1291397 6

6. Name, address, stamp and country of Management Authority

Zimbabwe Parks and Wildlife
Management Authority
P.O. Box CY 140
Causeway
Harare, Zimbabwe

6a. Declaration by Exporter or Agent
I hereby declare that I am aware of the provision of the Convention contained in the *Statutory Instrument 76 of 1998*, for the purpose of Exporting / Re- exporting / Importing the Wildlife listed below.
The total value of this consignment is:
$US .....Signature of applicant.....

7. Scientific Name	8. Common Name	9. Description of specimens including no. (age/sex if live)	10. Appendix and Source (see reverse)	11. Quantity (including unit)	11a. Total exported quota	11b. Tag Number	11c. Mark
.oxodonta africana	*Elephant*	*skin pieces : trunk*	*II W*	*1 no*	*47-500-2017*	*ZW126/500/2013-LOX*	*n/a*
oxodonta africana	*Elephant*	*tusks :*	*II W*	*19 kg*	*47-500-2017*	*ZW126/500/2013-LOX*	*ZW2013 23079 19*
oxodonta africana	*Elephant*	*tusks :*	*II W*	*20 kg*	*47-500-2017*	*ZW126/500/2013-LOX*	*ZW2013 23080 20*
ellivora capensis	*Honey Badger*	*skins : full*	*III W*	*1 no*	*n/a*	*n/a*	*n/a*
ellivora capensis	*Honey Badger*	*skulls :*	*III W*	*1 no*	*n/a*	*n/a*	*n/a*
pyceros melampus	*Impala*	*backskin :*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
pyceros melampus	*Impala*	*skin pieces : cape*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*

11. Country of origin:	Permit No	Date of issue	12a. Country of last re-export	12b. Certificate No	Date:

This permit is issued by

ice: Bulawayo Date: 09 MAY 2017

STANBIC BANK ZIMBABWE LIMITED
EXCHANGE CONTROL DEPARTMENT
78258
10 MAY 2017

Security stamp, signature and official seal

PERMITS DIVISION
ZIMBABWE PARKS AND WILDLIFE MANAGEMENT AUTHORITY

Exchange Control Information
1 number.....10 MAY 2017...../or
1 not applicable to export (delete)

15. Date Stamp of Zimbabwe Revenue Authority Inspector

ZIMBABWE REVENUE AUTHORITY
REVENUE OFFICER
29 JUN 2017

ite stamp and signature of authorized official):.....
e: *Permit/certificate invalid unless this section is completed.*

Export endorsement:

17. Bill of landing/Air waybill number: 08 [illegible] 5802

cimens	Quantity	Specimens	Quantity
front elephant foot	1	Impala backskin	1
" trunk	19kg	" skin piece	1
" "	20kg		
Badger skin	1		
" skull	1		

Harare Airport
Port of export

Date 07 JUN 2017

Signature

CITES FORM 2

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

Permit/Certificate No ZW/4310/2017

[X] Export
[ ] Re-Export
[ ] Import
[ ] Other

Original

2. Valid Until: 09-09-2017

1. Importer (name and address):
C/O ACE TAXIDERMY
PLOT 15 TURFBULT
BELA BELA
LIMPOPO PROVINCE

KUHIA FISHER

3. Country Of Import: Republic of South Africa

4. Exporter (name, address and country Zimbabwe
COLLETTS WILDLIFE ARTISTRY
15 JOSIAH CHINAMANO ROAD
BELMONT
BULAWAYO
ZIMBABWE

7. Special Conditions
For live animals this permit or certificate is only valid if the transport conditions conform to the Guidelines for Transport of Live Animals or, in the case of air transport, to the IATA Live Animals Regulations

8a. Purpose of transaction (see reverse): H

8b. Security stamp no. 1295974

6. Name, address, stamp and country of Management Authority

Zimbabwe Parks and Wildlife
Management Authority
P.O. Box CY 140
Causeway
Harare, Zimbabwe

9a. Declaration by Exporter or Agent
I hereby declare that I am aware of the provision of the Convention contained in the *Statutory Instrument 76 of 1998*, for the purpose of Exporting / Re- exporting / Importing the Wildlife listed below.
The total value of this consignment is:
$US .....Signature of applicant.....

7. Scientific Name	8. Common Name	9. Description of specimens including no. (age/sex if live)	10. Appendix and Source (see reverse)	11. Quantity (including unit)	11a. Total exported quota	11b. Tag Number	11c. Mark
epyceros melampus	*Impala*	*skulls*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
anthera pardus	*Leopard*	*skins : full*	*I W*	*1 no*	*46-500-2017*	*ZW054/500/2013-PAR*	*n/a*
anthera pardus	*Leopard*	*skulls*	*I W*	*1 no*	*46-500-2017*	*ZW054/500/2013-PAR*	*n/a*
hacochoerus aethiopicus	*Warthog*	*skulls*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*
hacochoerus aethiopicus	*Warthog*	*teeth*	*NE W*	*4 no*	*n/a*	*n/a*	*n/a*
quus burchelli	*Zebra*	*skins : flat*	*NE W*	*1 no*	*n/a*	*n/a*	*n/a*

12. Country of origin:	Permit No	Date of issue	12a. Country of last re-export	Certificate No	Date:

This permit is issued by

ace: Bulawayo

STANBIC BANK ZIMBABWE LIMITED
10 MAY 2017
EXCHANGE CONTROL DEPARTMENT
BULAWAYO

Security stamp, signature and official seal

DEPARTMENT OF NATIONAL PARKS AND WILDLIFE MANAGEMENT AUTHORITY
CITES
P.O. BOX 2
WESTERN AVENUE
TEL: 08 - 740
FAX: 08 - 883386

Exchange Control Information
D1 number 1825538 /or
D1 not applicable to export (delete)

15. Date Stamp of Zimbabwe Revenue Authority Inspectorate

ZIMBABWE REVENUE AUTHORITY
REVENUE OFFICER
29 JUN 2017
BULAWAYO

Date stamp and signature of authorized official: BULAWAYO
Note: Permit/certificate invalid unless this section is completed

Export endorsement:

17. Bill of landing/Air waybill number: BUE577 5802

Specimens	Quantity	Specimens	Quantity
Impala skull	1	Zebra skins	1
Leopard skin	1		
" skull	1		
Warthog skull	1		
" teeth	4		

Harare Airport
Port of export

01 JUL 2017
Date

Signature

Annexure A
CONDITIONS FOR PERMIT NO./s 163693
ALSO ISSUED ACCORDING TO NEMBA ACT 10 OF 2004:TOPS REGULATIONS

PERMIT CONDITIONS FOR THE INTERNATIONAL IMPORT, EXPORT OR RE-EXPORT OF CITES SPECIES AND ANY PRODUCTS THEREOF;

(A) CITES PERMIT BOX 5, SPECIAL CONDITIONS

(B) (B) ALL INTERNATIONAL IMPORTS, EXPORTS AND RE-EXPORTS [INCLUDINGAIR, MAIL, RAIL, ROAD, AND SEA] OF CITES SPECIES AND ANY PRODUCTS THEREOF;

THIS PERMIT:

1. a) Shall not be transferable;
   b) This permit is not valid unless it has been endorsed and released by an authorized Environmental Officer prior to the import, export or re-export taking place.
   c) In cases of importation of live animals, which are to be quarantined, the permit must be released prior to the animals leaving quarantine. Original import permits to be inserted into a sealed envelope and placed in the Environmental Management Inspectorate box that's provided at the quarantine station, no more than 14 working days after import;
   d) Shall be subject to the provisions of any other law and or regulation;
   e) Shall be valid for one consignment only;
   f) This permit is subject to the compliance of Veterinary and Agricultural requirements; and to the compliance of IATA Live Animal Regulations.

2. The permit holder or his delegated agent must contact one of the authorized Environmental Officers, per telephone ***and*** confirm per e-mail a minimum of ***48 hours*** prior to the import, export or re-export taking place to book an inspection, applicable for shipments done over weekends and public holidays, with the following information:

   a) Name / Company Name of Importer / Exporter;
   b) Name of Airline and Warehouse where intended inspection will take place;
   c) Date and Time of Import / Export / Re-Export;
   d) Date and Time of intended inspection (subject to approval);
   e) Agents particulars (if applicable), Carrier Name, Flight Number, Flight Time and Waybill Number;
   f) The applicable permit number/s and relevant expiry dates; and
   g) Detailed packing list as per condition 7.

3. Inspections are by appointment only and early booking is necessary. An authorized Environmental/Biodiversity Officer may be contacted at the following telephone numbers during office hours ***(07:00 – 15:30):*** ***OR 015 290 7176 if using the Beit Bridge Boarder Post***
   Office: **+27 (11) 390-3687/ 2311** Fax: 015 295 5018

   Fax: **+27 (11) 390-1720**

4. Only designated ports of exit / entry according to CITES regulations should be used unless special approval is received from the National Office.

5. All relevant documentation, including ***original*** permit/s ***(CITES permits must include original and coloured copy)***, Packing List/s, Waybill/s and Bill of entry/s (SAD/ DA 550) must be presented for inspection. A photo copy of all these documents must also be handed to the Environmental Officer on inspection. The original permit/s, these conditions and packing list/s must accompany the consignment/s in order to have the CITES permit to be endorsed.

6. All transport containers must be numbered and the numbers must coincide with the numbers on the packing list/s. The country of destination as shown on the containers must coincide with the country of destination as on the permit. The details on the packing list/s must coincide with the details on the permit/s and Waybill/s.

7. Detailed completed packing list/s on the prescribed format, which are signed and dated, must accompany the consignment/s.

8. If this permit is not used, the ***original permit (CITES permits must include coloured copy)*** must be returned to the Limpopo CITES Management Authority within ***14 working*** days after expiry thereof. Import permits must be returned to the Limpopo CITES Management Authority within ***14 working days*** after use. Export permits must be handed to a CITES Management Authority of the importing country within ***14 working days*** after use.

9. The permit holder must make and retain photo copies of permit/s for audit inspections. Copies of import permits must be made and retained ***after endorsement,*** for Re-export permit applications. When applying for a Re-export permit, a copy of the ***endorsed import permit*** must be submitted to the Limpopo CITES Management Authority with the application.

10. Only a Biodiversity Officer delegated by the Member of the Executive Council of the component responsible for environmental affairs in Limpopo may make an alteration on the permit upon a written request from the exporter/importer.

11. Failure to comply with any of the permit conditions renders the permit invalid and may result in criminal proceedings, cancellation of the permit/s and seizure of the consignment/s.

12. The holder of the permit and / or his delegated agent will be held responsible for any legal costs; costs incurred for delays and / or storage fees due to irregularities and / or due to the consignment being withheld due to incorrect documentation, and / or incorrect consignment/s and / or failure to comply with permit conditions.

13. Permit holders or their delegated agents must inform the Limpopo CITES Management Authority if an inspection needs to be cancelled, or if they are to be late for an inspection within a reasonable time before the inspection is due to take place.

..... Signature of Issuing Officer	.....2017/01/27..... Date	..... PP Signature of Recipient	01/02/2017 Date
.....CHIMANZI A..... Full Name		Sophy Lebeha Full Name	

Conditions to this permit are issued subject to the provisions of Section 88 (2) (c) of NEMBA

To be submitted in duplicate

ZIMBABWE

PERMIT NUMBER F02/ 2017

Provincial Veterinary Office
P.O. Box RY41
Bulawayo
ZIMBABWE
Telephone: 68061/ 3

Date: 29/3/17

VETERINARY CERTIFICATE

The game trophies listed below have been:-

a. ~~Tanned in a process using Formic Acid, Salt & Basyntan, or~~
b. Sprayed with a 4% solution of washing soda (Sodium Carbonate), or
c. Skulls have been boiled & bleached in a 4% solution of washing soda & are free from flesh & grease, or
d. The trophies, other than those from carnivores & zebra, destined for processing in the Republic of South Africa have been soaked for 24 hours
e. ~~Have been soaked for 21 hours in a solution of 1:5000 Sodium Fluoride under veterinary supervision & are contained in seal polythene bags.~~
f. ~~Disinfected with Hydrogen Peroxide (H^2O) – Skull/ Bone Only~~ (delete inapplicable section/s)

These products originate from an area where Anthrax is not prevalent & which is free of Foot & Mouth Disease for more than 6 months & in my opinion present no risk of spreading diseases.

DESCRIPTION OF GOODS:

BUFFALO (SYNCERUS CAFFER CAFFER) 1 X SKULL/ 1 X CAPE/ 1 X BACK SKIN

ELEPHANT (LOXODONTA AFRICANA) 2 X FEET/ 6 X PANELS/ 1 X HEAD PANEL/ 2 X EARS/ 1 X TRUNK/ 2 X TUSKS – ZW2013 23079 19 KGS/ ZW2013 23080 20 KGS TAG NO ZW126/ 500/ 2013-LOX

HONEY BADGER (MELLIVORA CAPENSIS) 1 X SKULL/ 1 X FULL SKIN

IMPALA (AEPYCEROS MELAMPUS) 1 X SKULL/ 1 X CAPE/ 1 X BACK SKIN

LEOPARD (PANTHERA PARDUS) 1 X SKULL/ 1 X FULL SKIN TAG NO ZW126/ 500/ 2013-LOX

WARTHOG (PHACOCHOERUS AETHIOPICUS) 1 X SKULL/ 4 X TEETH

ZEBRA (EQUUS BURCHELLI) 1 X FLAT SKIN

STANBIC BANK ZIMBABWE LIMITED
EXCHANGE CONTROL DEPARTMENT
10 MAY 2017
BELMONT, BULAWAYO

THE SKINS HAVE BEEN SPRAYED WITH A 4% SOLUTION OF WASHING SODA (SODIUM CARBONATE) THEY HAVE THEN BEEN DIPPED IN A SOLUTION OF FORMIC ACID, SALT & WATER WITH A PH OF BETWEEN 2.8 & 3. THE SKULLS HAVE BEEN BOILED IN A 4% SOLUTION OF WASHING SODA & ARE FREE OF FLESH & GREASE

DISTRICT OF ORIGIN: SONDELANI – MAT NORTH (JULY 2013)

CONSIGNOR: COLLETT'S WILDLIFE ARTISTRY/ P O BOX 9067/ HILLSIDE/ BULAWAYO

ZIMBABWE REVENUE AUTHORITY
29 JUN 2017
P.O. BOX 599, BULAWAYO

CONSIGNEE: *KUHIA FISHER/ C/O ACE TAXIDERMY/ PLOT 15 TURFBULT/ BELA BELA/ LIMPOPO PROVINCE/ SOUTH AFRICA*

PROVINCIAL VETERINARY SERVICES
29 MAR 2017
P.O. BOX RY41
BULAWAYO
TEL: (09) 68061/3

AUTHORITY:

DATE:

DEPARTMENT OF VETERINARY SERVICES – ZIMBABWE

NOTE: AN EXPORT PERMIT from the Department of National Parks and Wild Life Management is also required.

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
† DON LINDSAY
† BERT KLINEBURGER

BOARD OF DIRECTORS:
JOHN J. JACKSON, III, J.D.
CHRISSIE JACKSON
SHANE MAHONEY
RENEE SNIDER
DANENE VAN DER WESTHUYZEN

February 18, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Attn: Amy Brisendine
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803

Applicant: **Kuhia Fisher**
RE: **Import Permit Application for an elephant from Zimbabwe**

*****THIS ELEPHANT WAS TAKEN BEFORE THE 2014 SUSPENSION ON ELEPHANT TROPHIES FROM ZIMBABWE**

Ms. Brisendine,

Enclosed you will find an import permit application for a sport-hunted elephant trophy for Mr. Kuhia Fisher. Mr. Fisher hunted in the Colliery Option area – by Hwange National Park in Zimbabwe on July 9th, 2013 with ZimAfrica Safaris. This hunt predated the 2014 suspension on elephant trophies from Zimbabwe. Mr. Fisher relied upon information from the Federal register and the US Fish and Wildlife Service that the elephant was importable, which shaped his decision to take this safari. The U.S. Court has ordered that elephants taken before the suspension date be imported.

In 2017 the U.S. Fish and Wildlife service decided to end the suspension on elephant trophies from Zimbabwe and Zambia, stating that "Legal, well-regulated sport hunting as part of a sound management program can benefit certain species by providing incentives to local communities to conserve those species and by putting much-needed revenue back into conservation. The U.S. Fish and Wildlife Service has determined that the hunting and management programs for African elephants in Zimbabwe and Zambia will enhance the survival of the species."

The areas surrounding Hwange National Park and by the Botswana border contain the largest elephant populations throughout Africa. Mr. Fisher spent $20,000 on trophy fees for this hunt. $10,000 of that was for the elephant hunt. This revenue supports the conservation of wildlife throughout Zimbabwe, by going to anti-poaching initiatives and many community programs that help better the human-wildlife conflicts.

Please refer to the documents and responses included and previously submitted to the DMA by Conservation Force, Zimbabwe's wildlife authorities, professional hunters, and Safari operators when making an enhancement decision for this application.

Please contact me if you have any questions.

Sincerely,

Aimee F. Korver
Permits Paralegal – Conservation Force

Enclosed:

a. USFWS Import permit application for an elephant trophy
b. Notice of Representation
c. Hunting Permits
d. CITES Export and Import permits – (trophy is in South Africa)
e. Zimbabwe Elephant Management short fact sheet

CC: Kuhia Fisher w/ enclosures

APPLICANT:

KUHIA FISHER

NOTICE

OF

REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a permit to import a threatened-listed LOXODONTA AFRICANA [AFRICAN ELEPHANT] trophy from ZIMBABWE.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

SIGNATURE: (b) (6) [redacted]

NAME: KUHIA LOREN FISHER

DATE: 12/9/2019

APPLICANT:

KUHIA FISHER

ZIMBABWE ELEPHANT MANAGEMENT FACT SHEET

SHORT FACT SHEET—ZIMBABWE ELEPHANT MANAGEMENT (updated May 2018)

- Zimbabwe maintains the second-largest elephant population in the world, which has grown from under 5,000 in 1900 to over 83,000 today. It is larger than the elephant populations of West and Central Africa combined. It is almost the same size as the populations of all of Eastern Africa.

Region / Country	Estimated Elephant Population (2016 Report)[1]
West Africa	11,489
Central Africa	24,119
Southern Africa - Zimbabwe alone -	293,447 - 82,630 -
Eastern Africa	86,373

- Zimbabwe's elephant population is almost 20% larger than in 1997, when it was downlisted to Appendix II of the Convention on International Trade in Endangered Species (CITES) and the FWS first made a positive enhancement finding to allow the import of elephant trophies.[2] Zimbabwe's elephant population is stable over the last 15 years, despite rapid growth of the country's human population, which increased by 24.33% between 2000 and 2016.[3]

- Hunting offtakes are a fraction of a percent and have no biological impact on the overall elephant population (i.e., do not cause population declines). Average annual offtakes between 2010-2013 were 0.276% of the total population. Moreover, hunters target older bull elephant that have already reproduced and spread their genes. Removal of older bulls tends to increase population growth rates.[4]

- Zimbabwe's wildlife authority, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA), is a "parastatal." It is separate and largely funded separately from the Central

[1] Within a 95% confidence limit, without the plus/minus interval, and without "Informed Guesses." IUCN African Elephant Specialist Group, African Elephant Status Report (2016), https://www.iucn.org/ssc-groups/mammals/african-elephant-specialist-group.

[2] This annotation is for "the exclusive purposes of allowing ... trade in hunting trophies," among other things. Zimbabwe's elephant population has grown from 66,000 to approximately 83,000. See Zimbabwe's downlisting proposal, https://www.cites.org/sites/default/files/eng/cop/10/prop/E-CoP10-P-27.pdf.

[3] Zimbabwe's population has grown from 12.22 million in 2000 to 16.15 million in 2016. World Bank, https://data.worldbank.org/country/zimbabwe?view=chart.

[4] ZPWMA (April 2014, July 2015); R.B Martin, Background Study (Apr. 2005).

government. ZPWMA was not disrupted by the 2017 Presidential transition. President Mnangagwa has confirmed that ZPWMA is proceeding with "business as usual."[5]

- Hunting areas in Zimbabwe are over three times the size of the national parks. The elephant habitat includes approximately 27,000 km^2 in National Parks, 18,900 km^2 in Safari Areas, over 50,000 km^2 in Communal (CAMPFIRE) Areas, and 7,000 km^2 in private conservancies.[6] Communal (CAMPFIRE) Areas (90%) and private conservancies are almost wholly funded by hunting revenues, which justify the dedication of this space to nature in place of alternative uses like livestock.

- Hunting fees make up a significant portion of ZPWMA's revenues. Trophy and concession fees generated almost $5.1 million for ZPWMA in 2014. Over half of these fees were paid by U.S. clients. Approximately 80% of ZPWMA's revenues are allocated for law enforcement. Put simply, hunting revenues from U.S. hunters pay for most of the anti-poaching across Zimbabwe's elephant range. And the FWS suspension of elephant trophy imports reduced ZPWMA's revenues by almost 14% in 2014 compared to 2013. The suspension has reduced the revenues available for ZPWMA (as well as CAMPFIRE communities and individual operators) to combat poaching.[7]

- Poaching in Zimbabwe has generally been kept under control so as not to have a national effect. Hunting operators support this successful control of poaching by funding their own patrol teams, paying salaries for community scouts, and assisting ZPWMA with equipment, rations, petrol, and other needs. Hunting operators are the first line of defense against poaching. For example, a sample of 15 operators spent approximately $1.32 million in 2015 to protect an area exceeding 28,000 km^2.[8] One operator, Charlton McCallum Safaris in the Dande/ Mbire areas, spends an average of $85,000/year on anti-poaching. From 2010 to 2016, their efforts led to an 80% decline in elephant poaching in an important border region.[9]

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[5] ZPWMA Website, http://zimparks.org/about-zimparks/; see also news reports of the transition in Zimbabwe, e.g., http://www.thezimbabwemail.com/main/mnangagwa-swears-new-cabinet/; https://citizen.co.za/news/news-africa/1746240/mnangagwa-names-new-zimbabwean-cabinet/.

[6] UN Protected Planet, https://protectedplanet.net; CAMPFIRE Association of Zimbabwe Press Statement (November 2017), http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1. Elephant habitat in Zimbabwe also includes over 10,000 km^2 in Forest Areas managed by the parastatal Forestry Commission.

[7] Note that hunting and concession fees are considerably higher than this, but because of the grant of "appropriate authority," hunting fees accrue to the landholder on communal and private land, not to ZPWMA. "Appropriate authority" incentivizes landholders to maintain and increase wildlife populations because they retain the benefits of the sustainable use. ZPWMA (April 2014, July 2015).

[8] ZPWMA (October 2016).

[9] Dande Anti-Poaching Unit Website, http://dapuzim.com/.

- Regulated hunting also reduces poaching by incentivizing greater tolerance among the rural communities who live side-by-side with dangerous game species. Hunting provides most of the revenue in CAMPFIRE Areas and averaged $2.2 million/year prior to the FWS suspension of elephant trophy imports. Elephant hunting alone generated approximately $1.6 million per year (65-70% of the total on average). Most elephant are hunted in CAMPFIRE Areas (55 compared 49 in government areas in 2014).[10]

- Revenues from regulated hunting are invested in game monitoring and community projects such as boreholes, classrooms and clinics, food purchases, and other livelihood improvements for Zimbabwe's rural poor. Approximately 200,000 families directly and another 600,000 indirectly benefit from CAMPFIRE revenues. Because of these benefits, poaching and problem animal control are low in CAMPFIRE Areas. This tolerance exists even though elephant destroyed over 7,000 hectares of crops and claimed the lives of approximately 50 people in CAMPFIRE communities between 2010 and 2015.[11]

- There is no evidence that ivory poaching—in Zimbabwe or anywhere else—is tied to terrorism, and that claim has been debunked by credible research, although it is often repeated in popular media.[12] In any event, regulated hunting reduces the poaching: in the Southern African countries that depend upon regulated hunting as a conservation tool (including Zimbabwe), poaching levels are the lowest in Africa. According to CITES' Monitoring the Illegal Killing of Elephants (MIKE) data, Southern African countries have the lowest Proportion of Illegally Killed Elephant (PIKE). PIKE is used to assess whether poaching levels are unsustainable. It has never risen above the sustainability threshold in Southern Africa, even in 2011, when the recent poaching crisis was at its highest level. PIKE has declined in Zimbabwe's MIKE sites since 2011.[13]

- Zimbabwe's National Elephant Management Plan (2015-2020) is the most up-to-date plan in Africa. Responding to the FWS' concerns, this new plan identifies specific action items, outputs, and Key Performance Indicators to measure the success of plan implementation. The national plan is supplemented by four regional action plans with the same framework to address the unique challenges of each range.

---

[10] ZPWMA (July 2015).

[11] CAMPFIRE Association Press Statement, http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1; CAMPFIRE Association (April 2014).

[12] This research is available at: https://rusi.org/sites/default/files/201509_an_illusion_of_complicity_0.pdf; see also https://www.nytimes.com/2015/10/30/opinion/the-ivory-funded-terrorism-myth.html.

[13] CITES/MIKE Website, https://www.cites.org/eng/prog/mike/data_and_reports.

FWS Form 3-200-20 (Rev. 01/2020)
U.S. Department of Interior

OMB Control No. 1018-0093
Expires 08/31/2023

IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

■New ☐Reissue/Renew ☐Amendment

Complete Sections **A or B**, and C, D, and E of this application. U.S. address may be required in Section C.**

A. Complete if applying as an individual			
1.a. Last name Hogan	1.b. First name Kevin	1.c. Middle name or initial P	1.d. Suffix

2 Date of birth (mm/dd/yyyy)	5.a. Telephone number	5.b. Alternate telephone number	6. E-mail address
(b) (6)			

B. ~~Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution~~			
~~1.a. Name of business, agency, Tribe, or institution~~		~~1.b. Doing business as (dba)~~	
~~2. Tax identification no.~~	~~3.a. Description of business, agency, Tribe, or institution~~		~~3.b. Website URL (if applicable)~~
~~4.a. Principal officer (P.O.) last name~~	~~4.b. P.O. first name~~	~~4.c. P.O. middle initial~~	~~4.b. P.O. Title~~
~~5. Primary contact name~~		~~6. Primary e-mail address~~	
~~7.a. Business telephone number~~	~~7.b. Alternate phone no.~~		~~8.a. Primary contact telephone no.~~

C. All applicants complete address information				
1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes) (b) (6)				
1.b. City Taylor Ridge	1.c. State Illinois	1.d. Zip code/Postal code 61284	1.e. County/Province Rock Island	1.f. Country USA
2.a. Mailing Address (include if different than physical address; include name of contact person if applicable)				
2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f. Country

D. All applicants MUST complete

1. Include a check or money order, payable to the U.S. FISH AND WILDLIFE SERVICE, **a nonrefundable processing fee [50 CFR 13.11(d)(4)]**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – ***attach documentation of fee exempt status as outlined in instructions.*** (50 CFR 13.11(d)).

2. If you are requesting a reissue/renew/amendment, what is your permit/file number?

3. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13 of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter I of Title 50, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

The individual/principal officer of the business must print and sign the application. (No photocopied or stamped signatures) Date (mm/dd/yyyy)

** Further instructions for the above application may be found on our ePermits website. See the last page for information on the Privacy Act, Paperwork Reduction Act, Estimated Burden, and Freedom of Information Act aspects of this application form.

Mail your application(s) to Division of Management Authority, Branch of Permits, MS:IA 5275 Leesburg Pike, Falls Church, VA 22041-3803.

APPLICANT:

KEVIN HOGAN

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

Kevin Hogan (b) (6) Taylor Ridge, Illinois 61284

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

loxodonta africana, African elephant

b. Sex (if known).

Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Mapungubwe Game Reserve, Limpopo Province, South Africa

b. Date wildlife was hunted:

July 8th, 2017

c. Approximate age of animal:

30 years old

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Mapungubwe Game Reserve - P.H. Eugene Small

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Swift Dip - P.O. Box 1333, Thabazimbi, Limpopo Province 0380 South Africa

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

Please see provided

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Safari Cargo Systems
Address:	Holding 34, 5th Ave
City:	Bredell 1623
State/Province:	South Africa
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.
South Africa does not issue hunt return forms
11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Eugene Small
E-mail:	vhembe@lantic.net
Phone number:	+27 15 575 9939

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**).

    Applicant's signature: _____ (b) (6) _____ Date: 2-18-21

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

KEVIN HOGAN

HUNTING PERMITS

SOUTH AFRICAN PROFESSIONAL HUNTING REGISTER AND TROPHY EXPORT APPLICATION

Duration of Hunt: Commenced 02 / 07 / 2017 Terminated 08 / 07 / 2017

A. LP № 66195

Tick appropriate Province block where hunt took place (separate sheet for each Province):

KwaZulu-Natal (KZN)	Free State (FS)	Gauteng (GP)	Limpopo Province (LP) X	North West (NW)	Mpumalanga (MPA)	Western Cape (CNC)	Eastern Cape (EC)	Northern Cape (NC)

POST PERMIT TO (Mark correct block with X)

PROFESSIONAL HUNTER

Name: K Small

Business Address: P.O Box 123

Alldays

0909

ID No: 6309105066087

PH Permit No: ZA/HP/170/6754

Date: 8/7/2017 Signature:

CLIENT

Name: Kevin Patrick Hogan

Permanent Postal Addre: (b) (6)

Po Taylor Ridge Illinois

Code: 61284 Country: U.S.A.

Passport No: (b) (6)

Tel/Fax:

Date: 8/7/2017 Signatu: (b) (6)

HUNTING OUTFITTER

Name: K Small

Business Address: P.O Box 123

Alldays Code: 0909

ID No: 6309105066087

Tel No: 0795241635 Fax No:

HO Permit No: ZA/HP/HO/1927

Date: 8/7/2017 Signature:

Farm Name Registration No	Magisterial District	Name & Residential Address of Land Owner	Hunting Permit Certificate/Licence No.	Date of Hunt From	Date of Hunt To	Species Killed or Wounded	Number Killed or Wounded	Sex F	Sex M	Part of Trophy to be Exported
Mapungubwe Game Reserve	Musina	L Rahnguis?	12038	8/7	8/7	Elephant	ONE		X	Tusks, Skin, ears, Skull, Feet, Trunk.

Copies: Client Original

1st copy..... Forward to Nature Conservation authority where hunt took place

Hunting Outfitter 2nd copy..... Retain for a period of three years

Professional Hunter Last copy..... Remains in book

Address to which trophies are to be sent: As Arranged with Leesiday

Code

Country: U.S.A. Trophy Export Date (Estimate):

ORDINARY PERMIT

PERMIT NUMBER: 0 № 12088

(Issued in terms of the provisions of the National Environmental Management: Biodiversity Act 2004, Act 10 of 2004)

NAME	CEDET.
ADDRESS	Attn Monica Erasmus
	LOUISTRICHARDT
PROVINCE	LIMPOPO

DETAILS OF PERMIT HOLDER

NAME	KEVIN PATRICK	ID NO.	
SURNAME	HOGAN	PASSPORT NO.	(b) (6)

	POSTAL ADDRESS	RESIDENTIAL ADDRESS
ADDRESS		(b) (6)
ADDRESS		ILL.
ADDRESS		TAYLOR RIDGE
TOWN		ILLINOIS
POSTAL CODE		61284
PROVINCE		USA

PROPERTY WHERE RESTRICTED ACTIVITIES WILL BE CARRIED OUT

NAME AND SURNAME OF APPLICANT	Mr. K. P. HOGAN
NAME AND SURNAME: RESPONSIBLE PERSON	Mr. E. SMALL
NAME AND SURNAME OF AGENT	
PHYSICAL ADDRESS OF FACILITY	MAPUNGUBWE GAME RESERVE
PHYSICAL ADDRESS OF FACILITY	ALLDAYS
DISTRICT	VHEMBE
PROVINCE	LIMPOPO
REGISTERED NAME AND NUMBER (in the case of game farm)	MAPUNGUBWE GAME RESERVE

DETAILS OF SPECIES INVOLVED

SPECIES		SEX	QUANTITY	MARKING
COMMON NAME	SCIENTIFIC NAME	(if known)		(if applicable)
ELEPHANT	LOXODONTA	MALE	001 (ONE)	
	AFRICANA			

DETAILS OF RESTRICTED ACTIVITIES INVOLVED

TO HUNT ONE CITES MALE ELEPHANT ON THE PROPERTY- MAPUNGUBWE GAME RESERVE - ALLDAYS - VHEMBE - LIMPOPO BY AN OVERSEAS CLIENT FROM USA.

NAME AND SURNAME OF PURCHASER/SELLER	
RESIDENTIAL ADDRESS OF PURCHASER/SELLER	

IN THE CASE OF INTERNATIONAL IMPORT/EXPORT:

NAME AND SURNAME OF CONSIGNEE/CONSIGNOR	
RESIDENTIAL ADDRESS OF CONSIGNEE/CONSIGNOR	

IN THE CASE OF A HUNT:

NAME AND SURNAME OF HUNTING CLIENT (if applicable)	Mr. K. P. HOGAN
NAME AND SURNAME OF PROFESSIONAL HUNTER (if applicable)	Mr. E. SMALL
NAME AND SURNAME OF HUNTING OUTFITTER (if applicable)	Mr. E. SMALL
WEAPON AND METHOD OF HUNTING	RIFLE - WALK & STALK.

IN THE CASE OF POSSESSION OF ELEPHANT IVORY OR RHINOCEROS HORN:

WEIGHT OF EACH PIECE APPLIED FOR	
LENGTH OF THE ELEPHANT IVORY	
BASE CIRCUMFERENCE OF ELEPHANT IVORY OR RHINOCEROS HORN	
REGISTRATION NUMBER	
MICROCHIP NUMBER	

PERMIT VALIDATION

PERIOD OF VALIDITY FROM: 03/07/2017 TO: 03/08/2017

RECEIPT NUMBER 1015586 - AMOUNT = R6400-00

MALEKA S.T. (b) (6)

SIGNATURE OF ISSUING OFFICER: SIGNATURE OF PERMIT HOLDER:

DATE STAMP:

LOUIS TRICHARDT CENTRE

2017 -07- 03

PO BOX 2266 LOUIS TRICHARDT 0920

APPLICANT:

KEVIN HOGAN

ELEPHANT AERIAL CENSUS
CENTRAL LIMPOPO
RIVER VALLEY

ELEPHANT AERIAL CENSUS OF THE CENTRAL LIMPOPO RIVER VALLEY,
SOUTHERN AFRICA REPORT SUMMARY
SEPTEMBER 2012

Research Synopsis

In recent times, more and more questions have been asked on whether an increase in elephant numbers will lead to the ultimate destruction of an area.

Elephants are perceived to be a keystone species that determine the structure and composition of their habitats. This contention has in turn lead to claims that elephants at high numbers pose a threat to biodiversity in the conservation areas in which they occur. Little, however, is known on how elephant populations are limited and how co-existence between elephants and trees was achieved in the past. In order to understand elephant and tree dynamics a reliable understanding of what environmental and social factors influence elephant movements and the occupancy of different habitats is needed. This has led to the initiation of the Central Limpopo River Valley elephant research project in 1999 and is an ongoing program.

Since 2000, as part of the project six total aerial counts of the elephant population has been conducted to determine their range and numbers. In recent years the development of the Greater Mapungubwe Transfrontier Conservation Area, developing agriculture, mining, dam construction and increased human densities in the region, have influenced the range and the movements of elephants within the region.

Since 2005, increasing numbers of elephants have moved into Mapungubwe National Park and on several properties in South Africa where fence breakages between properties are reported on a near weekly basis. Extensive poaching and control hunting is also being reported and could influence population numbers and movements dramatically. Aerial surveys provide information on numbers, group structure and distribution that are important baseline data pertinent to basic ecological questions and conservation planning and management.

Methodology

This year's aerial survey of the area was undertaken on the 9th and 10th September 2012.

The methodology was similar to those of previous years. Three fixed wing airplanes (Cessna 206; two C182T) were used to count the study area simultaneously. A team consisting of a pilot, navigator and two observers on each side of the plane were used.

On day one the Northern Tuli Game Reserve (Botswana), the Tuli Block from the Motloutse River to Zanzibar and Sentinel Ranch, Nottingham Estate, River Ranch (Zimbabwe) were counted. On day two the Tuli Circle in Zimbabwe and Mapungubwe National Park, **Mapungubwe Private Reserve** and farms bordering the Limpopo River in South Africa were counted.

A herd of elephants seen from the airplane.

Results

During the 2012 count a total of 1291 elephants were counted.

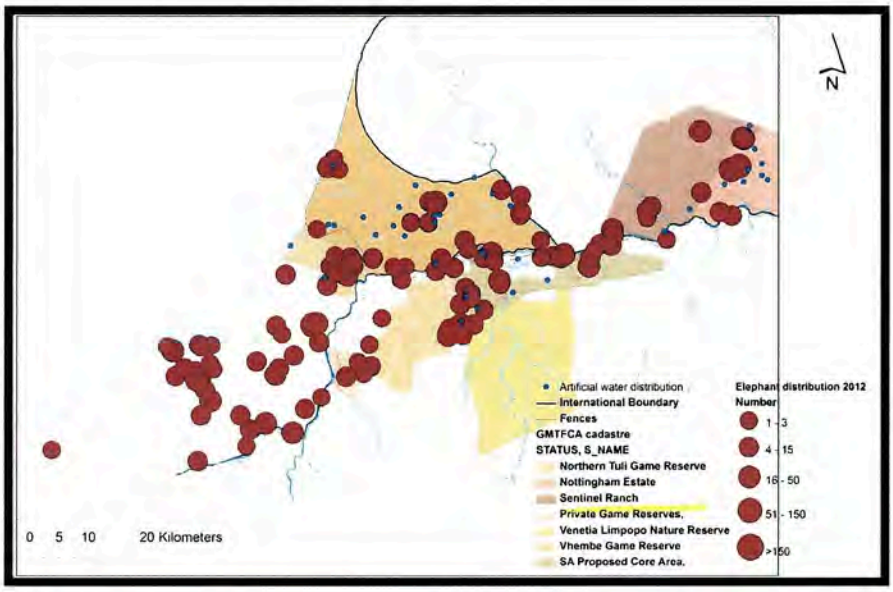

Figure 1: Elephant distribution and group sizes during the September 2012 total aerial count conducted in the Central Limpopo River Valley

Management Area	Total Counted						
	Aug 00	Jul 01	Oct 04	Jun 07	Aug 08	Sep-10	Sep-12
Botswana - NTGR	512	877	291	603	476	461	320
RSA - Mapungubwe National Park	0	10	2	115	33	210	127
RSA - Farms	5	5	5	0	53	72	123
Zimbabwe - Tuli Safari Area	57	0	0	3	0	0	0
Sub total	**574**	**892**	**298**	**721**	**562**	**743**	**570**
Botswana - BDMRF	373	288	522	244	636	190	368
Zimbabwe - Nottingham & Sentinel	170	104	20	115	31	304	353
Zimbabwe - Zhove Dam	0	0	*250*	0	0	0	0
Sub total	**170**	**104**	**270**	**115**	**31**	**304**	**353**
Shashe Riverine	120	10	0	0	0	0	0
Botswana - Letsibogo Dam	25	0	150	0	0	0	0
Botswana Communal Area	0	0	0	0	0	0	0
Sub total	**145**	**10**	**150**	**0**	**0**	**0**	**0**
TOTAL	**1262**	**1294**	**1240**	**1080**	**1229**	**1237**	**1291**

Table 1: Comparison of the results of the seven total aerial counts of the Central Limpopo Valley elephant population. NTGR – Northern Tuli Game Reserve, MNP – Mapungubwe National Park, TSA – Tuli Safari Area, BDMRF – Baines Drift to Motloutse River Farms, SNRC – Sentinel Ranch, Nottingham Estate, River Ranch Complex, LDNS – Letsibogo Dam and Northern Shashe Area, MTRR – Motloutse and Thune Riverine

The overall elephant distribution remained very similar between counts. Numbers of elephant south of the Limpopo River have increased steadily since 2007, while numbers within the Tuli Block west of the Motloutse River and the Northern Tuli Game Reserve fluctuate between years. The total number of elephants counted within the study area further remains 1200 – 1300, indicating that at least for the dry season this population remains stable. Group sizes are strongly correlated to rainfall with a higher number of small groups within years with low rainfall and fewer but larger groups in years with high rainfall.

For any additional information or the full report of the Aerial Count study, please don't hesitate to send an email to:

- Eugene Small vhembe@lantic.net

Kind regards,

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
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February 22, 2021

U. S Fish and Wildlife Service
Division of Management Authority (DMA)
Attn: Emma Nelson
Branch of Permits, MS: IA
5275 Leesburg Pike,
Falls Church, Virginia 22041

RE: Import Permit Application for an elephant trophy from R.S.A
Applicant: Kevin Hogan
Hunt Date: July 8th, 2017

Ms. Nelson,

Enclosed please find the permit application to import an elephant trophy from the Republic of South Africa for applicant, Kevin Hogan. Mr. Hogan hunted in South Africa in July of 2017 in the Mapungubwe Game Reserve. Mapungubwe is set against the northern border of South Africa, on the Botswana border. It is an open, expansive savannah landscape at the confluence of the Limpopo and Shashe rivers.

Mr. Hogan paid thousands of dollars in trophy fees for this hunt. 90% of the income to Mapungubwe GR comes from safari hunting and trophy fees from mostly American hunters. The reserve has seen some deterioration and damage to the infrastructure because of increased elephant activity. Mapungubwe adjusts their elephant management plan yearly and monitors the native and roaming herds to depict an accurate number of elephants for the area. They use science-based evidence to determine the off-take numbers and attempt to maintain a balanced eco-system by avoiding potentially dangerous threats to the local wildlife and surrounding communities.

According to the Great Elephant Census, put out in 2016, the elephant population in most of South Africa is steady, but in the areas surrounding the Limpopo region the populations are increasing. In the operator's elephant management plan for Mapungubwe put out in 2016, it was reported that the area had a range of between 158 elephants to 441 elephants in differing months and times. This was a large increase of elephants for the area since the year 2000 when the fences were removed from the Botswana border to have more of a range for the roaming elephants of the area. The operator reports that the carrying capacity for the reserve allows for a total of 100 elephants, and as stated, the area is far exceeding that limit. In Mapungubwe's management plan, the quota for elephants was set at 10 per year, though most years the number taken is below that. The operator of the reserve believes that 15 elephants taken within 5 years "will be better for planning the hunts." It will assist with the short-term management of keeping nomadic herds away and will be a good indication on resident herd growth to see if the take-offs need to be adjusted.

Mapungubwe Game Reserve works with the surrounding communities in many ways: they offer employment and give away edible game meat, but their most impressive community

initiative is funding and supporting the Rahmqvist foundation orphanage. The orphanage does not just give food, clothing and shelter to the children that live there, but they offer them skills training to prepare them for professional careers in the future.

Please refer to these documents and the National Norms and Standards for the Management of Elephant in South Africa (provided) to see that regulated, science-based hunting with strict quotas is in fact enhancing the elephant population in this region. We ask that you consider everything provided in addition to documents and information provided by the South African government, Safari operators, and other hunters when making a determination to issue an import permit for this elephant trophy.

Please do not hesitate to contact us if you have questions about this permit application

Aimee Korver

CONSERVATION FORCE
Conservation Permitting Division

CC: Kevin Hogan w/enclosures

Enclosures:

- import permit application 3.200.20
- Notice of Representation
- Hunting Permits
- Operator Enhancement Report – Mapungubwe Game Reserve
- Elephant Collar Program details
- Elephant Aerial Census of Central Limpopo River Valley
- Elephant Management Plan- annual report
- Rahmqvist Foundation Orphanage
- African Elephant Status Report
- The National Norms and Standards for the Management of Elephants in South Africa
- The Great Elephant Census- Country by Country
-

APPLICANT:

KEVIN HOGAN

AFRICAN ELEPHANT STATUS REPORT 2016

African Elephant Status Report 2016

An update from the African Elephant Database

C.R. Thouless, H.T. Dublin, J.J. Blanc, D.P. Skinner, T.E. Daniel, R.D. Taylor, F. Maisels, H. L. Frederick and P. Bouché

Occasional Paper of the IUCN Species Survival Commission No. 60

SSC Species Survival Commission

AFRICAN ELEPHANT SPECIALIST GROUP

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COUNTRY

South Africa

ESTIMATED TOTAL ELEPHANTS

18,841 ± 0

GUESSES

8,425 - 8,435

GENERAL STATISTICS

Country Area	2,345,000 km²
Range Area	30,851 km² (3+e)
Protected Range	93 %
Information Quality Index (IQI)	0.64
CITES Appendix	II
Listing Year	2000

CURRENT ISSUES

Apart from the large population of elephants in the Kruger National Park, most of South Africa's elephant populations exist in relatively small fenced areas (Department of Environmental Affairs and Tourism, 2008), many of which are privately owned. In some places, local elephant overabundance has led to adverse impacts on other biodiversity and a number of management approaches have been undertaken. These include the use of immuno-contraception to control reproduction (Delsink et al., 2013).

Until 2008, there was little elephant poaching in South Africa. However this has recently changed, with increased poaching for ivory, particularly in Kruger National Park (AFP, 2014).

South Africa published a set of Norms and Standards for Managing African Elephants in 2008 (Department of Environmental Affairs and Tourism, 2008) and these were under review in 2014 (Department of Environmental Affairs, 2014).

In 2008, South Africa undertook an approved one-off sale of 47,346 kg of ivory to Japan and China, at a price of USD $6,702,695 (Wijnstekers, 2011). Trophy hunting of elephants is legal in South Africa, and from 2007 to 2015, the declared annual quota increased from 200 tusks as hunting trophies (from 100 animals) to 300 (CITES, n.d.-b).

In recent analyses of seizure data in ETIS, prepared for CITES, South Africa has been identified as a country with a worrying involvement in illegal ivory trade (Milliken et al., 2013, 2016).

NUMBERS AND DISTRIBUTION

The estimated number of elephants in areas surveyed in the last ten years in South Africa is 18,841 at the time of the last survey for each area. There may be an additional 8,425 to 8,435 elephants in areas not systematically surveyed. These guesses likely represent a minimum number, and actual numbers could be higher than those reported. Together, this estimate and guess apply to 28,203 km^2, which is 92% of the known and possible elephant range. There remains an additional 8% of the estimated range for which no population estimates are available.

There has been a reported increase of about 1,000 elephants in the form of estimates, and about 8,000 in guesses since the AESR 2007. While the major population in Kruger NP has increased substantially, the quality of information for other areas is lower than in the AESR 2007, and many areas that previously had documented surveys now have unsupported population figures, which means that elephant numbers are recorded as guesses.

South Africa's elephants are confined to protected areas, private reserves and other privately-owned properties, largely in the north and east of the country, though some populations remain – or are being newly established – in the far south. The largest population of elephants is found within and around Kruger NP, from where most of the elephants in other populations have been translocated.

Following implementation of a policy of managing landscapes rather than managing elephants, and the cessation of culling in 1994, the elephant population of Kruger NP has increased. Annual total counts were carried out until 2012, followed by an **aerial total count** in 2015 which gave an estimate of 17,086 (Ferreira et al., 2015). This replaces a count of 12,427 from 2006 (Whyte, 2007). Since 2003 the growth rate has slowed to 4.2% and this may be connected to the closure of artificial water sources in the park (Ferreira et al., 2015). Fences between Kruger and many neighboring private reserves have been removed, allowing free movement of elephants. However, there is no figure for the entire Kruger ecosystem, since one major private reserve has asked for its numbers to be aggregated with private reserves in other parts of the country (Garaï, pers. comm., 2016). Elephants from Kruger NP move into adjacent areas of Mozambique, especially the adjoining Limpopo National Park. One radio-collared elephant from northern Kruger moved through Mozambique as far as Gonarezhou National Park in Zimbabwe (Henley, 2011).

The population at Addo Elephant National Park has increased slightly, with an overall count of 595 in 2012 (Ferreira et al., 2012), replacing one of 459 in 2005.

In Eastern Cape province there are two elephants in Knysna and two in the Great Fish River Provincial Reserve (Selier, pers. comm., 2016). In KwaZulu Natal, Hluhluwe-Imfolozi Game Reserve has 700 elephants, Ithala Game Reserve has 162, uMkhuze Game Reserve has 90 and Tembe Elephant Reserve, linked via the Futi Corridor to Maputo Special Reserve in Mozambique, supports at least 220 elephants (EKZNW, 2016). The St Lucia Reserves have 110 elephants (EKZNW, 2016). These are all **informed guesses** and reflect increased numbers compared to earlier estimates, with the exception of Hluhluwe GR from where elephants have been translocated (EKZNW, 2016).

In Mpumalanga Province, there are 57 elephants in the Mthetomusha Provincial Reserve and 105 in Songimvelo Game Reserve (Garaï, pers. comm., 2016); these are both **informed guesses** and represent increases on previous estimates.

In North West Province both Madikwe Provincial Nature Reserve (1,006 elephants) and Pilanesberg Provincial Nature Reserve (240 elephants) show increases based on **informed guesses** (Garaï, pers. comm., 2016). In Limpopo Province **informed guesses** indicate that Atherstone Provincial Nature Reserve holds 105 elephants, Letaba Provincial Nature Reserve 621, Makuya Provincial Nature Reserve nine (Garaï, pers. comm., 2016), and Manyeleti Game Reserve 222 (SANParks, 2009). Marakele National Park has 171 elephants (Ferreira et al., 2012).

As part of a total count survey of the Greater Mapungubwe Transfrontier Conservation Area (Selier & Page, 2015), 347 elephants were counted in Mapungubwe National Park and three in the surrounding area.

Information on elephants in private reserves and other privately-owned elephant properties has been obtained from the Elephant Management and Owners Association (Garaï, pers. comm., 2016). At the request of their owners, some private reserves are grouped under one overall estimate and are not shown on the map. This **guess** totals 2,482 elephants. Other private nature reserves for which numbers are available are Maremani (64), Kwandwe (57), Kariega (41) and Balule, Timbavati, Umbabat and Klaserie combined (2,772).

SUMMARY TOTALS

SURVEY CATEGORY	ESTIMATES FROM SURVEYS		GUESSES		KNOWN AND POSSIBLE RANGE	
Aerial Total Counts	18,421	—	—	—	67 %	20,563
Informed Guesses	420		8,423	8,433	25 %	7,515
Other Guesses	—	—	2	2	0 %	125
Totals 2015	**18,841**	**0**	**8,425**	**8,435**		
Totals 2006	**17,847**	**0**	**638**	**660**		
Assessed Range					92 %	28,203
Unassessed Range					8 %	2,448
Total Range					100 %	30,651

INTERPRETATION OF CHANGES IN ESTIMATES FROM PREVIOUS REPORT

REASON FOR CHANGE	ESTIMATES FROM SURVEYS		GUESSES		KNOWN AND POSSIBLE RANGE	
Repeat Survey	+4,810	0	0	0	63 %	19,184
New Population	0	0	+64	+64	0 %	0
Different Technique	+231	0	+162	+172	10 %	3,121
Different Area	+286	0	0	0	1 %	247
New Guess	-4,333	0	+7,561	+7,539	18 %	5,651
Totals	+994	0	+7,787	+7,775	92 %	28,203

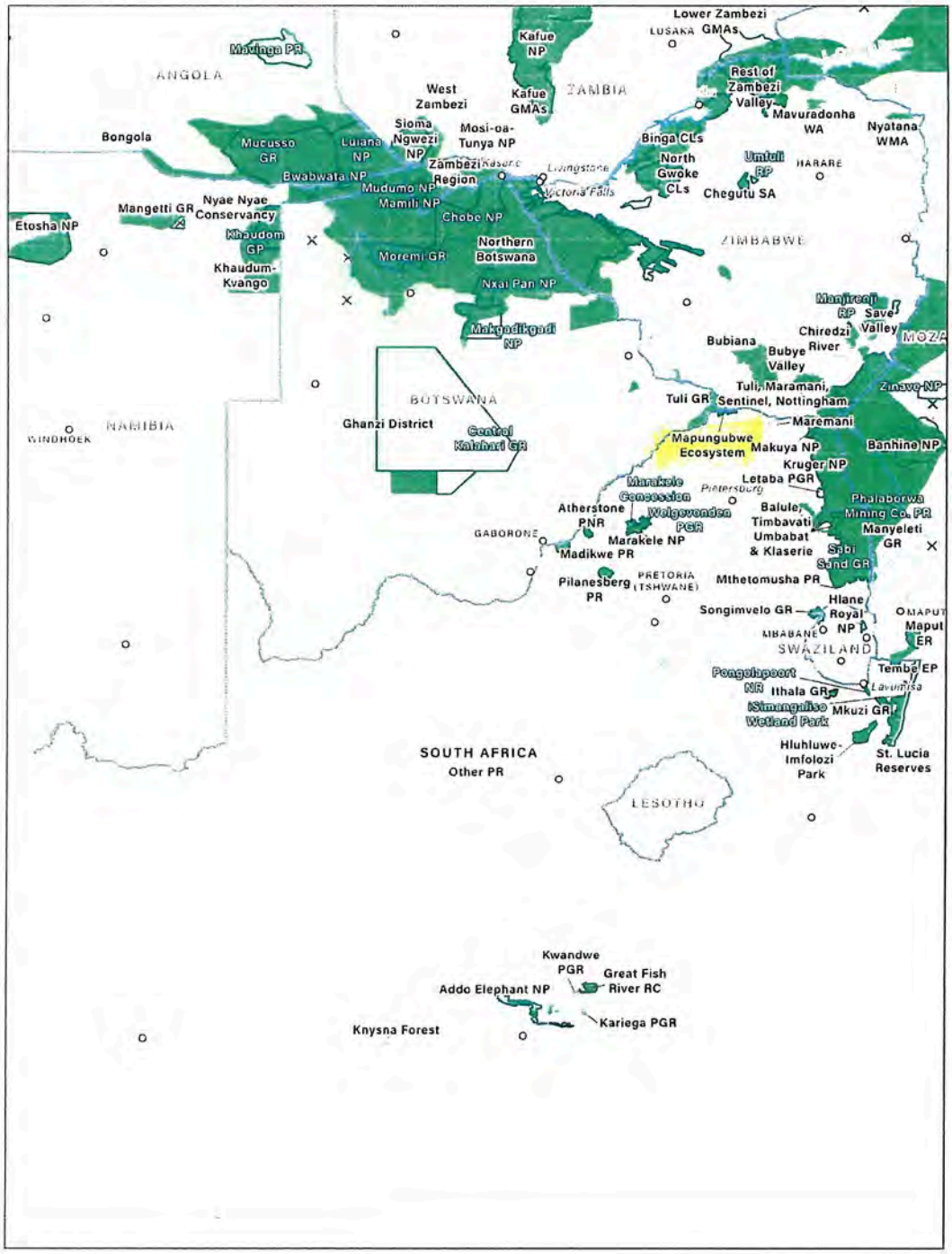
AREA OF RANGE COVERED BY EACH DATA CATEGORY

DATA CATEGORY	KNOWN RANGE (km²)	POSSIBLE RANGE (km²)	TOTAL RANGE (km²)
Aerial or Ground Total Counts	20,563	0	20,563
Informed Guesses	7,515	0	7,515
Other Guesses	125	0	125
Unassessed Range	2,448	0	2,448
Totals	30,651	0	30,651

ELEPHANT ESTIMATES

INPUT ZONE	REASON FOR CHANGE	SURVEY DETAILS			# OF ELEPHANTS		SOURCE	PFS	AREA	MAP LOCATION	
		TYPE	RELIAB.	YEAR	ESTIMATE	± 95% CL			(km²)	LON.	LAT.
Central Highveld Populations											
Atherstone Provincial Nature Reserve	NG	O	D	2015	105		Garai, pers. comm., 2016	2	240	26.8°E	24.5°S
Madikwe Provincial Reserve	NG	O	D	2015	1,006		Garai, pers. comm., 2016	2	605	26.3°E	24.8°S
Marakele National Park	DT	AT	A	2012	171		Ferreira et al., 2012	2	380	27.7°E	24.4°S
Pilanesberg Provincial Reserve	NG	O	D	2015	240		Garai, pers. comm., 2016	2	491	27.1°E	25.2°S
Eastern Cape Populations											
Addo Elephant National Park	DT	AT	A	2012	595		Ferreira et al., 2012	2	1,250	25.5°E	33.3°S
Great Fish River Provincial Reserve	NG	O	D	2015	2		Selier, pers. comm., 2016	2	450	26.8°E	33.1°S
Kariega Private Game Reserve	NG	O	D	2015	41		Selier, pers. comm., 2016	2	190	26.7°E	33.5°S
Knysna Forest	NG	O	E	2015	2		Selier, pers. comm., 2016	2	126	23.0°E	34.0°S
Kwandwe Private Game Reserve	NG	O	D	2015	57		Selier, pers. comm., 2016	3	158	26.6°E	33.1°S
Eastern Lowveld Populations											
Balule, Timbavati Umbabat and Klaserie	NG	O	D	2015	2,772		Garai, pers. comm., 2016	1	1,666	31.2°E	24.2°S
Kruger National Park	RS	AT	A	2015	17,086		Ferreira et al., 2015	1	19,073	31.5°E	24.3°S
Letaba Provincial Nature Reserve	NG	O	D	2015	621		Garai, pers. comm., 2016	2	420	31.1°E	23.7°S
Makuya National Park	NG	O	D	2015	9		Garai, pers. comm., 2016	2	165	30.9°E	22.6°S
Manyeleti Game Reserve	RS	AT	A	2009	222		SANParks, 2009	2	228	31.2°E	24.1°S
Maremani	NP	O	D	2015	64		Garai, pers. comm., 2016	2	400	30.2°E	22.4°S
Mthetomusha Provincial Reserve	NG	O	D	2015	57		Garai, pers. comm., 2016	3	72	31.3°E	25.5°S
Songimvelo Game Reserve	NG	O	D	2015	105		Garai, pers. comm., 2016	2	490	31.0°E	26.0°S
Greater Mapungubwe Ecosystem											
Mapungubwe Ecosystem	DA	AT	A	2014	347		Selier & Page, 2015	2	279	29.3°E	22.2°S
KwaZulu-Natal Populations											
Hluhluwe Imfolozi Game Reserve	NG	O	D	2015	700		EKZNW, 2016	2	965	31.9°E	28.3°S
Ithala Game Reserve	DT	O	D	2015	162		EKZNW, 2016	2	297	31.3°E	27.5°S
St. Lucia Reserves	DT	O	D	2015	110		EKZNW, 2016	2	539	32.5°E	27.9°S
Tembe Elephant Park	DT	O	D	2015	220	10*	EKZNW, 2016	2	285	32.5°E	26.9°S
uMkhuze Game Reserve	NG	O	D	2015	90		EKZNW, 2016	2	380	32.3°E	27.7°S
Other Private Reserves											
Other Private Reserves	NG	O	D	2015	2,482		Garai, pers. comm., 2016	3		24.6°E	29.1°S

South Africa



0 100 200 300 400 500 600km

ABBREVIATIONS AND ACRONYMS

AfESG

ELEPHANT RANGE

APPLICANT:

KEVIN HOGAN

NOTICE

OF

REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed ELEPHANT Trophy from S. AFRICA.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

(b) (6)

SIGNATURE

KEVIN PATRICK HOGAN
PRINT FULL NAME

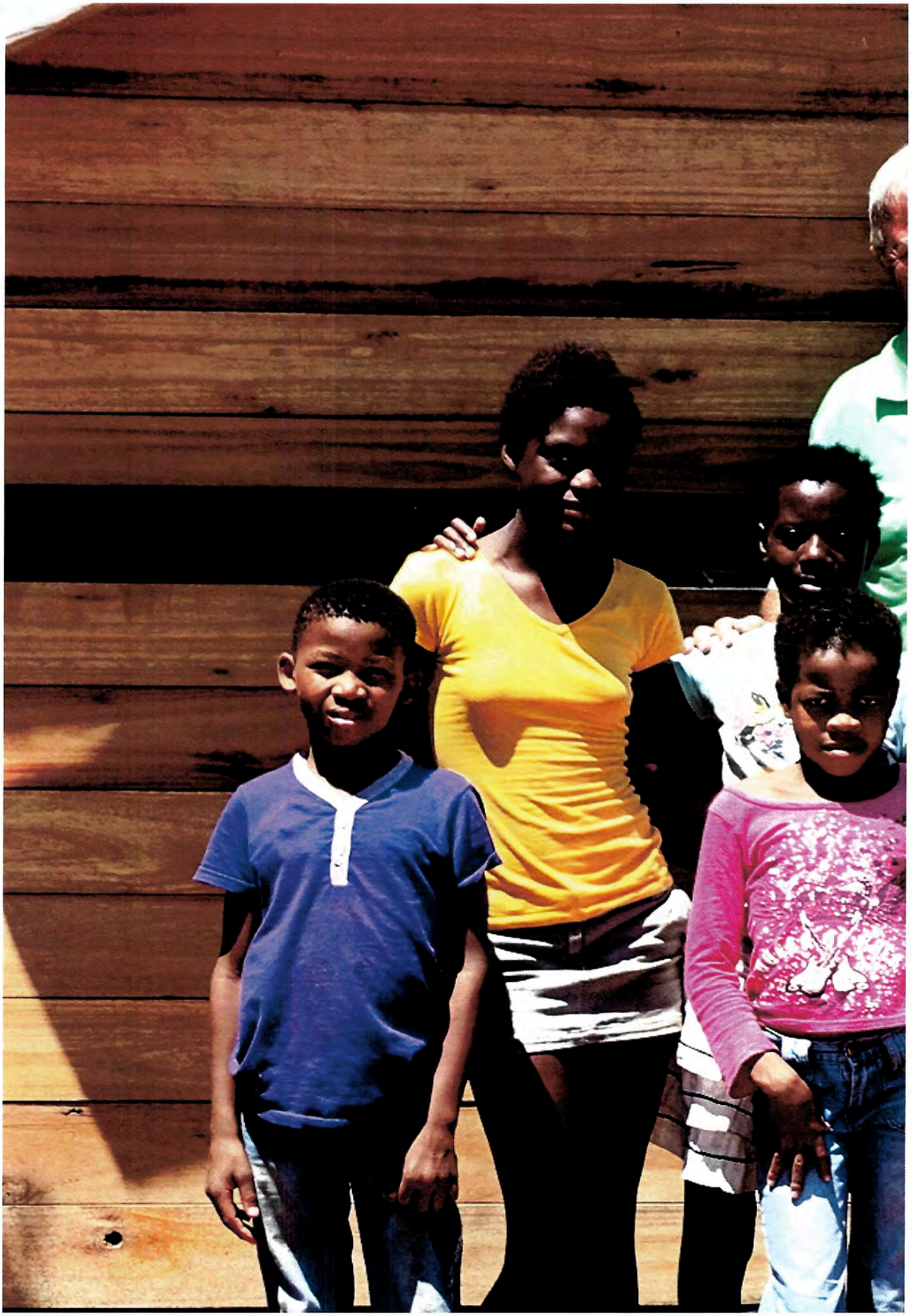
12/9/2020
DATE

APPLICANT:

KEVIN HOGAN

RAHMQVIST FOUNDATION

Toggle navigation



RAHMQVIST FOUNDATION CENTRE

"'All children are entitled to a good start in life with care and a safe shelter. I therefore founded Rahmqvist Foundation in order to build and run an orphanage, to give homeless and vulnerable children a safe place to grow up in."

LEIF RAHMQVIST
Founder and Protector

BACKGROUND

Close to my ranch in South Africa there is the town of Alldays. It is a small country town with lots of poverty, homelessness, unemployment and disease. There are many children having lost one or both their parents to AIDS and other diseases. The children are often living in very vulnerable situations, without any adult care. Their one meal a day they get by a Drop-In Centre run by local women. This is not the way children shall live! All children are entitled to a good start in life with shelter and proper care! I therefore founded Rahmqvist Foundation in order to build and run an orphanage to give children a place where they can be safe, get enough to eat, hygiene, health care, education, a bed of their own and not at least to play.

More about us

ORPHANAGE

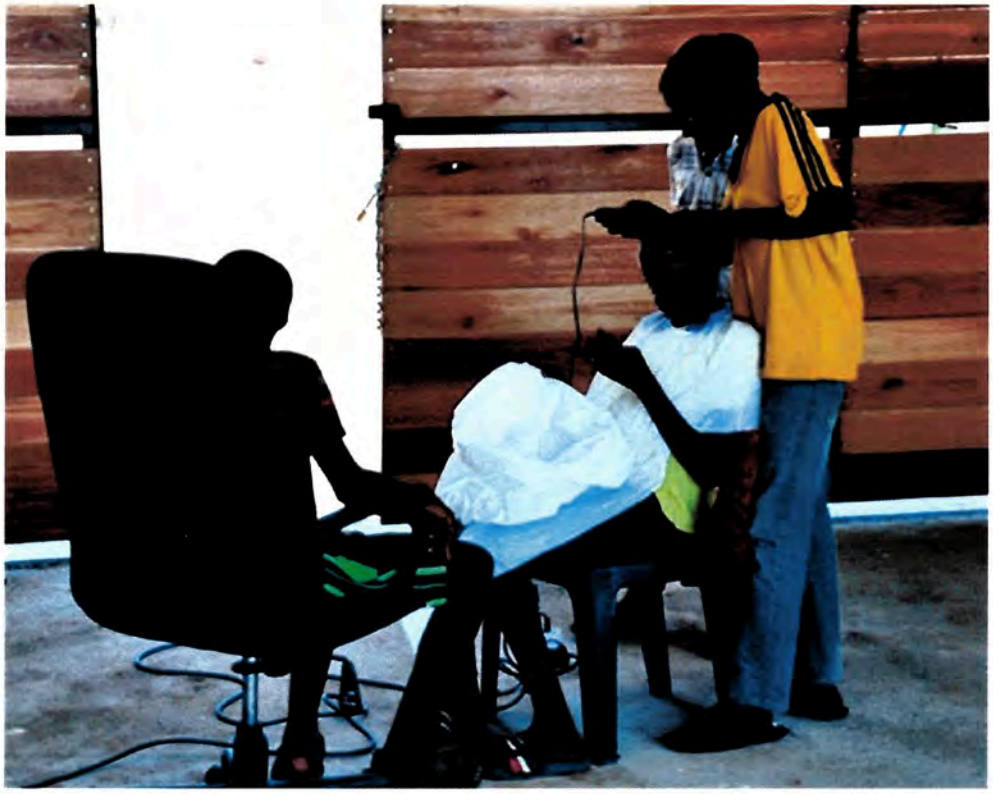
To strengthen the orphanage organization we are establishing a partnership with Norsa Community Care.

Read more

SKILL SCHOOL

We are now taking the next step in the project through the start-up of Rahmqvist Foundation Skill School. The skill school will offer young people leaving school a professional training to be bricklayers, seamstresses, bakers, chefs, masseuses or hairdressers.

Read more



WANT TO HELP?

Rahmqvist Foundation Centre is a charity project. All funds raised go directly to the Centre and to the benefit of the children. We are extremely grateful for all contributions, large and small, from individuals, businesses, organizations, schools and others!

Read more

PHOTOGALLERY

CONTACT US

Rahmqvist
Foundation

APPLICANT:

KEVIN HOGAN

ELEPHANT MANAGEMENT PLAN ANNUAL REPORT 2016

Elephant Management Plan Annual Report for year 2016

Survey Data will be conducted every 2 years and the next survey is planned for June 2019 (Dr. Gerhard De Beer)

Area

Mapungubwe Game Reserve is 25000 ha big and open with Botswana on the Northern and western border.

It was opened up from ten fenced in properties to one big area open with Botswana to allow more area for the Tuli elephants.

Elephants have become resident since the year 2000 as we opened the fences to have more range for the plus minus 1400 elephants roaming the area. (See attached detail of air count)

Management Actions

Fences:

The condition of the Fences are deteriorating on our Northern boundary along Limpopo River and Eastern area bordering with Mapungubwe National Park due to elephant activity. The fence from middle Modena North up to Den Staat road have been repaired.

Along our Western Boundary with Breslau and Eendvogelpan, the electrical fences have been completed but we had to repair the Breslau fence once, and Eendvogelpan fence once during 2016 due to elephant activity.

Our Southern fence are in fairly good condition with elephant breaking threw but gets repaired.

The South Eastern Fence bordering Lauriston and Montique are constantly being broken, by elephants and neighbours keep feeding along fence to attract animals including elephants.

Degraded Area's:

On farms Parma and Montrow, a lot of erosion repair work has been done, as well as on Vergenoegd and Kruidfontein. The dam wall that broke on Vergenoegd washed away a lot of roads but was filled and repaired.

We have lost the dam walls at Vergenoegd, due to elephants working of the walls going over the walls to drink and bath in the water. This damage will still have to be assessed. The wall at Lelie dam showed deterioration and we do not think it will withstand this coming rainy season. This wall was repaired in 2014 to the extent of R2milj

Fire Management Plan:

Due to sparse ground cover and a very good road system, our fire risk is extremely low. We do have adequate fire-fighting equipment and personnel.

Water Provision:

We have three big dams that supply the main water to the animals and also the Limpopo River on our West and North. One of these dams were extensively damaged by elephants, and another is close to the point of the dam wall washing away. Another supply in the form of a borehole will supply water the animals during the drier period.

Game Management

Game Census Frequency:

Due to a lot of hunting, tourism and surveying activity we had during 2016 and a lot of helicopters were use, the game-count was on-going and reported daily when people were out for their activities. On 29 July 2016 till 5 August 2016 an official game count was conducted at the waterholes as well as with the use of 2 helicopters. This accounted for a total of 441 elephants on 1 Aug 2016. This show an increase in elephant numbers, the biggest increase due to more elephants moving in from Botswana on our Northern boundary. The increase in damage to trees and infrastructure are also more in these areas.

On 8 February 2016 a Nature Conservation Officer flew with helicopter on the property and elephants were recorded. These groups were monitored by helicopter from the 7th February till 9th February and was a total of 158 elephants at one-time on farms Somerville, Parma and Vergenoegd.

Professional hunters and guides are instructed to record sightings especially elephant.

Helicopter Pilots were also task with reporting sightings and was then recorded by Eugene Small.

Any sightings by guests and owner were also recorded.

A drone was acquired and this will be used to identify groups of elephant.

Desired Stocking Density:

The desired stocking density is reflected in our Management plan and is <1 elephant per sq km but at this stage it is 9,6 elephant per sq km (EMP) (Ex max 100 elephant EMP Pg 124 Section 4:12)

Current Stocking Density:

As per our census with reference to Section E 5.4 Page 137, we have 276 resident and ? migratory elephants. The Model stocking rate should be 100 Max. (Stocking Capacity Section 4:12 C Pg 124)

The damage to our infrastructure and environment are a sign of increased elephant activity.

Alterations to stocking density can be made after Habitat Condition Assessment this year if needed.

Some Herd numbers were in access of 80 animals per herd. 121 on Modena , 118 on Vergenoegd.

We are identifying herds of elephant that were not previously identified on Mapungubwe Game Reserve. Noted was a herd of 121 on Modena, individuals that were identified by four cows with extremely long tusks, and 3 mature bulls with this specific herds. (We would like to collar one of these cows in 2017 to get more information of this specific herd)

In 2013 a herd of 236 stayed on Mapungubwe Game Reserve and was chased a few months later by helicopter back to Botswana. (Refer to Nature Conservation officials)

Game Management Action:

According to Scholes and Mennell 2008, elephant population increases 100% every 10 to 13 years.

From 2000 we saw a definite increase in the elephant population on Mapungubwe and since 2011 we started to do more research and monitoring threw School of Life Science of University of Kwa Zulu Natal (Annekke Bedetti) Refer to Elephant management Plan.

As the carrying capacity of Mapungubwe Game reserve allows for a total of 100 elephants, we see that the current population, resident and nomadic are far exceeding this.

An application will be submitted for 10 Cities elephant. We only hunted 3 in 2017 as the permit quota was issued late in 2016 and thus had only half a year to market and hunt these elephants.

We have collared an elephant cow which is part of one herd which consists of 87 individuals. (Attached data)

Also the selling of these animals to foreign hunters, which supply most of the income to run the farm, (90%) are very erratic due to uncertainty about Cities regulations to different countries as well as political uncertainty here and abroad.

We also have built and maintain an orphanage in the town of Alldays where we also feed 162 children, where income from elephant hunting is used.

We are in constant communications with School of Life Science of University of Kwa Zulu Natal which have been doing research on the total population of elephant in our area.

Elephant Management

Desired Total elephant Population Range:

As indicated by our Environmental Management Plan, the desired range is 100 individuals.

Desired Adult Sex Ratio Range:

Elephant Census Frequency:

Elephant census are done on an on-going process and for this all staff are motivated to report elephant activity. All tourist and guides are also asked to report any elephant activity and report and record elephant sightings.

Census Methods:

Any aircraft that are used for transport or game capture must report any elephant activity and numbers. This is then recorded.

A drone will be used to photograph groups and individuals as weather and time permits.

Method of elephant reduction

An application has been submitted for 10 Cities elephants.

We would suggest to have a set quota of 15 animals (Ref Management Plan) for 5 years as can be clearly seen that the deteriorating of Mapungubwe Game Reserve as a hole, is happening at an alarming rate and that current method is not slowing down destruction.

According to the game count in July/ Aug 2016 the elephant numbers are increasing and if we can get an approved quota for 5 years, we will be better off in planning the hunts spread out over the whole year in advance. This will help with short term management in keeping Nomadic herds away, and will be a good indication on resident herd growth to see if our take-off need to be adjusted accordingly.

APPLICANT:

KEVIN HOGAN

ELEPHANT COLLARING PROGRAM - MAPUNGUBWE

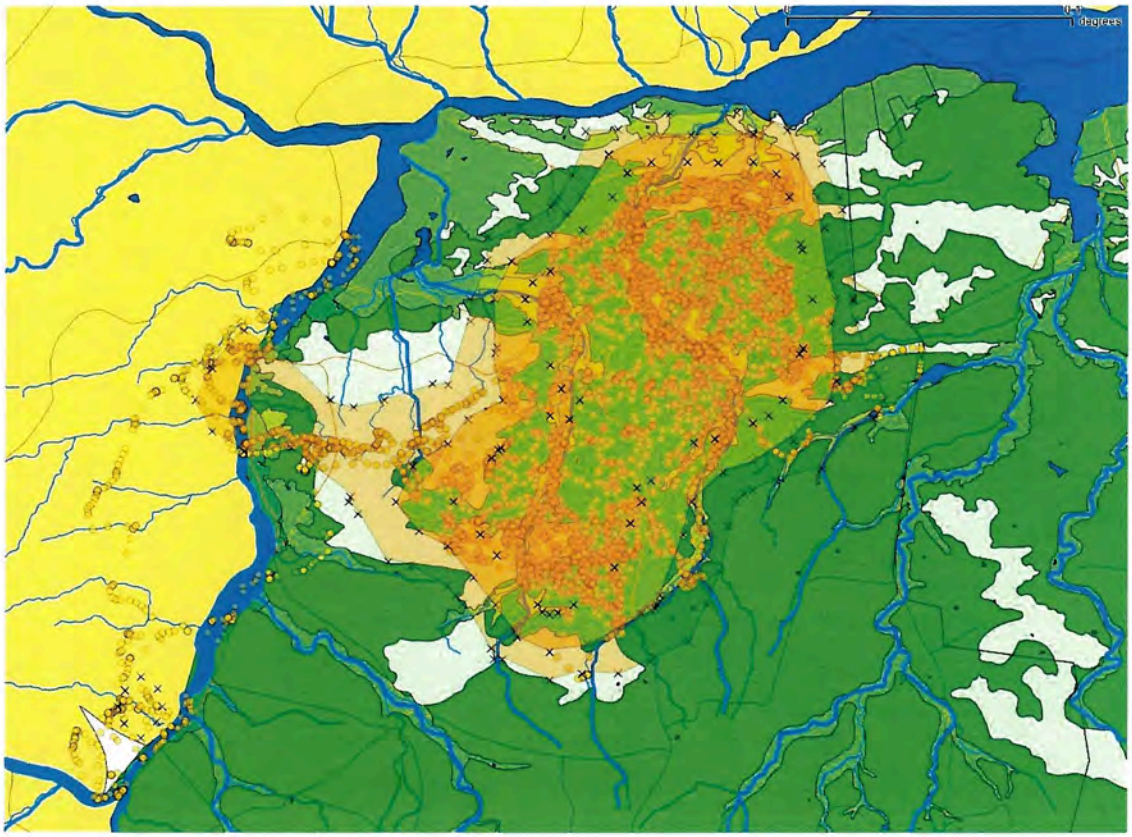
Elephant collared

One adult elephant cow, was darted and a collar fitted on 13 March 2015.

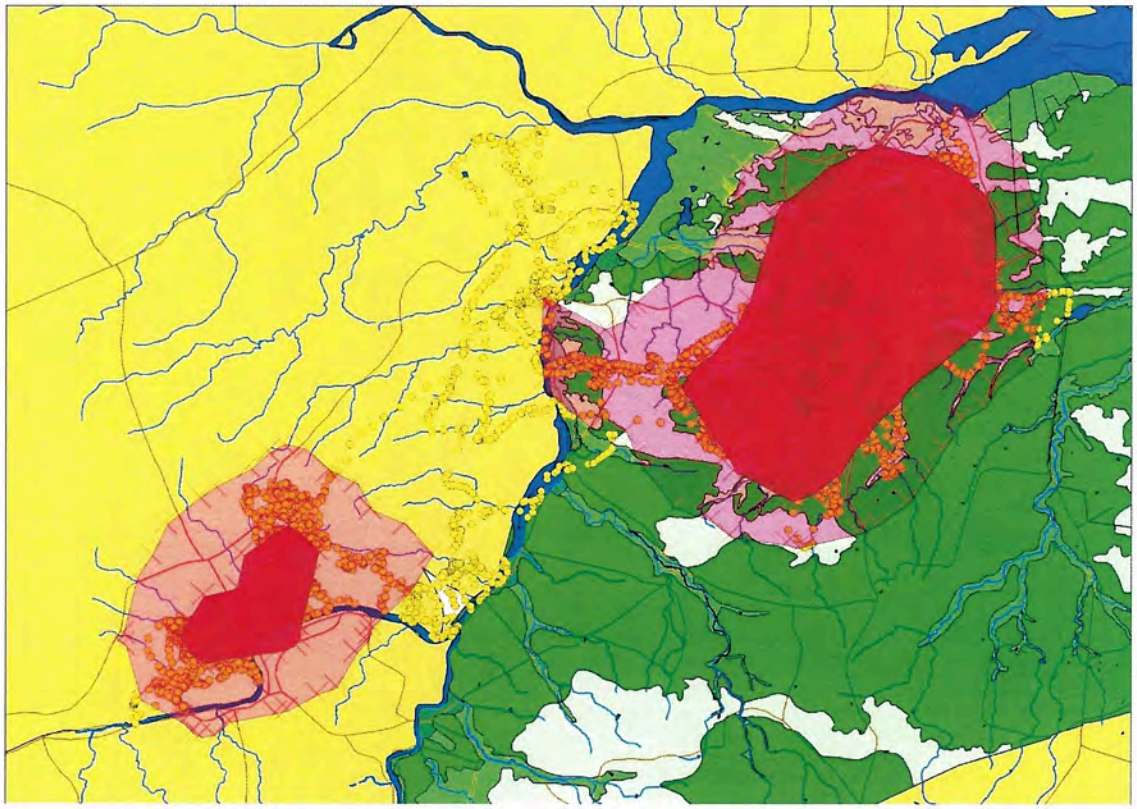
She was named Leila and is still part of one herd which consists of 89 animals.

With collar data it was established that this specific herd spend just over 11 months a year on Mapungubwe Game Reserve.

Leila: May to October 2016



Leila: May to January



APPLICANT:

KEVIN HOGAN

OPERATOR ENHANCEMENT REPORT

Conservation Force v.5/8/18
Operator Enhancement Questionnaire

1. Name of area operator: Mapungubwe Game Reserve

   a. Years in business: 24 years

   b. Name of company conducting hunt: Mapungubwe Game Reserve

   2. Name of concession: Mapungubwe Game Reserve Size in km^2: 250

   a. Land tenure: __ Government lease __ Community X Private ranch __ Private conservancy

   b. Length of concession agreement: N/A Can it be renewed? __ Yes __ No

   c. Length of renewal, if applicable: N/A

   d. Estimated total amount received in trophy fees last year, if applicable: $ 210 000

   e. Are there any special obligations under the concession agreement such as annual reporting, poaching control, community investment, community employment, etc.? If so, please explain: _ Approved Management plan by Nature Conservation and annual report.

   f. Please provide the concession location and nearest city. Please attach a map or maps with the boundaries marked and showing the nearest city: Alldays Limpopo Province. See attach Map

   g. If the concession borders a national park, please provide the park name: _ Mapungubwe Nat Park

   h. Description of general and distinctive habitat features and any water features: Mopane bushveld with 3 big dams

3. Are there any communities living in the concession? No

   a. If so, estimated number of people or villages in the concession? N/A

4. Are there communities bordering this concession? No

   a. If so, estimated number of people or villages around the concession? N/A

5. Relevant game populations in the concession:[1] See attached documents

Species name	Relative Abundance (dense/avg./sparse)	Est. population	3-Year trend (up/ down/ stable)	How monitored?
Elephant				
Lion				
Leopard				
Prey species				

6. Total employment number: 11

   a. Please identify the number and type of all employees:

[1] The new FWS import permit application form asks the applicant: "9. a. Do you have any information regarding the population status or trend on the species hunted?"

Type	Total number of this type	Number of this type who are local/from nearby communities
Professional Hunters	3	3
Trackers	4	4
Anti-poaching scouts/rangers		
Other anti-poaching	4	4
Cooks/housekeepers	6	6
Community coordinators		
Managers	1	1
Biologists	See Attached	
Others: _____		

7. Number of staff employed in the off-season: _____

   a. Please identify the number and type of staff that are engaged when the season is not open:

Type	Total number of this type	Number of locals/from nearby communities	When employed?
Anti-poaching staff			
Managers			
Maintenance	4	4	Winter
Road opening/construction	7	7	Winter
Community relations personnel			
Others: _____			

8. Anti-poaching efforts:[2]

   a. Number of anti-poaching staff: All staff are used for anti poaching when needed but full time 4

   b. Are anti-poaching patrols conducted during the hunting season, off-season, or both? Both

   c. Months during which anti-poaching patrols are conducted: 12 months

   d. Number of anti-poaching patrols per month: Full time

   e. Description of anti-poaching equipment, vehicles, etc.: Nissan 4x4, clothing camouflage, Binoculars

   f. Who is responsible for organizing and coordinating anti-poaching from prevention through successful prosecution? Manager

   g. Do you offer rewards to poaching informants leading to arrest? Yes

   h. Do you offer rewards to poaching informants upon conviction? Yes

[2] The new FWS import permit application asks for activities that provide a "conservation benefit" to the species. The FWS considers anti-poaching a "conservation benefit."

i. Please describe the company's anti-poaching expenditures below. What currency are the expenditures given in? _____

Type of expense	Spending 2015	Spending 2016	Spending 2017	Remarks
Salaries for anti-poaching scouts	R120000.00	R120000.00	R172800.00	
Equipment	R15000.00	R15000.00	R38000.00	Got donations in 2015/16
Vehicles	R110000.00	R160000.00	R234000.00	
Petrol	Not Available	R96 000.00	R156000.00	
Rewards paid	Not available	R27 000.00	R13 000.00	
Other: _____				
Other: _____				
TOTALS				

9. Anti-poaching results:

Category	2015	2016	2017	Remarks
Poaching incidents discovered	seven	eleven	Three	
Elephant carcasses observed	none	none	none	
Lion carcasses observed	none	none	none	
Leopard carcasses observed	none	none	none	
Ivory poachers arrested	none	none	Three	Stole legal ivory Polygraph
Meat poachers arrested	seven	eighteen	four	
Other poachers arrested	eight	Thirty seven	four	Mainly illegal fishing
Poachers convicted	three	Thirty seven	four	Poachers fined
Snares/gin traps collected	187	347	123	Mainly along Orchard
Firearms confiscated	none	none	none	
Vehicles confiscated	none	one	none	
Bicycles confiscated	none	none	none	
Boats/nets confiscated	14	6	15	Nets
Tusks recovered				Tusks never recovered
Other: _____				

10. Community investment:[3]

a. Does the company contribute money or goods/services to local communities? Yes

b. If so, what percentage or amount is shared, how often, and why (e.g., required by law, required by contract, voluntary contribution)? We built and maintain Orphanage voluntary in Alldays Attached documents

[3] The new FWS import permit application asks for activities that provide a "conservation benefit" to the species. The FWS considers community investment a "conservation benefit."

c. Does the company provide game meat to nearby communities? Yes our orphanage feed 162 children

d. If so, please estimate the amount and/or value of meat contributed in prior year and describe the meat contribution program: Monthly basis. In hunting season 80% of carcasses

e. If the company performs problem animal activities for surrounding communities (e.g., patrolling fields during the harvest, chasing away problem animals, conducting PAC hunts or PAC killings), please describe. N/A

f. Please describe any consolation payments made to local residents damaged by game species. What currency are the expenditures reported in? N/A

Species	Damage caused	Consolation paid 2015	Consolation paid 2016	Consolation paid 2017
Elephant				
Lion				
Leopard				
Other				

g. Please describe any community projects paid for by the company. What currency are the expenditures reported in? Orphanage in Alldays See Attached

Type of project	Spending 2015	Spending 2016	Spending 2017	Remarks
Education (e.g., classrooms, offices)				
Education (e.g., school fees, supplies)				
Health (e.g., clinics, offices)				
Health (e.g., medical salaries, equipment)				
Community scout salaries				
Other community anti-poaching				
Local government activities				
Water infrastructure improvements				
Sports teams funded				
Construction materials donated				
Other: _____				
Other: _____				
TOTALS				

11. How many U.S. clients did the company have in the past three years, what percentage of the company's clients were from the U.S., and what fees did they pay?

	Hunting elephant	Hunting lion	Hunting leopard	Hunting all species
Number of U.S. clients	2015: five 2016:six 2017: Seven	2015:none 2016:none 2017:one	2015:one 2016:none 2017:none	2015: nine 2016:thirteen 2017:eighteen
Percentage of U.S. clients	2015:80 2016:100 2017:100	2015:0 2016:0 2017:100	2015:100 2016:0 2017:0	2015:10 2016:25 2017:50
Trophy fees paid by U.S. clients	2015:80000 2016:120000 2017:175000	2015:0 2016:0 2017:45000	2015:12000 2016:0 2017:0	2015:30000 2016:35000 2017:63000

12. Approximate dollar amount and/or percentage of the company's revenue from U.S. clients:

$283000.00

13. Other information: Please provide a narrative of other enhancement information about the operation, such as any special hunting policies (e.g., aging, size, resting areas), concession improvements (e.g., digging and maintaining boreholes, restocking), management activities, research, etc.

14. I declare that the foregoing is true and correct.

Signature: _____

Name: _____ Title: _____

ZIMBABWE
BOTSWANA
MOZAMBIQUE
Mapungubwe
Musina
(Messina)
Alldays
Makhado
(Louis Trichardt)
Kruger
National
Park
LIMPOPO
N1
Lephalale
(Ellisras)
Tzaneen
POLOKWANE
Magoebaskloof
Phalaborwa
Balule
Game
Reserve
Welgevonden
Private Game
Reserve
Vaalwater
Mokopane
Marakele
National Park
Hoedspruit
Timbavati
Game
Reserve
Thabazimbi
Modimolle
(Nylstroom)
Mookgophong
(Naboomspruit)
Mabula Private
Game Reserve
Bela-Bela
MPUMALANGA
NORTH WEST
GAUTENG
0
30
60
90
120
150km

DETAILS OF ELEPHANT COLLARED ON MAPUNGUBWE GAME RESERVE

Collared elephants

Satellite collars are used to gather information on herd structure, dynamics, movement and splitting/merging of groups; In the NTGR , 5 cows and 1 bull have been fitted with a satellite collar of which unfortunately only one collar still works today (referred to as Tuli 2). In VLNR one elephant cow has been collared in September 2011 and whose collar is still functional at present. **Since the 7th of May 2012, a new female elephant has been collared on the Mapungubwe Game Reserve called "LEILA". This elephant Cow is part of a herd of 55 animals.**

The following are the movements of the elephant "LEILA" over one year period, 1 May 2012 till 1 May 2013, send by the Satellite Collar every 30 minutes

As the results show, this group stay on Mapungubwe Game reserve for more than 11 months of the year, where they would stray into Botswana for small periods.

APPLICANT:

KEVIN HOGAN

THE GREAT ELEPHANT CENSUS – COUNTRY BY COUNTRY REPORT

The largest pan-Africa aerial survey generates data critical to the species' survival

On Aug 31, the results of the immense three-year Great Elephant Census (GEC) project, the first-ever pan-African survey of savanna elephants using standardized data collection and validation methods were released. Led by Principal Investigator Mike Chase and EWB, funded by billionaire philanthropist Paul G. Allen, managed by a team at Paul Allen's Vulcan Inc., the scientific report confirms substantial declines in elephant numbers over just the last decade. The ivory trade and poaching pose serious threats and there is now a risk that savannah elephants could disappear from parts of Africa.

The Pan-African survey shows the estimated savannah elephant population to be 352,271 within the 18 countries surveyed to-date, representing at least 93 percent of savannah elephants in these countries. For savannah elephant populations in 15 of the GEC countries, for which repeat counts were available, populations declined by 30 percent between 2007 and 2014. The current rate of species decline is 8 percent per year, primarily due to poaching. High carcass ratios were discovered in many protected areas indicating that elephants are struggling both within and outside of parks. The scientific report was published on August 31, in the peer-reviewed open access journal PeerJ and is freely accessible at https://peerj.com/articles/2354/

Overall, 90 scientists, six non-governmental organization partners, consultants, and two advisory partners collaborated in the work, including EWB, the Wildlife Conservation Society, the Nature Conservancy, Frankfurt Zoological Society, African Parks Network which partnered with in country park biologists, rangers, and game wardens. The GEC teams flew a total of 294,517 km of transect lines to sample 218,238 square km or 24 percent of the total ecosystem area of 893,961 square km. This involved 9,700 hours (406 days) in the air with an average flight time of nearly three hours, by 81 airplanes and 286 crew.

Historically, counts of Africa's savanna elephants have varied in quality and some have been speculative, which can lead to incorrect conclusions about population status and trends. An accurate count of the African elephant population using up-to-date scientific techniques is a vital step in managing conservation efforts, identifying poaching hotspots and guiding law enforcement interventions, and assessing the impact of threats, such as habitat loss. The GEC team used the most accurate, up-to-date counting and statistical methods to analyze data, accurately determining the number and distribution of the

RESULTS: The following is a listing of country-by-country findings from the Great Elephant Census. For each of the 18 countries flown to-date there is a listed GEC elephant count – the number of live elephants counted during the Census – and a carcass ratio, percentage of dead elephants observed during the count. Carcass ratios of more than 8 percent are considered to indicate poaching at a high enough level to cause a declining population. Where relevant, observations reference each country's most recent historical baseline data.

ANGOLA: GEC elephant count: 3,395, Carcass ratio: 30%, Observations: Since 2005, African elephant populations in Angola have declined by 22 percent. A high carcass ratio indicates a likely increase in poaching.

BOTSWANA: GEC elephant count: 130,451, Carcass ratio: 7%, Observations: The population appears to have decreased by 15 percent since 2010, but larger area covered in GEC.

NORTHERN CAMEROON: GEC elephant count: 148, Carcass ratio: 83%, Observations: Without intervention, it is possible that the small, rapidly declining population here could go locally extinct.

CHAD: GEC elephant count: 743, Carcass ratio: 17%, Observations: The population in Zakouma National Park is now stable after great losses before 2010. The Binder Lere Reserve population lost 44 percent from 2010 to 2014.

NORTHEAST DEMOCRATIC REPUBLIC OF CONGO: GEC elephant count: 1,959, Carcass ratio: N/A – not reported., Observations: Since 2010, this area saw the second fastest population decline of any country in the dataset.

ETHIOPIA: GEC elephant count: At least 799, Carcass ratio: N/A – not reported, Observations: Elephants were not located where they were expected to be. Because of this, the general area was examined, but a scientific count was not conducted. The Census observed human encroachment in Babile Elephant Sanctuary and an unexpectedly large elephant population in Omo.

KENYA (includes: Laikipia-Samburu, Tsavo-Amboselli and Masai Mara): GEC elephant count: 25,959, Carcass ratio: 13%, Observations: Relatively stable population

may have been missed. Without intervention, it is possible that the small population here could go locally extinct.

MOZAMBIQUE: GEC elephant count: 9,605 Carcass ratio: 32% Observations: There was a rapid population decline of 53 percent in five years.

SOUTH AFRICA: GEC elephant count: 17,433 in Kruger, Carcass ratio: N/A – South Africa did not report a carcass ratio, Observations: Stable population.

TANZANIA: GEC elephant count: 42,871, Carcass ratio: 26%, Observations: There was a rapid population decline of 60 percent in 5 years.

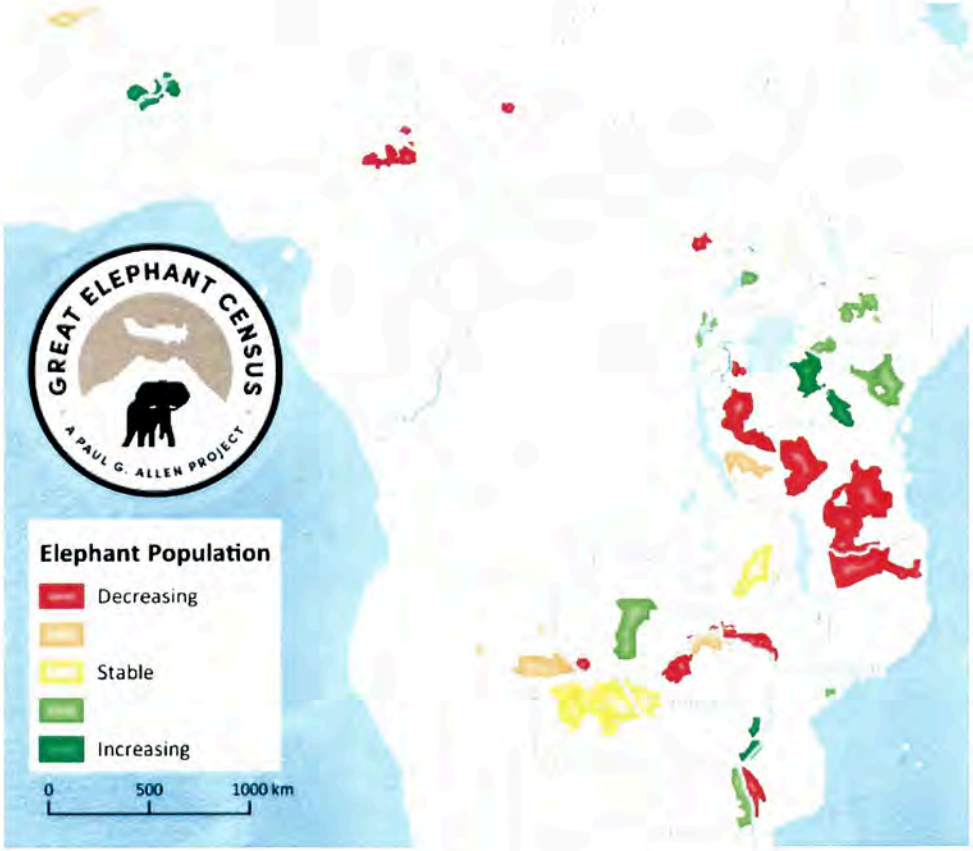
UGANDA: GEC elephant count: 4,864, Carcass ratio: 0.5%, Observations: Population numbers have increased from the less than 800 elephants that survived the height of poaching in the 1970s and 1980s.

W-ARLI-PENDJARI COMPLEX (includes: Niger, Burkina Faso and Benin): GEC elephant count: 8,911, Carcass ratio: 9%, Observations: Population has doubled since 2003 estimate.

ZAMBIA: GEC elephant count: 21,758, Carcass ratio: 85% ratio in Sioma Ngwezi National Park; 3% for the rest of Zambia, Observations: There were substantial declines along the Zambezi River, but other areas were stable.

ZIMBABWE: GEC elephant count: 82,304, Carcass ratio: 8%, Observations: The Census showed mixed results. Overall, the population was down 6 percent. Within the Sebungwe region, populations were down 74 percent.

**** South Sudan and Central African Republic** will be added as an amendment



Elephant population trends in GEC landscapes over the past ten years based on GEC data and comparable previous surveys (methodology in Chase et al. 2016). Red landscapes declining >5%/year, orange declining 2-5%/year, yellow declining or increasing <2%/year, pale green increasing 2-5%/year, dark green increasing >5%/year.

In the NEWS about the GEC Results:

BBC News, Alastair Leithead, Africa correspondent http://www.bbc.com/news/world-africa-37230700

CNN International News David McKenzie and Ingrid Formanek http://www.cnn.com/2016/08/31/africa/great-elephant-census/index.html

Daily Maverick, Don Pinnock: http://www.dailymaverick.co.za/article/2016-08-30-counting-africas-beleaguered-elephants-massive-two-year-census-finds-alarming-declines/#.V8aw7vl96M8

News24/Traveller, Adam Cruise: http://traveller24.news24.com/Explore/Green/elephant-numbers-across-africa-decrease-by-a-third-in-just-seven-years-survey-20160831

APPLICANT:

KEVIN HOGAN

THE NATIONAL NORMS AND STANDARDS FOR THE MANAGEMENT OF ELEPHANTS IN SOUTH AFRICA

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF ENVIRONMENTAL AFFAIRS

NO. 1208 02 NOVEMBER 2018

NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)

THE NATIONAL NORMS AND STANDARDS FOR THE MANAGEMENT OF ELEPHANTS IN SOUTH AFRICA

I, Derek Andre Hanekom, Minister of Environmental Affairs (Acting), hereby under section 9(1), read with section 100 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), give notice of my intention to repeal and replace the National Norms and Standards for the Management of Elephants in South Africa, 2008, published under Government Notice No. 251 in the Government *Gazette* No. 30833 of 29 February 2008, as set out in the Schedule hereto. For easy reference and for consultation purposes, the changes proposed to the existing Norms and Standards are indicated.

Members of the public are invited to submit to the Minister, within 30 days after the publication of the notice in the *Gazette*, written comments or inputs to the following address:

By post to: The Director-General
Department of Environmental Affairs
Attention: Mr Khuthadzo Mahamba
Private Bag X447
PRETORIA
0001

By hand at: Environmental House, 473 Steve Biko Street, Arcadia, Pretoria, 0083.

By e-mail: elephantnorms@environment.gov.za

Any enquiries in connection with the notice can be directed to Mr Khuthadzo Mahamba at 012 399 8845.

Comments received after the closing date may not be considered.

DEREK ANDRE HANEKOM
MINISTER OF ENVIRONMENTAL AFFAIRS (ACTING)

GENERAL EXPLANATORY NOTES

[ ] Words in bold type in square brackets indicate omissions from the existing Norms and Standards.

_____ Words underlined with a solid line indicate insertions in the existing Norms and Standards.

SCHEDULE

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This gazette is also available free online at www.gpwonline.co.za

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CHAPTER 1
INTERPRETATION, PURPOSE AND APPLICATION

Definitions

1. (1) In these Norms and Standards [, unless the context indicates otherwise, a word or expression defined in the Biodiversity Act or Protected Areas Act has the same meaning, and]—

["adaptive management" means integrated research, planning and monitoring in repeated cycles of learning in order to better define and achieve objectives, and is built on the assumption that natural extensive wildlife systems are complex, our knowledge is imperfect but we can learn from purposeful, documented objectives and actions;]

"adaptive management" means an interactive and repetitive cyclic process between integrated research, planning, monitoring, learning and implementing actions in order to better define and achieve objectives;

["applicable legislation" means—

(a) the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);

(b) the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004);

(c) legislation and instruments mentioned in section 88(3) of the Biodiversity Act, 2004;

(d) any regulations issued in terms of section 97 of the Biodiversity Act, 2004, or referred to in section 49 of the Protected Areas Act which apply to the implementation of these norms and standards;

(e) these Norms and Standards and annexures thereto;

(f) the Animals Protection Act, 1962 (Act No. 71 of 1962);

(g) the Performing Animals Protection Act, 1935 (Act No. 24 of 1935);

h) the Animal Matters Amendment Act, 1993 (Act No. 42 of 1993);

i) the Animal Health Act, 2002 (Act No. 7 of 2002);

j) the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

k) the Animals Diseases Act, 1984 (Act No. 35 of 1984);

l) the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983);

m) the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965);

n) the Meat Safety Act, 2000 (Act No. 40 of 2000); and

o) the Veterinary and Para-Veterinary Professions Act, 1982 (Act No. 19 of 1982);

p) the Foodstuffs, Cosmetics and Disinfectants Act,1972 (Act No. 54 of 1972); and

q) the Animal Improvement Act, 1998 (Act No. 62 of 1998);]

"Biodiversity Act" means the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004);

["biodiversity" means the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems;]

"bond groups" means two or more social units that regularly associate together, more than they do with other social units;

["born in captivity" means an elephant conceived naturally and born to a captive elephant in a controlled environment;]

"captive elephant" means an elephant that is kept in permanent captivity in a controlled environment **[,including elephants kept in captivity for rehabilitation, but excluding wild elephants in temporary captivity for other purposes]**;

"captive facility" means a **[registered facility in accordance with the provisions of Regulation 27 of the Threatened or Protected Species Regulations, 2007 and paragraph 24 of these Norms and Standards]** quarantine facility, rehabilitation facility, sanctuary, commercial exhibition facility, or any other similar facility;

["capture" includes searching, pursuing, driving, chasing, darting, lying in wait, luring, alluring, discharging a missile, catching, sedating, or exercising physical control by any other means, method or device, with the intent not to kill;]

"capture" means to employ any means, method or device to—

a) take, gain control over, or to secure possession of;

b) attempt to take, gain control over, or to secure possession of; or

c) search for, pursue, drive, lie in wait for, lure or allure, discharge a missile or injure with the intent to catch;

irrespective of whether such control or possession is intended to be temporary or permanent, and irrespective of whether such control or possession is with the intent to kill such specimen or not;

"**commercial exhibition facility**" in respect of elephants means a facility that keeps elephants for public display or performance purposes, including but not limited to, a circus, zoological garden or travelling exhibition, whether or not any kind of interaction between humans and the elephants is taking place at such facility;

"**controlled environment**" **[in relation to elephant management]** means an **[enclosure designed to hold an elephant in any way]** environment that—

(a) is a captive facility or an environment that is of insufficient size for an elephant or a group of elephants to be self-sustainable;

[(a)](b) is designed to hold an elephant or a group of elephants in any way that prevents it from escaping; and

[(b)](c) facilitates intensive human intervention in the form of provision of—

(i) food or water, or both;

(ii) artificial housing; **[or]**

(iii) veterinary or health care; **[and is less than 2000 ha;]**

(iv) the control of parasites or predation; or

(iv) any combination of the above interventions;

["cow-calf group" means a cohesive group of females and their calves led by the matriarch or another older female, which associate regularly and closely with one another over time;]

"**culling**" has the meaning as defined by the **[Threatened or Protected Species]** TOPS Regulations;

"**damage-causing elephant**" has the meaning as defined by the **[Threatened or Protected Species]** TOPS Regulations;

["defined herd" means a cohesive group of elephants that exist in a limited or extensive wildlife system;**]**

"destroy" means to intentionally kill an elephant for management purposes;

"ecologist" means a person registered as an ecologist under section 20 of the Natural Scientific Professions Act, 2003 (Act No. 27 of 2003);

"elephant" means a wild or captive elephant of the species *Loxodonta africana*;

"elephant population" means **[a group of]** all elephants **[freely associating]** living in a given **[environment]** defined area;

"escaped elephant" means—

(a) a wild elephant that has escaped from **[a protected area, or an adequately enclosed or suitably fenced property]** an extensive wildlife system, but has not become a damage-causing elephant; or

(b) an **[captive]** elephant that has escaped from **[captivity]** a controlled environment;

["extensive wildlife system has the meaning as defined by the [Threatened or Protected Species Regulations;]

"extensive wildlife system" means an environment—

(a) that is of sufficient size to meet the spatial requirement, and all or most of the other ecological requirements, of the elephant population occurring within that environment or to be introduced into that environment;

(b) that is fenced in a way that prevents an elephant from escaping;

(c) where the process of natural selection plays a major role; and

(d) where no or minimal human intervention is required, except if necessary in times of drought, in the form of—

(i) the provision of water;

(ii) the supplementation of food;

(iii) the control of parasites or predation; or

(iv) the provision of health care;

but excludes an enclosure that is a controlled environment within such extensive wildlife system;

["genuine orphan calf" means an elephant calf that—

(a) is less than 2 years old;

(b) its mother has clearly died of natural causes or poaching;

(c) has been rejected by the elephant population of which it forms part; and

(d) is likely to die if it is not taken into captivity;]

"GnRH vaccine" means Gonadotrophin releasing hormone vaccines;

"handler" means a trained person who is responsible for—

(a) controlling, caring for**[, cleaning or]** or managing a captive elephant**[,]**; or

(b) cleaning the enclosure of a captive elephant;

"hunt" has the meaning as defined by the **[Threatened or Protected Species]** TOPS Regulations;

"hunting client" means a person who is not a citizen of the Republic or a permanent resident within the Republic, and who pays or rewards any other person for or in connection with the hunting of an elephant;

["Institute" means the South African National Biodiversity Institute (SANBI), established in terms of section 10 of the Biodiversity Act;]

"issuing authority" has the meaning as defined by the **[Threatened or Protected Species Regulations]** Biodiversity Act;

["kept in captivity" or "captive kept" has the meaning as defined by the Threatened or Protected Species Regulations, provided that the definition of "controlled environment" given in these norms and standards applies specifically in relation to the management of elephants;]

["limited wildlife system" in relation to elephant management means—

(a) an area that is suitable for management of elephant populations of less than 15 animals with minimal human intervention, except the provision of water and supplementation of food in times of drought;

(b) is fenced to hold an elephant in a way that prevents it from escaping; and

(c) is larger than 2000 ha and less than 5000 ha,

but excludes fenced land on which self-sustaining wild populations of elephants are managed in an extensive wildlife system;]

"management authority" in relation to a protected area, means the organ of state or other institution or person in which the authority to manage the protected area is vested;

"management plan" means the management plan referred to in paragraph 6(1), in respect of the management of elephants;

"orphan calf" means an elephant calf—

(a) that has not been weaned yet and is likely to be less than 4 years of age;

(b) of which its mother has died;

(c) that has been rejected by the elephant population of which it forms part; and

(d) that is likely to die if it is not taken into captivity;

["preferred management density" means a stocking rate, or an acceptable range of densities within which a population may be allowed to fluctuate naturally;]

"professional hunter" [has the meaning as defined by the Threatened or Protected Species Regulations] means a person who is authorized in terms of applicable national or provincial conservation legislation that regulates hunting, to operate as a professional hunter;

"Protected Areas Act" means the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);

"protected area" means an area declared as such in terms of the Protected Areas Act;

"PZP vaccine" means porcine zona pellucida vaccine;

["range manipulation" means the alteration of the natural range of an elephant population, whether through limitation, extension or expansion by using fires, provision or opening or closure of, watering points, feed, fencing, driving or other human activity;]

"registered game farm" [has the meaning as defined by the Threatened or Protected Species] means a game farm registered in terms of the TOPS Regulations;

["responsible person" means the owner or manager of an elephant, the owner or manager of the land on which an elephant normally ranges or a management authority of a protected area;]

["rehabilitation facility" has the meaning as defined by the Threatened or Protected Species Regulations;]

"rehabilitation facility" means a facility equipped for the temporary keeping of a live—

(a) sick or injured elephant for the purpose of providing treatment of and care to the elephant; or

(b) young orphan elephant for rearing purposes;

with the overall intent to release such specimen, but excludes a veterinarian's practice or a veterinary academic hospital;

["rehabilitation" means the keeping in captivity for the treatment and recovery of sick or injured elephant, or the rearing of genuine orphan elephants, for the sole purpose of returning them to the wild in in a limited or an extensive wildlife system as soon as possible;]

"rehabilitation" means—

(a) the treatment and recovery of a sick or injured elephant;

(b) the rearing of an orphan elephant for the purpose of releasing it onto an extensive wildlife system as soon as possible; or

(c) the preparation of an elephant or group of elephants that have been kept in a controlled environment for purposes other than temporary captivity, for later release onto an extensive wildlife system;

"research elephant" means a roaming elephant that becomes the subject of a research project for the purpose of monitoring its biology;

"responsible person" means the owner or manager of an elephant, the owner or manager of the land on which an elephant normally ranges, or the management authority of a protected area on which elephants normally range;

"roaming elephant" means an elephant—

(a) from a known or unknown locality for which responsibility cannot readily be determined; or

(b) roaming across an international boundary from a neighbouring country into the Republic;

"scheduled substance" means a medicine or other substance prescribed under section 22A of the Medicines and Related Substances Act, 1965 (Act No.101 of 1965);

["sanctuary" has the meaning as defined by the Threatened or Protected Species Regulations;]

"sanctuary" means a facility that provides permanent care to an elephant that would be unable to sustain itself if released in an environment other than a controlled environment, whether as a result of injury or on account of human imprinting;

"social unit" means the basic unit that constitutes a matriarch with her dependent offspring, her adult daughters and their dependent offspring, and other related or bonded adult females that spend the majority of their time in close proximity and coordinate their behaviour and movement patterns;

"temporary captivity" means a wild elephant that is kept in a controlled environment for a short period of time **[the purpose of]** for—

(a) translocation, **[release camps,]** transfer or transport;

(b) quarantine;

(c) veterinary treatment; **[or]**

(d) rehabilitation, in the case of sick or injured elephants, or **[genuine]** orphan elephants; or

(e) any other similar purpose;

"TOPS Regulations" mean the regulations pertaining to listed threatened or protected species and promulgated in terms of section 97 of the Biodiversity Act;

["Threatened or Protected Species Regulations" means the regulations made by the Minister of Environmental Affairs and Tourism in terms of section 97 of the Biodiversity Act, relating to listed threatened or protected species published under Government Notice No.R.152 in Gazette No.29657 of 23 February 2007, as amended;]

["translocation" means the removal by human and mechanical means of a wild elephant from its existing location to another area;]

"translocation" means the—

(a) process of capturing a live elephant at a particular location, the conveying or transporting of the elephant, and the release of the elephant in another location; or

(b) movement of a live elephant from one area and the release of the elephant in another area;

["veterinarian" means a person registered in terms of the Veterinary and Para-Veterinary Professions Act, 1982 (Act No. 19 of 1982);]

"veterinarian" means a person registered with the South African Veterinary Council to operate as such;

"wild elephant" means an elephant that—

(a) **[is not a captive elephant or]** originates from an extensive wildlife system but is in temporary captivity , pending release into **[a limited or]** an extensive wildlife system; or

(b) is in **[a limited or]** an extensive wildlife system;

(2) In these Norms and Standards, a word or expression which is a derivative or other grammatical form of a word or expression defined in subparagraph (1) or in the Biodiversity Act or Protected Areas Act, has a corresponding meaning unless the context indicates **[that another meaning is intended]** otherwise.

Purpose and application

2. [(1) In terms of Section 9(1) of the Biodiversity Act, the Minister may, by notice in the *Gazette*—

(a) issue norms and standards for the achievement of any of the objectives of this Act, including for the—

(i) management and conservation of South Africa's biological diversity and its components;

(ii) restriction of activities which impact on biodiversity and its components; and

(b) set indicators to measure compliance with those norms and standards.]

[(2)] (1) The purpose of these norms and standards is to [set national norms and standards to] ensure that—

(a) elephants are managed in the Republic in a way that—

(i) ensures the long term survival of elephants within the ecosystems in which they occur or may occur in future;

(ii) promotes broader biodiversity and socio-economic goals that are ecologically, socially and economically sustainable;

(iii) does not disrupt the ecological integrity of the ecosystems in which elephants occur;

(iv) enables the achievement of specific management objectives of [protected areas, registered game farms, private or communal land] the extensive wildlife systems on which they occur;

(v) [ensures the sustainable use of hair, skin, meat and ivory products; and

(vi) is ethical and humane] recognises the necessary and persistent interplay between ethics, the well-being of elephants and conservation; and

[(vii)](vi) recognises their sentient nature, highly organised social structure and ability to communicate,

[(v) ensures the sustainable use of hair, skin, meat and ivory products; and]

[(vi)](v) [is ethical and humane] recognises the necessary and persistent interplay between ethics, the well-being of elephants and conservation; and

[(vii)](vi) recognises their sentient nature, highly organised social structure and ability to communicate,

(b) the management of elephants is regulated—

(i) in a way that—

(aa) is uniform across the Republic; and

(bb) takes into account the Republic's international obligations in terms of international agreements on biodiversity management binding on the Republic; and

(ii) in accordance with national policies on biodiversity management and sustainable development.

[(3)](2) These norms and standards are informed by the principles contained in paragraph 3.

[(4)](3) The provisions of these norms and standards apply to the management of elephants wherever they occur within the Republic, regardless of whether the elephants are wild elephants or captive elephants, or where a permit to import, export or re-export is applied for.

[(5)](4) The provisions of these Norms and standards must be read with the **[Threatened or Protected Species]** TOPS Regulations.

Guiding Principles

3. Any person executing a function or exercising a power or carrying out an activity that relates, directly or indirectly, to an elephant must do so with regard to the following **[further]** principles:

(a) elephants are intelligent, have strong family bonds, and in natural ecosystems operate within highly socialised groups; **[and]** unnecessary disruption of these groups by human intervention should therefore be minimised;

(b) while it is necessary to recognise the charismatic and iconic status of elephants and the strong local and international support for their protection, proper regard must be given to the impacts of elephants on biodiversity or people living in proximity to elephants;

(c) elephants are recognised engineers of habitat change and their presence or absence has a critical effect on the way in which ecosystems function;

(d) the movement of elephants throughout their **[historical]** natural distribution range has been disrupted by the activities of people;

(e) careful conservation management has led to the significant growth of elephant populations and human intervention may be necessary to ensure that any future growth occurs in a manner that does not result in the loss of biodiversity, ecosystem functions and resilience, or human life, or

the compromise of key management objectives for [protected areas, registered game farms or private or communal land] the extensive wildlife systems on which they occur;

(f) elephants often exist in close proximity to people, with the result that the elephants potentially pose a threat to the well-being of people and management measures must endeavour to limit these threats;

(g) measures to manage elephants must be **[informed by the best available scientific information** and] scientifically-based, and where the available scientific information is insufficient, adaptive management forms the cornerstone of the management of elephants and adaptive decision-making tools **[must]** should be adopted;

(h) management interventions must **[, wherever practicable, be based on scientific knowledge or management experience regarding elephant populations and must]**—

(i) take into account the social structure of elephants;

(ii) be based on measures to avoid stress and disturbance to elephants;

(i) where lethal measures are necessary to manage an elephant or group of elephants or to manage the size of elephant populations, these should be undertaken with caution and after all other alternatives have been considered;

(j) while efforts should be made to ensure that elephants continue to play an important role in an already well-established nature-based tourism sector this should not occur in an inappropriate, inhumane or unethical form or manner;

(k) in the context of objective-based management of complex ecological systems elephants should not be accorded preference over other elements of biodiversity;

(l) every effort must be made to safeguard elephants from abuse and neglect; and

(m) elephant populations in the wild should be managed in the context of objective-based management of the complex ecosystems in which they occur.

CHAPTER 2

GENERAL MANAGEMENT OF ELEPHANTS

Part 1

General Provisions

Restricted activities

4. No restricted activities **[in terms of the Biodiversity Act]** involving an elephant may be **[undertaken]** carried out without a permit issued in terms of **[Regulation 18 of the Threatened or Protected Species Regulations]** the Biodiversity Act.

Introduction, [K]keeping or handling of elephants

5. (1) A wild elephant may not be introduced for the purpose of keeping it in a controlled environment, except—

(a) in the circumstances referred to in paragraph 11(3); or

(b) if the introduction is necessary for the purpose of temporary captivity.

[(1)](2) An elephant may **[not]** be kept, **[unless]** if—

[It is:]

(a) it is a wild elephant that ranges in **[a limited or]** an extensive wildlife system; or **[that forms part of—**

(i) a proclaimed protected area; or

(ii) a registered game farm, private or communal land; or]

(b) it is a captive elephant kept at a captive facility; or

(c) it is a wild elephant in temporary captivity; or

(d) it is an ill or injured elephant or an **[genuine]** orphan calf kept in a rehabilitation facility; or

(e) it is an **[genuine]** orphan**[ed]** calf that could not be rehabilitated successfully into **[a limited or]** an extensive wildlife system, and is therefore kept in a sanctuary; and

(f) it is kept in terms of an approved management plan**[.]**

[(2) In the case of a limited wildlife system and extensive wildlife system, the [owner or person in control of elephants is responsible to] must provide for an ongoing assessment of the impact of the elephant on the habitat and ecological function of the area.]

(3) An elephant may be kept in accordance with subparagraph (2), only if—

(a) it is kept in terms of an approved management plan; and

(b) the controlled environment or extensive wildlife system in which it is kept, is adequately enclosed in accordance with paragraph 9.

[(3)] (4) **[A captive elephant may not be kept or handled without—**

(a) the elephant being fitted with two permanent internal microchips or transponders; inserted one at the base of the tail and one in front of the left shoulder[, the responsible

person must submit the serial numbers of the transponders (microchips) to the issuing authority;

(b) **[**the responsible person creating and maintaining a system of identikits of each elephant as changes in tusks or ears occur, preferably by a set of photographs and forward these to the issuing authority for incorporation in the national register; and**]**

[(c) there being a minimum of two trained elephant handlers permanently and exclusively allocated to the care of the elephant**]** Subparagraph (3)(b) does not apply to—

(a) an elephants that is in the process of being transported; or

(b) a property that borders an international boundary of the Republic.

[(4) A permit to keep a captive elephant shall only be issued for a period of 36 months pursuant to which application must be made for the renewal in terms of regulation 38 of the Threatened of Protected Species Regulations.]

(5) An elephant in a controlled environment that is subject to human contact may not be handled without a minimum of two appropriately trained persons being allocated permanently and exclusively to the care of the elephant.

(6) The responsible person in respect of the keeping of a captive elephant must—

(a) submit the serial numbers of the microchips or transponders referred to in subparagraph (5) (a) to the issuing authority, within 5 working days of inserting the microchips or transponders; and

(c) update the system of identikits referred to in subparagraph (5)(b) of each elephant as changes in its tusks or ears occur, and must forward the photograph to the relevant issuing authority for incorporation into the national register, within 5 working days of the photograph being taken.

Management plans

6. (1) The responsible person**[**in relation to a protected area, registered game farm, private or communal land or in relation to a captive facility in which elephants are kept, is responsible**]** ,whether in respect of a wild elephant or a captive elephant, must —

(a) **[**to**]** prepare a management plan, with the assistance of a professional natural scientist who has adequate knowledge and experience in matters relating to elephant management; and

(b) **[**to**]** submit the management plan to the relevant issuing authority for approval.

[(2) A management plan must—

(a) comply with the following:

(i) the process prescribed in the Protected Areas Act and the requirements and contents in Annexure I for a wild elephant occurring on land that is declared as a protected area;

(ii) for a wild elephant occurring on a registered game farm, private or communal land the requirements specified in Annexure I; or

(iii) for a captive elephant, the requirements specified in Annexure II;

(b) take into consideration the principles contained in paragraph 3;

(c) be consistent with any biodiversity management plan developed in terms of section 43 of the Biodiversity Act;

(d) include a contingency plan that deals with the fate of the elephant in the event of the death, insolvency or any other event that impairs the ability of the owner or the responsible person to care for the elephant;

(e) contain an initial assessment as described in paragraph 7 and provide for the ongoing assessment of the impact of the elephant on the vegetation structure and ecological function of—

(i) the area of enclosure; or

ii) any area from which the elephant is deliberately excluded;

(f) identify the potential for conflict between people and elephants in or on the borders of the area of enclosure and provide for emergency plans in the event of the escape of an elephant, including measures to deal with such an emergency;

(g) identify interventions likely to be made and management measures likely to be adopted, based on the principle of adaptive management; and

(h) include a culling plan, if and when culling is identified as an intervention in terms of paragraph 15(1) and set out the conditions under which culling would take place.]

[(3) The management plan referred to in subparagraph (1) may be incorporated in one of the following plans—

(a) in relation to a protected area, the plan that has been prepared by the management authority in terms of section 39(2) of the Protected Areas Act and the requirements for a management plan as described in Annexure I and approved by the Minister or the MEC as the case may be; or

(b) a biodiversity management plan that has been developed in terms of section 43 of the Biodiversity Act.

(4) When preparing a management plan and/or a culling plan for a protected area, registered game farm, private or communal land the responsible persons must develop their management plan according to Annexure I and II of these norms and standards.]

(2) The relevant issuing authority must approve the management plan—

(a) within 60 working days of receiving the management plan; or

(b) if it requests additional information, within 60 working days of receiving the additional information.

(3) A management plan referred to in subparagraph (1) that has been approved by the relevant issuing authority in respect of elephants occurring in a protected area, may be incorporated into the management plan of the protected area that has been pprepared by the management authority and approved in terms of section 39(2) of the Protected Areas Act.

(4) Notwithstanding subparagraph (1)(b), if a management plan referred to in subparagraph (1) is developed as part of a management plan for a protected area, the management plan referred to in subparagraph (1) must be approved by the Minister or the MEC, as the case may be.

(5) A management plan must—

(a) contain the information set out in—

(i) Annexure I in respect of wild elephants; or

(ii) Annexure II in respect of a captive elephant;

(b) in addition to the information set out in Annexure I, contain an initial assessment referred to in paragraph 7, in respect of the introduction of elephants into an extensive wildlife system;

(c) take into consideration the principles contained in paragraph 3;

(d) be consistent with any biodiversity management plan developed in terms of section 43 of the Biodiversity Act, a management plan developed in terms of section 39 of the Protected Areas Act, or a management plan in relation to a transfrontier conservation area;

(e) identify the potential for conflict between people and elephants in or on the borders of the area of enclosure and provide for emergency plans in the event of the escape of an elephant, including measures to deal with such an emergency; and

(f) identify interventions likely to be made and management measures likely to be adopted, based on the principle of adaptive management.

(6) If the responsible person needs to carry out a restricted activity that is a required management intervention in respect of his or her elephants, but such restricted activity has not been provided for in the approved management plan, the issuing authority may nevertheless issue a permit for the carrying out of the restricted activity, provided that the intervention is necessary and appropriate for the achievement of the objectives of the controlled environment or extensive wildlife system to which the management plan relates.

(7) Notwithstanding subparagraph (6), the issuing authority may not issue a permit for culling, unless it has approved a culling plan.

(8) An approved management plan must be reviewed every 10 years, and if the review process results in an amendment of the management plan, the amended management plan must be submitted to the relevant issuing authority for approval.

(9) Subparagraph (8) does not prevent the responsible person from reviewing and updating the approved management plan more frequently, if the need arises.

(10) The issuing authority may appoint a panel of specialists, of whom at least one member must be a professional natural scientist who has adequate knowledge and experience in matters relating to elephant management, to assist with the evaluation of the management plan, or to make recommendations thereon to the relevant issuing authority.

Initial assessment

7. An assessment in **[terms of paragraph 6(2) (e)]** respect of the introduction of elephants into an extensive wildlife system must—

(a) consider the potential impact of the elephants on the biodiversity of the area and structure of the habitat into which the population is to be introduced;

(b) take into account—

(i) the availability of adequate food plants;

(ii) the availability of adequate shelter;

(iii) the availability of adequate water for drinking and bathing; and

(iv) the size of the land available to the population;

(c) be based on the following population parameters—

(i) a **[cow-calf group]** social unit;

(ii) the possibility that two adult bulls may need to be introduced if juvenile males become troublesome; and

(iii) an indication of the initial **[stocking]** density for the elephant population, which may not exceed 60% of the **[future]** recommended maximum **[preferred elephant]** population density **[for the land]**, in respect of the habitat into which the population is to be introduced;

(d) determine if the responsible person can provide for the physical, physiological, social and natural behavioural needs of the elephant; and

(e) determine if the responsible person will meet and be capable of meeting the long-term financial commitments of owning or managing elephants.

Duty of care

8. (1) The responsible person **[is obliged to]** must—

(a) **[provide responsible]** ensure that appropriate veterinary care is provided when necessary;

(b) remain abreast with new monitoring and research information on the management of elephants, especially captive elephants;

[(c) submit to the Institute all information that may be relevant to the development of properly planned monitoring and research programmes, a national and international database on elephant management and the development of best practises;

(d) share information and experiences with other responsible persons;]

(e)] (c) provide for the safety of people, including guests and staff, interacting with the elephants in accordance with the requirements of Annexure III; and

[(f)] (d) not neglect or allow any neglect or abuse of the elephant.

(2) The responsible person in respect of an extensive wildlife system, must—

(a) provide for an ongoing assessment of the impact of the elephants on the habitat and ecological function of the area in which the elephants occur;

(b) report changes beyond acceptable limits to the habitat as a result of elephant impact, as soon as they occur, to the relevant issuing authority; and

(c) deploy the necessary management interventions when the elephants are altering the habitat beyond acceptable limits.

(3) The responsible person must report the following information to the relevant issuing authority:

(a) in respect of an ongoing assessment referred to in subparagraph (2) (a), at least every 5 years; and

(b) the number of elephants kept at the time of reporting, at least every 3 years.

(4) The Department must develop a template and indicators for the purpose of reporting the information referred to in subparagraph (2) (a).

(5) The Department must establish and maintain a national database of all elephants kept in a controlled environment or an extensive wildlife system.

Adequate enclosure

9. **[(1) An elephant should must be kept in an area that is adequately enclosed.]**

[(2)](1) **[An area]** A controlled environment or an extensive wildlife system **will** be deemed **[to be]** adequately enclosed **[in terms of subparagraph (1) if it is—**

(a) a new protected area, newly registered game farm, private or communal land and a perimeter fence has been erected; or

(b) a limited or an extensive wildlife system around which a perimeter fence has been erected.] if a perimeter fence has been erected around it.

[(3)] (2) The minimum standard for a perimeter fence is—

(a) a **[minimum]** height of 1.8m; and

(b) electrified on the side occupied by the elephant in accordance with the requirements of Annexure V.

[(4)] (3) The perimeter fence must be properly maintained.

[(5) The provisions of subparagraph (1) shall not apply to—

(a) an elephant in the process of translocation; and

(b) that portion of a boundary that extends beyond an international border of the Republic.]

Administering of scheduled substances and sedation

10. (1) The administering of scheduled substances to an elephant must be in accordance with the Medicines and Related Substances Act, 1965 (Act No.101 of 1965).

[(2) An elephant may—

(a) only be sedated as an extraordinary measure;

(b not be sedated repeatedly; and

(c) only be sedated for the purpose of temporarily immobilising or tranquillising it—

(i) to carry out a disease control procedure, scientific research or for management purposes;

(ii) for treatment by a veterinarian; or

(iii) to translocate or transport the animal.]

(2) An elephant may be—

(a) immobilised, only—

(i) to carry out a disease control procedure, for scientific research or for management purposes;

(ii) for treatment by a veterinarian; or

(iii) to translocate or transport the elephant; and

(b) sedated, only—

(i) during transportation, or prior to release after transportation; or

(iii) if circumstances necessitate sedation of the elephant to ensure its well-being, subject to advice of a veterinarian.

(3) Sedation, **[or any]** the administration of scheduled substances or the application of veterinary procedures must be done in **[terms of]** accordance with the Veterinary and Para-Veterinary Professions Act, 1982 (Act No. 19 of 1982) **[in terms of subparagraph (2) may only be carried out by a veterinarian and may be carried out from a motorised vehicle or aircraft.]** and the provisions of the TOPS Regulations.

Capture of elephants

[11. (1) A wild elephant may only be captured under the following conditions:

(i) [T]the capture is for the purposes of temporary captivity;

(i) [T]the capture must comply with all relevant permitting requirements and conditions;

(ii) [T]the capture must be effected in accordance with the provisions of the Biodiversity Act; and

(iv) [T]the capture must take place in compliance with the relevant provisions of the Animals Protection Act, 1962 (Act No. 71 of 1962), and the Translocation of Certain Wild Herbivore (SABS Protocol SABS 0331), as amended.

(2) A wild elephant may be captured for introduction into a rehabilitation facility only if—

(a) in the case of a sick or injured elephant, it is for treatment and recovery purposes and subsequent release into a limited or extensive wildlife system; or

(b) it is a genuine orphan calf captured or to be captured on private or communal land for the purposes of rearing and subsequent release into a limited or extensive wildlife system; and

(c) a permit authorising the removal of the elephant from the wild has first been obtained from the issuing authority in terms of the Threatened or Protected Species Regulations.

[(3) A wild elephant may be captured to be kept in captivity with the approval of the Minister, only in exceptional circumstances, including but not limited to:

(i) International agreements; or

(ii)] Scientific or research purposes.]

11. (1) A wild elephant may be captured in the following circumstances:

(a) for introduction into another extensive wildlife system;

(b) for introduction into a captive facility—

(i) only in exceptional circumstances with the approval of the Minister, including but not limited to scientific or research purposes or in terms of an international agreement; or

(ii) if the capture is necessary for the purposes of temporary captivity;

(b) for introduction into a rehabilitation facility, if—

(i) in the case of a sick or injured elephant, it is for treatment and recovery purposes and subsequent release into an extensive wildlife system; or

(ii) it is an orphan calf captured, for the purposes of rearing and subsequent release into an extensive wildlife system.

(2) The capture must comply with—

(a) all relevant permitting requirements and conditions;

(b) the relevant provisions of the Biodiversity Act; and

(c) the relevant provisions of the Animals Protection Act, 1962 (Act No. 71 of 1962), and the Translocation of Certain Wild Herbivore (SABS Protocol SABS 0331).

Translocation, import and export of elephants

12. (1) An elephant may not be translocated if it is—

(a) a wild elephant that is intended to be kept **[in captivity]** in [controlled environment] a captive facility, other than in terms of paragraph 11;

(b) a wild elephant with a history of crop raiding, fence breaking, damaging property or aggression towards humans or livestock, unless it is to be translocated to an area where there is no risk of damage from similar behaviour; or

(c) a wild elephant that has been previously translocated, except under extraordinary conditions.**[**; or

(d) **a wild or captive elephant from another country that is intended to be kept in captivity in the Republic.]**

(2) A**[n]** wild elephant may **[only]** be translocated, only if it is—

(a) part of a **[cow-calf group]** social unit, and—

(i) the entire **[cow-calf group]** social unit is translocated; and

(ii) the calves are more than 2 months old;

(b) a bull to be introduced to an area where—

(i) there is **[a cow-calf group]** an existing social unit **[and the cow-calf group]** that has successfully established a **[natural]** home range for a period of three months; or

(ii) a social group is intended to be introduced together with the bull or subsequent to the successful establishment of the bull; or

(c) for purposes of temporary captivity.

(3) An elephant may **[only]** be translocated on the following conditions only:

(a) the translocation must comply with all relevant permitting requirements;

(b) the translocation must be effected in accordance with the provisions of the Biodiversity Act;

(c) the translocation must comply with the relevant provisions of the Animals Protection Act, 1962 (Act No. 71 of 1962), and the Translocation of Certain Wild Herbivore (SABS Protocol SABS 0331), as amended;

(d) If elephants are captured within a protected area for the purpose of translocation, the capture must be in accordance with an approved management plan for the protected area within which the elephant occurs;

(e) if the elephants are to be introduced into a protected area, the introduction must be in accordance with an approved management plan for the protected area to which the elephant is to be introduced;

(f) if it is necessary to release an elephant into a release camp at the point of destination, the **[elephant must initially be released into a]** release camp must be constructed in accordance with the provisions of Annexure IV; and

(g) immediately prior to offloading into a release camp, the matriarch, other adults and juveniles must, if necessary, be **[tranquillized with short or long-acting tranquillisers]** sedated. **[; and**

(h) when there is an agreement or exchange programme[s] between state institutions for exhibition or scientific purposes.]

(4) No wild or captive elephant may be—

(a) imported into the Republic; or

(b) exported from the Republic,

for the purposes of keeping it in **[captivity in]** a controlled environment, except in terms of paragraph 11 (3) or 12(5).

(5) Captive elephants which are part of a *bona fide* circus may be temporarily imported or exported for a limited, specified period, not exceeding the period of performance, for the sole purpose of use in the circus.

Release camps

13. (1) A release camp must conform to the requirements of Annexure IV.

(2) Except for the required management actions and in an emergency, there must be no interaction between a human and an elephant whilst the elephant is in a release camp.

(3) An elephant may not be kept in a release camp for a period exceeding 6 months **[except for veterinary treatment]**.

(4) Elephants are highly social animals and, other than in extraordinary circumstances, should not be housed separately from all of the other members of their immediate family.

(5) Subparagraph (3) does not apply in the case of an elephant in quarantine, or for veterinary treatment as prescribed by a veterinarian.

Part 2

Management of Elephants in the Wild

Composition of wild elephant populations

14. (1) An elephant population in the wild must be managed with proper regard for—

(a) the highly social nature of elephants;

(b) the organised matriarchal system in which they normally operate;

(c) the **[division of the population into different herds]** hierarchical nature of elephant society;

(d) the **[division of a herd into cow-calf groups each under a matriarch]** division of a population into bond groups, and bond groups into different social units, each led by a matriarch;

(e) the existence of adult bulls in a **[herd]** bond group outside of the **[cow-calf groups]** social unit; and

(f) the role of adult bulls in dominating and controlling juvenile males.

(2) Bull elephants **[, between]** of the age of twenty-five **[and thirty-five years old]** years or older must be introduced into areas where the only male elephants present are juvenile bulls.

[Control] Management of wild elephant populations [sizes and distribution]

15. (1) Should it become necessary, within the objectives of the **[management plan of the]** area concerned as indicated in the management plan, to manage the size, or the composition or the rate of growth of a wild elephant population, it must—

(a) take place in terms of the approved management plan applicable to the area in which the population occurs and to the population;

(b) use one or a combination of the following management options—

(i) **[C]**contraception in terms of paragraph 17;

(ii) **[R]**range manipulation in terms of paragraph 18;

(iii) [T]translocation in terms of paragraph 12 [(2) and (3)];

(iv) [I]introduction of elephants in terms of paragraphs 5 and 16 [or 12(1)];

(v) [H]hunting in terms of paragraphs 20 and 21; or

(vi) [C]culling in terms of [these Norms and Standards] paragraph 19 as well as the [Threatened or Protected Species] TOPS Regulations.

(2) Should it become necessary, within the objectives of the [management plan of the] area concerned as provided for in the approved management plan, to manage the spatial distribution of a wild elephant population within the boundaries of the area, it must—

(a) take place in terms of the approved management plan applicable to the area in which the population occurs and to the population;

(b) use one or a combination of the following management options:

(i) [C]contraception in terms of paragraph 17;

(ii) [R]range manipulation in terms of paragraph 18;

(iii) [T]translocation in terms of [sub-]paragraph[s] 12 [(2) and (3)]; or

(iv) [I]introduction of elephants in terms of paragraph [12(1)] 5 [or] and paragraph 16 [(1)(b)].

(3) The flow diagram in Annexure VI [may] should be used as a guideline to determine the appropriate option.

Establishment of new populations of wild elephants

16. (1) A new population of wild elephants may be established by the—

(a) translocation of [elephants] a social unit, from an existing population of wild elephants; or

(b) introduction of captive elephants into [a limited or] an extensive wildlife system, only [after] if the issuing authority is satisfied that the [elephants have been fully rehabilitated] rehabilitation of the introduced elephants at the new destination will be done under expert supervision.

(2) A new population of wild elephants may be established subject to the following conditions—

(a) [T]the prior approval of a management plan for the population;

(b) [T]the prior assessment of [the suitability of the land to which the population is to be translocated in terms of paragraph 12] the area where the new population is to be introduced

to ensure that it meets the spatial requirement, and most of the other ecological requirements, of the population to be established;

(c) [A]adequate enclosure in terms of paragraph 9;

(d) **[S]**stipulation of the initial population structures taking into account—

(i) the matriarchal society of the animals;

(ii) the initial population should **[not be less than 6 suitable animals, and should consist of a cow-calf group]** be a social unit; and

(iii) that adult bulls may only be introduced—

(aa) once the **[cow-calf group]** social unit has successfully established a **[natural]** home range **[;]**.

(bb) at the same time as introducing the social unit; or

(cc) if a social group is intended to be introduced subsequent to the successful establishment of the bull;

(e) **[identification of the long-term population structure in view of the management objectives of the population;]** written notification of the intended establishment to adjacent landowners, communities and any other person who may be directly affected by the intended establishment and requesting written comments within a period of thirty days; and

(f) **[Written notification of the intended establishment to adjacent landowners, communities and any other person who may be directly affected by the intended establishment and requesting written comments within a period of thirty days; and]** the issuing authority of a permit by the relevant issuing authority.

[(g) The issuing of a permit by the issuing authority.]

Contraception

17. **[(1) The responsible person undertaking a programme to control the size of an elephant population by reducing the rate of reproduction of the elephant population using contraceptives must take into account that—**

(a) contraception is—

(i) undesirable if it requires regular sedation of an elephant;

(ii) difficult to implement in a large population;

(iii) most appropriate in a small elephant population of 20 or less and has an uncertain or limited ability to reduce the number of elephants within a large population; or

(iv) not effective in providing immediate control of an elephant population or dealing with the immediate need to reduce the size of an elephant population;

(b) the use of vasectomy procedures in elephants are currently complex and until scientific knowledge improves, should only be considered in small populations; and

(c) in publicly and privately owned protected areas, contraception should only be used in the context of approved research projects that are adequately designed to ensure meaningful conclusions regarding the efficacy of the techniques.

(2) Contraceptives must be—

(a) administered by a [registered] veterinarian; and

(b) applied in accordance with the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965).

(3) A monitoring programme must be implemented to evaluate the effects of a contraception programme on the elephants.

(4) Vasectomy procedures must be—

(a) undertaken by a veterinarian; and

(b) applied in accordance with the Veterinary and Para-Veterinary Professions Act, 19 of 1982 and the Medicines and Related Substances Act, 1965 (Act No.101 of 1965).]

(1) The responsible person undertaking a contraception programme to control the size of an elephant population by reducing the rate of reproduction, must take into account that the use of immunocontraceptive vaccines are not effective in providing immediate reduction in the size of the elephant population.

(2) Immunocontraception vaccines—

(a) include the use of—

(i) PZP vaccines, which are suitable for the use in captive and wild elephant populations for the purpose of population control; and

(ii) GnRH vaccines, which should—

(aa) only be used in respect of captive adult elephant bulls to supress testosterone-related aggressive behaviour;

(bb) should be used continuously, once introduced in respect of captive adult elephant bulls; and

(cc) not be used for the control of wild elephant populations; and

(b) must be administered by a veterinarian.

(3) The application of PZP immunocontraception—

(a) does not require sedation or immobilization of target females;

(b) can be implemented across a broad age and sex class of females; and

(c) may be applied from the air or from the ground.

(4) The application of GnRH immunocontraception—

(a) may be applied from the air or from the ground; and

(b) does not require the immobilization of the target elephant.

(5) Until more scientific information becomes available, GnRH vaccines should not be used as a contraceptive in respect of captive or wild female elephants, or in respect of wild male elephants.

(6) The efficacy and effects of immunocontraception vaccines on individual elephants, breeding units and elephant populations must be monitored on an ongoing basis.

(7) The responsible person requiring vasectomy procedures to be undertaken in respect of elephant bulls must take into account that surgical and laparoscopic vasectomies are—

(a) not effective in providing immediate reduction in the size of the elephant population; and

(b) complex, highly invasive and irreversible, and require that all breeding bulls are treated to prevent unintended breeding.

(8) Vasectomies—

(a) should be considered only—

(i) in small populations; and

(ii) where no alternative non-lethal option is feasible; and

(b) must be performed by veterinarians.

(9) The side effects of vasectomies on male elephants, and the behavioural effects of immunocontraceptive vaccines on both male and female elephants, must be monitored on an ongoing basis.

Range manipulation

18. The movement of an elephant in the area in which it normally ranges may be altered by using one or a combination of the following methods, without compromising biodiversity objectives—

(a) [M]management of the water supply of the elephants;

(b) **[Management of the feed supply of the elephants]** provision of artificial feed;

(c) [T]the controlled use of fire in appropriate situations;

(d) [P]preventing the elephants from entering or leaving a particular area of the land by—

(i) erecting **[of]** enclosure fences; or

(ii) **[erection of]** erecting exclosure fences;

(e) [T]the creation of corridors of movement between different areas;

[or]

(f) [T]the expansion of the range by acquisition of additional land **[.]**; or

(g) non-invasive disturbance such as disturbance by bees, plantation of chillies, creation of noise, or any other similar means of disturbance.

Culling

19. (1) Culling may be used to reduce the size of an elephant population subject to the following conditions:

(a) culling may be used only after all other population management options referred to in paragraph 15, have been appropriately considered, evaluated and rejected;

[(a)](b) **[C]**culling may be undertaken only in terms of a culling plan that—

(i) is prepared by the responsible person with the assistance of **[an ecologist who is a recognised elephant management specialist and approved by the relevant issuing authority that sets out the conditions under which culling would take place and the manner in which the cull would to be implemented]** a professional natural scientist who has adequate knowledge and experience in matters relating to elephant management;

(ii) sets out the conditions under which culling will take place and the manner in which the cull will be implemented; and

(iii) has been approved by the relevant issuing authority;

[(b)](c) **[T]**the culling plan must **[provide the issuing authority with]** contain the following information relating to the culling operation—

(i) evidence that the actual or projected elephant numbers at a specific location are incompatible with the agreed land use objectives spelt out in the management plan and that a reduction in population numbers is therefore necessary;

(ii) evidence that all other population management options[,] referred to in paragraph 15 have been rejected by the **[ecologist]** professional natural scientist referred to in **[19 (a)]** subparagraph (b)(i) after appropriate consideration and evaluation;

(iii) proposed number of elephants to be culled;

(iv) proposed method of animal selection;

(v) proposed time frames;

(vi) proposed culling methods; and

(vii) intended use of products;

[(c)](d) **[A]**an elephant may not be culled if it is **[—]** part of a social unit unless the entire social unit, including the matriarch and juvenile bulls, is culled;

[(i) part of a cow-calf group unless the entire cow-calf group, including the matriarch and juvenile bulls, is culled; or

(ii) part of a group comprising only juvenile elephants, unless the entire group is culled;]

[(d)](e) **[C]**culling must be done with—

(i) quick and humane methods; and

(ii) **[if]** in the case that a rifle is used—

(aa) the rifle must be **[with]** a minimum calibre of .375 H&H inches; and

[(iii)](bb) **[a]**the bullet must be of a **[full metal jacket monolithic]** solid construction, with a minimum weight of **[300]** 286 grains **[, and shall not include bullets of soft-nosed conetruction]**; and

[(e)](f) **[T]**the use of suxamethonium (Scoline) **[in culling]** is prohibited.

(2) The culling plan referred to in subparagraph (1) (b) must be submitted to the relevant issuing authority for approval—

(a) as part of the management plan; or

(b) as an annexure to the approved management plan.

Part 3
Hunting

Hunting of elephants

20. (1) Only the following elephants may be hunted—

(a) **[S]**solitary males; or

(b) **[Females,]** damage-causing elephants, in **[terms of regulation 14(2) (b)]** accordance with the provisions of the **[Threatened or Protected Species]** TOPS Regulations pertaining to damage-causing animals, and paragraph 25 of these Norms and Standards.**[; and**

(c) **Females on private or communal land according to the management plan.]**

(2) Subject to the exceptions in subparagraph (1), no elephant may be hunted in the immediate proximity of **[any female/calf group]** a social unit.

(3) A professional hunter registered with the issuing authority must be present for the full duration and supervise each hunt, **[when]** if the hunter is a **[non South African citizen]** hunting client.

(4) A hunt must be carried out in compliance with the provisions of the **[Threatened or Protected Species]** TOPS Regulations and paragraphs 20 and 21 of these Norms and Standards.

Hunting methods

21. In addition to **[those methods regulated in terms of Regulation 26 of Threatened or Protected Species]** prohibited hunting methods that are prohibited in terms of the TOPS Regulations; the following methods or manners of hunting elephants are prohibited:

(a) driving an elephant by any means;

(b) hunting within 500 metres of a water hole or watering point;

(c) using a pitfall; or

(d) hunting with—

(i) a rifle with a calibre of less than .375 H&H; and

(ii) a bullet **[with a full metal jacket or monolithic construction]** of a non-solid construction, or a bullet of a solid construction with a weight of **[not]** less than 286 grains **[or heavier bullet of monolithic or full metal jacket construction].**

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Part 4

[Captive elephants] Elephants in controlled environments

Provisions for [captive] elephants in a controlled environment

22. (1) The provisions of the Animals Protection Act, 1962 (Act No. 71 of 1962), the Performing Animals Protection Act, 1935 (Act No. 24 of 1935) and these Norms and Standards **[will]** apply to the **[general]** management of **[captive]** elephants **[as prescribed]** in a controlled environment.

(2) The Minister **[shall within 12 months of these Norms and Standards coming into effect,]** may by notice in the *Gazette*, publish an **[A]**annexure **[VII]** to these norms and standards that provides for **[M]**minimum **[S]**standards for the management of **[captive elephants, [and compliance with these Minimum Standards shall be a requirement of the Management Plan and a condition of permits for keeping of elephants in captivity]** elephants in a controlled environment.

Keeping elephants in captivity

23. An elephant may **[only]** be kept in **[captivity]** a captive facility, only if—

(a) it was already permitted to be kept in **[captivity]** a captive facility on the date that these **[N]**norms and **[S]**standards came into effect; or

(b) it was conceived naturally and born in **[captivity in]** a **[controlled environment]** captive facility to captive elephants as per the approved management plan.

Registration of captive facilities for elephants

24. The owner of **[captive]** elephants in a captive facility is responsible to—

(a) **[apply to]** register the facility, in the case that compulsory registration is required in terms of **[regulation 27 of]** the **[Threatened and Protected Species]** TOPS Regulations, **[2007]** and keep a register**[/]** or stud book of each captive elephant at the facility;

(b) submit to the issuing authority a management plan complying with the requirements as set out in Annexure II; and

(c) comply with any other relevant policy, procedure or framework that provides guidance for the management of elephants and that is approved by the Minister.

Part 5

Escaped or Roaming Elephants

Escaped [or roaming] elephants

25. (1) The obligation to **[control]** manage an elephant that has escaped from a protected area or an **[adequately enclosed area]** area other than a protected area lies with the responsible person and issuing authority.

(2) The issuing authority **[is responsible to act as facilitator between the responsible person and the owner of or manager or other person in control of the property onto which the elephant has escaped to]** must identify appropriate steps that may be taken to **[deal with]** manage the escaped elephant **[and the consequences of its escape]**.

(3) The responsible person **[is responsible to]** must apply to the relevant issuing authority for **[permission]** authorisation to—

(a) capture the escaped elephant and return it to its normal range or arrange for it to be captured; or

(b) subject to the written approval of the owner, **[of or]** manager or other person in control of the property onto which the elephant has escaped—

(i) hunt the escaped elephant or arrange for **[the escaped elephant]** it to be hunted; or

(ii) destroy the escaped elephant or arrange for the escaped elephant to be destroyed.

(4) Should the responsible person fail to take steps referred to in **[terms of]** subparagraph **[(5)]**(3), the owner ,manager or other person in control of the property onto which the elephant has escaped may—

(a) apply for a permit in terms of the **[Threatened and Protected Species]** TOPS Regulations**[, 2007]** to—

(i) capture the escaped elephant and[—] return it to its normal range;

[(aa) return the elephant to its normal range; or]

[(bb)](ii) keep the elephant; **[or]**

[(ii)](iii) hunt or arrange for the escaped elephant to be hunted; or

[(iii)](iv) destroy or have the escaped elephant destroyed; and

(b) recover the cost incurred in terms of sub[-]paragraph (a)(i) or **[(iii)]**(iv) from the responsible person.

(5) An application [in terms of] referred to in subparagraph (4) must be accompanied with proof that the responsible person has been notified that the elephant has escaped from its normal range, and of the area in which it is currently ranging.

(6) The requirement of a management plan to manage an escaped elephant does not apply to the owner, manager or other person in control of the property onto which an elephant has escaped.

(7) The issuing authority is responsible to immediately take such steps as it deems appropriate to manage the escaped elephant if—

(a) notwithstanding the provisions of subparagraphs (3), (4) or (5), it is of the view that the elephant poses an immediate threat to people or may become a damage-causing animal;

(b) the responsible person fails to expeditiously take steps pursuant to an authorisation granted in terms of subparagraph **[(6)(a)]** (3); or

(c) the owner, manager or other person in control of the property onto which the elephant has escaped fails to expeditiously take steps pursuant to a permit granted in terms of subparagraph **[(6)(b)]** (4).

Roaming elephants

26. (1) The obligation to **[control]** manage a roaming elephant whose origin cannot readily be determined lies with the issuing authority or the owner, **[of or]** manager or other person in control of the property onto which the elephant has roamed, in consultation with the issuing authority.

[(7)](2) The **[responsible person, the]** owner, **[of or]** manager or other person in control of the property onto which the elephant has roamed, must report such an incident to the issuing authority within **[a period not exceeding]** 24 hours **[after the incident has occurred]** of becoming aware of the roaming elephant.

[(8)](3) In the case **[where the origin of the elephant cannot readily be determined]** of a roaming elephant, the owner, manager or other person in control of the property onto which the elephant has roamed may—

(a) in terms of the **[Threatened and Protected Species]** TOPS Regulations**[, 2007]** apply to the issuing authority for a permit to—

(i) capture the roaming elephant or arrange for it to be captured;

(iA) **[and]** keep the elephant;

(ii) hunt or arrange for the roaming elephant to be hunted; or

(iii) have the roaming elephant destroyed at his own cost **[and for his own account]**; or

(b) request that the issuing authority take responsibility for the roaming elephant.

[(9)](4) The issuing authority is responsible to immediately take such steps as it deems appropriate to **[deal with]** manage the **[escaped or]** roaming elephant if—

(a) notwithstanding the provisions of subparagraph**[s]** (3) **[, (4) or (5)]**, it is of the view that the elephant poses an immediate threat to people or may become a damage-causing animal; or

[(b) the responsible person fails to expeditiously take steps pursuant to a permission granted in terms of subparagraph [(6)(a)] ; or]

[(c)](b) the owner of or manager or other person in control of the property onto which the elephant has **[escaped or]** roamed fails to expeditiously take steps pursuant to **[a permission]** a permit granted in terms of subparagraph **[(6)(b)]** (3).

(5) The issuing authority—

(a) must take into account international agreements, and management plans that may apply to transfrontier conservation areas, when considering a permit for the hunting or culling of a roaming elephant; and

(b) should consider to allow for a roaming elephant to become a research elephant, instead of killing the elephant or authorise it to be killed.

(6) The requirement of a management plan to manage a roaming elephant does not apply to the owner, manager or other person in control of the property onto which an elephant has roamed.

(7) If the owner of the property onto which an elephant has roamed, decides to keep the elephant in terms of subparagraph (3) (a) (IA), he or she must submit a management plan to the relevant issuing authority in accordance with paragraph 6(1).

Part 6

General

Research

27. A method that is not provided for, or that is not permissible in terms of these norms and standards, may nevertheless be performed, subject to the following conditions:

(a) the performing of the method forms part of a scientific research project that has the aim of establishing the feasibility of including the method as a management intervention in these norms and standards, provided that—

(i) a project proposal in respect of the research project is approved by the relevant issuing authority;

(ii) the method is aligned with the management objectives provided in the management plan in respect of the elephant population to which the research project relates;

(iii) the progress of the research project is reported annually to the relevant issuing authority; and

(iv) the results of the research project are published in a scientific journal; and

(b) the carrying out of the method is subject to requirements of the Biodiversity Act and the TOPS Regulations.

Repeal of the National Norms and Standards for the Management of Elephants in South Africa, 2008

28. The National Norms and Standards for the Management of Elephants in South Africa, 2008, published under Government Notice No. 251 in Government Gazette No. 30833 of 29 February 2008 is hereby repealed.

Transitional provisions

29. Anything done in terms of the repealed National Norms and Standards for the Management of Elephants in South Africa, 2008 published in Government Notice No. 251, *Gazette* No. 30833 of 29 February 2008, and which can be done in terms of these norms and standards, must be regarded as having been done under these norms and standards.

Short title and commencement

[26] 30. These norms and standards are called the National Norms and Standards for the Management of Elephants in South Africa, [2008] 2018, and [will take effect] comes into operation on [1 May 2008] [the] a date [of publication] to be determined by the Minister by notice in the Gazette.

ANNEXURE I

MANAGEMENT PLANS FOR WILD ELEPHANTS

A management plan for a wild elephant shall contain at least all the following information:

Section A. General information and inventory

1. **General**

1.1 Names of owner and manager;

1.2 Postal address.

1.3 Telephone and fax numbers.

1.4 Farm name (including all registered farm names, numbers and portion numbers in the fenced area).

1.5 Precise extent of the property and the specific enclosure where the elephants will be kept.

1.6 Description of the land uses and activities on all neighbouring properties. Description of land uses must be specific such as irrigation farming.

1.7 Name, contact details, [and] qualifications and experience in elephant management of an ecologist or compiler of the plan or person who did the survey.

1.8 Proximity to settlements, rural communities and tribal land.

1.9 Information as to whether there is potential for enlarging the property.

1.10 Specifications of the perimeter fence.

1.11 Financial plan indicating the ability of the owner of the elephants to continuously manage the elephants.

2. **Ecological**

2.1 General climatic and hydrological data (e.g. rainfall, temperatures).

2.2 General description of the geology.

2.3 General description of the soils.

2.4 Detailed description of the vegetation.

2.5 [Preferred management density of elephants.] Game species and numbers present on property.

2.6 [Game species and numbers present on property] Sensitive habitats and species.

2.7 [Sensitive habitats and species] Disturbed or degraded areas such as bush encroachment and soil erosion.

2.8 **[Disturbed or degraded areas such as bush encroachment and soil erosion]** Description of all available water bodies and distribution thereof described.

2.9 **[Description of all available water bodies and distribution thereof described.]** Maps:

(a) Location map.

(b) Topographic map of property (boundary of farm(s) and camp(s), roads, water points, infrastructure, etc.).

(c) Vegetation communities.

2.10 [Maps:

(a) Location map.

(b) Topographic map of property (boundary of farm(s) and camp(s), roads, water points, infrastructure, etc.).

(c) Vegetation communities.]

Ecological information should be collected and analysed by an ecologist. Methods used should be scientific and described in detail. The scale of the maps should be at least 1-50 000.

Section B. Management goals and objectives

3. Habitat

3.1 Veld condition monitoring methods and time schedules.

3.2 Rehabilitation programme for degraded areas.

3.3 Fire management plan.

3.4 Water provision.

3.5 Population management of other wildlife species.

3.6 **[Preferred management density]**

4. Information pertaining to elephants

4.1 Purpose of introduced elephant.

4.2 Number of elephants kept or to be introduced, and preferred population size to be maintained

4.3 Public participation reports, where there is contractual arrangements between the management authority of a protected area and a private land owner(s).

4.4 Specifications for the release camp.

4.5 **[Control]** Interventions to manage **[of]** elephant population size and elephant impact, and a culling plan if the management intervention involves culling.

4.6 If and how sex and age ratios will be manipulated.

4.7 Measures to prevent poaching.

4.8 Provision for adequate insurance.

4.9 Contingency plans **[to deal with elephant problems]** (including contact details of responsible manager, veterinary practitioner and capture operator/s) to deal with—

(a) elephant problems in the case of the fence being unable to contain the elephants **[.]**, or in the case of an escaped elephant;

(b) elephant problems in the case of the alteration of the habitat beyond acceptable limits**[.]**; or

(c) the fate of an elephant in the event of the death, insolvency or any other event that impairs the ability of the responsible person to care for the elephant.

4.10 Feeding scheme in case of a natural food supply shortfall.

4.11 Threat analysis and security plan.

4.12 Identification of the long-term population structure in view of the management objectives of the population.

Section C Information to be provided after approval for the introduction of elephants, but before a permit may be issued

5. Details of the elephants

5.1 The complete translocation history of each individual:

(a) Origin of the elephants (e.g. location, habitat, fencing and size of reserve/farm); and

(b) The age of elephants and selection of elephants to be translocated (e.g. exposure to tourists, fences and boma).

5.2 Serial numbers of transponders (microchips) to be inserted where appropriate.

5.3 The management of the capture, transport and keeping in boma (including sedation) of elephants, as well as the name of the acting veterinary practitioner.

Two hard copies of the management plan must be **[handed in at the provincial authority]** submitted to the relevant issuing authority. The applicant will be informed in writing if the plan has been accepted/rejected or if the plan has to be amended.

ANNEXURE II

MANAGEMENT PLANS FOR CAPTIVE ELEPHANTS

A management plan for captive elephants shall contain at least all of the following information:

Section A. General information and inventory

1.1 Names of owner and manager.

1.2 Postal address.

1.3 Telephone and fax numbers.

1.4 Farm name (including all registered farm names, numbers and portion numbers in the fenced area).

1.5 Precise extent of the property and the specific enclosure details where the elephants will be kept.

1.6 Description of the land uses and activities on all neighbouring properties. Description of land uses must be specific such as irrigation farming.

1.7 Name, contact details and qualifications of an ecologist, should one have been consulted, who did the survey.

1.8 Proximity to settlements, rural communities and tribal land.

1.9 Information as to whether there is potential for enlarging the property.

1.10 Specifications of the perimeter fence and / or adequate enclosure.

1.11 Financial plan to indicate the ability of the owner of the elephants to continuously manage the elephants.

Section B. Specific information relating to elephants

2.1 Purpose of keeping captive elephants and proposed uses of the elephant.

2.2 Number of elephants kept, or to be introduced

2.3 Projected elephant numbers for next 5, 10 and 20 years.

2.4 Control of elephant population sizes – management options to be used if required.

2.5 Proof of notification of neighbours.

2.6 Measures to prevent poaching, unnecessary and/or deliberate disturbances and harassing.

2.7 Provision for adequate insurance.

2.8 Contingency plans to deal with elephant problems (including contact details of responsible manager, veterinary practitioner and capture operator/s)-

(a) In the case of the fence being unable to contain the elephants.

(b) In the case of the alteration of the habitat beyond acceptable limits.

2.8 Description of housing facilities.

2.9 Description of activities, training methods and tools used.

2.10 Identification characteristics of individual elephants to be provided to the issuing authority within 30 days after approval.

2.11 Serial numbers of transponders (microchips or any other current form of tracking for elephants more than two (2) years old) to be inserted, to be provided to the issuing authority within 30 days after approval.

2.12 Description of provisions to minimise stress and trauma to the elephants.

2.13 Description of provisions to cater for the social structure of the elephants.

2.14 Description of projected growth patterns and measures for population management.

2.15 Description of provisions relating to veterinary care.

2.16 The complete history of each individual;

(a) Origin of the elephants (e.g. location, habitat, fencing and size of reserve/farm).

(b) The age of elephants.

2.17 Emergency procedures describing the following:

(a) Reactive and preventative procedures for elephants out of control, injured or sick elephants;

(b) Personnel emergency procedures including reactive and preventative procedures aimed at stabilizing elephants out of control and managing injured staff, guests or elephants; and

(c) Guest emergency procedures.

2.18 Contingency plan that deals with the fate of the elephant in the event of the death, insolvency or any other event that impairs the ability of the responsible person to care for the elephant.

Two hard copies of the management plan must be **[handed in at the provincial authority]** submitted to the relevant issuing authority. The applicant will be informed in writing if the plan has been accepted/ rejected or if the plan has to be amended.

ANNEXURE III

SECURITY – WHEN DEALING WITH WILD ELEPHANTS

1. Elephants are wild animals and can be very dangerous if not treated with respect and caution.
2. The responsibility of safe encounters with elephant lies entirely in the hands of the field guides and land owners.
3. High standards of guest and staff safety should be maintained at all times.
4. Guides should be adequately qualified and experienced to protect the guests.
5. The following are recommended specifically:

5.1 All tourist facilities and amenities should be ring fenced with an electric fence, so should staff villages;

5.2 Where river frontage occurs an electrified cabled fence must be erected to keep elephant out of tourist camps; and

5.3 Fencing of sewage ponds and rubbish pits with electrified fence.

6. Regarding vehicles, the following is recommended:

6.1 Expanded mesh should be attached to vehicles to at least cover the height of the legs of guests and doors must be present in the cab to protect the driver and his passenger;

6.2 All vehicles must be reliable and in a good running mechanical condition and be fitted with adequate spare wheels and repair kits;

6.3 Functional radios are essential;

6.4 Well-prepared emergency action plan;

6.5 When guests drive on their own the following should be supplied:

6.5.1 Information on the potential dangers of elephants (i.e. cows with calves);

6.5.2 Information on how to identify, approach and behave near bulls in musth; and

6.5.3 Strict regulations of how to behave near wild elephants:

(a) Not to drive off road;

(b) Not to follow the elephants;

(c) To respect the elephants at all times;

(d) To always allow them the right of way;

(e) To drive off slowly if they get too near;

(f) Not to cut off their path especially when more than one vehicle present;

(g) Not unnecessarily increase the noise emitted by the motor vehicle engine; and

(h) Not to leave the vehicle.

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ANNEXURE IV

REQUIREMENTS FOR RELEASE CAMPS

[The purpose of the release camps is to teach the elephants to respect electricity; and to enable the group to re-bond following the disruption of translocation.]

1. The release camp must—

1.1 be prepared well ahead of time;

1.2 be inspected and approved beforehand by the issuing authority;

1.3 be easily accessible by large, low-bed transport trucks with access roads able to adequately carry such vehicles, due consideration be given to all bridges and culverts and large trees;

1.4 be located adjacent to the centre of the protected area or registered game farm, to the extent possible;

1.5 have access and use of a water source;

1.6 be a minimum width of 100 metres;

1.7 be a minimum area of two hectares for every six elephants;

1.8 have adequate clean drinking water;

1.9 include a possibility for mud-wallowing with a solid cement or rock floor and supplied with water to prevent small calves from becoming trapped; and

1.10 is sufficiently vegetated to provide security and shade for the elephants.

2. The fence of the release camp must—

2.1 have a minimum height of 2,4 metres;

2.2 be constructed using steel railway tracks lines or steel poles filled with concrete as uprights set in concrete ten metres apart;

2.3 have a minimum of five strands of steel cables, each having a minimum diameter of 16mm, one placed at ground level and thereafter at minimum intervals of 500mm. The cable must be strung on the inside of the poles except at the corners, where it must go around the outside of the corner post;

2.4 have a galvanised veldspan fence erected from ground level to the top of the fence with steel droppers, each having a minimum top width of 100mm, placed at intervals of one metre apart;

2.5 be electrified in the following manner:

(i) five strands of wire;

(ii) the offsets must be to the inside;

(iii) a voltage of 6000 - 9000 V should be maintained;

(iv) the bottom strand must be 300mm above ground level. The second strand must be 1,0m above ground level and the remaining strands are to be spaced approximately 500mm apart. The top strand must be placed at the top of the fence with an additional earth strand. Double offset brackets should be used for all strands, especially when bulls are introduced;

(v) the offsets must be five metres apart to prevent the elephants from causing a short when they push against the fence; and

(vi) if elephants are ranging on the property outside the release camp, it is essential that the paddock is also electrified with three strands on the outside.

2.6 where adult bulls are to be introduced, be reinforced with the following:

(i) additional earthing that can be obtained by wetting the area directly inside the fence prior to the animals arriving;

(ii) a second inner electric fence erected two metres inside the perimeter of the paddock fence using Y metal standards or using good quality offset brackets;

(iii) spanning electrified strands across the corners of the release camp. It is advisable to construct a paddock of 2 hectares, so as to ensure that the elephants do not run through the fence in panic, and so that they have sufficient food during their stay. Additional re-enforcement of the gate can be achieved by using horizontal steel poles; and

2.7 not be near large trees that the elephants may push onto the fence and cause a short.

3. The offloading ramp must—

3.1 be placed outside the fence;

3.2 be at least 2, 4m wide and 1m high;

3.3 have containing walls that are—

(i) three metres high;

(ii) reinforced;

(iii) constructed with steel poles that are concreted into the ramp; and

(iv) are sufficiently strong to prevent the elephants from pushing them over when off-loaded; and

3.4 have a gate that—

(i) separates the offloading ramp from the release camp;

(ii) is constructed of heavy steel;

(iii) is electrified when closed;

(iv) is reinforced by thick horizontal poles pushed through steel brackets after the elephants have been offloaded;

(v) is additionally reinforced if bulls are to be introduced; and

(vi) is six metres wide;

(vii) is of a sliding design; and

(viii) can be opened remotely with a cable or rope, if necessary.

ANNEXURE V

ELECTRIFICATION OF PERIMETER FENCES

A perimeter fence to an area in which an elephant population is kept must be electrified in accordance with the following requirements:

1. The fence must have at least three strands of electrical wires that are structured in the following manner:

1.1 each strand must have a minimum diameter of 2.24mm;

1.2 a minimum of two electrified strands, one at 1.0 – 1.5 m and the other at the top. In situations where electrification cannot be relied on, the fence must be strong enough to contain elephants without electrification;

1.3 the second strand must be 1.5m above ground level with 225mm or 450mm double offset brackets;

1.4 the top strand must be on the top of fence with 450mm double offset brackets; and

1.5 an earth strand must be affixed to the double offset brackets 10cm on the inside of each live wire strand; ideally earth pegs should be every 100 to 200 metres apart to achieve minimum voltage.

2. A minimum voltage of 6000 V must be maintained on the whole perimeter.

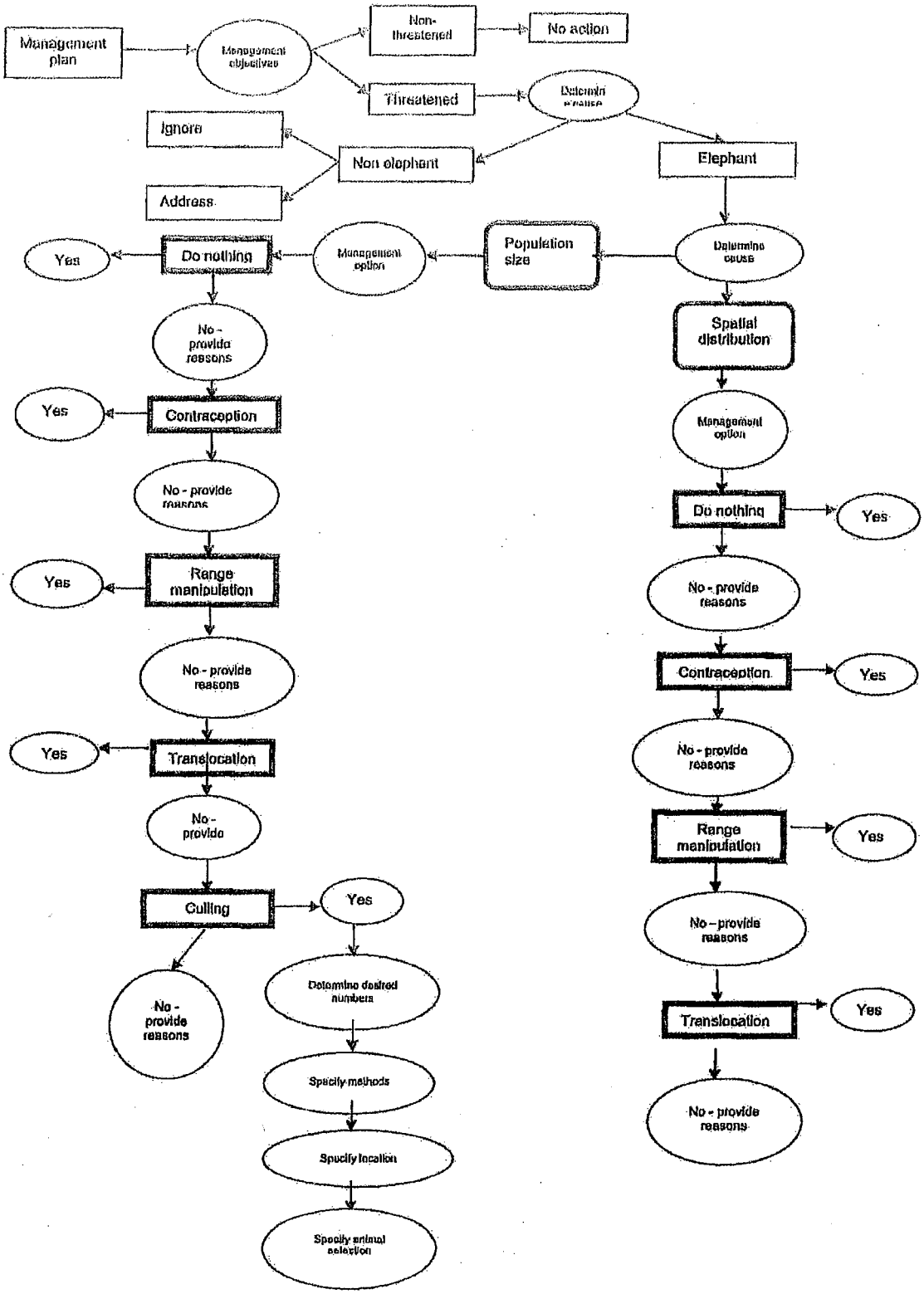
3. Energisers must be large enough to maintain at least 6000 V over a distance of 8km and should not release less than 6 Joules.

4. Danger signs indicating electrified fencing and elephants must be erected on the fence at regular intervals and all likely points of human contact.

5. The fence should be kept clear of vegetation that could reduce the voltage along fence line.

6. The fence should be inspected on regular basis but preferably daily.

ANNEXURE VI - FLOW DIAGRAM RELATING TO MANAGEMENT OPTIONS



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U.S. Fish and Wildlife Service
Federal Fish and Wildlife Permit Application Form

U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104 or 703-358-2104

Type of Activity

IMPORT OF SPORT-HUNTED TROPHIES under Appendix I of the Convention on International Trade in Endangered Species (CITES) and/or U.S. Endangered Species Act (ESA)

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details.
Instructions on how to make your application complete and help avoid unnecessary delays are attached.

Section A: Complete if applying as an individual

1.a. Last Name	1.b. First Name	1.c. Middle Name/Initial	1.d. Suffix
SHAW	CHRISTOPHER	BRUCE	

2. Date of Birth (mm/dd/yyyy) | [redacted]

Section B: Complete if applying as a business, corporation, public agency, Tribe, or institution

1.a. Name of business, agency, Tribe, or institution	1.b. Doing business as (DBA)
2. Tax identification no.	3. Description of business, agency, Tribe, or institution

4.a. Principal officer Last name	4.b. Principal officer First Name	4.c. Principal officer Middle name/initial	4.d. Suffix
5. Principal officer title	6. Primary contact name		
7.a. Business telephone number	7.b. Alternate telephone number	7.c. Business fax number	7.d. Business e-mail address

Section C: All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)

[redacted]

1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
ROLLA	MISSOURI	65401	PHELPS	USA

2.a. Mailing address (include if different than physical address; include name of contact person if applicable)

WELL WORLDWIDE 17401 ALDINE WESTFIELD RD.

2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f.Country
HOUSTON	TEXAS	77073	HARRIS	USA

Section D: All applicants MUST complete

1. Attach the **nonrefundable application processing fee** in the form of a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE **in the amount of $100**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee--attach documentation of fee exempt status as outlined in instructions [50 CFR 13.11(d)].

2. Certification: I hereby certify that I have read and am familiar with the regulations contained in ***Title 50 Part 13 of the Code of Federal Regulations*** and the other ***applicable parts in subchapter B of Chapter I of Title 50***, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

Carol Alexander Well Worldwide atty in fact 3/01/2021

Signature of applicant/Principal Officer for permit (No photocopied or stamped signatures) Date of signature (mm/dd/yyyy)

Please continue to next page

OMB Control No. 1018-0093
Expires 08/31/2020

E. IMPORT OF SPORT-HUNTED TROPHIES *(Appendix I of CITES and/or ESA)*

Note 1: This form should be used to request authorization to import trophies of species listed on Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND SOUTHERN WHITE RHINOCEROS TROPHIES TAKEN IN NAMIBIA.

Note 2: If you hold an import permit for a trophy that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

Please provide the following information. Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you are submitting; please indicate the application question number you are addressing. If applying for more than one trophy, be sure to answer questions 4-6 for each trophy addressed in this application. If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

   WELL WORLDWIDE 17401 ALDINE-WESTFIELD RD. HOUSTON, TEXAS 77073
   FEDEX ENVELOPE ATTACHED

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

   CAROL ALEXANDER, 281-606-2400, trophies@well-usa.com

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Expires 08/31/2020

3. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court; and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

LOXODONTA AFRICANA, AFRICAN ELEPHANT

b. Sex (if known).

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

b. Date wildlife is to be hunted:

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

6. **IF THE TROPHY HAS ALREADY BEEN TAKEN**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife was removed from the wild:

WINDHOEK, NAMIBIA

b. Date wildlife was hunted:

09/13/2015

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Expires 08/31/2020

c. Name of hunting outfitter, safari company, or professional hunter you hunted with:

PIETER DELPORT
P.O. BOX 30149
WINDHOEK, NAMIBIA

d. The current location of the trophy (address and country) [the U.S. import permit will identify this country as the country of export/re-export and must match with the foreign export/re-export document]:

SBS LOGISTICS PTY LIMITED
UNIT #9 RUSTIVIA IND VILLAGE
6 ROVER ROAD
RUSTIVIA

7. Please provide a copy of any applicable foreign government permits or licenses that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you must provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	SBS LOGISTICS PTY LIMITED
Address:	UNIT #9 RUSTIVIA IND VILLAGE 6 ROVER ROAD
City:	RUSTIVIA
State/Province:	
Country, Postal Code:	

9. For species listed under the U.S. Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service (Service) must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or hunted when making the required findings, if you have any information that could support this finding, it would be helpful for our review if you could provide it. Please submit such information on a separate page with your application.

a. Do you have any information regarding the population status or trend data on the species hunted?

b. In order to hunt, you likely paid for licenses or trophy fees. What were those fees and do you have any information on how those funds were used by either the landowner, local community, or government?

c. Do you have information on other funding activities that are being carried out, or were carried out, by the safari outfitter, professional hunter, concession holder, or landowner that provide a conservation benefit to the species being hunted/species hunted?

OMB Control No. 1018-0093
Expires 08/31/2020

CERTIFICATION STATEMENT (original signature must be provided for either 10 or 11 below)

10. If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national, provide documentation to show you have a Power of Attorney to act on your client's behalf and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying for the import of an elephant trophy, I understand that my client may import no more than two elephant trophies in one calendar year.

Taxidermist/Broker's signature: Carol Alexander Date: 03/01/2021

11. If you are the hunter applying to import your own trophy, please read and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying to import an elephant trophy, I understand that I may import no more than two elephant trophies in one calendar year.

Applicant's signature: _____ Date: _____

Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign governments to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

12. All international shipments must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

WELL Worldwide Energy Logistics Inc.
17401 Aldine Westfield Road, Houston, Texas,77073, USA.

Social Security No: (b) (6) **Phone No** (b) (6)

CUSTOMS POWER OF ATTORNEY Acceptance of Terms and Conditions Know all men by these presents: That,

Christopher Bruce Shaw **(PRINT NAME), an individual residing at**

(b) (6) issouri 65401

(AD **DRIVERS LICENSE)**

hereby constitutes and appoints **WELL Worldwide Energy Logistics, Inc.** ("Broker"), its officers and employees, and or specifically authorized agents, to act for and on its behalf as a true and lawful agent and attorney of the grantor for and in the name, place, and stead of said grantor, from this date, in the United States (the "territory") either in writing, electronically, or by other authorized means, to: Make, endorse, sign, declare, or swear to any Customs entry, withdrawal, declaration, certificate, bill of lading, carnet or any other documents required by law or regulation in connection with the importation, exportation, transportation, of any merchandise in or through the customs territory, shipped or consigned by or to said grantor; Perform any act or condition which may be required by law or regulation in connection with such merchandise deliverable to said grantor; to receive any merchandise; Make endorsements on bills of lading conferring authority to transfer title; make entry or collect drawback; and to make, sign, declare, or swear to any statement or certificate required by law or regulation for drawback purposes, regardless of whether such document is intended for filing with Customs; Sign, seal, and deliver for and as the act of said grantor any bond required by law or regulation in connection with the entry or withdrawal of imported merchandise or merchandise exported with or without benefit of drawback, or in connection with the entry, clearance, lading, unlading or navigation of any vessel or other means of conveyance owned or operated by said grantor; and any and all bonds which may be voluntarily given and accepted under applicable laws and regulations, consignee's and owner's declarations provided for in section 485, Tariff Act of 1930, as amended, or affidavits or statements in connection with the entry of merchandise; Sign and swear to any document and to perform any act that may be necessary or required by law or regulation in connection with the entering, clearing, lading, unlading, or operation of any vessel or other means of conveyance owned or operated by said grantor; Authorize other Customs Brokers duly licensed within the territory to act as grantor's agent; to receive, endorse and collect checks issued for Customs duty refunds in grantor's name drawn on the Treasurer of the United States; If the grantor is a nonresident of the United States, to accept service of process on behalf of the grantor; And generally to transact Customs business, including filing of claims or protests under section 514 of the Tariff

Act of 1930, or pursuant to other laws of the territories, in which said grantor is or may be concerned or interested and which may properly be transacted or performed by an agent and attorney; Giving to said agent and attorney full power and authority to do anything whatever requisite and necessary to be done in the premises as fully as said grantor could do if present and acting, hereby ratifying and confirming all that the said agent and attorney shall lawfully do by virtue of these presents; This power of attorney to remain in full force until revocation in writing is duly given to and received by grantee (if the donor of this power of attorney is a partnership, the said power shall in no case have any force or effect in the United States after the expiration of two years from the date of its execution); Appointment as

Forwarding Agent: Grantor authorizes the above Grantee to act within the territory as a lawful agent and sign or endorse export documents (i.e. commercial invoices, bill of lading, insurance certificates, drafts and any other document) necessary for the completion of an export on grantor's behalf as may be required under law and regulation in the territory and to appoint forwarding agents on grantor's behalf; If the Grantor is a Limited Liability Company, the signatory certifies that he/she has full authority to execute this power on behalf of the Grantor. Grantor acknowledges receipt and acceptance of these Terms and Conditions of Service of Broker governing all transactions between all the Parties. This Power of Attorney constitutes authorization for you to forward all Customs entries, bills and related documents in care of our Forwarding Agent, Safari Specialty Importers, who arranges for the importing and international carriage of our merchandise pursuant to the executed Authorization to Import with them. This clause is intended to allow all parties to insure compliance with 19 CFR 111.36. We acknowledge that as importer of record payment to the broker will not relieve us of liability for Customs charges (duties, taxes or other debts owed Customs) in the event that the charges are not paid by the Broker/Forwarding Agent. We further acknowledge that Customs charges may be paid with a separate check payable to the "U.S. Customs" which shall be delivered to Customs by the broker.

In witness whereof, the said individual,

Christopher Bruce Shaw **(PRINT NAME)**

has caused these presents to be sealed and signed:

Signature of Individual: (b) (6)

Date: 09-18-2018 **Witness Signature:**

Form 3-200-20

OMB Control No. 1018-0093
Expires 08/31/2020

RCVD MAR 2 2021

Department of Interior
U.S. Fish and Wildlife Service
Federal Fish and Wildlife Permit Application Form

U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104 or 703-358-2104

Type of Activity

IMPORT OF SPORT-HUNTED TROPHIES under Appendix I of the Convention on International Trade in Endangered Species (CITES) and/or U.S. Endangered Species Act (ESA)

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details.
Instructions on how to make your application complete and help avoid unnecessary delays are attached.

Section A: Complete if applying as an individual

1.a. Last Name	1.b. First Name	1.c. Middle Name/Initial	1.d. Suffix
SHAW	CHRISTOPHER	BRUCE	

2. Date of Birth (mm/dd/yyyy) | 3. Telephone Number

(b) (6)

Section B: Complete if applying as a business, corporation, public agency, Tribe, or institution

1.a. Name of business, agency, Tribe, or institution	1.b. Doing business as (DBA)
2. Tax identification no.	3. Description of business, agency, Tribe, or institution

4.a. Principal officer Last name	4.b. Principal officer First Name	4.c. Principal officer Middle name/initial	4.d. Suffix
5. Principal officer title	6. Primary contact name		
7.a. Business telephone number	7.b. Alternate telephone number	7.c. Business fax number	7.d. Business e-mail address

Section C: All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)

(b) (6)

1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
ROLLA	MISSOURI	65401	PHELPS	USA

2.a. Mailing address (include if different than physical address; include name of contact person if applicable)

WELL WORLDWIDE 17401 ALDINE WESTFIELD RD.

2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f.Country
HOUSTON	TEXAS	77073	HARRIS	USA

Section D: All applicants MUST complete

1. Attach the **nonrefundable application processing fee** in the form of a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE **in the amount of $100**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee--attach documentation of fee exempt status as outlined in instructions [50 CFR 13.11(d)].

2. Certification: I hereby certify that I have read and am familiar with the regulations contained in ***Title 50 Part 13 of the Code of Federal Regulations*** and the other ***applicable parts in subchapter B of Chapter I of Title 50***, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

Carol Alexander Well Worldwide atty in fact 3/01/2021

Signature of applicant/Principal Officer for permit (No photocopied or stamped signatures) Date of signature (mm/dd/yyyy)

Please continue to next page

OMB Control No. 1018-0093
Expires 08/31/2020

E. IMPORT OF SPORT-HUNTED TROPHIES *(Appendix I of CITES and/or ESA)*

Note 1: This form should be used to request authorization to import trophies of species listed on Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND SOUTHERN WHITE RHINOCEROS TROPHIES TAKEN IN NAMIBIA.

Note 2: If you hold an import permit for a trophy that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

Please provide the following information. Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you are submitting; please indicate the application question number you are addressing. If applying for more than one trophy, be sure to answer questions 4-6 for each trophy addressed in this application. If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

   WELL WORLDWIDE 17401 ALDINE-WESTFIELD RD. HOUSTON, TEXAS 77073
   FEDEX ENVELOPE ATTACHED

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

   CAROL ALEXANDER, 281-606-2400, trophies@well-usa.com

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Expires 08/31/2020

3. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court; and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

LOXODONTA AFRICANA, AFRICAN ELEPHANT

b. Sex (if known).

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

b. Date wildlife is to be hunted:

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

6. **IF THE TROPHY HAS ALREADY BEEN TAKEN**, please enter the following information:

a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife was removed from the wild:

WINDHOEK, NAMIBIA

b. Date wildlife was hunted:

09/13/2015

OMB Control No. 1018-0093
Expires 08/31/2020

c. Name of hunting outfitter, safari company, or professional hunter you hunted with:

PIETER DELPORT
P.O. BOX 30149
WINDHOEK, NAMIBIA

d. The current location of the trophy (address and country) [the U.S. import permit will identify this country as the country of export/re-export and must match with the foreign export/re-export document]:

SBS LOGISTICS PTY LIMITED
UNIT #9 RUSTIVIA IND VILLAGE
6 ROVER ROAD
RUSTIVIA

7. Please provide a copy of any applicable foreign government permits or licenses that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you must provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	SBS LOGISTICS PTY LIMITED
Address:	UNIT #9 RUSTIVIA IND VILLAGE 6 ROVER ROAD
City:	RUSTIVIA
State/Province:	
Country, Postal Code:	

9. For species listed under the U.S. Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service (Service) must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or hunted when making the required findings, if you have any information that could support this finding, it would be helpful for our review if you could provide it. Please submit such information on a separate page with your application.

a. Do you have any information regarding the population status or trend data on the species hunted?

b. In order to hunt, you likely paid for licenses or trophy fees. What were those fees and do you have any information on how those funds were used by either the landowner, local community, or government?

c. Do you have information on other funding activities that are being carried out, or were carried out, by the safari outfitter, professional hunter, concession holder, or landowner that provide a conservation benefit to the species being hunted/species hunted?

OMB Control No. 1018-0093
Expires 08/31/2020

CERTIFICATION STATEMENT (original signature must be provided for either 10 or 11 below)

10. If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national, provide documentation to show you have a Power of Attorney to act on your client's behalf and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying for the import of an elephant trophy, I understand that my client may import no more than two elephant trophies in one calendar year.

Taxidermist/Broker's signature: Carol Alexander Date: 03/01/2021

11. If you are the hunter applying to import your own trophy, please read and sign the following statement:

I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying to import an elephant trophy, I understand that I may import no more than two elephant trophies in one calendar year.

Applicant's signature: _____ Date: _____

Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign governments to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

12. All international shipments must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

WELL Worldwide Energy Logistics Inc.
17401 Aldine Westfield Road, Houston, Texas,77073, USA.

Social Security No: (b) (6) **Phone No** (b) (6)

CUSTOMS POWER OF ATTORNEY Acceptance of Terms and Conditions Know all men by these presents: That,

Christopher Bruce Shaw **(PRINT NAME), an individual residing at**

(b) (6) Missouri 65401

(AD **DRIVERS LICENSE)**

hereby constitutes and appoints **WELL Worldwide Energy Logistics, Inc.** ("Broker"), its officers and employees, and or specifically authorized agents, to act for and on its behalf as a true and lawful agent and attorney of the grantor for and in the name, place, and stead of said grantor, from this date, in the United States (the "territory") either in writing, electronically, or by other authorized means, to: Make, endorse, sign, declare, or swear to any Customs entry, withdrawal, declaration, certificate, bill of lading, carnet or any other documents required by law or regulation in connection with the importation, exportation, transportation, of any merchandise in or through the customs territory, shipped or consigned by or to said grantor; Perform any act or condition which may be required by law or regulation in connection with such merchandise deliverable to said grantor; to receive any merchandise; Make endorsements on bills of lading conferring authority to transfer title; make entry or collect drawback; and to make, sign, declare, or swear to any statement or certificate required by law or regulation for drawback purposes, regardless of whether such document is intended for filing with Customs; Sign, seal, and deliver for and as the act of said grantor any bond required by law or regulation in connection with the entry or withdrawal of imported merchandise or merchandise exported with or without benefit of drawback, or in connection with the entry, clearance, lading, unlading or navigation of any vessel or other means of conveyance owned or operated by said grantor; and any and all bonds which may be voluntarily given and accepted under applicable laws and regulations, consignee's and owner's declarations provided for in section 485, Tariff Act of 1930, as amended, or affidavits or statements in connection with the entry of merchandise; Sign and swear to any document and to perform any act that may be necessary or required by law or regulation in connection with the entering, clearing, lading, unlading, or operation of any vessel or other means of conveyance owned or operated by said grantor; Authorize other Customs Brokers duly licensed within the territory to act as grantor's agent; to receive, endorse and collect checks issued for Customs duty refunds in grantor's name drawn on the Treasurer of the United States; If the grantor is a nonresident of the United States, to accept service of process on behalf of the grantor; And generally to transact Customs business, including filing of claims or protests under section 514 of the Tariff

Act of 1930, or pursuant to other laws of the territories, in which said grantor is or may be concerned or interested and which may properly be transacted or performed by an agent and attorney; Giving to said agent and attorney full power and authority to do anything whatever requisite and necessary to be done in the premises as fully as said grantor could do if present and acting, hereby ratifying and confirming all that the said agent and attorney shall lawfully do by virtue of these presents; This power of attorney to remain in full force until revocation in writing is duly given to and received by grantee (if the donor of this power of attorney is a partnership, the said power shall in no case have any force or effect in the United States after the expiration of two years from the date of its execution); Appointment as

Forwarding Agent: Grantor authorizes the above Grantee to act within the territory as a lawful agent and sign or endorse export documents (i.e. commercial invoices, bill of lading, insurance certificates, drafts and any other document) necessary for the completion of an export on grantor's behalf as may be required under law and regulation in the territory and to appoint forwarding agents on grantor's behalf; If the Grantor is a Limited Liability Company, the signatory certifies that he/she has full authority to execute this power on behalf of the Grantor. Grantor acknowledges receipt and acceptance of these Terms and Conditions of Service of Broker governing all transactions between all the Parties. This Power of Attorney constitutes authorization for you to forward all Customs entries, bills and related documents in care of our Forwarding Agent, Safari Specialty Importers, who arranges for the importing and international carriage of our merchandise pursuant to the executed Authorization to Import with them. This clause is intended to allow all parties to insure compliance with 19 CFR 111.36. We acknowledge that as importer of record payment to the broker will not relieve us of liability for Customs charges (duties, taxes or other debts owed Customs) in the event that the charges are not paid by the Broker/Forwarding Agent. We further acknowledge that Customs charges may be paid with a separate check payable to the "U.S. Customs" which shall be delivered to Customs by the broker.

In witness whereof, the said individual,

Christopher Bruce Shaw **(PRINT NAME)**

has caused these presents to be sealed and signed:

Signature of Individual: (b) (6)

Date: 09-18-2018 **Witness Signature:**

RCVD MAR 9 2021

Form 3-200-20

OMB Control No. 1018-0093
Expires 08/31/2020

Department of Interior
U.S. Fish and Wildlife Service

Federal Fish and Wildlife Permit Application Form

U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104 or 703-358-2104

Type of Activity

IMPORT OF SPORT-HUNTED TROPHIES under Appendix I of the Convention on International Trade in Endangered Species (CITES) and/or U.S. Endangered Species Act (ESA)

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details.
Instructions on how to make your application complete and help avoid unnecessary delays are attached.

Section A: Complete if applying as an individual

1.a. Last Name	1.b. First Name	1.c. Middle Name/Initial	1.d. Suffix
Facchina	Matthew	Gian	

2. Date of Birth (mm/dd/yyyy)	3. Telephone Number	3.a. Alternate Telephone Number	4. E-mail address
(b) (6)			

Section B: Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution

1.a. Name of business, agency, Tribe, or institution		1.b. Doing business as (DBA)	
2. Tax identification no.		3. Description of business, agency, Tribe, or institution	
4.a. Principal officer Last name	4.b. Principal officer First Name	4.c. Principal officer Middle name/initial	4.d. Suffix
5. Principal officer title	6. Primary contact name		
7.a. Business telephone number	7.b. Alternate telephone number	7.c. Business fax number	7.d. Business e-mail address

Section C: All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)				
(b) (6)				
1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
Davidsonville	MD	21035	Anne Arundel	USA
2.a. Mailing address (include if different than physical address; include name of contact person if applicable)				
2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f.Country

Section D: All applicants MUST complete

1. Attach the **nonrefundable application processing fee** in the form of a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE **in the amount of $100**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee–attach documentation of fee exempt status as outlined in instructions [50 CFR 13.11(d)].
2. Certification: I hereby certify that I have read and am familiar with the regulations contained in ***Title 50 Part 13 of the Code of Federal Regulations*** and the other ***applicable parts in subchapter B of Chapter I of Title 50***, and I certify that the information submitted in this application for a permit is complete and [illegible]wledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

(b) (6)

03-02-2021

Signature of applicant or Principal Officer for permit (No photocopied or stamped signatures) Date of signature (mm/dd/yyyy)

Please continue to next page

E. IMPORT OF SPORT-HUNTED TROPHIES *(Appendix I of CITES and/or ESA)*

Note 1: This form should be used to request authorization to import trophies of species listed on Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND SOUTHERN WHITE RHINOCEROS TROPHIES TAKEN IN NAMIBIA.

Note 2: If you hold an import permit for a trophy that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

Please provide the following information. Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you are submitting; please indicate the application question number you are addressing. If applying for more than one trophy, be sure to answer questions 4-6 for each trophy addressed in this application. If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

(b) (6)
(b) (6) Crofton, MD 21114

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

Barbara Eber
(b) (6)

3. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court; and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

N/A

4. For each trophy to be imported, provide:

   a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Loxodonta, Africana Elephant

   b. Sex (if known). Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD**, please enter the following information:

   a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

Zimbabwe, Save Valley Conservancy, Sango Ranch, Nearest town Masvingo

   b. Date wildlife is to be hunted:

04/24/2021 to 05/12/2021

   c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

Crane Safaris

6. **IF THE TROPHY HAS ALREADY BEEN TAKEN**, please enter the following information:

   a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife was removed from the wild:

N/A

   b. Date wildlife was hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you hunted with:

N/A

d. The current location of the trophy (address and country) [the U.S. import permit will identify this country as the country of export/re-export and must match with the foreign export/re-export document]:

N/A

7. Please provide a copy of any applicable foreign government permits or licenses that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).
Have not hunted yet - Permits to be issued closer to hunt dates

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you must provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Crane Safaris
Address:	3 Normandy Close
City:	Alexander Park
State/Province:	Harare
Country, Postal Code:	Zimbabwe

9. For species listed under the U.S. Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service (Service) must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or hunted when making the required findings, if you have any information that could support this finding, it would be helpful for our review if you could provide it. Please submit such information on a separate page with your application.

a. Do you have any information regarding the population status or trend data on the species hunted?

See attached Wildlife Conservancy

b. In order to hunt, you likely paid for licenses or trophy fees. What were those fees and do you have any information on how those funds were used by either the landowner, local community, or government?

All daily rates and trophy fees are used to run the property, this includes a staff of 130 people, 44 of which are Game scouts, maintenance of roads, water infrastructure, fire breaks, aerial and sweep surveys, conservation levies to the Save Valley Conservancy, and ecological monitoring.

c. Do you have information on other funding activities that are being carried out, or were carried out, by the safari outfitter, professional hunter, concession holder, or landowner that provide a conservation benefit to the species being hunted/species hunted?

See attached African Wildlife Conservation Fund

CERTIFICATION STATEMENT (original signature must be provided for either 10 or 11 below)

10. If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national, provide documentation to show you have a Power of Attorney to act on your client's behalf and sign the following statement:

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying for the import of an elephant trophy, I understand that my client may import no more than two elephant trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

11. If you are the hunter applying to import your own trophy, please read and sign the following statement:

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying to import an elephant trophy, I understand that I may import no more th[redacted]hies in one calendar year.

    Applicant's signatu[redacted] Date: 3-2-21

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign governments to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

12. All international shipments must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

Crane Safaris

Crane Safaris (Private) Limited
P. O. Box MP 852
Mount Pleasant
Harare
info@cranesafaris.co.zw
Landline: 0242 745460

2nd of March 2021

TO WHOM IT MAY CONCERN

This letter serves to confirm that **Mr. Matthew Gian Facchina** of United States of America, address (b) (6) (b) (6) Davidsonville, MD 21035, USA with Passport number (b) (6) has booked a hunting safari with Crane Safaris Pvt Ltd based in the Save Valley Conservancy, Zimbabwe.

Mr. Facchina will be travelling to Zimbabwe between the following dates.

Arrival Date: 24 April 202
Departure Date: 13 May 2021

Bringing with him the following firearms:

Make	Calibre	Serial No.	# Rounds
Holland and Holland	.500	(b) (6)	40
Winchester	.375		40

This letter serves as a formal invitation for the above hunter to hunt with us on our concessions.

Yours Faithfully,

Edwards

Natalie Edwards
Reservations and Administration

CRANE SAFARIS (PVT) LTD
P.O. BOX MP 852
MOUNT PLEASANT, HARARE
TEL: 0242- 745 460

CARNIVORE DENSITIES IN THE SAVÉ VALLEY CONSERVANCY

Results of the 2019 Spoor Survey & Wild Dog Monitoring Project

Jessica Watermeyer and Dr Rosemary Groom

(Spoor survey carried out by Jess Watermeyer, Rueben Boté and Talent Chinguwa)

Introduction

The African Wildlife Conservation Fund carries out an annual large carnivore spoor survey in order to assess population trends of carnivores within the Savé Valley Conservancy (SVC / the conservancy) to aid management decisions. A standardised methodology is used to ensure consistency through time and comparability with other studies. Since 2008, the spoor surveys have been done using the same roads and the same observer.

Spoor surveys have been shown to be an effective and efficient means to assess wildlife densities (Stander 1998; Funston et al. 2001; Davidson & Romañach 2007; Funston et al 2010) with strong correlations existing between spoor density and true density. The technique is considered to produce reliable estimates for lions, spotted hyenas, and leopards, when sample sizes (spoor encounter rates) are sufficient. Other carnivores are included in our counts simply to monitor trends over time.

This report presents the results of the October 2019 carnivore spoor survey for the SVC, together with results from the long-term wild dog monitoring project, and looks at trends in the main carnivore species over time.

Methodology

The 2019 carnivore spoor survey used the methods pioneered in SVC by Davidson and Romañach (2007), based on those used by Stander (1998) in Namibia. Exactly the same methodology has been used annually since 2008. Road transects were chosen throughout the SVC to represent a fair coverage of all (non-resettled) areas, and these transects were scanned for spoor. The number of kilometres of transects surveyed was chosen to maintain consistency with previous spoor surveys. Thus, for every 6-7km^2 of sample area, 1km of transect was surveyed, creating a penetration density (expressed as a ratio of kilometres of transect surveyed to total sample area) of between 1:6 and 1:7.

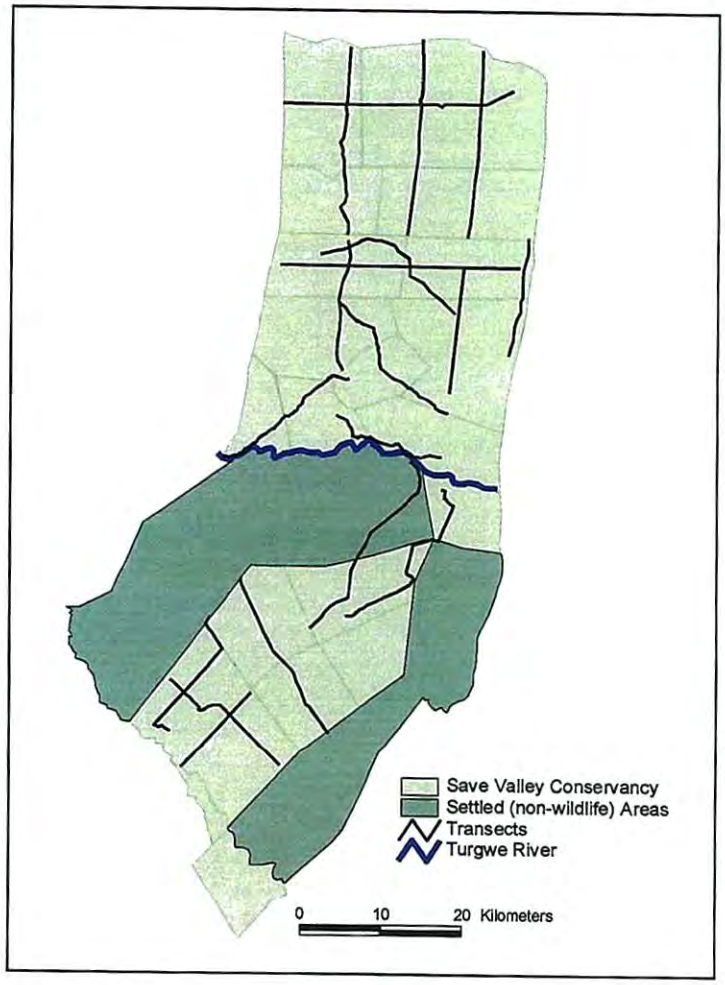
The total area of the Savé Valley Conservancy is 3,490km^2. However, the effective wildlife area (excluding the 1051km^2 of resettled land), comes to only 2,439km^2; 1,639km^2 north of the Turgwe river and 800km^2 south of the Turgwe (see Table 1).

In northern SVC, the total length of all transects combined was 262.4 km, giving a penetration ratio of 6.25. In southern SVC, the combined transect length was 129.4 km, giving a penetration ratio of 6.19. For the conservancy as a whole, 391.8 km were driven (penetration ratio 6.23).

Transects surveyed were the same as those used in 2007-2018 (Figure 1). Each transect was driven at a speed of between 10 and 20 km/hr with one tracker, AWCF head scout Rueben Boté, sitting on the front of the vehicle scanning for spoor. Transects ranged between 12.7 km and 29.7 km in length, with a mean transect length of 21.8 km.

Each transect survey started as close to sunrise as possible, and wherever feasible was driven from west to east to ensure the best possible tracking conditions. Only tracks less than 24 hours old were counted. Road conditions are generally sandy, such that spoor is relatively easy to see. Where possible, spoor of individual animals were followed to reduce the likelihood of that individual being counted twice on a given transect. Spoor was recorded for all mammalian carnivores bigger than a genet.

Figure 1. Map of the transects driven – October 2019



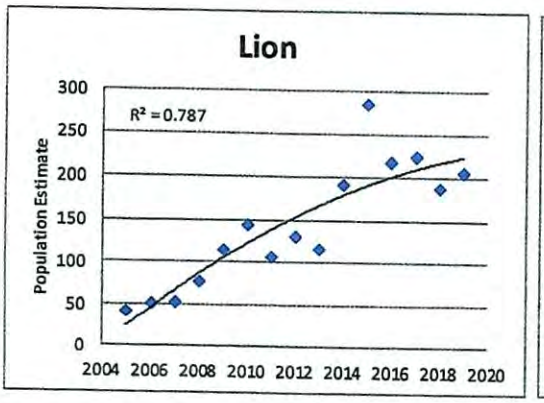
Results

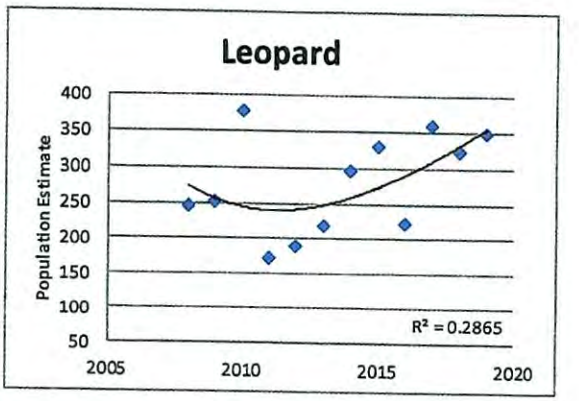
Table 1: Summary of survey parameters (2019)

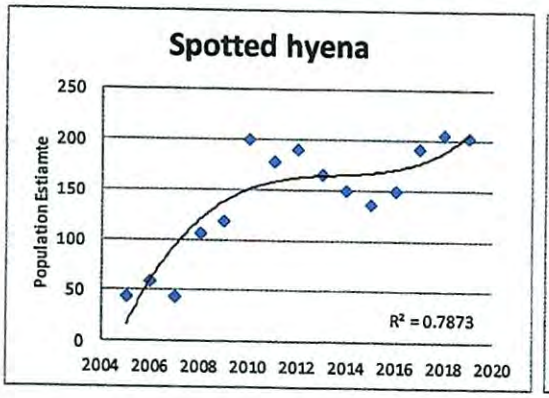
Parameter	Northern SVC	Southern SVC	Total SVC
Area (km²)	1639	800	2439
Total number of km driven	262.4	129.4	391.8
Penetration ratio	6.25	6.19	6.23

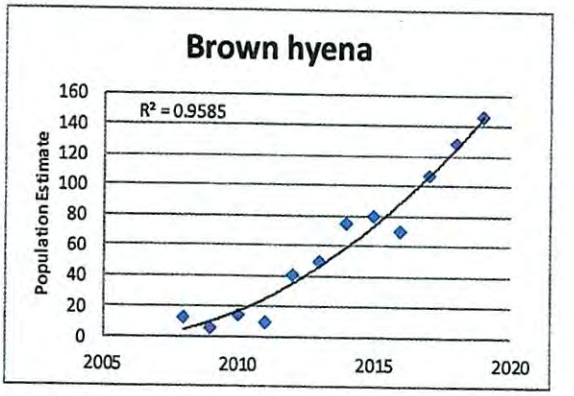
Table 2: Population estimates of the key carnivore species in the **whole of Savé Valley Conservancy** from 2008-2019 (from 2005-2019 for lion and spotted hyena).
Data for lion, leopard, spotted and brown hyenas and black backed jackal are from spoor surveys; **data for wild dogs is from the Lowveld Wild Dog Project's direct monitoring efforts** (counts are taken from April of each year and include adult and yearling wild dogs only).

Species	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Lion	40	50	52	76	114	143	105	130	115	190	284	217	223	187	205
Leopard				245	252	378	172	189	218	295	328	221	359	323	348
Spotted hyena	44	58	44	107	118	201	178	192	166	150	137	150	193	206	203
Brown hyena				12	6	14	10	41	50	75	80	70	107	128	146
African Wild dog				45	60	64	61	86	90	81	91	99	94	96	86
Black backed jackal				188	190	157	141	151	199	229	241	234	296	153	187









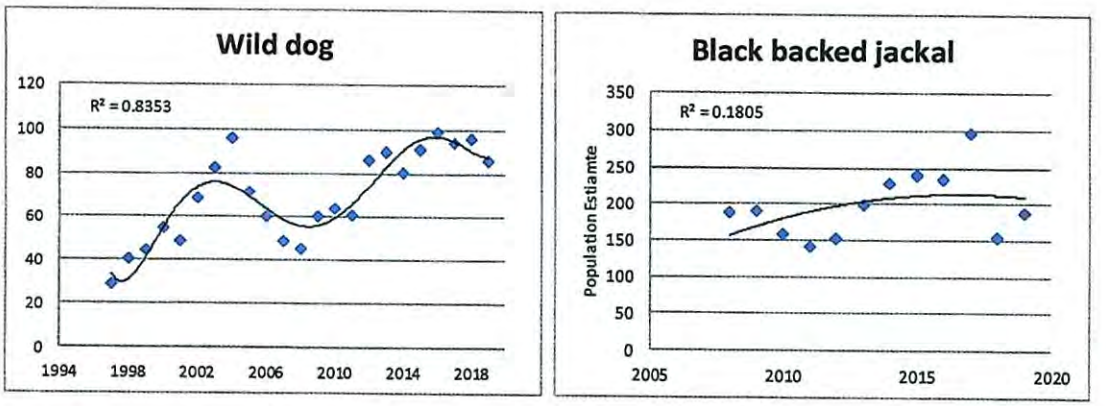


Figure 2: Trends in the populations of key carnivores in SVC for all years for which data is available. Data for lion, leopard and spotted and brown hyenas and black backed jackal are from spoor surveys; data for wild dogs is from the Lowveld Wild Dog Project's direct monitoring efforts (counts are taken from April of each year and include adult and yearling wild dogs). *A breakdown of all survey results for all species between the north and south of the conservancy is given in Appendix 1.*

Discussion

Lion population

Excluding the anomalous over count in 2015, the population appears to have stabilised over the last six years at c. 200 lions, with a few natural fluctuations. The 2019 survey estimates **205 lions** in the conservancy at a **density of 8.4 lions / 100km²**. This is in line with densities recorded elsewhere (9.6 lions / 100km² - average over Kruger, Hwange, Selous and Serengeti), although in areas notably larger than SVC. Finally, of the 104 lion tracks identified by sex, 31% were adult males and 64% identified as adult females. Otherwise, tracks for cubs (2) and yearling lions (2) were encountered once each.

Leopard population

In 2019 there were an estimated **348 leopard** in the conservancy. Considering the long-term trend data for the species, it is clear that the conservancy's leopard population (similarly to the lion population) has stabilised over the last six years (bar the undercount in 2016) at between 300-350 estimated individuals.

Leopards are at a **density of 14.3 leopards / 100km²** in the conservancy. This is considerably higher than densities recorded in other places, for example in Phinda and Mkhuze in South Africa (average 9.7 / 100km²; Balme et al. 2009) and in neighbouring Gonarezhou National Park (9.5 / 100km²; Watermeyer & Groom, 2019). Finally, of the 77 tracks identified as male or female, 42% were male and 58% were female.

Spotted hyena population

As reported in 2018, spotted hyenas appear to have stabilised over the last few years at between 150-200 individuals. Indeed, there were an estimated **203 spotted hyenas** in 2019. Spotted hyenas are at a density of **8.3 spotted hyenas / 100km²**. This is lower than other populations; 13.5 / 100km² in Kruger (Mills 1985), 17.0 / 100km² in Hwange (Bowler 1992), and 10.4 / 100km² in Gonarezhou National Park (Watermeyer & Groom, 2019). Given the relatively lower density of the species in the conservancy, there is suggested scope for the population to increase (especially if the lion numbers have stabilised).

Brown hyena population

There were an estimated **146 brown hyenas** in the conservancy in 2019. Overall, the brown hyena population is displaying a stable trend, with incremental, positive increases over the past six years. The estimated density of brown hyenas was **5.9 brown hyenas / 100km²** in 2019, which is comparable to that recorded in neighbouring Gonarezhou National Park at **4.8 brown hyenas / 100km²** (Watermeyer & Groom, 2019).

African wild dog population

As reported consistently for the past few years, the African wild dog population appears to have stabilised at between 90-100 individuals, with slight natural fluctuations. **From our comprehensive and direct monitoring of the species, there are 86 adult wild dogs in the conservancy (3.5 wild dogs / 100km²).** Average wild dog densities across their range are generally lower (average 2.5 wild dogs / 100km² across five populations; Pole 1999). The spoor survey results estimated 158 wild dogs in the conservancy, with a density of 6.6 wild dogs / 100km². This is clearly an overestimate of the wild dog population, and serves to demonstrate that spoor surveys, with current calibration methods, are not a reliable indicator of wild dog numbers.

Importantly, snaring has been a significant threat to resident wild dogs in 2019, and we have seen fewer packs denning and smaller litter sizes born on average than previous years. The latter may affect recruitment and the stability of some packs into 2020.

Black backed jackal population

There were an estimated **187 black backed jackals** in 2019, with a density of **7.7 jackals / 100km²**. We were cautious of the drop in numbers estimated in 2018, and whilst a count of 187 jackals is more in keeping with the trend, this species does need to be watched.

Cheetah population

The spoor encounter rate for cheetah in the conservancy is very low, and thus it is impossible to accurately estimate the number of resident cheetah, even with large confidence intervals. **We did not pick up a signal track for cheetah in the 2019 spoor survey.** However, spoor surveys are not an appropriate technique for monitoring cheetah, and cheetah naturally occur at low densities and are a wide-ranging species (Mills 1997; Durant 1998; Wilson & Delahay 2001).

At best, we can reliably say that cheetah are resident and breeding in the conservancy, but only present at low densities as is characteristic of the species.

Word of caution

When interpreting the results in the graphs and tables at the end, please do so with caution, especially to quote specific numbers. For lions and hyenas we are confident that these spoor surveys are relatively accurate in the numbers they predict, although occasional anomalous over and undercounts need to be treated carefully. Likewise, we can trust the numbers for wild dogs, as they are from AWCF's detailed population monitoring study. For leopards however, several different equations (all considered suitable for estimating leopard numbers from spoor) can give different population estimates from each other. The spoor survey technique has not been calibrated for species like jackals, civets, even brown hyenas, so while the data is useful for looking at trends, using population figures directly from the graphs for these species is unadvisable.

Bibliography

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conservancy for allowing us to conduct this spoor survey on their properties. Rueben Boté deserves special mention for his excellent track identification.

Appendix 1: All Spoor Survey Results for All Species Counted (2019)

NORTH SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	North SVC	(Total area)	Stander1998	(Animals/100km 2)	(km)	counted	(km/spoor)	(km)	(Area/lengt h)	(Spoor/100k m)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						
Black-backed jackal	1639	117.9349196	Leopard (Y=0.6993X)	7.195541159	262.4	27	9.718518519	262.4	6.246189024	10.28963415
Brown hyaena	1639	102.8410038	Lion (Y=0.3049X)	6.274618902	262.4	54	4.859259259	262.4	6.246189024	20.57926829
Cheetah	1639	0	Lion (Y=0.3049X)	0	262.4	0	0	262.4	6.246189024	0
Civet	1639	572.202758	Leopard (Y=0.6993X)	34.9116997	262.4	131	2.003053435	262.4	6.246189024	49.92378049
Honey Badger	1639	126.6708396	Leopard (Y=0.6993X)	7.728544207	262.4	29	9.048275862	262.4	6.246189024	11.05182927
Leopard	1639	275.181479	Leopard (Y=0.6993X)	16.78959604	262.4	63	4.165079365	262.4	6.246189024	24.00914634
Lion	1639	127.5990232	Lion (Y=0.3049X)	7.785175305	262.4	67	3.91641791	262.4	6.246189024	25.53353659
Spotted hyaena	1639	125.6945602	Lion (Y=0.3049X)	7.668978659	262.4	66	3.975757576	262.4	6.246189024	25.15243902
Wild dog	1639	129.5034863	Lion (Y=0.3049X)	7.901371951	262.4	68	3.858823529	262.4	6.246189024	25.91463415
African Wildcat	1639	21.83979992	Leopard (Y=0.6993X)	1.332507622	262.4	5	52.48	262.4	6.246189024	1.905487805
SOUTH SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	South SVC	(Total area)	Stander1998	(Animals/100km 2)	(km)	counted	(km/spoor)	(km)	(Area/lengt h)	(Spoor/100k m)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						

Black-backed jackal	800.57	69.22270182	Leopard (Y=0.6993X)	8.646676971	129.4	16	8.0875	129.4	6.186785162	12.36476043
Brown hyaena	800.57	43.38606831	Lion (Y=0.3049X)	5.419397218	129.4	23	5.626086957	129.4	6.186785162	17.77434312
Cheetah	800.57	0	Lion (Y=0.3049X)	0	129.4	0	0	129.4	6.186785162	0
Civet	800.57	246.6058752	Leopard (Y=0.6993X)	30.80378671	129.4	57	2.270175439	129.4	6.186785162	44.04945904
Honey Badger	800.57	38.93776978	Leopard (Y=0.6993X)	4.863755796	129.4	9	14.37777778	129.4	6.186785162	6.955177743
Leopard	800.57	73.54912069	Leopard (Y=0.6993X)	9.187094281	129.4	17	7.611764706	129.4	6.186785162	13.13755796
Lion	800.57	77.34038264	Lion (Y=0.3049X)	9.660664606	129.4	41	3.156097561	129.4	6.186785162	31.68469861
Spotted hyaena	800.57	77.34038264	Lion (Y=0.3049X)	9.660664606	129.4	41	3.156097561	129.4	6.186785162	31.68469861
Wild dog	800.57	28.29526194	Lion (Y=0.3049X)	3.53438949	129.4	15	8.626666667	129.4	6.186785162	11.59196291
African Wildcat	800.57	0	Leopard (Y=0.6993X)	0	129.4	0	0	129.4	6.186785162	0
TOTAL SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	Total SVC	(Total area)	Stander1998	(Animals/100km2)	(km)	counted	(km/spoor)	(km)	(Area/length)	(Spoor/100km)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						
Black-backed jackal	2439	187.1885812	Leopard (Y=0.6993X)	7.674808576	391.8	43	9.111627907	391.8	6.225114855	10.97498724
Brown hyaena	2439	146.148889	Lion (Y=0.3049X)	5.99216437	391.8	77	5.088311688	391.8	6.225114855	19.65288412
Cheetah	2439	0	Lion (Y=0.3049X)	0	391.8	0	0	391.8	6.225114855	0
Civet	2439	818.4058897	Leopard (Y=0.6993X)	33.55497703	391.8	188	2.084042553	391.8	6.225114855	47.98366514
Honey Badger	2439	165.422467	Leopard	6.782388974	391.8	38	10.31052632	391.8	6.22511485	9.698825932

		1	(Y=0.6993X)						5	
Leopard	2439	348.2578254	Leopard (Y=0.6993X)	14.27871363	391.8	80	4.8975	391.8	6.225114855	20.41858091
Lion	2439	204.9880521	Lion (Y=0.3049X)	8.404594181	391.8	108	3.627777778	391.8	6.225114855	27.56508423
Spotted hyaena	2439	203.0900145	Lion (Y=0.3049X)	8.326773864	391.8	107	3.661682243	391.8	6.225114855	27.30985197
Wild dog	2439	157.5371141	Lion (Y=0.3049X)	6.459086269	391.8	83	4.720481928	391.8	6.225114855	21.18427769
African Wildcat	2439	21.766114009	Leopard (Y=0.6993X)	0.892419602	391.8	5	78.36	391.8	6.225114855	1.276161307

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Lion Information and Survey:

1. Sango is a 600 square kilometer property located within the Save Valley Conservancy (SVC) which is located in the South Eastern Lowveld of Zimbabwe. Sango has a lion population of +/- 80 at any one time, this information comes from annual surveys conducted by Sango's ecologist and independent monitoring by the African Wildlife Conservation Fund, who monitor all large carnivores within the SVC.

2. All daily rates and trophy fees are used to run the property, this includes a staff of 130 people, 44 of which are Game scouts, maintenance of roads and water infrastructure, fire breaks, aerial and sweep surveys, conservation levies to the SVC, ecological monitoring etc.

3. Previously Sango had a small lion population and brought in 10 lion females in 2005, this brought the population to 18-20 animals. The population has grown and spread to the entire SVC and presently stands at +/- 200 for the SVC. This remarkable growth is more easily understood when plains game animal populations that Sango holds are looked at. Presently Sango has 6000+ Impala,1000+ buffalo, 550+ giraffe, 400+ eland, 600+elephant, 500+ wildebeest and Zebra. In 2013 Sango relocated 1300+ plains game animals to Gonarezhou National Park and in 2018, relocated 100 elephant to RIFA located in the Zambezi National Park system. COVID Restrictions pending, 2021 will see the relocation of 400 elephant, 2000 impala as well as two prides of lion and one pack of wild dog, plus various plains game species to Zimbabwe National Parks Estates. Sango is presently over stocked and it's vegetation is degrading, these overstocked animals are being used to benefit conservation in other areas of Zimbabwe. Sango also supports 4 schools along it's boundary as well as community boreholes.

4. **Relevant Game Populations in the Concession 2020**

Species	Relative Abundance			Estimated Population	3-Year Trend			How is it Monitored?
	Dense	Avg.	Sparse		Up	Down	Stable	
Elephant	Dense			681			Stable	Aerial count
Lion	Dense			81			Stable	Spoor count
Prey Species (if applicable)	Dense			7 150			Stable	Aerial count
Other: _____								

5. Further information can be obtained from Mr. D. Goosen the Sango General Manager on sangohq@sango-wlidlife.com

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Sango is a 60 000 hectare property, situated within the Save Valley Conservancy in the South Eastern Lowveld of Zimbabwe.

The annual 2019 aerial survey, carried out in Sep/Oct each year, showed that there was a population of 738 elephant on Sango.

Aerial Survey numbers for elephant since 2009 are:

Year	Total Number of Animals Seen
2009	654
2010	462
2012	393
2013	648
2014	474
2015	497
2016	949
2017	684
2018	665
2019	738

This is a density of 0.8 elephant per square kilometre, the recommended density is 0,2-0,3 per square kilometres for the dry Savanna areas that Zimbabwe has.

The continued high density of elephant has and is having a negative effect on Sango's habitat.
Sango practices 'Sustainable Utilisation' and is proactive in the use of its excess animals to further conservation efforts.

To this end, Sango moved 100 live elephants to help restock the Zimbabwe National Parks area known as RIFA, situated in the Zambezi Valley in October of 2018.

The annual elephant hunting quota is three bulls, all funds generated from hunting goes to help running and maintaining the property.

This includes employment for 135 local people (44 of which are anti-poaching scouts) provision of water for wildlife, fire breaks, road and infrastructure maintenance.

Operator Enhancement Questionnaire

Operator Information

a. Name of Area Operator: **Sango, Save Valley Conservancy**
b. Years in business: **2019 to present**
c. Name of company conducting hunt: **Crane Safaris**
d. Country: **Zimbabwe**

Concession

a. Name of Concession: **Sango**
b. Area in Km^2: **600 km2**
c. Land tenure:
____ Government Lease ____Community ____Private Ranch __x__ Private Conservancy
d. Length of concession agreement: **Privately owned - Title deed with, German Bilateral Investment Agreement (BIPPA)**
e. Can it be renewed? **N/A**
f. Length of renewal, if applicable: **N/A**
g. Estimated trophy fees: **USD $ 264 150.00**
h. Are there any special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed):
Sango is privately owned. And is professionally run ecologically and has community support programs. The revenue earned is used to run the property. 135 local people from the surrounding communities are employed by Sango, of which 44 are scouts trained in Anti-poaching.
i. Provide concession location and nearest city: **Masvingo, Zimbabwe**
j. Please attach a map or maps with marked boundaries and nearest city.

k. If the concession border a National Park, provide park name: N/A

l. Describe general and distinctive habitat/water features:
Savanna woodland with three main rivers, Msaize, Mokore and Save River. Granite hills in the western area. Sango has 24 kms Save River frontage.

Communities in the Concession

a. Are there any communities living in the concession? ____Yes __x__No
b. If so, estimated number of people/villages in the concession: N/a
c. Are there communities bordering this concession? __x__ Yes ____ No
d. If so, estimated number of people/villages around the concession: **400,000**

Relevant Game Populations in the Concession

Species	Relative Abundance			Estimated Population	3-Year Trend			How is it Monitored?
	Dense	Avg.	Sparse		Up	Down	Stable	
Elephant	Dense			681			Stable	Aerial count
Lion	Dense			81			Stable	Spoor count
Prey Species (if applicable)	Dense			7 150			Stable	Aerial count
Other: _____								

If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.

Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

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2020 Aerial Survey

	Counted
Black rhino	17
White rhino	15
Buffalo	957
Crocodile	35
Eland	311
Elephant	681
Elephant (herds)	531
Elephant (bulls)	150
Giraffe	667
Impala	4872
Kudu	148
Sable	10
Warthog	180
Waterbuck	87
Wildebeest	309
Zebra	616

Local Community Participation

a. Total employment number: **135 + 8 management**
b. Total employment in off-season: **135 + 8 management**
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	3	All Zimbabwean	n/a
Trackers	10	All from the surrounding Villages	10
Anti-poaching Scouts/Rangers	44	All from the surrounding Villages	44
Other Anti-poaching		Sango hosts the Save Valley Special Species anti-poaching unit	
Cooks/Housekeepers	20	All from the surrounding Villages	20
Community Coordinators	N/A		N/A
Managers	8	All Zimbabwean	8
Biologists	1	English Ecologist	1
Others:	67		67

Anti-Poaching Efforts

a. Number of anti-poaching staff: **44**
b. Are patrols conducted during the hunting season, off season or both? **Both**
c. Months patrols are conducted: **All Year round**
d. Number of patrols per month: **20 two-man patrols per day x 365 days**
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: **1/3**
f. Description of anti-poaching equipment, vehicles, gear, etc. **1 full time Manager with Vehicle, 20 Radios, 30 Shotguns, uniforms and sleeping equipment.**
g. Do government-sponsored game scouts conduct patrols? **No**
h. If so, do they have the ability to arrest? **Yes**
i. Do you offer rewards to poaching informants leading to arrest? __x__ Yes ____ No

j. Do you offer rewards to poaching informants upon conviction? __x__ Yes

k. Please describe the operator's anti-poaching expenditures for the past 3 years below:

Type of Expense	Year 1 (2019) Spending	Year 2 (2018) Spending	Year 3 (2017) Spending	Remarks
Scout Salaries	$ 114 200	$ 114 000	$ 114 000	
Equipment	$ 17 700	$ 17 700	$ 17 000	
Vehicles	Landcruiser valued at $ 20 000	Landcruiser valued at $ 22 000	Landcruiser valued at $ 25 000	
Fuel	$ 9 700	$ 9 800	$ 9 500	
Rewards	$ 16 200	$ 16 000	$ 15 000	$20/poacher
Others:_____				
Totals	$ 177 800	$ 179 500	$ 180 500	

1. What currency are the expenditures given in? **US Dollars**

Anti-Poaching Results

Type	Year 1 (2019)	Year 2 (2018)	Year 3 (2017)	Remarks
Poaching Incidents Discovered	131	135	120	
Elephant Carcasses Observed	0	0	0	
Lion Carcasses Observed	0	0	0	
Leopard Carcasses Observed	0	0	0	
Ivory Poachers Observed	0	0	0	
Bush Meat Poachers Observed	131	135	120	
Illegal Logging Observed	0	0	0	
Other Poachers Observed	0	0	0	
Poachers Convicted	84	73	65	
Snares/Traps Collected	437	400	421	
Firearms Confiscated	0	0	0	
Vehicles Confiscated	0	0	0	
Bicycles Confiscated	0	0	0	
Boats/Nets Confiscated	0	0	0	
Tusks Recovered	0	0	0	

Others: _____				

Community Investment

a. Does the company contribute money or goods/services to local communities?

__x__ Yes _____ No

b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e., more than required by law)?

Sango supports 4 schools, 9 community boreholes and Chief's functions with approx. 1 200kgs meat per year.

c. Does the company provide game meat to nearby communities?

____x___ Yes _____ No

d. If so, estimate the amount/value of meat contributed in the last year and describe the distribution program: **school and traditional meetings $2 300**

e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling fields during harvest, PAC hunts, insurance programs); please describe.

N/A

f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks
Elephant	N/A				
Lion	N/A				
Leopard	N/A				
Other: _____					

g. What currency are the expenditures reported in? **US dollars**

h. Describe any community projects paid for by the company:

Product	Spending, Year 1 (2019)	Spending, Year 2 (2018)	Spending, Year 3 (2017)	Remarks
Education (classrooms, offices)	0	0	0	
Education (supplies, fees)	0	0	0	
Health (clinics, offices)	0	0	0	
Health (equipment, salaries)	0	0	0	
Community Scout Salaries	0	0	0	
Community Anti-Poaching	0	0	0	
Local Government Activities	0	0	0	
Infrastructure Improvements	0	0	0	
Sports Teams Funded	0	0	0	
Construction Materials Donated	0	0	0	
Other: **Donations to Schools**	**$ 1 500**	**$ 1 500**	**$ 1 500**	
Other: **Maintenance of Boreholes**	**$ 6 500**	**$ 6 500**	**$ 6 500**	
TOTALS	**$ 8 000**	**$ 8 000**	**$ 8 000**	

i. What currency are the expenditures reported in? **US Dollars**

j. Include receipts and photographs of projects, if available. – **N/A**

Company Clientele

a. How many U.S. clients did the company have in the past 3 years, what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients	Year 1 (2019): 3	Year 1 (2019): 1	Year 1 (2019): 16
	Year 2 (2020): 1	Year 2 (2020): 1	Year 2 (2020): 1
	Year 3 (____):	Year 3 (____):	Year 3 (____):
Percentage of U.S. Clients	Year 1 (2019): 100%	Year 1 (2019): 100%	Year 1 (2019): 75%
	Year 2 (2020): 100%	Year 2 (2020): 100%	Year 2 (2020): 100%
	Year 3 (____):	Year 3 (____):	Year 3 (____):
Trophy Fees Paid by U.S. Clients	Year 1 (2019): $ 58 500	Year 1 (2019): $ 25 000	Year 1 (2019):$ 150 650
	Year 2 (2020): $ 20 000	Year 2 (2020): $ 30 000	Year 2 (2020): $ 28 200
	Year 3 (____):	Year 3 (____):	Year 3 (____):

b. Approximate amount/percentage of company's revenue from U.S. clientele: **85%**

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):

Licensed Zimbabwe Professional hunters

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology if available):

Trophy measurements and age data collected

c. Are there hunt return forms that must be reported to officials? If so, please include a copy of these forms or confirmation of their receipt for the past 3 years.

A Zimbabwe National Parks and Wildlife Management Authority Return Form of Lion, Leopard and Elephant must be submitted to Head Office in Harare, Stamped by the Regional Parks office after completion of each hunt. Signed by the Professional Hunter and accompanying National Parks Scout. Details displayed on the Form:

1. **Operator's Name and Registration Number with The Zimbabwe Tourist Authority.**
2. **Name and Physical address of Hunting Client.**
3. **Professional Hunter's name and License Number.**
4. **Type of Hunt**
5. **TRAS2 Number – Reserve Bank of Zimbabwe Tracking of Hunt Funds**
6. **Duration of Hunt**
7. **Area where Hunt is being conducted, description of species, Zimbabwe National Parks permit number for species, date shot, SEX, was it killed or wounded and remaining quota for the Property post hunt.**

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct:

Signature	Date
Natalie Edwards	Director
Print-Full Name	**Title**

RCVD MAR 9 2021

Form 3-200-20

OMB Control No. 1018-0093
Expires 08/31/2020

Department of Interior
U.S. Fish and Wildlife Service

Federal Fish and Wildlife Permit Application Form

U.S. Fish and Wildlife Service
Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104 or 703-358-2104

Type of Activity

IMPORT OF SPORT-HUNTED TROPHIES under Appendix I of the Convention on International Trade in Endangered Species (CITES) and/or U.S. Endangered Species Act (ESA)

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details.
Instructions on how to make your application complete and help avoid unnecessary delays are attached.

Section A: Complete if applying as an individual

1.a. Last Name	1.b. First Name	1.c. Middle Name/Initial	1.d. Suffix
Facchina	Matthew	Gian	

2. Date of Birth (mm/dd/yyyy)	3. Telephone Number	3.a. Alternate Telephone Number	4. E-mail address
(b) (6)			

Section B: Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution

1.a. Name of business, agency, Tribe, or institution		1.b. Doing business as (DBA)	
2. Tax identification no.		3. Description of business, agency, Tribe, or institution	
4.a. Principal officer Last name	4.b. Principal officer First Name	4.c. Principal officer Middle name/initial	4.d. Suffix
5. Principal officer title	6. Primary contact name		
7.a. Business telephone number	7.b. Alternate telephone number	7.c. Business fax number	7.d. Business e-mail address

Section C: All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)				
(b) (6)				
1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
Davidsonville	MD	21035	Anne Arundel	USA
2.a. Mailing address (include if different than physical address; include name of contact person if applicable)				
2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f.Country

Section D: All applicants MUST complete

1. Attach the **nonrefundable application processing fee** in the form of a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE **in the amount of $100**. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee–attach documentation of fee exempt status as outlined in instructions [50 CFR 13.11(d)].

2. Certification: I hereby certify that I have read and am familiar with the regulations contained in ***Title 50 Part 13 of the Code of Federal Regulations*** and the other ***applicable parts in subchapter B of Chapter I of Title 50***, and I certify that the information submitted in this application for a permit is complete and [redacted]ledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

(b) (6)

03-02-2021

Signature of applicant or Principal Officer for permit (No photocopied or stamped signatures) Date of signature (mm/dd/yyyy)

Please continue to next page

E. IMPORT OF SPORT-HUNTED TROPHIES *(Appendix I of CITES and/or ESA)*

Note 1: This form should be used to request authorization to import trophies of species listed on Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND SOUTHERN WHITE RHINOCEROS TROPHIES TAKEN IN NAMIBIA.

Note 2: If you hold an import permit for a trophy that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

Please provide the following information. Complete all questions on the application. Mark questions that are not applicable with "N/A". If needed, use a separate sheet of paper. On all attachments or separate sheets you are submitting; please indicate the application question number you are addressing. If applying for more than one trophy, be sure to answer questions 4-6 for each trophy addressed in this application. If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

[redacted]
(b) (6) [redacted] Crofton, MD 21114

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

Barbara Eber
(b) (6) [redacted]

3. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above?

☒ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court; and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

N/A

4. For each trophy to be imported, provide:

   a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Loxodonta, Africana Elephant

   b. Sex (if known). Male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD**, please enter the following information:

   a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

Zimbabwe, Save Valley Conservancy, Sango Ranch, Nearest town Masvingo

   b. Date wildlife is to be hunted:

04/24/2021 to 05/12/2021

   c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

Crane Safaris

6. **IF THE TROPHY HAS ALREADY BEEN TAKEN**, please enter the following information:

   a. Country and place (area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife was removed from the wild:

N/A

   b. Date wildlife was hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you hunted with:

N/A

d. The current location of the trophy (address and country) [the U.S. import permit will identify this country as the country of export/re-export and must match with the foreign export/re-export document]:

N/A

7. Please provide a copy of any applicable foreign government permits or licenses that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).
Have not hunted yet - Permits to be issued closer to hunt dates

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you must provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Crane Safaris
Address:	3 Normandy Close
City:	Alexander Park
State/Province:	Harare
Country, Postal Code:	Zimbabwe

9. For species listed under the U.S. Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service (Service) must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or hunted when making the required findings, if you have any information that could support this finding, it would be helpful for our review if you could provide it. Please submit such information on a separate page with your application.

a. Do you have any information regarding the population status or trend data on the species hunted?

See attached Wildlife Conservancy

b. In order to hunt, you likely paid for licenses or trophy fees. What were those fees and do you have any information on how those funds were used by either the landowner, local community, or government?

All daily rates and trophy fees are used to run the property, this includes a staff of 130 people, 44 of which are Game scouts, maintenance of roads, water infrastructure, fire breaks, aerial and sweep surveys, conservation levies to the Save Valley Conservancy, and ecological monitoring.

c. Do you have information on other funding activities that are being carried out, or were carried out, by the safari outfitter, professional hunter, concession holder, or landowner that provide a conservation benefit to the species being hunted/species hunted?

See attached African Wildlife Conservation Fund

CERTIFICATION STATEMENT (original signature must be provided for either 10 or 11 below)

10. If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national, provide documentation to show you have a Power of Attorney to act on your client's behalf and sign the following statement:

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying for the import of an elephant trophy, I understand that my client may import no more than two elephant trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

11. If you are the hunter applying to import your own trophy, please read and sign the following statement:

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit). If applying to import an elephant trophy, I understand that I may import no more than two elephant trophies in one calendar year.

    Applicant's signature: (b) (6) Date: 3-2-21

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign governments to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

12. All international shipments must be through a designated port. A list of designated ports (where an inspector is posted) is available from **the list of designated ports**. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

Crane Safaris

Crane Safaris (Private) Limited
P. O. Box MP 852
Mount Pleasant
Harare
info@cranesafaris.co.zw
Landline: 0242 745460

2nd of March 2021

TO WHOM IT MAY CONCERN

This letter serves to confirm that **Mr. Matthew Gian Facchina** of United States of America, address (b) (6) (b) (6) Davidsonville, MD 21035, USA with Passport number (b) (6) has booked a hunting safari with Crane Safaris Pvt Ltd based in the Save Valley Conservancy, Zimbabwe.

Mr. Facchina will be travelling to Zimbabwe between the following dates.

Arrival Date: 24 April 202
Departure Date: 13 May 2021

Bringing with him the following firearms:

Make	Calibre	Serial No.	# Rounds
Holland and Holland	.500	(b) (6)	40
Winchester	.375		40

This letter serves as a formal invitation for the above hunter to hunt with us on our concessions.

Yours Faithfully,

Edwards

Natalie Edwards
Reservations and Administration

CRANE SAFARIS (PVT) LTD
P.O. BOX MP 852
MOUNT PLEASANT, HARARE
TEL: 0242- 745 460

CARNIVORE DENSITIES IN THE SAVÉ VALLEY CONSERVANCY

Results of the 2019 Spoor Survey & Wild Dog Monitoring Project

Jessica Watermeyer and Dr Rosemary Groom

(Spoor survey carried out by Jess Watermeyer, Rueben Boté and Talent Chinguwa)

Introduction

The African Wildlife Conservation Fund carries out an annual large carnivore spoor survey in order to assess population trends of carnivores within the Savé Valley Conservancy (SVC / the conservancy) to aid management decisions. A standardised methodology is used to ensure consistency through time and comparability with other studies. Since 2008, the spoor surveys have been done using the same roads and the same observer.

Spoor surveys have been shown to be an effective and efficient means to assess wildlife densities (Stander 1998; Funston et al. 2001; Davidson & Romañach 2007; Funston et al 2010) with strong correlations existing between spoor density and true density. The technique is considered to produce reliable estimates for lions, spotted hyenas, and leopards, when sample sizes (spoor encounter rates) are sufficient. Other carnivores are included in our counts simply to monitor trends over time.

This report presents the results of the October 2019 carnivore spoor survey for the SVC, together with results from the long-term wild dog monitoring project, and looks at trends in the main carnivore species over time.

Methodology

The 2019 carnivore spoor survey used the methods pioneered in SVC by Davidson and Romañach (2007), based on those used by Stander (1998) in Namibia. Exactly the same methodology has been used annually since 2008. Road transects were chosen throughout the SVC to represent a fair coverage of all (non-resettled) areas, and these transects were scanned for spoor. The number of kilometres of transects surveyed was chosen to maintain consistency with previous spoor surveys. Thus, for every 6-7km^2 of sample area, 1km of transect was surveyed, creating a penetration density (expressed as a ratio of kilometres of transect surveyed to total sample area) of between 1:6 and 1:7.

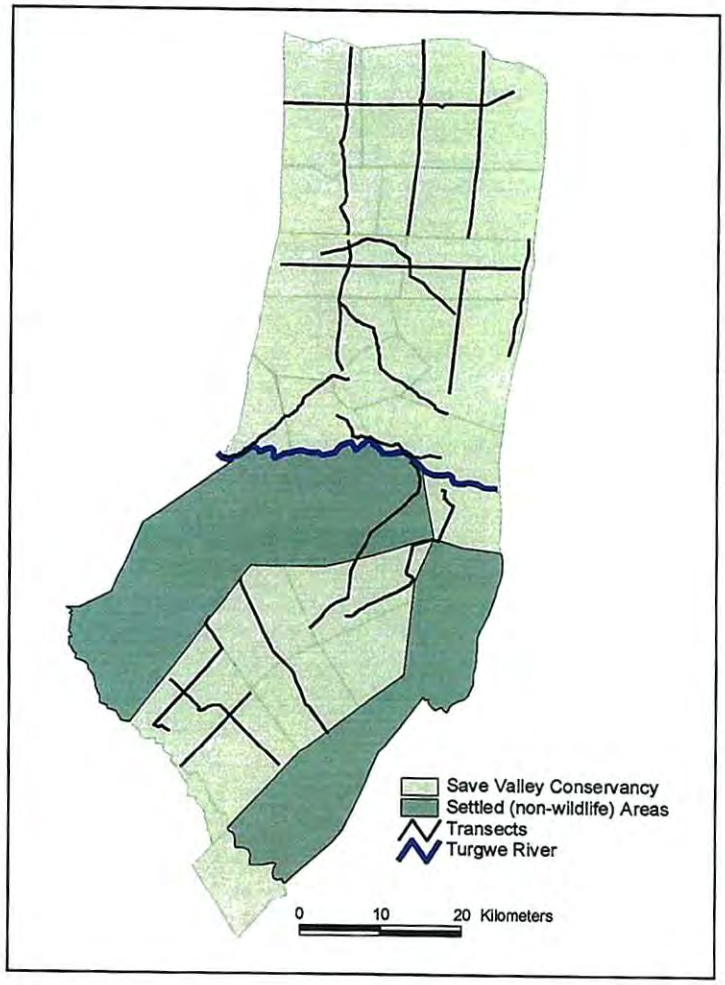
The total area of the Savé Valley Conservancy is 3,490km^2. However, the effective wildlife area (excluding the 1051km^2 of resettled land), comes to only 2,439km^2; 1,639km^2 north of the Turgwe river and 800km^2 south of the Turgwe (see Table 1).

In northern SVC, the total length of all transects combined was 262.4 km, giving a penetration ratio of 6.25. In southern SVC, the combined transect length was 129.4 km, giving a penetration ratio of 6.19. For the conservancy as a whole, 391.8 km were driven (penetration ratio 6.23).

Transects surveyed were the same as those used in 2007-2018 (Figure 1). Each transect was driven at a speed of between 10 and 20 km/hr with one tracker, AWCF head scout Rueben Boté, sitting on the front of the vehicle scanning for spoor. Transects ranged between 12.7 km and 29.7 km in length, with a mean transect length of 21.8 km.

Each transect survey started as close to sunrise as possible, and wherever feasible was driven from west to east to ensure the best possible tracking conditions. Only tracks less than 24 hours old were counted. Road conditions are generally sandy, such that spoor is relatively easy to see. Where possible, spoor of individual animals were followed to reduce the likelihood of that individual being counted twice on a given transect. Spoor was recorded for all mammalian carnivores bigger than a genet.

Figure 1. Map of the transects driven – October 2019



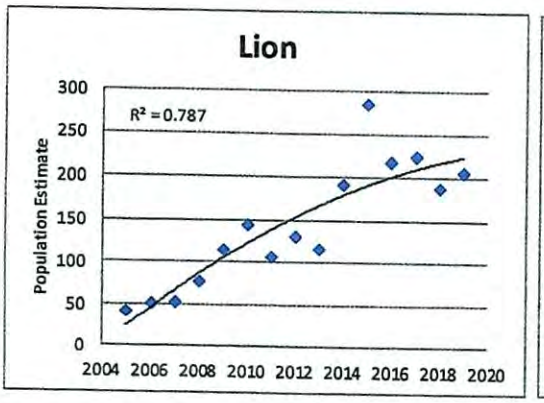
Results

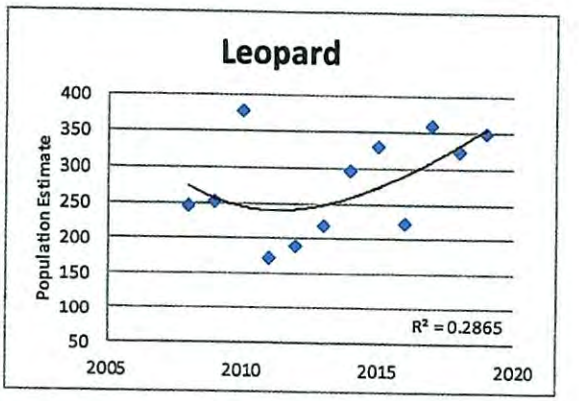
Table 1: Summary of survey parameters (2019)

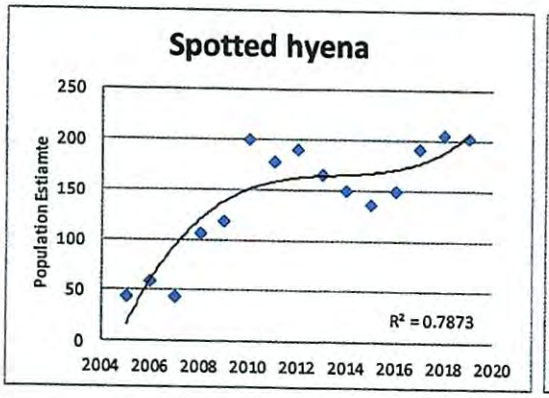
Parameter	Northern SVC	Southern SVC	Total SVC
Area (km²)	1639	800	2439
Total number of km driven	262.4	129.4	391.8
Penetration ratio	6.25	6.19	6.23

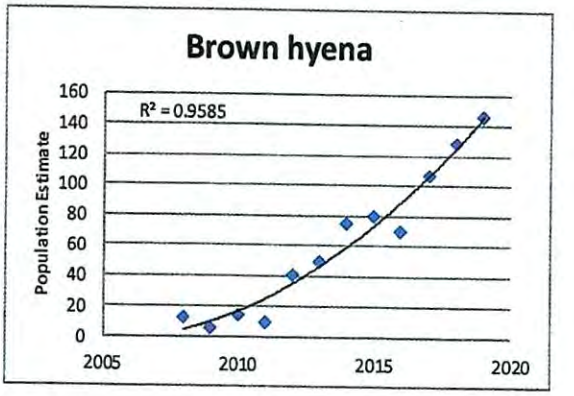
Table 2: Population estimates of the key carnivore species in the **whole of Savé Valley Conservancy** from 2008-2019 (from 2005-2019 for lion and spotted hyena).
Data for lion, leopard, spotted and brown hyenas and black backed jackal are from spoor surveys; **data for wild dogs is from the Lowveld Wild Dog Project's direct monitoring efforts** (counts are taken from April of each year and include adult and yearling wild dogs only).

Species	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Lion	40	50	52	76	114	143	105	130	115	190	284	217	223	187	205
Leopard				245	252	378	172	189	218	295	328	221	359	323	348
Spotted hyena	44	58	44	107	118	201	178	192	166	150	137	150	193	206	203
Brown hyena				12	6	14	10	41	50	75	80	70	107	128	146
African Wild dog				45	60	64	61	86	90	81	91	99	94	96	86
Black backed jackal				188	190	157	141	151	199	229	241	234	296	153	187









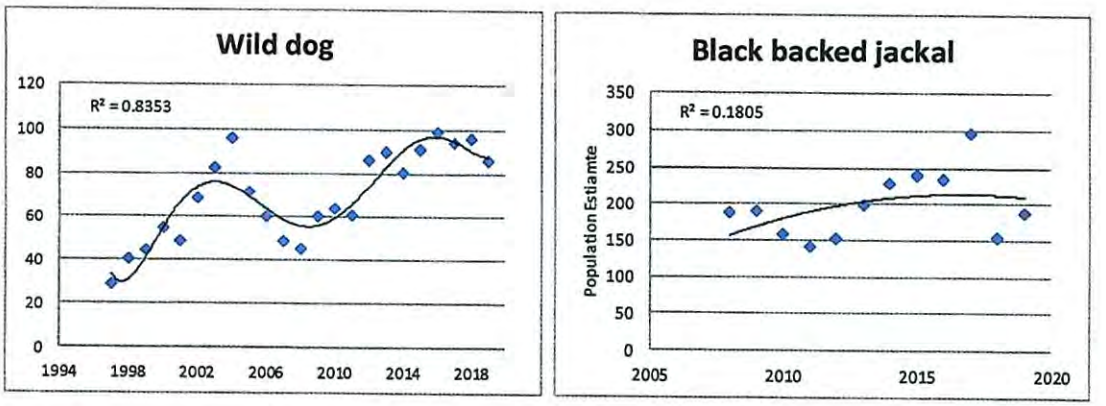


Figure 2: Trends in the populations of key carnivores in SVC for all years for which data is available. Data for lion, leopard and spotted and brown hyenas and black backed jackal are from spoor surveys; data for wild dogs is from the Lowveld Wild Dog Project's direct monitoring efforts (counts are taken from April of each year and include adult and yearling wild dogs). *A breakdown of all survey results for all species between the north and south of the conservancy is given in Appendix 1.*

Discussion

Lion population

Excluding the anomalous over count in 2015, the population appears to have stabilised over the last six years at c. 200 lions, with a few natural fluctuations. The 2019 survey estimates **205 lions** in the conservancy at a **density of 8.4 lions / 100km²**. This is in line with densities recorded elsewhere (9.6 lions / 100km² - average over Kruger, Hwange, Selous and Serengeti), although in areas notably larger than SVC. Finally, of the 104 lion tracks identified by sex, 31% were adult males and 64% identified as adult females. Otherwise, tracks for cubs (2) and yearling lions (2) were encountered once each.

Leopard population

In 2019 there were an estimated **348 leopard** in the conservancy. Considering the long-term trend data for the species, it is clear that the conservancy's leopard population (similarly to the lion population) has stabilised over the last six years (bar the undercount in 2016) at between 300-350 estimated individuals.

Leopards are at a **density of 14.3 leopards / 100km²** in the conservancy. This is considerably higher than densities recorded in other places, for example in Phinda and Mkhuze in South Africa (average 9.7 / 100km²; Balme et al. 2009) and in neighbouring Gonarezhou National Park (9.5 / 100km²; Watermeyer & Groom, 2019). Finally, of the 77 tracks identified as male or female, 42% were male and 58% were female.

Spotted hyena population

As reported in 2018, spotted hyenas appear to have stabilised over the last few years at between 150-200 individuals. Indeed, there were an estimated **203 spotted hyenas** in 2019. Spotted hyenas are at a density of **8.3 spotted hyenas / 100km²**. This is lower than other populations; 13.5 / 100km² in Kruger (Mills 1985), 17.0 / 100km² in Hwange (Bowler 1992), and 10.4 / 100km² in Gonarezhou National Park (Watermeyer & Groom, 2019). Given the relatively lower density of the species in the conservancy, there is suggested scope for the population to increase (especially if the lion numbers have stabilised).

Brown hyena population

There were an estimated **146 brown hyenas** in the conservancy in 2019. Overall, the brown hyena population is displaying a stable trend, with incremental, positive increases over the past six years. The estimated density of brown hyenas was **5.9 brown hyenas / 100km²** in 2019, which is comparable to that recorded in neighbouring Gonarezhou National Park at **4.8 brown hyenas / 100km²** (Watermeyer & Groom, 2019).

African wild dog population

As reported consistently for the past few years, the African wild dog population appears to have stabilised at between 90-100 individuals, with slight natural fluctuations. **From our comprehensive and direct monitoring of the species, there are 86 adult wild dogs in the conservancy (3.5 wild dogs / 100km²).** Average wild dog densities across their range are generally lower (average 2.5 wild dogs / 100km² across five populations; Pole 1999). The spoor survey results estimated 158 wild dogs in the conservancy, with a density of 6.6 wild dogs / 100km². This is clearly an overestimate of the wild dog population, and serves to demonstrate that spoor surveys, with current calibration methods, are not a reliable indicator of wild dog numbers.

Importantly, snaring has been a significant threat to resident wild dogs in 2019, and we have seen fewer packs denning and smaller litter sizes born on average than previous years. The latter may affect recruitment and the stability of some packs into 2020.

Black backed jackal population

There were an estimated **187 black backed jackals** in 2019, with a density of **7.7 jackals / 100km²**. We were cautious of the drop in numbers estimated in 2018, and whilst a count of 187 jackals is more in keeping with the trend, this species does need to be watched.

Cheetah population

The spoor encounter rate for cheetah in the conservancy is very low, and thus it is impossible to accurately estimate the number of resident cheetah, even with large confidence intervals. **We did not pick up a signal track for cheetah in the 2019 spoor survey.** However, spoor surveys are not an appropriate technique for monitoring cheetah, and cheetah naturally occur at low densities and are a wide-ranging species (Mills 1997; Durant 1998; Wilson & Delahay 2001).

At best, we can reliably say that cheetah are resident and breeding in the conservancy, but only present at low densities as is characteristic of the species.

Word of caution

When interpreting the results in the graphs and tables at the end, please do so with caution, especially to quote specific numbers. For lions and hyenas we are confident that these spoor surveys are relatively accurate in the numbers they predict, although occasional anomalous over and undercounts need to be treated carefully. Likewise, we can trust the numbers for wild dogs, as they are from AWCF's detailed population monitoring study. For leopards however, several different equations (all considered suitable for estimating leopard numbers from spoor) can give different population estimates from each other. The spoor survey technique has not been calibrated for species like jackals, civets, even brown hyenas, so while the data is useful for looking at trends, using population figures directly from the graphs for these species is unadvisable.

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Acknowledgements

Permission to conduct this research was given by the Research Council of Zimbabwe, and the Savé Valley Conservancy, with the support of the Zimbabwe Parks and Wildlife Management Authority. Thank you to Chishakwe Ranch for hosting the project team. Thanks also to all of the landowners and managers in the

conservancy for allowing us to conduct this spoor survey on their properties. Rueben Boté deserves special mention for his excellent track identification.

Appendix 1: All Spoor Survey Results for All Species Counted (2019)

NORTH SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	North SVC	(Total area)	Stander1998	(Animals/100km 2)	(km)	counted	(km/spoor)	(km)	(Area/lengt h)	(Spoor/100k m)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						
Black-backed jackal	1639	117.9349196	Leopard (Y=0.6993X)	7.195541159	262.4	27	9.718518519	262.4	6.246189024	10.28963415
Brown hyaena	1639	102.8410038	Lion (Y=0.3049X)	6.274618902	262.4	54	4.859259259	262.4	6.246189024	20.57926829
Cheetah	1639	0	Lion (Y=0.3049X)	0	262.4	0	0	262.4	6.246189024	0
Civet	1639	572.202758	Leopard (Y=0.6993X)	34.9116997	262.4	131	2.003053435	262.4	6.246189024	49.92378049
Honey Badger	1639	126.6708396	Leopard (Y=0.6993X)	7.728544207	262.4	29	9.048275862	262.4	6.246189024	11.05182927
Leopard	1639	275.181479	Leopard (Y=0.6993X)	16.78959604	262.4	63	4.165079365	262.4	6.246189024	24.00914634
Lion	1639	127.5990232	Lion (Y=0.3049X)	7.785175305	262.4	67	3.91641791	262.4	6.246189024	25.53353659
Spotted hyaena	1639	125.6945602	Lion (Y=0.3049X)	7.668978659	262.4	66	3.975757576	262.4	6.246189024	25.15243902
Wild dog	1639	129.5034863	Lion (Y=0.3049X)	7.901371951	262.4	68	3.858823529	262.4	6.246189024	25.91463415
African Wildcat	1639	21.83979992	Leopard (Y=0.6993X)	1.332507622	262.4	5	52.48	262.4	6.246189024	1.905487805
SOUTH SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	South SVC	(Total area)	Stander1998	(Animals/100km 2)	(km)	counted	(km/spoor)	(km)	(Area/lengt h)	(Spoor/100k m)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						

Black-backed jackal	800.57	69.22270182	Leopard (Y=0.6993X)	8.646676971	129.4	16	8.0875	129.4	6.186785162	12.36476043
Brown hyaena	800.57	43.38606831	Lion (Y=0.3049X)	5.419397218	129.4	23	5.626086957	129.4	6.186785162	17.77434312
Cheetah	800.57	0	Lion (Y=0.3049X)	0	129.4	0	0	129.4	6.186785162	0
Civet	800.57	246.6058752	Leopard (Y=0.6993X)	30.80378671	129.4	57	2.270175439	129.4	6.186785162	44.04945904
Honey Badger	800.57	38.93776978	Leopard (Y=0.6993X)	4.863755796	129.4	9	14.37777778	129.4	6.186785162	6.955177743
Leopard	800.57	73.54912069	Leopard (Y=0.6993X)	9.187094281	129.4	17	7.611764706	129.4	6.186785162	13.13755796
Lion	800.57	77.34038264	Lion (Y=0.3049X)	9.660664606	129.4	41	3.156097561	129.4	6.186785162	31.68469861
Spotted hyaena	800.57	77.34038264	Lion (Y=0.3049X)	9.660664606	129.4	41	3.156097561	129.4	6.186785162	31.68469861
Wild dog	800.57	28.29526194	Lion (Y=0.3049X)	3.53438949	129.4	15	8.626666667	129.4	6.186785162	11.59196291
African Wildcat	800.57	0	Leopard (Y=0.6993X)	0	129.4	0	0	129.4	6.186785162	0
TOTAL SVC	Survey Area	Est. population	Equation Used	Est. density	Distance covered	No. of spoor	Spoor frequency	Transect length	Penetration	Spoor density
	Total SVC	(Total area)	Stander1998	(Animals/100km2)	(km)	counted	(km/spoor)	(km)	(Area/length)	(Spoor/100km)
Species	(Km2)			Y=0.3049X	Sum of transects			Sum of routes		
				Y=0.6993X						
Black-backed jackal	2439	187.1885812	Leopard (Y=0.6993X)	7.674808576	391.8	43	9.111627907	391.8	6.225114855	10.97498724
Brown hyaena	2439	146.148889	Lion (Y=0.3049X)	5.99216437	391.8	77	5.088311688	391.8	6.225114855	19.65288412
Cheetah	2439	0	Lion (Y=0.3049X)	0	391.8	0	0	391.8	6.225114855	0
Civet	2439	818.4058897	Leopard (Y=0.6993X)	33.55497703	391.8	188	2.084042553	391.8	6.225114855	47.98366514
Honey Badger	2439	165.422467	Leopard	6.782388974	391.8	38	10.31052632	391.8	6.22511485	9.698825932

		1	(Y=0.6993X)						5	
Leopard	2439	348.2578254	Leopard (Y=0.6993X)	14.27871363	391.8	80	4.8975	391.8	6.225114855	20.41858091
Lion	2439	204.9880521	Lion (Y=0.3049X)	8.404594181	391.8	108	3.627777778	391.8	6.225114855	27.56508423
Spotted hyaena	2439	203.0900145	Lion (Y=0.3049X)	8.326773864	391.8	107	3.661682243	391.8	6.225114855	27.30985197
Wild dog	2439	157.5371141	Lion (Y=0.3049X)	6.459086269	391.8	83	4.720481928	391.8	6.225114855	21.18427769
African Wildcat	2439	21.766114009	Leopard (Y=0.6993X)	0.892419602	391.8	5	78.36	391.8	6.225114855	1.276161307

SANGO
wildlife conservancy

Lion Information and Survey:

1. Sango is a 600 square kilometer property located within the Save Valley Conservancy (SVC) which is located in the South Eastern Lowveld of Zimbabwe. Sango has a lion population of +/- 80 at any one time, this information comes from annual surveys conducted by Sango's ecologist and independent monitoring by the African Wildlife Conservation Fund, who monitor all large carnivores within the SVC.

2. All daily rates and trophy fees are used to run the property, this includes a staff of 130 people, 44 of which are Game scouts, maintenance of roads and water infrastructure, fire breaks, aerial and sweep surveys, conservation levies to the SVC, ecological monitoring etc.

3. Previously Sango had a small lion population and brought in 10 lion females in 2005, this brought the population to 18-20 animals. The population has grown and spread to the entire SVC and presently stands at +/- 200 for the SVC. This remarkable growth is more easily understood when plains game animal populations that Sango holds are looked at. Presently Sango has 6000+ Impala,1000+ buffalo, 550+ giraffe, 400+ eland, 600+elephant, 500+ wildebeest and Zebra. In 2013 Sango relocated 1300+ plains game animals to Gonarezhou National Park and in 2018, relocated 100 elephant to RIFA located in the Zambezi National Park system. COVID Restrictions pending, 2021 will see the relocation of 400 elephant, 2000 impala as well as two prides of lion and one pack of wild dog, plus various plains game species to Zimbabwe National Parks Estates. Sango is presently over stocked and it's vegetation is degrading, these overstocked animals are being used to benefit conservation in other areas of Zimbabwe. Sango also supports 4 schools along it's boundary as well as community boreholes.

4. **Relevant Game Populations in the Concession 2020**

Species	Relative Abundance			Estimated Population	3-Year Trend			How is it Monitored?
	Dense	Avg.	Sparse		Up	Down	Stable	
Elephant	Dense			681			Stable	Aerial count
Lion	Dense			81			Stable	Spoor count
Prey Species (if applicable)	Dense			7 150			Stable	Aerial count
Other: _____								

5. Further information can be obtained from Mr. D. Goosen the Sango General Manager on sangohq@sango-wlidlife.com

SANGO
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Sango is a 60 000 hectare property, situated within the Save Valley Conservancy in the South Eastern Lowveld of Zimbabwe.

The annual 2019 aerial survey, carried out in Sep/Oct each year, showed that there was a population of 738 elephant on Sango.

Aerial Survey numbers for elephant since 2009 are:

Year	Total Number of Animals Seen
2009	654
2010	462
2012	393
2013	648
2014	474
2015	497
2016	949
2017	684
2018	665
2019	738

This is a density of 0.8 elephant per square kilometre, the recommended density is 0,2-0,3 per square kilometres for the dry Savanna areas that Zimbabwe has.

The continued high density of elephant has and is having a negative effect on Sango's habitat.
Sango practices 'Sustainable Utilisation' and is proactive in the use of its excess animals to further conservation efforts.

To this end, Sango moved 100 live elephants to help restock the Zimbabwe National Parks area known as RIFA, situated in the Zambezi Valley in October of 2018.

The annual elephant hunting quota is three bulls, all funds generated from hunting goes to help running and maintaining the property.

This includes employment for 135 local people (44 of which are anti-poaching scouts) provision of water for wildlife, fire breaks, road and infrastructure maintenance.

Operator Enhancement Questionnaire

Operator Information

a. Name of Area Operator: **Sango, Save Valley Conservancy**
b. Years in business: **2019 to present**
c. Name of company conducting hunt: **Crane Safaris**
d. Country: **Zimbabwe**

Concession

a. Name of Concession: **Sango**
b. Area in Km^2: **600 km2**
c. Land tenure:
____ Government Lease ____Community ____Private Ranch __x__ Private Conservancy
d. Length of concession agreement: **Privately owned - Title deed with, German Bilateral Investment Agreement (BIPPA)**
e. Can it be renewed? **N/A**
f. Length of renewal, if applicable: **N/A**
g. Estimated trophy fees: **USD $ 264 150.00**
h. Are there any special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed):
Sango is privately owned. And is professionally run ecologically and has community support programs. The revenue earned is used to run the property. 135 local people from the surrounding communities are employed by Sango, of which 44 are scouts trained in Anti-poaching.
i. Provide concession location and nearest city: **Masvingo, Zimbabwe**
j. Please attach a map or maps with marked boundaries and nearest city.

k. If the concession border a National Park, provide park name: N/A

l. Describe general and distinctive habitat/water features:
Savanna woodland with three main rivers, Msaize, Mokore and Save River. Granite hills in the western area. Sango has 24 kms Save River frontage.

Communities in the Concession

a. Are there any communities living in the concession? ____Yes __x__No
b. If so, estimated number of people/villages in the concession: N/a
c. Are there communities bordering this concession? __x__ Yes ____ No
d. If so, estimated number of people/villages around the concession: **400,000**

Relevant Game Populations in the Concession

Species	Relative Abundance			Estimated Population	3-Year Trend			How is it Monitored?
	Dense	Avg.	Sparse		Up	Down	Stable	
Elephant	Dense			681			Stable	Aerial count
Lion	Dense			81			Stable	Spoor count
Prey Species (if applicable)	Dense			7 150			Stable	Aerial count
Other: _____								

If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.

Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

SANGO
wildlife conservancy

2020 Aerial Survey

	Counted
Black rhino	17
White rhino	15
Buffalo	957
Crocodile	35
Eland	311
Elephant	681
Elephant (herds)	531
Elephant (bulls)	150
Giraffe	667
Impala	4872
Kudu	148
Sable	10
Warthog	180
Waterbuck	87
Wildebeest	309
Zebra	616

Local Community Participation

a. Total employment number: **135 + 8 management**
b. Total employment in off-season: **135 + 8 management**
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	3	All Zimbabwean	n/a
Trackers	10	All from the surrounding Villages	10
Anti-poaching Scouts/Rangers	44	All from the surrounding Villages	44
Other Anti-poaching		Sango hosts the Save Valley Special Species anti-poaching unit	
Cooks/Housekeepers	20	All from the surrounding Villages	20
Community Coordinators	N/A		N/A
Managers	8	All Zimbabwean	8
Biologists	1	English Ecologist	1
Others:	67		67

Anti-Poaching Efforts

a. Number of anti-poaching staff: **44**
b. Are patrols conducted during the hunting season, off season or both? **Both**
c. Months patrols are conducted: **All Year round**
d. Number of patrols per month: **20 two-man patrols per day x 365 days**
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: **1/3**
f. Description of anti-poaching equipment, vehicles, gear, etc. **1 full time Manager with Vehicle, 20 Radios, 30 Shotguns, uniforms and sleeping equipment.**
g. Do government-sponsored game scouts conduct patrols? **No**
h. If so, do they have the ability to arrest? **Yes**
i. Do you offer rewards to poaching informants leading to arrest? __x__ Yes ____ No

j. Do you offer rewards to poaching informants upon conviction? __x__ Yes

k. Please describe the operator's anti-poaching expenditures for the past 3 years below:

Type of Expense	Year 1 (2019) Spending	Year 2 (2018) Spending	Year 3 (2017) Spending	Remarks
Scout Salaries	$ 114 200	$ 114 000	$ 114 000	
Equipment	$ 17 700	$ 17 700	$ 17 000	
Vehicles	Landcruiser valued at $ 20 000	Landcruiser valued at $ 22 000	Landcruiser valued at $ 25 000	
Fuel	$ 9 700	$ 9 800	$ 9 500	
Rewards	$ 16 200	$ 16 000	$ 15 000	$20/poacher
Others:_____				
Totals	$ 177 800	$ 179 500	$ 180 500	

1. What currency are the expenditures given in? **US Dollars**

Anti-Poaching Results

Type	Year 1 (2019)	Year 2 (2018)	Year 3 (2017)	Remarks
Poaching Incidents Discovered	131	135	120	
Elephant Carcasses Observed	0	0	0	
Lion Carcasses Observed	0	0	0	
Leopard Carcasses Observed	0	0	0	
Ivory Poachers Observed	0	0	0	
Bush Meat Poachers Observed	131	135	120	
Illegal Logging Observed	0	0	0	
Other Poachers Observed	0	0	0	
Poachers Convicted	84	73	65	
Snares/Traps Collected	437	400	421	
Firearms Confiscated	0	0	0	
Vehicles Confiscated	0	0	0	
Bicycles Confiscated	0	0	0	
Boats/Nets Confiscated	0	0	0	
Tusks Recovered	0	0	0	

Others: _____				

Community Investment

a. Does the company contribute money or goods/services to local communities?

__x__ Yes _____ No

b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e., more than required by law)?

Sango supports 4 schools, 9 community boreholes and Chief's functions with approx. 1 200kgs meat per year.

c. Does the company provide game meat to nearby communities?

____x___ Yes _____ No

d. If so, estimate the amount/value of meat contributed in the last year and describe the distribution program: **school and traditional meetings $2 300**

e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling fields during harvest, PAC hunts, insurance programs); please describe.

N/A

f. Describe any consolation payments made to local residents that have incurred damage by game species:

Species	Damage Caused	Consolation Paid, Year 1 (____)	Consolation Paid, Year 2 (____)	Consolation Paid, Year 3 (____)	Remarks
Elephant	N/A				
Lion	N/A				
Leopard	N/A				
Other: _____					

g. What currency are the expenditures reported in? **US dollars**

h. Describe any community projects paid for by the company:

Product	Spending, Year 1 (2019)	Spending, Year 2 (2018)	Spending, Year 3 (2017)	Remarks
Education (classrooms, offices)	0	0	0	
Education (supplies, fees)	0	0	0	
Health (clinics, offices)	0	0	0	
Health (equipment, salaries)	0	0	0	
Community Scout Salaries	0	0	0	
Community Anti-Poaching	0	0	0	
Local Government Activities	0	0	0	
Infrastructure Improvements	0	0	0	
Sports Teams Funded	0	0	0	
Construction Materials Donated	0	0	0	
Other: **Donations to Schools**	**$ 1 500**	**$ 1 500**	**$ 1 500**	
Other: **Maintenance of Boreholes**	**$ 6 500**	**$ 6 500**	**$ 6 500**	
TOTALS	**$ 8 000**	**$ 8 000**	**$ 8 000**	

i. What currency are the expenditures reported in? **US Dollars**

j. Include receipts and photographs of projects, if available. – **N/A**

Company Clientele

a. How many U.S. clients did the company have in the past 3 years, what percentage of clients were from the U.S., and what fees did they pay?

	Elephant	Lion	All Species
Number of U.S. Clients	Year 1 (2019): 3	Year 1 (2019): 1	Year 1 (2019): 16
	Year 2 (2020): 1	Year 2 (2020): 1	Year 2 (2020): 1
	Year 3 (____):	Year 3 (____):	Year 3 (____):
Percentage of U.S. Clients	Year 1 (2019): 100%	Year 1 (2019): 100%	Year 1 (2019): 75%
	Year 2 (2020): 100%	Year 2 (2020): 100%	Year 2 (2020): 100%
	Year 3 (____):	Year 3 (____):	Year 3 (____):
Trophy Fees Paid by U.S. Clients	Year 1 (2019): $ 58 500	Year 1 (2019): $ 25 000	Year 1 (2019):$ 150 650
	Year 2 (2020): $ 20 000	Year 2 (2020): $ 30 000	Year 2 (2020): $ 28 200
	Year 3 (____):	Year 3 (____):	Year 3 (____):

b. Approximate amount/percentage of company's revenue from U.S. clientele: **85%**

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):

Licensed Zimbabwe Professional hunters

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology if available):

Trophy measurements and age data collected

c. Are there hunt return forms that must be reported to officials? If so, please include a copy of these forms or confirmation of their receipt for the past 3 years.

A Zimbabwe National Parks and Wildlife Management Authority Return Form of Lion, Leopard and Elephant must be submitted to Head Office in Harare, Stamped by the Regional Parks office after completion of each hunt. Signed by the Professional Hunter and accompanying National Parks Scout. Details displayed on the Form:

1. **Operator's Name and Registration Number with The Zimbabwe Tourist Authority.**
2. **Name and Physical address of Hunting Client.**
3. **Professional Hunter's name and License Number.**
4. **Type of Hunt**
5. **TRAS2 Number – Reserve Bank of Zimbabwe Tracking of Hunt Funds**
6. **Duration of Hunt**
7. **Area where Hunt is being conducted, description of species, Zimbabwe National Parks permit number for species, date shot, SEX, was it killed or wounded and remaining quota for the Property post hunt.**

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

I declare that the foregoing is true and correct:

Signature	Date
Natalie Edwards	Director
Print-Full Name	**Title**

FWS Form 3-200-20 (Rev. 01/2020)
U.S. Department of Interior

OMB Control No. 1018-0093
Expires 08/31/2023

IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

■New ☐Reissue/Renew ☐Amendment

Complete Sections **A or B**, and C, D, and E of this application. U.S. address may be required in Section C.**

A. Complete if applying as an individual

1.a. Last name	1.b. First name	1.c. Middle name or initial	1.d. Suffix
Moritz	Donald	Troy	

2 Date of birth (mm/dd/yyyy)	5.a. Telephone number	5.b. Alternate telephone number	6. E-mail address
			(b) (6) [redacted]

B. Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution

1.a. Name of business, agency, Tribe, or institution		1.b. Doing business as (dba)	
2. Tax identification no.	3.a. Description of business, agency, Tribe, or institution		3.b. Website URL (if applicable)
4.a. Principal officer (P.O.) last name	4.b. P.O. first name	4.c. P.O. middle initial	4.b. P.O. Title
5. Primary contact name		6. Primary e-mail address	
7.a. Business telephone number	7.b. Alternate phone no.		8.a. Primary contact telephone no.

C. All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)
(b) (6) [redacted]

1.b. City	1.c. State	1.d. Zip code/Postal code	1.e. County/Province	1.f. Country
Barrington	Illinois	60010	Lake	USA

2.a. Mailing Address (include if different than physical address; include name of contact person if applicable)

2.b. City	2.c. State	2.d. Zip code/Postal code	2.e. County/Province	2.f. Country

D. All applicants MUST complete

1. Include a check or money order, payable to the U.S. FISH AND WILDLIFE SERVICE, **a nonrefundable processing fee** [50 CFR 13.11(d)(4)]. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – ***attach documentation of fee exempt status as outlined in instructions.*** (50 CFR 13.11(d)).

2. If you are requesting a reissue/renew/amendment, what is your permit/file number?

3. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13 of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter I of Title 50, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may sub (b) (6) [redacted]

The individual/principal officer of the business must print and sign the application. (No photocopied or stamped signatures) Date (mm/dd/yyyy) 03/16/2021

** Further instructions for the above application may be found on our ePermits website. See the last page for information on the Privacy Act, Paperwork Reduction Act, Estimated Burden, and Freedom of Information Act aspects of this application form.

Mail your application(s) to Division of Management Authority, Branch of Permits, MS:IA 5275 Leesburg Pike, Falls Church, VA 22041-3803.

APPLICANT:

DONALD TROY MORITZ

IMPORT PERMIT APPLICATION

3.200.20

SECTION "E"

OMB Control No. 1018-0093
Expires 08/31/2023

E. IMPORT OF SPORT-HUNTED TROPHIES (Appendix I of CITES and/or ESA)

Note 1: This form should be used to request authorization to import trophies of species included in Appendix I of CITES and/or as threatened or endangered under the ESA (examples include elephants, lions, cheetahs, wood bison, and markhor).

PLEASE USE FORM 3-200-19 FOR SOUTHERN AFRICAN LEOPARD TROPHIES AND NAMIBIAN SOUTHERN WHITE RHINOCEROS TROPHIES.

Note 2: If you hold an import permit for trophy/trophies that you did not use, please **return the unused original permit**. If you are requesting reissuance of a permit because you have taken a trophy, but were unable to import it prior to the expiration of the permit, please use the renewal form (3-200-52) and return your original permit with that form.

Note 3: Applications for species listed as endangered under the U.S. Endangered Species Act are published in the Federal Register for a 30-day public comment period. Please allow at least **90 days** for the application to be processed.

Note 4: *Sport-hunted trophy* is defined at 50 CFR 23.74 as follows: *Sport-hunted trophy* means a whole dead animal or a readily recognizable part or derivative of an animal specifically identified on the accompanying CITES document that meets the following criteria:

- Is raw, processed, or manufactured;
- Was legally obtained by the hunter through hunting for his or her personal use;
- Is being imported, exported, or re-exported by or on behalf of the hunter as part of the transfer from its country of origin ultimately to the hunter's country of usual residence; and
- Includes worked, manufactured, or handicraft items made from the sport-hunted animal only when:
  - i. Such items are contained in the same shipment as raw or tanned parts of the sport-hunted animal and are for the personal use of the hunter;
  - ii. The quantity of such items is no more than could reasonably be expected given the number of animals taken by the hunter as shown on the license or other documentation of the authorized hunt accompanying the shipment; and
  - iii. The accompanying CITES documents (export document and, if appropriate, import permit) contain a complete itemization and description of all items included in the shipment.

Note 5: Certain hunting trophies, including elephants, are subject to restrictions on their use after import into the United States. Please see 50 CFR 23.55 for more information or contact the Division of Management Authority.

- **Complete all questions on the application.**
- **Mark questions that are not applicable with "N/A".**
- **If applying for more than one trophy species, be sure to answer questions 4, 5, and 6 for each trophy.**
- **If importing trophies from more than one country, you must submit a separate application for each shipment in order to obtain separate import permits.**

1. Name and address where you wish the permit to be mailed, if different from page 1. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via the U.S. Postal Service.

Donlad Troy Moritz - (b) (6) Barrington, Illinois 60010

2. Who should we contact if we have questions about the application (name, phone number, and e-mail)?

John Jackson or Aimee Korver (504) 837-1233 permits@conservationforce.org

3. Have you or your client (if a broker applying on behalf of your client), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

■ No ☐ Yes

If you answered "Yes" to Question 3, provide: a) the individual's name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a "Yes" response does not automatically disqualify you from getting a permit.

4. For each trophy to be imported, provide:

a. Scientific name (genus, species, and, if applicable, subspecies) and common name.

Loxodonta africana, African elephant

b. Sex (if known).

male

5. **IF ANIMAL IS CURRENTLY LIVING IN THE WILD,** please include the following information:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where wildlife is to be taken from the wild:

N/A

b. Date wildlife is to be hunted:

N/A

c. Name of hunting outfitter, safari company, or professional hunter you will be hunting with:

N/A

6. **IF ANIMAL HAS ALREADY BEEN TAKEN**, please include the following:

a. Country and location (e.g., area, region, GIS coordinates, ranch, conservancy, management area, or hunting block, AND nearest city) where trophy was removed from the wild:

Ingwizi Wildlife Association, Bulawayo, Bulilima Mangwe District, Zimbabwe

b. Date wildlife was hunted:

October 13, 2020

c. Approximate age of animal:

45-47 years old

d. Name of hunting outfitter, safari company, and/or professional hunter you hunted with:

Mapasa Big Game Houds - P.H. Vaugh Whitehead Wilson

e. The current location of the trophy (address and country) [the U.S. CITES import permit will identify this country as the country of export/re-export and must match with the CITES export/re-export document]:

Collets Wildlife Taxidermy- 15 Josiah Chinamano Road, Belmont, Bulawayo, Zimbabwe

7. Please provide a copy of any applicable foreign government permits, licenses, or tags, that were required to remove this animal from the wild (if you have not hunted yet and do not currently hold any such permits or licenses, please indicate so).

   See permits provided

8. Complete name and address of overseas person or business shipping the trophy to you. If you are applying to import a trophy directly from **Namibia**, you **must** provide the name and address of the professional hunter listed on your Namibian hunting permit [this name will appear on the face of the export permit].

Name:	
Business Name:	Outbound Cargo and Trophy Exporters
Address:	5 Grantham Road
City:	Belmont, Bulawayo
State/Province:	Zimbabwe
Country, Postal Code:	

9. For species listed under the Endangered Species Act, please be aware that the U.S. Fish and Wildlife Service must make a finding that your activities will enhance or benefit wild populations of the species involved. While we will communicate with the range country for the species you will hunt or have hunted when making the required findings, **please include the Operator Enhancement Questionnaire** provided in Annex I filled out by the operator or professional hunter of the concession in which you hunted or will hunt. You may attach an updated report of operations from this concession in lieu of this questionnaire if information regarding the enhancement of the survival or propagation of the species in the wild is made available in the report.

10. If required by the country in which you hunted, please include the government-endorsed hunter return form.

    See hunter return form provided

11. Provide the name of the operator, safari company, or professional hunter with whom you hunted or will hunt.

Name (Company/Professional Hunter):	Vaughn Whitehead Wilson
E-mail:	mapassaham@gmail.com
Phone number:	+263 (0)771 510 739

CERTIFICATION STATEMENT (original signature must be provided for either 11 or 12 below)

12. **If you are a broker or taxidermist applying on behalf of a U.S. hunter or foreign national**, provide documentation to show you have **Power of Attorney** to act on your client's behalf and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by my client and is being imported only for my client's personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**). If applying for the import of a leopard trophy, I understand that my client may only import two leopard trophies in one calendar year.

    Taxidermist/Broker's signature: _____ Date: _____

13. **If you are the hunter applying to import your own trophy**, please read and sign the following statement.

    I acknowledge that the sport-hunted trophy/trophies to be imported has been/will be personally hunted by me and is being imported only for my personal use (i.e., **not for sale, transfer, donation, or exchange that is reasonably likely to result in economic use, gain, or benefit**).

    Applicant's signature: _____ Date: 03/16/2021

    Be aware that there may be additional permitting or approval requirements by your local or state governments, as well as required by other Federal agencies or foreign government to conduct your propose activity. While the Service will attempt to assist where possible, it is your responsibility to obtain such approval.

14. All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available from the list of designated ports. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

APPLICANT:

DONALD TROY MORITZ

HUNTING PERMITS

HUNTING RETURN FORM - TRAS2
APPLICATION FOR HUNTING NP/CITES

Issued in terms of Exchange Control Act (Chapter 22:05),
The Parks and Wild Life Act (Chapter 20:14) and the Tourism Act (Chapter 14:20)

0000082928
SUBMITTED

1. DETAILS OF THE SAFARI OPERATOR

Name of Operator	Mapasa Big Game Hounds	Client's Full Name	Donald Troy Moritz
ZTA (HOP) No.	HOP0312	Passport Number	(b) (6)
		Country of Issue	UNITED STATES
Address	188 Snaith Rd Burnside Bulawayo	Address	(b) (6) Illinois USA
Name of Professional Hunter	VAUGHAN WHITEHEAD WILSON	Licence No.	559
Telephone		Fax	232331

Number of Accompanying Guests: 0
Are the trophies being exported after tanning and mounting?
Are the trophies being exported after primary treatment?

Name of Processing Agent or Taxidermist — Address
Name of Shipping Agent — Address
Name of Foreign Agent — Address

2. HUNTING AREAS

	Hunting Area Name	Province	Signature of Land Authority
1	Middle Block	Matabeleland South	
2	Bulilimamangwe District Area 3 - Dombodema	Matabeleland South	
3	Marshlands Ranch	Bulawayo	
4	Block 3 Mangwe	Matabeleland South	
5	Dornoch Estate	Matabeleland South	
6	Block 1 Top Block	Matabeleland South	
7	Bulilimamangwe District Area 1 - Maitengwe	Matabeleland South	
8	Ingwizi Wildlife Association	Bulawayo	
9	Bulilimamangwe District Area 4 - Norwood	Matabeleland South	
10			
11			
12			
13			
14			
15			

Date of Safari From	11-10-2020
Date of Safari To	21-10-2020
Daily Rate Charged For Big Game USD	.00
Daily Rate Charged For Plains Game USD	.00
Daily Rate Charged for Non hunting guests USD	.00
Number of Accompanying Guests	0

ZPWMA
Date Stamp

Rec 132858

JETAILS OF DEPOSITS

(All inclusive of Daily Rate, Trophy Fees, Processing, Handling charges and any other incidentals)

(i) Safari Operator

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

(ii) Taxidermist

	Value Date	ECA Number	ECA Date	Currency	Invoice Amount	Amount Paid
1						
2						
3						
4						

4. FINANCIAL DATA

Total Daily rate

Less Commission

Other fees (Incidentals)

Percentage Commission Charged

Total Guests rate

Total Trophy fees

Grand Total USD

Total Processing Fees

5. DETAILS OF SPECIES HUNTED

	SPECIES	SEX	W/K	CONCESSION/FARM	GRID REF	DATE SHOT	SCI TROPHY SIZE	TROPHY FEES
1	SABLE	M	K	MARSHLANDS	35K619703177217	12-10-2020		
2	ELEPHANT	M	K	INSUZI	35K596874176987	13-10-20		
3	ELAND	M	K	MARSHLANDS	35K619405772339	15-10-20		
4	KUDU	M	K	MARSHLANDS	35K620273177397	17-10-20		
5								
6								
7								
8								
9								
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PARKS AND WILDLIFE ACT [CHAPTER 20:14] OF 2001

SPECIAL PERMIT FOR 2020 HUNTING SEASON
Section: 123 (1) of the Parks and Wildlife Act 20:14 as read with S9 (1) (a) (b) (c) of S 362 of 1990.
Reference: 150/18/H/SPNH
ISSUER
Parks and Wildlife Management Authority (The Authority)

PERMIT HOLDER
Bulilima Rural District Council

NAME OF SAFARI OPERATOR
Mapassa Big Game Hounds Hunting Company

NAME OF PROFESSIONAL HUNTER
Vaughan Whitehead-Willson PH licence number 559

NAME OF CLIENT:
Donald Trey Moritz Passport number (b) (6)
Of (b) (6) Barrington, Illinois 60010 USA

The Parks and Wildlife Management Authority is a statutory body established in terms of the **Parks and Wildlife Act [Chapter 20:14] (the Act)** and is the responsible authority for the management and development of National Parks and Wildlife resources thereby controlling all related activities and issues this permit in terms of the Act. Permission is hereby granted on the authority of the Minister of Environment, Tourism and Hospitality Industry in terms of Section 123 (1) of the Parks and Wildlife Act 20:14 as read with S9 (1) (a) (b) (c) of SI 362 of 1990.

PURPOSE OF PERMIT
To hunt in the following properties

- 5 x male elephants and 1 x male leopard at Bulilima District Area 1 Matshetsheni in Matebeleland South
- 5 x male elephants and 1 x male leopard at Bulilima District Area 3 Dombodema in Matebeleland South
- 1 x male leopard at Bulilima District area 4 Norwood in Matebeleland South

Unless sooner cancelled, amended or modified in terms of section 123 of the Act, this permit is valid from **11 October 2020 to 21 October 2020** and is subject to strict compliance with overleaf-mentioned terms and conditions

Investigations and Security Manager Date

Legal Services Manager

THE TERMS AND CONDITIONS OF THIS PERMIT ARE STIPULATED

1. This permit is not transferable: alterations of this permit shall render it invalid.
2. This hunt should be monitored by a Parks and Wildlife Management Authority Ranger.
3. Safari Operator shall be invoiced for expenses incurred by members of staff who will monitor the hunt on cost recovery basis
4. To submit returns to the Director General of Parks and Wildlife Management Authority and to include sex of the animal shot and balance on quota.
5. This permit is only valid with the client named in the TRAS 2 pertaining this hunt.
6. Animals being hunted shall not exceed quota limit for the particular property
7. Animals to be hunted shall be on approved NP/CITES Form 10 hunting permit.
8. In case of hunting in more than one property NO variation shall be allowed. NO quota transfer for the properties mentioned on this permit. Breach of this is an offence.
9. Where an animal has been hunted, both the landowner where the animal has been shot and the Safari operator shall be responsible for that hunt.
10. This permit shall be produced when demanded by the appropriate authorities

I Vaughan Whitehead-Mills hereby certify that the information given in this return is, to the best of my knowledge, true and correct.

Signature of Foreign Client (b) (6) Redacted Date 22-10-2020

Signature of Professional Hunter Date 22-10-2020

Signature of Safari Operator Date 22-10-2020

APPLICANT:

DONALD TROY MORITZ

HUNT RETURN FORM

ZIMBABWE PARKS AND WILDLIFE MANAGEMENT AUTHORITY

Matobo Cluster

P.O. Box 2283
Bulawayo

Landline: +263-9-63646-7
Bookings: +263-9-65592
E-mail: info@zimparks.org.zw

All correspondence to be directed to the Cluster Manager

Head office

Botanical Gardens
Cnr Borrowdale Rd/ Sandringham Dr
P.O. Box CY 140
Causeway
Harare

Landline: +263-242-707625-8
VOIP: +263-8677707627
Cellphone: 0714 707 627

www.zimparks.org

HUNTING RETURN FORM

NAME OF OPERATOR Mapondera BGH ..... HOP No .....

NAME OF CLIENT TROY MORITS ..... Country USA

Address (b) (6) Barrington Illinois USA

P/H NAME Dayton W-wilson ..... Licence No 559

TRAS2 NUMBER 0000032'RS ..... Hunting Permit No .....

TYPE OF HUNT DG ..... Date Killed 13/10/20

DURATION OF HUNT 10 ..... Hire Of Service Fee 10

AREA OF HUNT	PROVINCE	DISTRICT	SPECIES	K/W	SEX M/F	LOC STAT
~~Nuanetsi~~ WA						
Mangwe	Mat South	Mangwe	Elephant	K	M	35K 5[illegible] 74 1769 [illegible]

2019 QUOTA (1) LION 0 ..... BALANCE OF QUOTA (1) LION .....

(2) LEOPARD 1 ..... (2)LEOPARD 1

(3) ELEPHANT 1 ..... (3)ELEPHANT 0

TROPHY SIZE 50 T- 16

P/H SIGNATURE ..... DATE 27/10/2020

RANGERS NAME Tsitsi Zhangazha SIGN Zhangazha DATE 27/10/20

DATE SUBMITTED TO OFFICE ..... SIGN ..... DATE 29/10/20

NB. The Professional Hunter should fill in all the information in the spaces provided, in the presence of the Ranger escorting the hunt and no space should be left blank.

In harmony with nature

CONSERVATION FORCE A FORCE FOR WILDLIFE CONSERVATION

† BARON BERTRAND DES CLERS, PH.D.
† JAMES G. TEER, PH.D.
† BART O'GARA, PH.D.
† DON LINDSAY
† BERT KLINEBURGER

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DANENE VAN DER WESTHUYZEN

March 18, 2021

Department of the Interior
U.S. Fish and Wildlife Service
Attn: Amy Brisendine
Division of Management Authority (DMA)
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, Virginia 22041-3803

Applicant: **Donald Troy Moritz**
RE: **Import Permit Application for an elephant from Zimbabwe**
Date of Hunt: **October 13, 2020**

Ms. Brisendine,

Enclosed you will find an import permit application for a sport-hunted elephant trophy for Mr. Donald Troy Moritz, who hunted in the Matabeleland South region of Zimbabwe in the Bulilima Mangwe District. Mr. Moritz took his Elephant on October 13th, 2020 with Mapasa Big Game Hounds and Professional Hunter Vaughn Whitehead Wilson.

The Matabeleland region is known for having the highest population of elephants in all of Zimbabwe, most likely due to its proximity to Botswana and Zimbabwe's committed adherence to their Elephant Management Plan. In this concession, the operator has noted that the population is dense with over 10,000 elephants. The quota for elephant in this concession is on average about 3 elephants per year, with the trophy fees costing $10,000.00 for each hunt, 70% of that coming from US hunters.

This operator is adhering to the National Elephant Management Plan with its 5 main components: 1. Protection and Law Enforcement, 2. Biological Monitoring and Management, 3. Social, Economic, and Cultural Framework, 4. Building Conservation Capacity, and 5. Coordination, collaboration, and program management. Mapasa's government lease for their concession contractually mandates that they must abide by the vision set forth in the management plan by providing local employment, anti-poaching control, annual reporting, and community investments.

The Bulilima Mangwe District has many communities living within it and surrounding it. There is an estimated 300,000 people living in this area whose lives are intertwined with wildlife every day. Mapasa operates the Isibaya leopard Conservation project, whose mission it is to systemically reduce the human-wildlife conflict in the area through a livestock reimbursement

program. This program alleviates the local tensions between the communities and the area's wildlife population with particular focus on leopard. The indirect result of this is that it has also drastically decreased poaching in the area and has allowed the leopard population to flourish without jeopardizing the local communities' livelihoods. We have included materials on this program.

Zimparks has revised the 2015-2020 National Elephant Plan with the financial help of Conservation Force, it is just waiting on the final signatures of approval. We have previously submitted the existing plan to highlight what is being done currently to manage this national resource and are including with this application the CITES document "Showcasing Implementation of Zimbabwe's National Elephant Management Plan (2015-2020) and its National Action Plan". The National Elephant plan expressly states that the revenue from elephant hunting is essential and necessary to the full implementation of the plan. Of course, budgetary funding is limited, and that is exactly why the revenue from hunting is so beneficial for the survival of the elephant.

We ask that you consider the information and documents provided along with documents submitted by the Zimbabwe government and other operators and hunters when making an enhancement decision for this application.

Please contact me if you have any questions.

Sincerely,

Aimee F. Korver
Permits Paralegal – Conservation Force

Enclosed:

a. Import permit application for an elephant trophy
b. Notice of Representation
c. Hunting Permits
d. Operator Enhancement Report
e. Isibaya Leopard Conservation Project
f. Short Fact Sheet – Zimbabwe Elephant Management
g. Zimbabwe National Elephant Management Plan (has previously been submitted)
h. "Showcasing Implementation of Zimbabwe's National Elephant Management Plan (2015-2020) and its National Action Plan

CC: Donald Troy Moritz w/ enclosures

APPLICANT:

DONALD TROY MORITZ

NOTICE OF REPRESENTATION

NOTICE OF REPRESENTATION

This is a notice to the U.S. Fish and Wildlife Service that I have appointed John J. Jackson, III, of the non-profit firm CONSERVATION FORCE as my attorney and legal representative for all matters concerning my application for a Permit to Import a threatened-listed Loxodonta Africana (Elephant) Trophy from Zimbabwe.

This authority is inclusive and extends to all applications and filings, whether administrative or judicial, including but not limited to any request for reconsideration, appeal, and litigation. This authority also may include execution of electronic signatures on my behalf, that may be required for the filing of my import permit application.

I also request that this attorney be copied with all correspondence, acknowledgements, notices and decisions concerning my application at the following address:

CONSERVATION FORCE
3240 S. I-10 Service Road W, Suite 200
Metairie, Louisiana 70001
USA
Tel.: (504) 837-1233
Fax: (504) 837-1145
Email: cf@conservationforce.org

(b) (6)

SIGNATURE

Donald Troy Moritz

PRINT FULL NAME

3/16/2021

DATE

APPLICANT:

DONALD TROY MORITZ

OPERATOR ENHANCEMENT REPORT

OMB Control No. 1018-0093
Expires 08/31/2023

ANNEX I OPERATOR ENHANCEMENT QUESTIONAIRE

Operator Information

a. Name of Area Operator: Mangwe Bulilima Rural District Councils
b. Years in business: +5
c. Name of company conducting hunt: Mapassa Big Game Hounds
d. Country: Zimbabwe Concession

a. Name of Concession: Bulilima Mangwe District
b. Area in km^2: 5331.21 KM
c. Land tenure:
___x_ Government Lease
____ Community
____ Private Ranch
____ Private Conservancy
d. Length of concession agreement: 4yrs
e. Can the concession be renewed? Yes
f. Length of renewal, if applicable: futher 4 yrs
g. Estimated trophy fees: 10000
h. Are there are special obligations under the Concession Agreement (e.g. annual reporting, poaching control, qualification requirements, community investment/employment? If so, please explain (attach extra documents if needed: Local Employment, Anti-poaching, investment, CSR
i. Provide concession location and nearest city: Matabeleland South near Bulawayo.
j. Please attach a map or maps with marked boundaries and nearest city
k. If the concession borders a National Park, provide park name: NA
l. Describe general and distinctive habitat/water features: Savanah woodlands and rocky out crops with rivers and streams.

Communities in the Concession

a. Are there any communities living in the concession? Yes__x__ No ____
b. If so, estimated number of people/villages in the concession: +/- 150000
c. Are there communities bordering this concession? Yes __x__ No ____
d. If so, estimated number of peoples/villages around the concession: +/- 150000

Relevant Game Populations in the Concession

Species	Relative Abundance (Dense, Average, or Sparse)	Estimated Population	3-Year Trend (Up, Down, or Stable)	How is it Monitored?
Elephant	Dense	10000	Up	Game Counts
Lion	Sparse	50	Stable	Game Counts
Prey Species (if applicable)				

Other: _____				

a. If there are any population studies or reports being done in or around the concession area, please provide a copy with your application.
b. Are there any actions being taken to conserve game community habitat? If so, please explain and attach any relevant project photos or reports.

Local Community Participation

a. Total employment number: _____35_____
b. Total employment in the off-season:__35_____
c. Identify the number and type of all employees:

Employee Type	Number of Employees	Number of Employees from Local Communities	Number of Employees in the Off-Season
Professional Hunters	3		3
Trackers	3	3	3
Anti-poaching Scouts/Rangers	15	10	15
Other Anti-poaching	2	2	2
Cooks/Housekeepers	3	2	2
Community Coordinators	6	6	6
Managers	3	3	3
Biologists			
Others: _____			

Anti-Poaching Efforts

a. Number of anti-poaching staff: __15_____
b. Are patrols conducted during the hunting season, off-season, or both? __Both_____
c. Months patrols are conducted: _Jan - Dec_____
d. Number of patrols per month: __Various_____
e. Estimate the percentage of trophy fees that go toward anti-poaching efforts: _10% -30%_____
f. Description of anti-poaching equipment, vehicles, gear, etc. _Vehicles All gear
g. Do government-sponsored game scouts conduct patrols? _No_____
h. If so, do they have the ability to arrest? _No_____
i. Do you offer rewards to poaching informants leading to arrest? Yes _x___ No ____
j. Do you offer rewards to poaching informants upon conviction? Yes__x__ No ____
k. Please describe the operator's anti-poaching expenditures over the past 3 years below:

Type of Expense	Year 1 (_2017__) Spending	Year 2 (_2018__) Spending	Year 3 (_2019_) Spending	Remarks
Scout Salaries	18000	18000	18000	
Equipment				
Vehicles	5000			
Fuel				
Rewards				

Others:_____				
Totals	23000	18000	18000	

l. What currency are the expenditures given in? USD

Anti-Poaching Results

Type	Year 1 (_2017___)	Year 2 (__2018__)	Year 3 (__2019__)	Remarks
Poaching Incidents Discovered	6	11	20	
Elephant Carcasses Observed	5	3	2	
Lion Carcasses Observed		3	2	
Leopard Carcasses Observed	1	3	4	
Ivory Poachers Observed				
Bush Meat Poachers Observed	4	3	5	
Illegal Logging Observed				
Other Poachers Observed			8	
Poachers Convicted			5	
Snares/Traps Collected	33	84	213	
Firearms Confiscated				
Vehicles Confiscated				
Bicycles Confiscated			1	
Boats/Nets Confiscated	6	8	11	
Tusks Recovered				
Others: _____				

Community Investment

a. Does the company give money or goods/services to local communities? Yes _x___ No ____
b. If so, what percentage/amount is shared and how often, and how much is voluntary (i.e. more than required by law)? There is a compulsory component through CAMPFIRE and a voluntary component through CSR.
c. Does the company provide game meat to nearby communities? Yes _x___ No ____
d. If so, estimate the amount/value of meat contributed in the last year and describe that distribution program: All the meat from each hunt goes to the community where the animal was shot.
e. Are there any programs run by the company that address human-wildlife conflict (e.g. patrolling field during harvest, PAC hunts, insurance programs); please describe. Yes there is ISIBAYA Conservation Project in partnership with us, we do PAC hunts.
f. Describe any consolation payments made to local residents that have incurred damage by game species: ISIBAYA Report Attached

Species	Damage Caused	Consolation Paid, Year 1 (_2017___)	Consolation Paid, Year 2 (_2018___)	Consolation Paid, Year 3 (_2019___)	Remarks
Elephant	Crop Raiding		1800	2900	Not paid through Mapassa
Lion	Killing Livestock				
Leopard	Killing Livestock			8600	As above
Other: _____					

g. What currency are the expenditures reported in? USD

h. Describe any community projects paid for by the company:

Product/Service	Spending, Year 1 (_2017___)	Spending, Year 2 (_2018___)	Spending, Year 3 (_2019___)	Remarks
Education (classrooms, offices)	10000			Classroom block
Education (supplies, fees)				
Health (clinics, offices)				
Health (equipment, salaries)				
Product/Service	**Spending, Year 1 (__2017__)**	**Spending, Year 2 (_2018___)**	**Spending, Year 3 (_2019___)**	**Remarks**
Community Scout Salaries				
Community Anti-Poaching				
Local Government Activities				
Infrastructure Improvements				
Sports Teams Funded				
Construction Materials Donated				
Other: _____				
Other: _____				
TOTALS	10000			

i. What currency are the expenditures reported in? USD

j. Include receipts and photographs of projects, if available.

Company Clientele

a. How many U.S. clients did the company have in the past 3 years (indicate years), what percentage of clients were from the U.S., and what fees did they pay?

2017-2019	Elephant	Lion	All Species
Number of U.S. Clients	8	6	24
Percentage of Clients from the U.S.	70%	90%	45%
Trophy Fees Paid by U.S. Clients	80000	30000	100000

b. Approximate amount/percentage of company's revenue from U.S. clientele:+/-65%

Hunting Policies

a. List the expertise required for the company's professional hunters (i.e. abilities and experience):
All PH's are require to have sat and passed all the necessary examination required by law. Zimbabwe exams are of the highest standard in Africa. They are required to have a medical certificate in general first aid. Our PHs need to have vehicle maintenance knowledge. They need to be able to converse with the local people and be able to deal with any situation they are faKayced.

b. Are there age/sex requirements for take of trophies? If so, please describe how this is enforced for each species (attach methodology, if available): yes. All cats have an age limit of 5yrs old or more and male only. The PHs training would enable him to tell if the animal is before it is shot. There is no size or age limit for elephant but only males can be shot. There are serious fines for shooting females or underage animals.

c. Are there hunt return forms that must be reported to officials? If so, please include a copy of these forms or confirmation of their receipt for the past 3 years. Yes there is a hunt return form for every client we have and for every concession/private land and council land we hunt on. Attached copy of Troy's return

Other Information

Provide a narrative of other enhancement information about the operation, such as any additional hunting policies, maintenance of the concession, management activities, research, community involvement and outreach, etc.

All the information above covers all that our company is, and the laws of our country govern how we run our company.

I declare that the foregoing is true and correct.

04th March 2021

Sign Name and Date

Vaughan Whitehead-Willson

Director

Print Name and Title

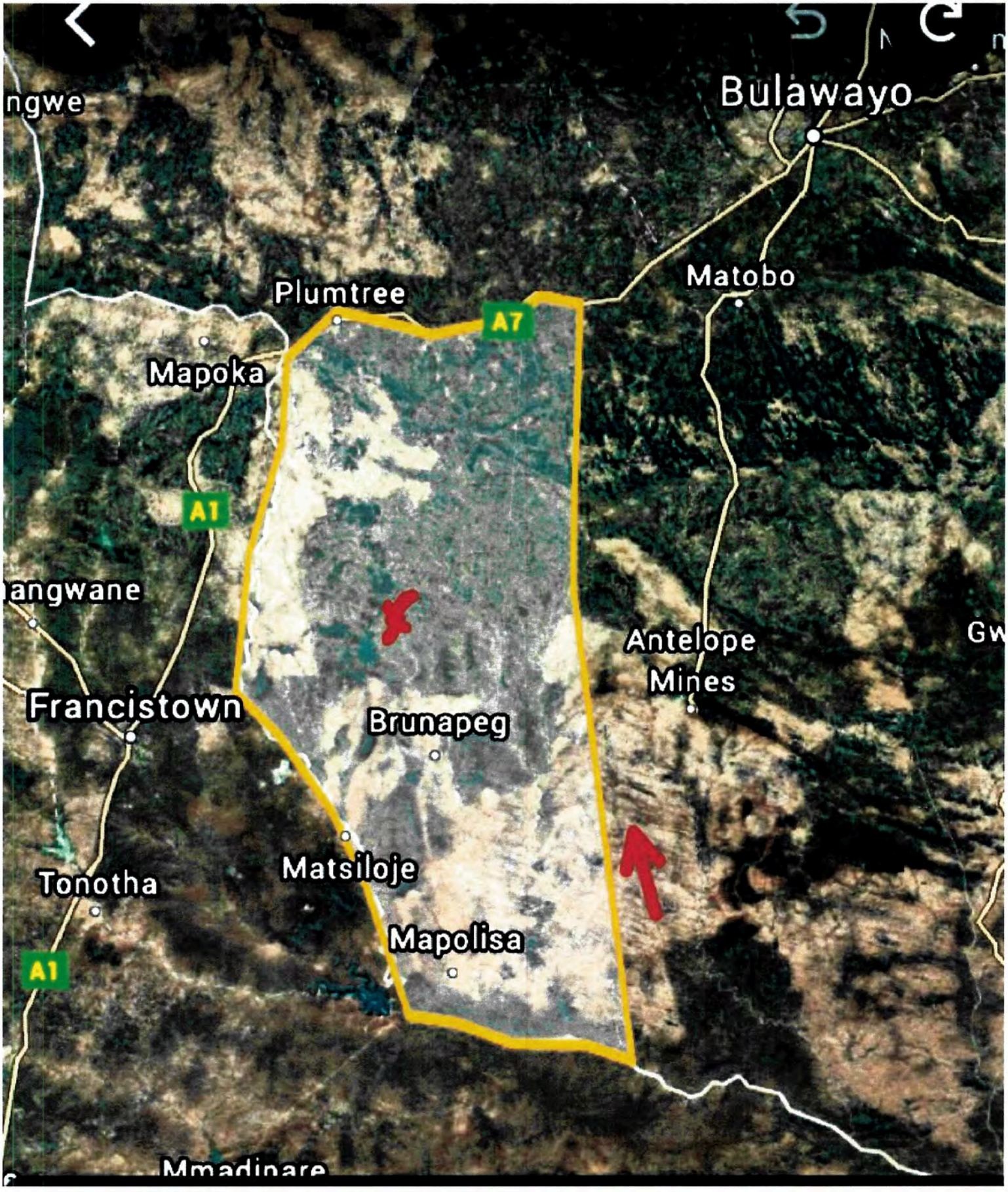
APPLICANT:

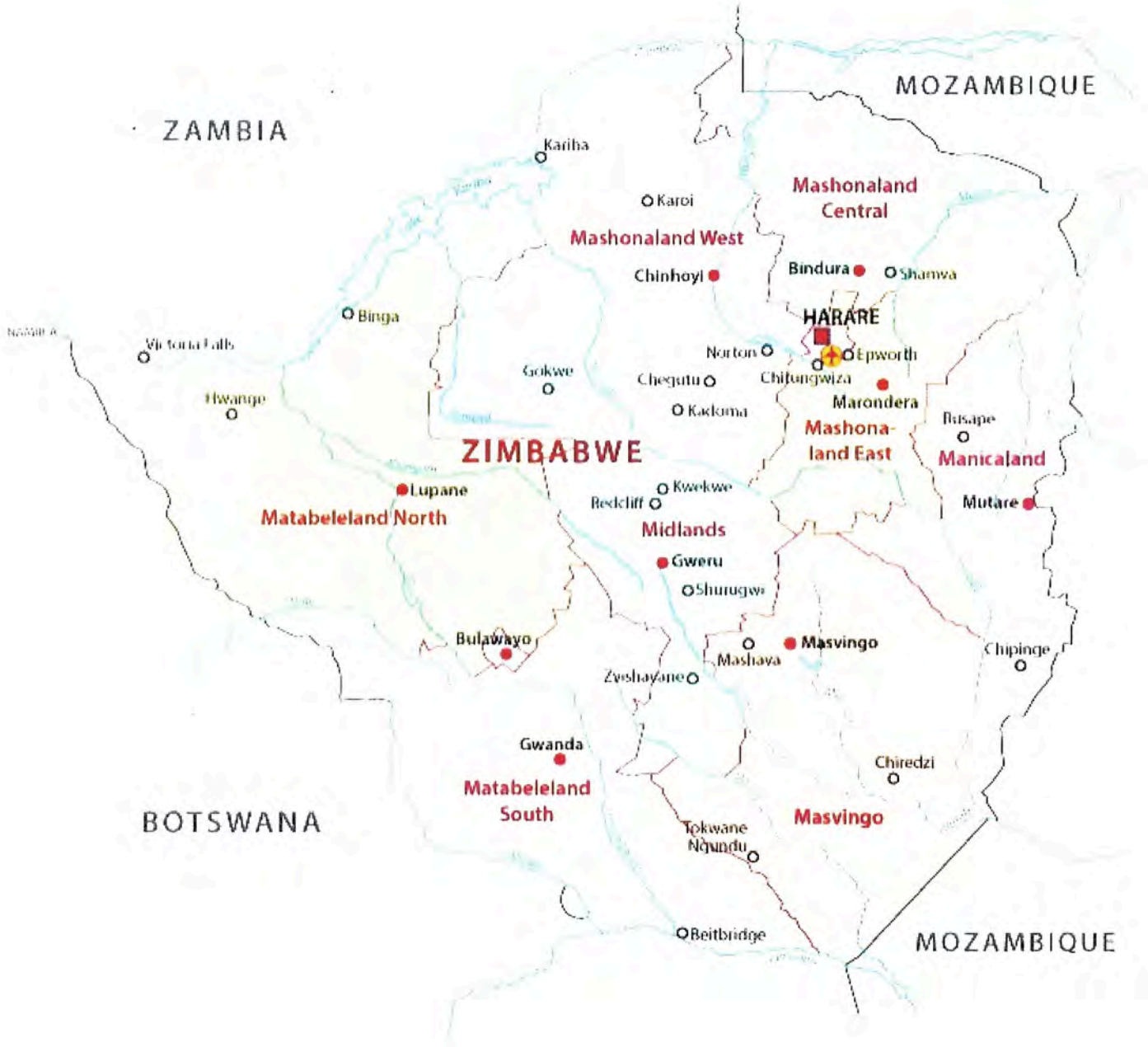
DONALD TROY MORITZ

MAP

OF

HUNT AREA


ngwe
Bulawayo
Plumtree
A7
Matobo
Mapoka
A1
angwane
Antelope
Mines
Francistown
Brunapeg
Matsiloje
Tonotha
Mapolisa
A1
Mmadinare


MOZAMBIQUE
ZAMBIA
Kariba
Karoi
Mashonaland Central
Mashonaland West
Chinhoyi
Bindura
Shamva
HARARE
Binga
Victoria Falls
Norton
Epworth
Gokwe
Chegutu
Chitungwiza
Marondera
Hwange
Kadoma
Mashona-land East
Rusape
ZIMBABWE
Manicaland
Lupane
Kwekwe
Redcliff
Mutare
Matabeleland North
Midlands
Gweru
Shurugwi
Bulawayo
Masvingo
Mashava
Chipinge
Zvishavane
Gwanda
Chiredzi
Matabeleland South
Masvingo
BOTSWANA
Tokwane Ngundu
Beitbridge
MOZAMBIQUE

APPLICANT:

DONALD TROY MORITZ

CITES

SHOWCASING IMPLEMENTATION OF ZIMBABWE'S NATIONAL ELEPHANT MANAGEMENT AND ACTION PLAN

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

Eighteenth meeting of the Conference of the Parties
Geneva (Switzerland), 17-28 August 2019

SHOWCASING IMPLEMENTATION OF ZIMBABWE'S NATIONAL ELEPHANT MANAGEMENT PLAN (2015-2020) AND ITS NATIONAL ACTION PLAN

1. This document has been submitted by Zimbabwe* in relation to proposal CoP18 Prop. 11 and agenda items 17 and 69.

2. In January 2016, Zimbabwe adopted its National Elephant Management Plan (2015-2020) – EMP, following a series of participatory National and Regional workshops in elephant range areas started in 2014. This document shows the implementation progresses of the EMP achieved since its inception in 2016.

3. It is an ambitious plan that includes the cooperation of all stakeholders to achieve its aims. The provision in the plan to establish regional elephant management committees that will include representative from the range of stakeholders that have a strong interest in elephant conservation is a major step in devolution of responsibility.

4. The Implementation of the action plan requires more human and financial resources than are currently available for the conservation and management of elephant in Zimbabwe. It requires resources to cover the ground effectively and at a rough estimate of at least $12,000,000 per annum in operational budget to protect the nearly 66,000 km^2 of elephant range (inside and outside Protected Areas) in the country. This estimate is based on the rule of thumb of $200 per km^2. Some of these resources are mobilized through Global Environment Facility (GEF) and European Union (EU) funded projects being implemented in Zimbabwe as well as a number of stakeholders including WWF, Frankfurt Zoological Society, Conservation Force, The Tashinga Initiative, Zambezi Society, African Wildlife Fund and private sector including hunting and photographic operators.

5. By any standards Zimbabwe has a proud history of successful elephant conservation. Elephant populations in most of Africa were reduced to very low numbers by the late 19th Century. In 1897 approximately 100,000 tons of ivory were exported from Africa. In 1900 it was feared that elephant might become extinct south of the Zambezi River. Using historical accounts of elephant numbers, backwards extrapolations based on population growth rates, and known levels of elephant kills it is unlikely that Zimbabwe held more about 4,000 elephants in 1900. More than one hundred years later, in 2014, this number had increased twenty-fold to nearly 83,000 elephants despite attempts to limit elephant population growth between 1960 and 1989 by culling 45,000 elephants in tsetse control areas and state protected areas. The primary rationale for limiting elephant numbers in protected areas was to reduce their impact on woodland habitats and the loss of plant and animal species as result of elephant-induced habitat change. Elephant impacts on woodlands and associated biodiversity is still a concern today. (References in the EMP)

6. Zimbabwe is satisfied with how the implementation of the EMP is progressing to date: elephant poaching declined since the inception of the EMP although more resources are necessary to

The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

effectively implement some of its components. To this end we want to reaffirm that the cost of conserving this elephant population, estimated to be of about 83,000 in 2014, is enormous and we cannot continue to fully implement the EMP without the resources derived from the sustainable utilization of elephants. These are not donor dependent resources, but in-country generated ones such as tourism hunting and live sales.

7. In addition, Zimbabwe has embarked in important reforms in wildlife management funded by the European Union. The Zimbabwe Parks and Wildlife Management Authority (ZPWMA) has been deeply restructured and this new approach is giving important results.

8. A comprehensive review of the CAMPFIRE programme was undertaken (2017-18), setting new conditions for the granting of Appropriate Authority status for the management of wildlife on communal land. Draft guidelines have been submitted for Ministerial consideration. The National CBRNM policy derived from the EU funded CAMPFIRE review is being finalized. This new policy seeks to improve the devolution of rights and responsibilities to grassroots communities' institutions. A fully-fledged new Community Liaison and Interpretation Service department was established at ZPWMA in 2018 whose Strategic Plan has been approved in the same year.

9. This document is based on the National Action Plans included in the EMP which are reported verbatim in the following tables with the addition of a fourth column to the right which shows the implementation progress from 2016 to June 2019.The EMP also included four Regional Actions Plans which are being implemented by the Regional Elephant Committees.

NOTE: For Acronyms and Abbreviations please refer to the ZIMBABWE NATIONAL ELEPHANT MANAGEMENT PLAN (2015-2020) hyperlinked in point 1 above

Zimbabwe National Elephant Management Plan (2015-2020)

3. VISION, TARGETS, AND KEY COMPONENTS

Long-term Vision:
To conserve elephants at levels that will enable them to contribute to biodiversity, national development and Zimbabwe's cultural heritage

Targets:

1. ***To maintain at least four demographically and genetically viable elephant populations in Zimbabwe***
2. ***To maintain or increase core protected range of elephant in Zimbabwe***
3. ***To maintain numbers / densities of elephant at levels that do not adversely impact on biodiversity conservation goals while contributing to economically viable and sustainable wildlife-based land uses in Zimbabwe***

Key Components	**1. Protection and Law Enforcement**	**2. Biological Monitoring and Management**	**3. Social, Economic and Cultural Framework**	**4. Building Conservation Capacity**	**5. Coordination, Collaboration and Programme Management**
Strategic Objectives	Objective 1. Ensuring effective protection of all populations of elephant in Zimbabwe	Objective 2. Implementing effective biological and ecological management to achieve populations that are within upper and lower acceptable limits in numbers and distribution	Objective 3. Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development	Objective 4. Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and used efficiently and effectively	Objective 5. Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives
Outputs	Output #1: Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented	Output #2: Adaptive management to achieve viable populations in all four sub-populations implemented	Output #3: Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased	Output #4: Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational	Output #5: Coordination mechanisms to assess and review adaptive elephant population management and strategic planning established and operating

4. ACTION PLANS

***4.1 PROTECTION AND LAW ENFORCEMENT** – Ensuring effective protection of all populations of elephant in Zimbabwe*
***Output:** Management actions, security and law enforcement to minimise illegal losses of elephants and their habitats from all populations implemented*
***KPI:**Illegal losses of elephant from at least 90% of elephant populations reduced to less than 5% by 2020, and less than 5% of elephant habitats encroached by settlements by 2020*
***MV:** National level monitoring data on illegal activity, successful convictions, carcass records, status and trends of all elephant populations; verified data on extent of encroachment and of available elephant habitat*

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation progress as of June 2019
1. For each key population establish a highly trained rapid response anti-poaching unit for deployment to areas under threat	1. An equipped rapid response unit established and operating jointly with Zimbabwe Republic Police (ZRP) in each region by June 2016	Inception report for each unit Monthly reports of operation from each unit Number of joint operations	Multi-stakeholders rapid response Units were established in elephant range areas and regularly reporting. Table 1 shows a summary of law enforcement in the period 2016-April 2019. ZPWMA has been implementing the CITES MIKES (Minimizing of the Illegal Killing of Elephant and Other Endangered Species) project for the Mana-Sapi-Chewore complex of the Lower Zambezi Valley since latter half of 2016 to date, with the assistance of The Tashinga Initiative (a Zimbabwe-based NGO), providing an enabling environment in which Rangers can effectively operate.
2. Informer systems enhanced and supported at national, regional and local levels	1. An active informer system/network operating within each region by Jan. 2016 2. National level informer system targeting middle men and higher crime syndicates operating by Jan. 2016	Operational reports Records of arrests and successful prosecutions resulting from informer reports Records of payments for information	ZPWMA went on an extensive informant recruitment exercise targeting crime hotspots in all elephant range areas and at national level and this was mainly guided by the Domesticated SADC Law Enforcement and Anti- Poaching Strategy (LEAP). This involved thorough vetting and profiling of the informer sources which were systematically placed into different categories, reliable, most reliable and those categorised as unreliable had their services terminated. A sound informer reward system was approved and this included monetary and non-monetary incentives. The system operates on an informer and handler confidentiality basis (no group running of contacts for effectiveness and security reasons) All arrests and successful prosecutions are duly recorded. Payments of informants are duly recorded and audited. Four additional investigations and intelligence offices where opened in Binga, Tsholotsho, Chiredzi and Chirundu to assist in curbing illegal activities.
3. Improve investigation and prosecution of crimes	1. At least two of law enforcement staff trained in scene of crime collection and preservation of evidence,	Staff training records Monthly reports Court records	Law enforcement staff received specialized training on scene of crime attendance, documentation and evidence preservation in all range areas.

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation progress as of June 2019
	ballistics evidence, etc. in each area/station level 2. Percentage of investigations resulting in successful prosecutions from each region greater than in 2014 3. Monthly liaison sessions on wildlife crime and law enforcement held with members of the judiciary	Minutes of meetings with judiciary (prosecutors and magistrates)	Members in the specialised Unit of ZPWMA, Intelligence and Security members underwent specialised and advanced training courses in intelligence gathering, investigations, docket compilation, scene of crime attendance and evidence gathering and preservation among others. The need of an effective detection, investigation and prosecution system cannot be over emphasised. Training of members of the security forces involved with investigating wildlife crimes has been a major thrust in the ZPWMA's drive to provide members with skills to combat illegal wildlife trade. Through continuous lobbying and holding awareness workshops with judiciary, we have witnessed an improved judiciary chain where prosecution of environmental and more specific, wildlife crimes is fully functional and effective. A deliberate strategy targeting prosecutors was developed, as such many in jurisdictions relating to environmental crimes received training through the support of Government, ZPWMA, NGO stakeholder support and UNDP funded programs. Expeditious handling and speedy finalization of cases is now being witnessed in all provinces. Conviction rate is quite encouraging especially in matters involving illegal possession of elephant ivory and specially protected animals and products thereof. Matabeleland North Province encompassing Hwange National Park and Matetsi Block in particular Hwange Magistrate Court, Binga and Victoria Falls respectively have commendable cases before the court finalized with outstanding conviction rates. Mashonaland West Province is also a leading example in handling of wildlife cases where all wildlife cases on their court role are given high priority in particular Kariba Court. A deliberate strategy to engage other jurisdictions around the country is underway so that uniform handling of cases is achieved in all our lower Courts and Higher Courts where sitting Judges need to have the same appreciation on the negative side of poaching and illegal wildlife trade.
4. Set up and maintain national and local intelligence databases	1. National, regional and local databases recording and analysing illegal activity (nature, time and locality of activity and profiles of those involved if known)	Inspection of operating databases	An up to date wildlife crime database is in place where all criminals arrested and those on wanted lists nationally are profiled capturing the following information: - all individuals personal information, offence committed, police station references, date of arrest, exhibit references, court references to include name of magistrate and

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation progress as of June 2019
			prosecutor, progressive stage of the case, outcome and details of those on warrant of arrest as well as previous convictions etc. Wildlife criminal syndicates are continuously being profiled and kept under surveillance in an effort to disrupt their criminal activities and networks. Promulgation of the Assets Forfeiture Act and the Anti-Money Laundering and Anti-Terrorism activities perpetrated by organised criminal gangs has come handy in tracing proceeds of crime and subsequent forfeiture. Currently Zimbabwe is working on trying to link databases with all local Enforcement Networks so that all convicted prisoners out on bail pending appeal are monitored so that they are compelled to prosecute their own cases.
5. Enhance social (community) involvement in law enforcement through incentive schemes and introduction of hotlines for reporting wildlife crime	1. Incentive schemes (see Section 4.3) that encourage the public and members of rural communities to contribute to law enforcement (e.g. through informer hotline) established in each region 2. Larger number of incidents of community contribution to law enforcement (e.g. whistle blowers) by Dec. 2016 3. Number of hotlines established and assessment of their performance	Record of operating incentive schemes and hotline reports Record of performance of hotlines	Community based programs such as CAMPFIRE has been revamped to ensure that communities derive benefits from the resource. Community policing initiatives are constantly being improved in order for members to report all suspicious activities in their areas of operation. A number of hotlines and WhatsApp groups have been created for ease of communication. Wildlife crime consultative forums involving the Village, ward, District and Provincial levels were set up and are run by the Wildlife Enforcement Networks for effectiveness. Community projects such as bee keeping and fruit production and sporting clubs are being funded in various provinces in an effort to keep the youths out of crime. Tremendous achievements were realised through the community whistle blower facility as the communities living adjacent to the park are usually the first line of defence. Continuous engagement of the local chieftainship who are the vanguard of the natural resources in their areas of jurisdiction shall remain one of the pillars of our protection strategy. Communities benefit meat from problem Animal Control in their areas of jurisdiction as a protein supplement. A strong gender consideration has also been made through the founding of the Pfundundu women anti-poaching group. Wildlife community rangers from Mbire CAMPFIRE District were trained at the Mushandike Wildlife College.

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation progress as of June 2019
			A new concept of community conservancies has been established in the following areas Mucheni, Sidinda, Mavhuradonha and Kariyangwe.
6. Reduce illegal settlement in all wildlife areas	1. Illegal settlements reduced to less than 5% of wildlife areas by 2020 (i.e. state and community protected areas)	Records and maps of illegal settlements and of wildlife land recovered	Illegal encroachment in wildlife areas have been remotely, satellite-mapped in 2018. Verification of the above through ground surveys is in progress in order to assess the level of encroachment and propose and implement remedial measures by 2020. Mapping of salt licks and perennial water points to monitor and prevent poisoning has been done in major wildlife areas.
7. Ensure full compliance with hunting and guiding regulations and quotas set	1. Quota setting models reviewed and, if necessary, revised models implemented by Dec. 2016	Proceedings of workshop and revised models Record of infringements and penalties (historical analysis)	All quota setting workshops were duly reported and minutes are available. Tourism hunting is providing substantial and important revenues for conservation. Since October 2014 a new electronic hunting monitoring system has been implemented. All hunts are registered, authorized and acquitted online providing an efficient framework for timely monitoring. All big-game hunts (Elephant, Lion, Leopard) are escorted by ZPWMA personnel. Quota setting models have integrated GIS-based spatial analysis as well as a review of the quotas based on an analysis of the 2014 countrywide elephant and other wildlife aerial surveys. This has led to the introduction of innovative approaches including block quota allocation depending on the species biological and ecological needs as well as the introduction of age-based quota setting for lions and leopards. Infringements and penalties related to hunting are duly recorded and a historical analysis has been carried out showing a marked decline in the period 2016-2019 around negligible levels. Private sector involved in coming up with hunting ethics to monitor all hunts in Zimbabwe.
8. Revisit the appointment of honorary officers to assist in law enforcement	1. Proposed revision to the Parks and Wildlife Act drafted and submitted to Ministry EWC by Dec. 2015.	Draft of proposed revision to the Act and letters to Ministry	This aspect will be dealt within the framework of a GEF project (see point 4.3.2) which foresee the revision/improvement of some National Legislations.

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation progress as of June 2019
9. Enhance international and transboundary collaboration in law enforcement	1. Quarterly meetings on law enforcement collaboration and activities between law enforcement agencies of neighbouring countries established at regional / transboundary park level by Oct. 2015 2. Broader collaboration with Interpol, TRAFFIC, TWENS, and other international law enforcement entities	Minutes of meetings Record of joint cross border law enforcement activities Records of participation in workshops, TWENS, other examples of international law enforcement collaboration	Zimbabwe continues to undertake a series of intelligence related meetings as well as operations with neighbouring countries including Mozambique, South Africa and Zambia (Table 1.). Real-time intelligence information sharing with neighbouring countries resulted in arrests of wildlife traffickers being arrested and a number of exhibits such as pangolin scales and ivory seized. The Republic of Zimbabwe also undertook a joint Bilateral meeting with neighbouring countries regarded as a transit point of most poached wildlife products such as ivory and Rhino horns from Zimbabwe. This also helped in discussion of measures which should be put in place to guard against cross border smuggling and also alignment of stiffer penalties. Records are kept in the form of documents and reports. These engagements have resulted in the arrest of a number of poachers and recovery of firearms, ammunition as well as elephant ivory that was being smuggled by cross-border poaching gangs including a notorious Rhino Poacher. Several bilateral meetings were held with neighbouring countries law enforcement /intelligence agencies as well as several intelligence joint operations were carried out. It is important to note that all TFCAs where Zimbabwe is participating security committees have been established enhancing transboundary law enforcement collaboration. Zimbabwe has also participated in several INTERPOL-led meetings, workshops and operations related to fighting wildlife crime including the operations Thunderbird (2017), Thunderstorm (2018) and Thunderball (2019). These operations resulted in important seizures of wildlife specimens and arrests of several wildlife poachers/smugglers. Zimbabwe has participated in three multilateral meetings of the Defence and Security Chiefs on anti-poaching involving all its neighbouring countries.

***4.2 BIOLOGICAL MONITORING AND MANAGEMENT** – Implementing effective biological and ecological management to achieve elephant populations that are within upper and lower acceptable limits to change in numbers and distribution*
***Output**: Monitoring programmes and research to support science based adaptive management of elephants in all populations implemented*
***KPI**: Elephant population within each sub-region is genetically and demographically viable and within the preferred lower and upper limits in 2020*
***MV**: Results of aerial and other censuses and analyses of population structure and viability*

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
1. Monitor elephant population numbers, structure, mortality and trends using aerial, ground and ranger-based methods among others	1. Elephant populations and carcass ratios estimated and distribution determined from aerial surveys at least every three years for each regional population 2. Records available for all areas of all elephant deaths with data on dates, locations, cause of death, reason killed (trophy hunting, problem animal control, natural mortality, management, illegally killed elephants, etc.), age, sex, tusk size	1. Survey and patrol reports 2. Completed annual returns for elephant mortality from all areas	Elephant Monitoring is a routine exercise countrywide. After the 2014 aerial survey all areas have been regularly monitored with ground or range-based methodologies. Aerial surveys have been carried out in Gonarezhou NP in 2016 and 2018 showing slight fluctuations around a certain average which is above carrying capacity. Aerial surveys for other areas within the elephant range are starting in August 2019 and will be concluded in October 2019. Elephant mortality registers are used at station level and are sent regularly to HQ. As of June 2019, 71 elephants are followed through satellite collars in different areas of their range in Zimbabwe. These collars provide an important early warning planning tool to prevent conflicts in communal areas. They also provide insight into habitat selection, ranging behaviour as well as connectivity. Spatial Monitoring and Reporting Tool (SMART) has been extended through the Parks estate from 1,063,600ha in 2015 to about 3,061,300ha in 2019 respectively. The adoption and promotion of SMART has been done largely to support law enforcement, research and monitoring. As such SMART is being implemented in most of the elephant range areas resulting in detailed monitoring and strategic law enforcement actions. The CITES MIKE program has been extended from an initial 2 areas Chewore and Nyaminyami in 2015 to Manapools-Sapi and ZPWMA is currently considering adding other areas such as Gonarezhou NP and Hwange NP. Table 2 shows the temporal changes in the estimated elephant numbers in Zimbabwe 1980-2014 and Table 3 shows the trends in elephant populations in Gonarezhou National Park and some adjacent areas updated with the results of the 2018 Aerial Survey. A research priority guide has been developed that gives research priorities to elephants and rhinos have been developed, approved and is being implemented.

2. Monitor impacts of elephants on habitats and diversity of selected indicator plants and animal species	1. Annual trends in tree canopy cover 2. Annual trends in species diversity 3. Annual trends in selected indicator species	Monitoring reports	Monitoring of elephant impacts on biodiversity has been and is being carried out routinely in elephant range areas with monthly reports complied by field ecologists. Monitoring is conducted with various methodologies such as transects, exclusion and experimental plots (monitoring vegetation with or without elephants), and monitoring plots to study vegetation structure and composition. Furthermore, other methodologies such as geo-spatial tools are used.
3.Use research findings, expert opinion and informed public opinion to establish thresholds of potential concern (TPCs) to initiate management action in respect of elephant impacts on protected areas.	1. Thresholds of potential concern (TPCs) established for at least five key areas / habitats and selected indicators of change monitored every two years	Documented TPCs	Although TPCs were not formally established due to the high variability of ecosystems and cost to obtain uniform baseline data, indicators derived from densities, damages to biodiversity (canopy cover, species diversity) and infrastructures are used to initiate management actions. Furthermore, pending the availability of funding, ZPWMA is willing to update the science included in the 1996 document "*Elephant Management in Zimbabwe*" (3rd ed.), which contained a review of wildlife management science related to Elephants. The end result is not only to provide updated scientific evident on impact of elephants on biodiversity but also to elaborate sound scientific based TPCs.
4. Carry out appropriate management actions when populations exceed, or are projected to exceed, TPCs	1. Management actions taken in relation to TPCs being exceeded (e.g. manipulate water supplies)	Records of management actions considered and actions taken	As a result of the indicators referred in point 3 above, in 2018, 100 elephants were translocated from Save Valley Conservancy to Hurungwe Safari Area and the operation was successful. A further 50 elephants will be translocated to Zambezi Valley (Sapi Safari Area) from Malilangwe. Live sales of elephants to international destinations are done to depopulate high elephants' numbers, and to generate financial resources for conservation programmes. Zimbabwe has also pledged the availability of elephants to several African countries for reintroduction purposes.
5. Monitor age and quality of trophies and adjust quotas to maintain desired levels of trophy quality	1. Database and field recording protocols and forms established and operating by Dec. 2015 2. Annual analysis of trophies taken as % of quota, and trend in trophy quality and ages of trophies.	Consolidated annual records of trophies taken Annual report of trophy quality by region for quota setting workshop	Databases and protocols on measurements including weight and age of harvested elephants are in place and informing ecologists and managers especially during the quota setting process. Furthermore, a new utilisation database is operational since 2018 capturing several aspects of wildlife consumptive use including mortality records. Table 4 shows the Trophy Elephant off-takes and revenues. Starting from 2014 elephant offtake from safari hunting has been reduced mainly due the suspension on import of elephant trophies by the United States of America.
6. Define current elephant range and explore options for extending range and	1. Map of current elephant range based on 2014 survey results and other information available	Current estimate of elephant range and subsequent bi-annual estimates and associated maps	After the 2014 countrywide aerial survey, elephant range was estimated at 65,367km^2 and maps were produced. Updates on the range estimation are ongoing and being analysed.

maintaining connectivity between fragmented populations	2. Estimates every two years of range expansion / contraction for each region based on all available information 3. Use and effectiveness of corridors assessed, inter alia, from aerial surveys, ground sightings and reports, satellite collared animals	Reports on elephant locations from ground and aerial sightings	Corridors are being assessed also through information derived from collared elephants at national and Sub-Regional levels in TFCA areas. There are two projects approved for funding by the African Elephant Fund in Mana Pools National Park and Sengwa Research Station.
7. Reporting to international monitoring systems (e.g. AED, ETIS, and MIKE)	1. Timely reports submitted as required with copies to regional and national levels	Copies of reports lodged at regional and national levels	ZPWMA is regularly reporting to international monitoring systems.
8. Recognising the long response time of elephants to management interventions, use modelling to project alternative outcomes or scenarios of management	1. Number of instances in which models were used to project alternative outcomes of elephant management actions	Management and associated modelling reports	A total of 32 (28 published, 4 in press) studies used mathematical and environmental models to predict alternative outcomes in various echelons of elephant management. Most of the studies used models to make predictions in the following subjects: law enforcement, climate change, population monitoring, connectivity and corridors, climate change and human and wildlife conflict.

***4.3 SOCIAL, ECONOMIC AND CULTURAL FRAMEWORK** - Implementing strategies that enhance the contribution of elephant to rural livelihoods and national development*
***Output:** Fair distribution of financial benefits from elephants improved and tolerance for living with elephants increased*
***KPIs:** 1. Annual assessment of elephant derived benefits reveals that they increasingly dispersed more equitably between deserving stakeholders and the contribution to national development is assessed; 2. Trends in elephant numbers and human wildlife conflict in non-protected areas assessed and reduced*
***MV**: Report on annual assessment of the distribution of revenues from consumptive and non-consumptive use of elephants and record of HWC incidents*

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
1. Provide incentives and promote partnerships and joint venture opportunities to strengthen elephant management, including across land use boundaries	1. Policy instruments that demonstrate and establish incentives to conserve elephants 2. Higher levels and increasing trends of private and community investment in elephant conservation measures 3. Lower number of poaching incidents/ higher number of arrests based on prior information and leads from communities / land holders	Documented policies and list of operating partnerships / joint ventures that promote elephant conservation and management Record of investments in elephant conservation measures assembled by elephant programme manager/ coordinator	A comprehensive review of the CAMPFIRE programme was undertaken (2017-18), setting new conditions for the granting of Appropriate Authority status for the management of wildlife on communal land developed. Draft guidelines have been submitted for Ministerial consideration. For CAMPFIRE areas 33 Safari Operators/Outfitters maintained their investments in 15 major districts. Key trophy species (elephant, buffalo, leopard, hippo, crocodile and lion) contribute approximately US$1.2 million/year (Source: Role of Trophy Hunting of Elephant in Support of the Zimbabwe CAMPFIRE Program, Dec 2016) to CAMPFIRE community revenues annually. Elephant account for 64% of these fees. Data for the period 2016 to date is still being collated for analysis. The National CBRNM policy derived from the EU funded CAMPFIRE review is being finalised. This new policy seeks to improve the devolution of rights and responsibilities to grassroots communities' institutions. A fully-fledged new Community Liaison and Interpretation Service department was established at ZPWMA in 2018 whose Strategic Plan was also approved in the same year. At local level a Community Engagement Strategy was developed, adopted and being implemented in the South East Lowveld which is hosting the second largest elephant population in the country. Elephant poaching in the following districts: Binga, Bubi, Bulilima, Chipinge, Gokwe North, Hwange, Matobo, Mbire, Nyaminyami, Tsholotsho, has continued to decline. Standard Operating procedure for capture and translocation of elephants and other species has been developed. Socio-economic & cultural activities (TFCA programs and community benefits) have also been promoted largely through regulated sport hunting as mechanism to converts wildlife

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
			(Elephants) into assets for the benefit of local people and the country as a whole, thus promoting wildlife production as an alternative land use option in light of competing options such as agriculture (livestock and crop production). The absence of sustainable elephant utilisation is likely to accelerate wildlife habitat and range loss.
2. Explore additional elephant-based tourism and sustainable utilisation opportunities	1. Higher number of elephant-based tourism and/or sustainable use projects established (e.g. PPCPs)	Record of projects initiated and their success rates	During this reporting period, four CAMPFIRE Conservancies have been established namely, the Jamanda and Naivasha Conservancies in south East Lowveld, the Ume Conservancy in Kariba and the Sidinda CAMPFIRE Conservancy situated in Hwange District in northwest Zimbabwe. Investment have been made in community-based projects such as the Sidinda through the successful re-introduction of 100 buffalo and other plains game to complement resident population of plus or minus 200 elephants. Gonarezhou Conservation Trust was formed to streamline the long-standing partnership for the management of GNP between ZPWMA and Frankfurt Zoological Society. The Trust was initiated in 2016. The Government of Zimbabwe, through the Ministry of Environment, Tourism and Hospitality Industry (METHI), in partnership with the UNDP is implementing a 6-year GEF funded project entitled "Strengthening Biodiversity and Ecosystems Management and Climate-Smart Landscapes in the Mid to Lower Zambezi Region of Zimbabwe." The project is implemented under a National Implementation Modality (NIM) where METHI is the Implementing Partner. Through this project six CAMPFIRE Wildlife Conservancies with a total area of 334,500 ha will be officially established in the Zambezi valley at Pfundundu and Mukwichi in Hurungwe, Mbire North, Kanyurira/Masoka and Karinyanga in Mbire, and Mavhuradonha in Muzarabani District.
3. Facilitate the transparent distribution of the benefits and costs of elephant management and conservation	1. Policy instruments adopted that result in more transparent and equitable benefit distribution than benchmark assessed in 2015	Annual record of distribution of elephant derived benefits (revenue, development projects, products received by beneficiaries) and costs of elephant conservation	All revenues derived from elephant consumptive and non-consumptive use accruing to communities are recorded and audited. This revenue to date has largely been used to invest in communal social services such as schools, clinics, boreholes, dip tanks, grinding mills, water and sanitary services. With increased global support, CAMPFIRE revenues can be increased to providing household level incomes, thus

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
			contributing towards sustainable development. Costs of elephant conservation remain high in CAMPFIRE Districts. However, there is a general decline, for example, in the number of human injuries and deaths in key CAMPFIRE Districts (2016-2018) such as, Gokwe North (2 injuries in 2016 and no deaths; no injuries or deaths in 2017 and 2018), Chipinge (1 death and 1 injury in 2016; no death or injury in 2017 and 2018), Hwange (1 death and no injury in 2016; no deaths or injuries in 2017 and 2018), Nyaminyami (1 death and no injuries in 2016; no deaths or injuries in 2017 and 2018). This is due to improved conservation education among communities.
4. Implement effective techniques and land use strategies, and protocols to mitigate human-elephant conflict	1. Higher levels of investment (funds and manpower) provided for mitigating human-elephant conflict by ZWMA, communities and partners 2.Protocols for land use and HEC developed and implemented by June 2016 3. Conduct research and develop strategy for wildlife-based land use systems and promotion of the establishment of community conservancies for areas within the elephant range with high human population densities and human settlements	Record of human-elephant conflict incidents (in HEC Database) Summaries from human-elephant conflict database reported at annual meetings of Elephant Management Committees Research report on strategies to develop wildlife-based land used system	Human elephant conflict (HEC) occurrence is summarized in Table 5 and this shows an increased number of elephants killed through problem animal management. Since 2015 there have been an increase in investments in Human Elephant Conflict mitigation by several partners working with communities; for example, CAMPFIRE has successfully developed an innovative Human and Elephant mitigation system in Tsholotsho district that has seen communities doubling their harvests of cereal crops over three years, through support from a GEF 5 project. ZPWMA launched the drafting of the National Policy on HWC in 2018. Of major concern is the increasing number of elephants destroyed/lost due to Problem Animal Control actions which have risen from an estimated 33 in 2016 to 92 in 2018 a possible sign of an increasing elephant population.
5. Promote effective recovery and use of all products from dead elephants	1. Proportion of dead elephants from which products were recovered 2. Revenue from products recovered	Records of items recovered and revenue realised from raw products	There are recoveries of firearms and other equipment used for poaching ceded to Police. no products recovered from dead elephants have generated income in CAMPFIRE areas largely due to trade restrictions as well as lack of clarity on the standing of ivory stocks recovered from poaching and illegal trade. Training and development in record management remains critical in strengthening community participation in light of the remote landscape in which most Elephant Range Aras exist.

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
6. Include information on elephants and their conservation in school curricula and promote environmental education in rural areas adjacent to key elephant populations	1. Number and quality of elephant information packages developed and delivered to schools 2. Proportion of schools in, or neighbouring, elephant areas receiving and using information on elephants	1. Information packages developed 2. Reports of delivery and use of elephant conservation information packages	Several conservation awareness projects have been launched in various districts such as the Chilojo Club in Chiredzi and Chipinge; as well as the Malilangwe community outreach programmes. ZPWMA has conducted various awareness campaigns on wildlife species and related conservation issues in radio, media, pamphlets, shows and displays, targeting schools, rural communities, religious gatherings and institution of higher learning. In addition, we also do quiz competitions. Private NGOs also assist in wildlife education awareness.
7. Develop and implement an effective communication strategy for local, regional and international	Information strategy developed and launched by June 2016	Information strategy document	A communication strategy is underway, at national level, budgets and workplans have been developed. The ZPWMA public relations department recently partnered with NGOs in an MOU to encourage positive community perception on wildlife and report wild life crime this includes selecting local regional and international celebrities to help reach the different levels of audiences. Print media and video through the National broadcaster (Zimbabwe Broadcasting Cooperation) and Social Media platforms (Twitter, Facebook) have also been used effectively to communicate issues regarding conservation particularly elephant populations and human elephant conflict. Sunday Mail opinion columns have represented views of ZPWMA on managing this resource sustainably. Partnerships with Extension services at local levels are taking place to help educate communities to understand value of wildlife and help them value wildlife sustainable A human wildlife conflict documentary was produced to showcase the situation in Zimbabwe as a crucial aspect of sustainable use of wildlife in light of social issues.

4.4 Building Conservation Capacity *–Ensuring that sufficient and appropriately trained personnel, equipment, infrastructure and financing are mobilised, available and use efficiently and effectively*
Output: *Sufficient numbers of trained, equipped, motivated and effective personnel are deployed and operational*
KPI: *Law enforcement, monitoring and research staff are trained, equipped, and deployed at levels that enables them to implement this action plan as specified in the activities under components 1, 2 and 3*
MV*: KPIs for components 1, 2 and 3 are being met, staff training records, equipment register, staff deployed for elephant conservation*

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
1. Secure funding to initiate the implementation of this Action Plan	1. Funds and allocated budget for elephant conservation meet annual requirements for effective conservation as measured by KPIs for activities 2-8 below and those of Components 1, 2 and 3 2. More than 75% of revenue derived from elephants channelled into elephant conservation and management	Record of funds available (USD) and investment by ZPWMA, Private sector, NGOS, and CAMPFIRE in elephant conservation measures (compiled annually by Elephant Manager)	Growing annual budgets have been compiled for all stations within the elephant range indicating an ever-increasing financial requirement for conservation. Since the inception of the EMP 20,676,461.00million in Gross National Income was realised from big game (buffalo elephant leopard, lion) sport hunting of which more than 7.5million accrued directly to ZPWMA. These funds have been utilised to finance the operational budgets of range areas. Live sales have also complemented conservation funding through the generation of up to about 5 millions in revenue to support North West Matabeleland operations which consist of up to 72% of Zimbabwe's elephant population (Table 6). Key stakeholders that have supported elephant conservation include GEF 12million and HSBC 5 million. Other indirect contributions are realised in the form of vehicle support of up to 14 stakeholder vehicles providing deployments and reaction support in Lower Zambezi Valley. Table 7 shows ZPWMA Financial resources deployment into management and general conservation of Elephant from 2016 to June 2019.
2. Establish sustainable funding programs to build and maintain necessary human resources to strengthen elephant conservation and management capacity	1. Manpower density for protection of elephant (No. of km^2/operational field person) 2. Level of effective deployment of field staff (e.g. record % of available man days spent on patrol in the field - see example of records envisaged under Section 8 Notes on monitoring, page 29)	Consolidated record of number of field personnel and days operational (law enforcement, research and monitoring, elephant management) for each area in the elephant range compiled and reported on at annual planning meetings Records of vehicle months, VHF radio operation, fully functional stations, operating research facilities,	Manpower levels have been updated and rationalised situationally depending on poaching threat at regional level. Staffing records have been updated monthly largely guiding planning and staff rationalisations in hotspot areas through redeployments and/or transfers of personnel. ZPWMA has recruited skilled personnel to complement stakeholder support in resuscitating radio communication through a needs assessment strategy. Coverage and advancement (analog to digital) equipment has improved communication efficiency in all range areas including

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
		compiled and consolidated at station, area and regional levels and reported on to the Elephant Management Committees bi-annually	Hwange National Park, Gonarezhou and the Zambezi Valley.
3. Analyse current capacity and identify needs	1. Current capacity assessed and needs identified and plan developed to meet needs	Assessment and needs report	Regular needs and budgets have been communicated by Clusters (Regional) Managers to HQ.
4. Maintain and/or initiate continuity in research and monitoring necessary for the conservation and adaptive management of elephants and habitats	1. Number of research programmes 2. Research-person days spent on monitoring / assessing elephant impacts in relation to TPCs 3. Research person days spent on monitoring elephant population parameters in each population/region	Research reports and papers on elephant conservation and management	There are 5 major elephant research projects that are ongoing with the major aim of establishing elephant home range as well as human elephant conflict. This research is currently being undertaken in Hwange, Victoria Falls, Mana Pools and Gonarezhou National Park. In Safari area elephant research and monitoring is ongoing in Hurungwe Safari Area. On private land there is ongoing elephant monitoring in Save Valley Conservancy and Debshan Ranch. An array of peer reviewed papers on elephant have been produced covering aspects including Human elephant Conflict, Elephant movements and seasonal migrations, ranging behaviour, competition / interactions at watering hole as well as habitat utilisation and damage.
5. Strengthen research capacity in ZPWMA and collaborate with other research institutions	1. Number of researchers (internal and external), budgets, equipment, vehicles, and active research programmes increased by more than 25% by July 2016 and 50% by July 2017	Staff register, budget allocations, asset register, research permits issued, MOUs with collaborators, reports and published papers on elephant conservation and management	There are 12 Terrestrial Ecologist and 50 support staff in research section who are currently employed by the ZPWMA to conduct research and monitoring of elephants and other species. There are several vehicles that are used for field data collection by research staff. The Scientific Services Unit has recently recruited 18 research technicians (Senior Rangers) and in currently conducting the recruitment of an additional 5 Terrestrial Ecologists all to be deployed in all strategic research stations within the elephant range. Six external research permits have been issued to complement ZPWMA elephant research and monitoring. Due consideration is currently underway in signing MOUs/permits on elephant research and monitoring.

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
6. Establish training and in-service retraining of personnel in law enforcement, research and monitoring, education and awareness, community elephant management, etc.	Increased levels (50 to 100%?) compared to June 2015 levels in: 1. Number of training days and programmes initiated increased 2. Number of staff trained (rangers, ecologists, extension officers) 3. Number of communities trained and implementing elephant management programmes 4. Number of elephant management campaigns conducted	Record of staff training and re-training in staff files and annual summary report of training Record of communities trained Record of training programmes	A fully-fledged training division was established through the restructuring process in 2018 further complements ZPWMA efforts in staff training and development. Training has been revamped since 2016 covering aspects of elephant conservation including Basic and Special Force Training, First Aid Emergency Responders Course, Protective Security Training, Information Communication Technology and Spatial Monitoring and Reporting Tools (SMART). ZPWMA has resuscitated its Wildlife College (Mushandike College of Wildlife http://www.mushandikecollege.ac.zw/). The college has grown to offer training in protected area management courses to internal and external candidates starting from the National Foundation certificate up to Degree level in collaboration with the National University of Science and Technology. The college also offers other administrative courses like Diploma in Finance and a Certificate in Information Technology. ZPWMA has constantly sent at least 2 participants to Regional institutions such as Southern African College to train in Law enforcement planning as a regional initiative, GIS and Remote sensing in China and India (2019), Conservation and Development at Cambridge University (2018), France CIRAD Campus for Mobile Data Collection Systems and GIS (2016).
7. Strive to achieve best standards for elephant management, including any forms of utilisation	1. Best standards for elephant management in Zimbabwe, based on international standards, drafted and distributed to all practitioners	Record of best practices complied with/ not complied with	ZPWMA in liaison with relevant stakeholders is developing Guidelines for care and management of elephants in captivity and is considering the development of Guidelines for elephant hunting and Elephant Capture in accordance with relevant international best practises such as, inter alia, CITES Resolution Conf. 17.9 and IATA standards for international transport of live animals
8. Engage available external expertise	1. Number of expert driven decisions made from consultations 2. Number of collaborative and outsourced projects with external experts	Reports and record of collaboration with external experts	External expertise is used in Park planning (e.g. Hwange National Park finalized, Chizarira National Park and Mana Pools National Park in progress.) and this planning is directly affecting elephant management in NPs having elephant populations. ZPWMA is directly engaging and creating expert platforms such as meetings and workshops.

4.5 Coordination, collaboration and programme management *–Ensuring effective coordination and collaboration with national and international stakeholders to achieve these strategic objectives*
Output: *Coordination mechanisms to assess and review adaptive elephant population management and strategic planning established and operating*
KPI: *National Elephant Manager [Coordinator] appointed and national and regional elephant conservation committees with appropriate stakeholder participation appointed and information dissemination programme in place*
MV: *National Manager monthly reports, minutes of committee meetings and planned actions completed*

Key Activities/Actions	Key Performance Indicators	Means of Verification	Implementation as of June 2019
1. Establish a national elephant conservation and management steering/ implementing committee that includes stakeholders' meetings at least bi-annually to review progress and to develop an annual implementation plan	1. National committee functional and meeting once a year (or more if required) 2. Committee meeting minutes, with actionable points approved, circulated within one month of meetings 3. Number of resolutions/action points, acted upon	Record of meetings, minutes, actions approved and completed	The first National meeting on elephants in Zimbabwe in response to the EMP was held on March 2019 in Harare. Nevertheless, the National Committee has been established and properly functioning at an operational level considering the deep restructuration that occurred in ZPWMA in 2017-2018.
2. Establish four regional management committees to meet at least twice each year and implement regional plans	1. Four regional committee functional and meeting twice a year 2. Committee meeting minutes, with actionable points approved, circulated within one month of meetings 3. Number of resolutions/action points, acted upon	Record of meetings, minutes, actions approved and completed	The Elephant Management Plan (2015-2020) has been decentralized to regional level so as to provide a grassroots adaptive framework for implementation. Regional committees have been established and are meeting regularly. This has ensured more efficient coordination in implementation. Records of meetings are duly kept as well as proposal to advance in elephant management.
3. Strengthen links with neighbouring states to confer on the management of shared elephant populations, particularly in relation to TFCA populations	1. Consultative meetings held with neighbouring states on shared elephant populations at least twice each year. 2. Joint cross border projects initiated and completed	Record of attendance at and reporting to regional and international elephant conservation bodies of which Zimbabwe is a member. Record of project initiated/completed.	KAZA elephant management strategy has been approved with the following vision: "KAZA's elephants, the largest viable and contiguous population in Africa, are conserved to the benefit of people and nature within a diverse and productive landscape." Zimbabwe is also leading (as the current Coordinating Country for the Great Limpopo TFCA) the process of developing a regional Elephant Management Framework for the Great Limpopo Transfrontier Conservation Area (involving South Africa, Mozambique and Zimbabwe). Terms of references have been developed.
4. Establish a full-time elephant manager to be responsible for coordinating the implementation of the Action Plan	1. Elephant manager appointed with full terms of reference 2. Monthly reports from elephant manager on implementation	Elephant manager's contract and date of appointment Record of reports by the person in the elephant management position	The elephant Manager position has been filled since the inception of the plan with the terms of references provided in the plan itself. So far two staff ecologists have filled this position one for the period 2016-April 2017 and the current one from April 2017 to date. The elephant manager coordinated elephant management in liaison with the Regional Committees and all relevant stakeholders contributing to the generation of timely status reports and other reporting prescribed by the EMP as well as by international obligations. A vehicle is being procured for travelling of the Elephant

			Coordinator thanks to the generous contribution from an international donor.
5. Strengthen coordination between the hunting industry and the elephant management programme	1. Regular meetings and workshops convened with the hunting industry on hunting and elephant management issues 2. Key issues resolved by June 2016	Record of meeting and workshop proceedings Record of elephant hunting issues resolved	Strict coordination exists at national and local level between ZPWMA and Hunting Associations and individual operators/Professional hunter. Their contribution to wildlife conservation is crucial. Regular meetings are held with SOAZ and ZPHGA at different forums on elephant conservations and hunting in general with the aim to promote sustainable utilisation as a conservation tool. These meetings include the regular quarterly SOAZ and ZPHGA assemblies. Meetings with the hunting sector are also held at the regular Quota setting workshops held at local and national level.

TABLES

The following tables summarizes various aspects under the relevant Key activities.

4.1 PROTECTION AND LAW ENFORCEMENT

Table 1 – Summary of elephant-related Law Enforcement efforts/activities.

					Poachers Killed		Recoveries			Arrests		Prosecutions			Intelligence Operations		
YEAR	Patrol Effort /man nights	Effective Manpower on the ground	No of elephants poached	Armed Contacts	Local	Foreign	Rifles	Ammunition	Ivory	Local	Foreign	Cases Investigated	Cases finalized	Convicted 9+years	Meetings with Judiciary	Transborder Intelligence Meetings	Joint operations with ZRP (Transborder Intelligence Operations)
2019*	71 236	1 200	29	9	6	0	5	70	33	275	12	165	120	3	6	4	14 (0)
2018	122 893	935	38	9	2	1	8	60	40	56	14	623	137	67	14	3	26 (2)
2017	126 133	940	130	12	5	2	23	67	30	466	41	705	114	55	11	1	- (2)
2016	132 181	970	210	35	4	9	25	288	160	718	76	211	116	57	22	2	- (2)

* As of June 2019

4.2 BIOLOGICAL MONITORING AND MANAGEMENT

TABLE 2 - Temporal changes in the estimated elephant numbers in Zimbabwe 1980-2014
Source: Dunham K. 2015 *National summary of aerial survey results for elephants in Zimbabwe:2014. Unpublished report. Zimbabwe Parks and Wildlife Management Authority (ZPWMA)*

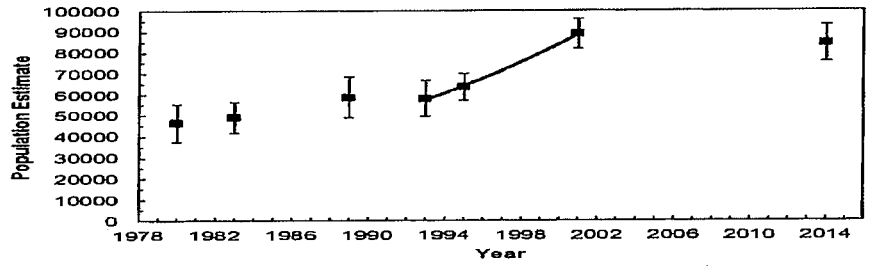


Table 3 – Trends in elephant populations in Gonarezhou National Park and some adjacent areas updated with the results of the 2018 Aerial Survey

Source: Dunham, K.M. & van der Westhuizen, H.F. (2018). *Aerial Survey of Elephants and other Large Herbivores in Gonarezhou National Park (Zimbabwe) and some adjacent areas: 2018.* Gonarezhou Conservation Trust, Gonarezhou National Park, Chiredzi, Zimbabwe.

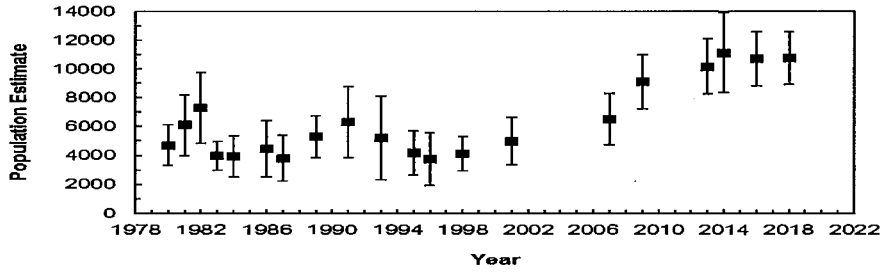


Table 4 - Trophy Elephant off-takes and revenues (Source: Reserve bank Tourism Return Accounting System-TRAS2)

Year	2012	2013	2014	2015	2016	2017	2018
Trophy Elephants	299	286	174	195	194	171	155
Revenues (in USD)	3,171,480	3,261,507	2,157,910	2,651,640	3,120,750	2,435,950	2,062,850

4.3 Social, Economic and Cultural Framework

Table 5 - Human Elephant Conflict in Zimbabwe 2016-2018

Year	Reports Received	Reports Actioned	Number of people killed	Number of people injured	Number of elephants killed on PAC
2016	239	202	6	0	33
2017	256	194	6	2	45
2018	262	197	6	1	92

4.4 Building Conservation Capacity

Table 6 - Other revenues from elephant utilization (in USD)

Year	2016	2017	2018
Live Elephant Sales	1,306,000.00	1,889,000.00	1,771,000.00
Donations	90,000.00	119,000.00	451,000.00

Table 7 – ZPWMA Financial resources deployment into Management and general Conservation of Elephant - 2016 to June 2019

BUDGET ITEM	2016	2017	2018	2019(JUNE)
Law Enforcement	$ 3,174,000.00	$ 3,617,000.00	$ 2,814,000.00	$ 2,128,000.00
Research	$ 142,000.00	$ 122,000.00	$ 167,000.00	$ 254,000.00
Training	$ 116,000.00	$ 118,000.00	$ 129,000.00	$ 353,000.00
Community Relations	$ 174,000.00	$ 186,000.00	$ 204,000.00	$ 254,000.00
Administration	$ 2,231,000.00	$ 2,878,000.00	$ 3,422,000.00	$ 1,180,000.00
Park Management	$ 2,116,000.00	$ 2,325,000.00	$ 2,497,000.00	$ 1,377,000.00
Total	$ 7,953,000.00	$ 9,246,000.00	$ 9,233,000.00	$ 5,546,000.00

Final considerations

10. Any impediment on legal trade in elephant and elephant products by the international regulatory system is now an impediment to basic human rights and sustainable development agenda; depriving the rural communities the legal benefits that they should accrue from sustainable wildlife utilization and is also intended as a violation of instruments and commitments that the international community have adopted, such as, among others, the *Sustainable Developments Goals*, the *United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas* and *the African Union Agenda 2063*, the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance.

11. Banning or impeding Zimbabwe to legally trade in these resources has had a disastrous effect on the elephants but especially on the rural people that are the first and foremost actors that shall benefit from them.

12. Revenues from legal trade are crucial not only to sustain rural economies and fight against illegal activities but also to provide means and resources to reduce habitat loss which is the first and most dangerous threat to biodiversity.

13. Elephants, and other wildlife, are an important economic asset for rural Africa, wildlife-based economies in Southern Africa have demonstrated that sustainable utilization is the way to follow to link conservation and economy to obtain habitat conservation and poverty alleviation.

14. As a keystone species elephant sustainable utilization is central to a new paradigm in conservation which is to grow wildlife-based economies for the benefit of rural people and biodiversity.

APPLICANT:

DONALD TROY MORITZ

SHORT FACT SHEET: ZIMBABWE ELEPHANT MANAGEMENT

SHORT FACT SHEET—ZIMBABWE ELEPHANT MANAGEMENT (updated May 2018)

- Zimbabwe maintains the second-largest elephant population in the world, which has grown from under 5,000 in 1900 to over 83,000 today. It is larger than the elephant populations of West and Central Africa combined. It is almost the same size as the populations of all of Eastern Africa.

Region / Country	Estimated Elephant Population (2016 Report)[1]
West Africa	11,489
Central Africa	24,119
Southern Africa	293,447
- Zimbabwe alone -	- 82,630 -
Eastern Africa	86,373

- Zimbabwe's elephant population is almost 20% larger than in 1997, when it was downlisted to Appendix II of the Convention on International Trade in Endangered Species (CITES) and the FWS first made a positive enhancement finding to allow the import of elephant trophies.[2] Zimbabwe's elephant population is stable over the last 15 years, despite rapid growth of the country's human population, which increased by 24.33% between 2000 and 2016.[3]

- Hunting offtakes are a fraction of a percent and have no biological impact on the overall elephant population (i.e., do not cause population declines). Average annual offtakes between 2010-2013 were 0.276% of the total population. Moreover, hunters target older bull elephant that have already reproduced and spread their genes. Removal of older bulls tends to increase population growth rates.[4]

- Zimbabwe's wildlife authority, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA), is a "parastatal." It is separate and largely funded separately from the Central

[1] Within a 95% confidence limit, without the plus/minus interval, and without "Informed Guesses." IUCN African Elephant Specialist Group, African Elephant Status Report (2016), https://www.iucn.org/ssc-groups/mammals/african-elephant-specialist-group.

[2] This annotation is for "the exclusive purposes of allowing ... trade in hunting trophies," among other things. Zimbabwe's elephant population has grown from 66,000 to approximately 83,000. See Zimbabwe's downlisting proposal, https://www.cites.org/sites/default/files/eng/cop/10/prop/E-CoP10-P-27.pdf.

[3] Zimbabwe's population has grown from 12.22 million in 2000 to 16.15 million in 2016. World Bank, https://data.worldbank.org/country/zimbabwe?view=chart.

[4] ZPWMA (April 2014, July 2015); R.B Martin, Background Study (Apr. 2005).

government. ZPWMA was not disrupted by the 2017 Presidential transition. President Mnangagwa has confirmed that ZPWMA is proceeding with "business as usual."[5]

- Hunting areas in Zimbabwe are over three times the size of the national parks. The elephant habitat includes approximately 27,000 km^2 in National Parks, 18,900 km^2 in Safari Areas, over 50,000 km^2 in Communal (CAMPFIRE) Areas, and 7,000 km^2 in private conservancies.[6] Communal (CAMPFIRE) Areas (90%) and private conservancies are almost wholly funded by hunting revenues, which justify the dedication of this space to nature in place of alternative uses like livestock.

- Hunting fees make up a significant portion of ZPWMA's revenues. Trophy and concession fees generated almost $5.1 million for ZPWMA in 2014. Over half of these fees were paid by U.S. clients. Approximately 80% of ZPWMA's revenues are allocated for law enforcement. Put simply, hunting revenues from U.S. hunters pay for most of the anti-poaching across Zimbabwe's elephant range. And the FWS suspension of elephant trophy imports reduced ZPWMA's revenues by almost 14% in 2014 compared to 2013. The suspension has reduced the revenues available for ZPWMA (as well as CAMPFIRE communities and individual operators) to combat poaching.[7]

- Poaching in Zimbabwe has generally been kept under control so as not to have a national effect. Hunting operators support this successful control of poaching by funding their own patrol teams, paying salaries for community scouts, and assisting ZPWMA with equipment, rations, petrol, and other needs. Hunting operators are the first line of defense against poaching. For example, a sample of 15 operators spent approximately $1.32 million in 2015 to protect an area exceeding 28,000 km^2.[8] One operator, Charlton McCallum Safaris in the Dande/ Mbire areas, spends an average of $85,000/year on anti-poaching. From 2010 to 2016, their efforts led to an 80% decline in elephant poaching in an important border region.[9]

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[5] ZPWMA Website, http://zimparks.org/about-zimparks/; see also news reports of the transition in Zimbabwe, e.g., http://www.thezimbabwemail.com/main/mnangagwa-swears-new-cabinet/; https://citizen.co.za/news/news-africa/1746240/mnangagwa-names-new-zimbabwean-cabinet/.

[6] UN Protected Planet, https://protectedplanet.net; CAMPFIRE Association of Zimbabwe Press Statement (November 2017), http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1. Elephant habitat in Zimbabwe also includes over 10,000 km^2 in Forest Areas managed by the parastatal Forestry Commission.

[7] Note that hunting and concession fees are considerably higher than this, but because of the grant of "appropriate authority," hunting fees accrue to the landholder on communal and private land, not to ZPWMA. "Appropriate authority" incentivizes landholders to maintain and increase wildlife populations because they retain the benefits of the sustainable use. ZPWMA (April 2014, July 2015).

[8] ZPWMA (October 2016).

[9] Dande Anti-Poaching Unit Website, http://dapuzim.com/.

- Regulated hunting also reduces poaching by incentivizing greater tolerance among the rural communities who live side-by-side with dangerous game species. Hunting provides most of the revenue in CAMPFIRE Areas and averaged $2.2 million/year prior to the FWS suspension of elephant trophy imports. Elephant hunting alone generated approximately $1.6 million per year (65-70% of the total on average). Most elephant are hunted in CAMPFIRE Areas (55 compared 49 in government areas in 2014).[10]

- Revenues from regulated hunting are invested in game monitoring and community projects such as boreholes, classrooms and clinics, food purchases, and other livelihood improvements for Zimbabwe's rural poor. Approximately 200,000 families directly and another 600,000 indirectly benefit from CAMPFIRE revenues. Because of these benefits, poaching and problem animal control are low in CAMPFIRE Areas. This tolerance exists even though elephant destroyed over 7,000 hectares of crops and claimed the lives of approximately 50 people in CAMPFIRE communities between 2010 and 2015.[11]

- There is no evidence that ivory poaching—in Zimbabwe or anywhere else—is tied to terrorism, and that claim has been debunked by credible research, although it is often repeated in popular media.[12] In any event, regulated hunting reduces the poaching: in the Southern African countries that depend upon regulated hunting as a conservation tool (including Zimbabwe), poaching levels are the lowest in Africa. According to CITES' Monitoring the Illegal Killing of Elephants (MIKE) data, Southern African countries have the lowest Proportion of Illegally Killed Elephant (PIKE). PIKE is used to assess whether poaching levels are unsustainable. It has never risen above the sustainability threshold in Southern Africa, even in 2011, when the recent poaching crisis was at its highest level. PIKE has declined in Zimbabwe's MIKE sites since 2011.[13]

- Zimbabwe's National Elephant Management Plan (2015-2020) is the most up-to-date plan in Africa. Responding to the FWS' concerns, this new plan identifies specific action items, outputs, and Key Performance Indicators to measure the success of plan implementation. The national plan is supplemented by four regional action plans with the same framework to address the unique challenges of each range.

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[10] ZPWMA (July 2015).

[11] CAMPFIRE Association Press Statement, http://campfirezimbabwe.org/index.php/news-spotlight/26-press-stateme...1; CAMPFIRE Association (April 2014).

[12] This research is available at: https://rusi.org/sites/default/files/201509_an_illusion_of_complicity_0.pdf; see also https://www.nytimes.com/2015/10/30/opinion/the-ivory-funded-terrorism-myth.html.

[13] CITES/MIKE Website, https://www.cites.org/eng/prog/mike/data_and_reports.

APPLICANT:

DONALD TROY MORITZ

ISIBAYA LEOPARD CONSERVATION PROJECT

ISIBAYA
Leopard Conservation Project

PROJECT PROPOSAL

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PROJECT OVERVIEW

Livestock plays an integral role in the livelihood of many Africans; cattle, goats and sheep, in particular, are an important source of food, a status of wealth as well as a pivotal element of the traditional cultures in many African communities. Livestock is a particularly valuable resource to rural populations living in small villages and communities in the remote and wild areas of Zimbabwe.

All farmers, regardless of the size of their operation, suffer from livestock loss from predation by both leopard and spotted hyena. In turn, the farmers use any means possible to reduce the impact of predation, often resorting to the use of poison, snares and gin traps. All of these methods are indiscriminate and have a greater ripple effect of consequences on the intended predators; especially on mothers with cubs, as well as many other species of wildlife in the area. Poisoning especially has the capacity to detrimentally affect dozens of animals within the ecosystem, including vultures and other birds of prey. Many people have tried and failed to solve or reduce human/wildlife conflicts through education over the decades. While education is an important aspect to effecting any change in the world, alone it is simply not enough; especially in areas where the population is barely eking out a daily living. These remote communities will remain unreceptive to conservation efforts unless a solution offering instant gratification is developed.

Our proposed solution is to launch an initiative focused on raising a herd of cattle from which farmers' livestock killed by predators will be replaced. By finding a workable solution, like the replacement of stock, Isibaya aims to minimize these effects by protecting the farmers' livelihood and consequently eliminating the desperate measures used to stop the predators, ultimately conserving the predators and other wild animals in the area.

The project concept is thus built around "ISIBAYA", which is IsiNdebele/isiZulu for a kraal or cattle pen. Isibaya in this context denotes not just the kraal but also implies the "wellness and size of the herd" in that kraal. Thus by maintaining the "wellness" of the farmer's kraal, we are in effect saving the leopard.

Isibaya will be established as a non-profit project organisation, whose aim is to promote the conservation and protection of leopards through the provision of alternative solutions to local farmers who usually perceive the leopard as a pest to their livestock.

THE ISIBAYA LEOPARD CONSERVATION PROJECT

OUR MISSION

CHANGING A PERSPECTIVE FROM LIVESTOCK PEST TO COMUNITY ASSEST.

Isibaya's mission is to systematically reduce the human-wildlife conflict in the area through a livestock reimbursement program to alleviate the tensions between the local communities and the area's wildlife population, with particular focus on the leopard. As a direct result, Isibaya's presence in the area will reduce non-commercial poaching and thus enable the leopard population to grow and flourish without jeopardising the local community's livelihoods.

Our mission, in short, is to remove the leopards' label as a "community pest", and ensure that it's survival in the area is perceived as an opportunity for local communities to build a better future for themselves.

OUR VISION

BRIDGING THE DIVIDE BETWEEN RURAL COMUNITIES AND WILDLIFE

Our vision is to bridge the divide between rural populations and wildlife by providing them with a vested interest in the animals' survival. Isibaya strives to create a symbiotic relationship between the conservancy and the communities around it.

Through the growth and monetisation of the initial herd, Isibaya will be able to grow from strength to strength and be able to operate in larger areas over time, paving the way for harmony between rural communities and the wildlife that surrounds them.

OUR 4 SHORT TERM GOALS

1. Develop infrastructure for the herds; build fences, cattle dips, kraals
2. the procurement of cattle, goats and sheep, to begin the compensation program and the establishment of a breeding program.
3. Launch an awareness campaign in the area with the main directive of spreading the word about the project amongst local communities
4. Identify underutilized lands, which are currently mismanaged or unused to become grazing lands for the livestock or secured for the wildlife conservancy.

OUR 5 LONG TERM GOALS

1

BECOMING SELF-SUSTAINABLE

By implementing a breeding program, Isibaya will be able to ensure the number of cattle in the breeding herd is higher than the number of cattle needed to replace livestock in communities. The excess stock will be sold commercially and the income generated will be directed towards supporting the operation and further expansion into larger areas of operation. It is our goal to create a cattle herd of 500 within 5 years to further fund the project without having to rely on donations.

2

RESEARCH TO SYSTEMATICALLY IDENTIFY AND ELIMINATE POACHING CHANNELS

The Isibaya team will be collecting data and conducting research in the area to further our understanding of population numbers and movements, leopard behaviour, conflict management and poaching channels. Often leopards are killed under the guise of "problem animals" and "cattle killers" however they are actually being killed for commercial use. By reducing the issues with stock loss, the other poaching aspects will be revealed and can be independently addressed throughout anti-poaching efforts

Through research into the grim reality of the commercial leopard skin and bone trade on the black market and in the traditional medicine trade, we will systematically be able to identify and close commercial poaching syndicates operating in the area.

3

REHABILITATION OF THE AREA TO BOOST INCOME GENERATING POTENTIAL

Isibaya will focus on rehabilitating underutilized land for wildlife and conservation initiatives. Mangwe Districts wildlife conservancies are currently dependent on consumptive tourism to fund their conservation efforts. While the area is currently not a viable tourism area for the non-consumptive tourism sector, Isibaya believes with time, and heavy anti-poaching efforts, its wildlife will quickly bounce back; offering greater opportunity to generate income by both consumptive and non-consumptive tourism markets which in turn creates further protection to wildlife populations.

4

EDUCATION

Isibaya will develop educational workshops which will be made available to the local communities at no cost to themselves. These workshops will have the dual purpose of:

-Teaching local farmers about implementing affordable systems and tools to assist communities to understand safer, more sustainable and efficient methods of land use and management, for example; tick control, rotational grazing lands, basic veterinary skills and the best stock management practices.

-about the importance of conservation and wildlife preservation as our heritage to protect. Value in wildlife other than meat/skins, i.e. tourism

COMMUNITY DEVELOPMENT

Isibaya's role in the area will not be limited to the protection of the leopard population and livestock replacement system but will continually expand as the opportunity presents to create better lives for the communities in the area. There are many other community projects that may arise along the way not limited to job creation, education opportunities, and research projects.

THE TEAM

01

02

03

04

05

01 VAUGHAN WHITEHEAD-WILLSON

Executive Director & Founder

Born in Zimbabwe, Vaughan is 31 with 10 years experience in wildlife conservation. Having completed a 5 years apprenticeship in the safari industry, Vaughan went on to director of Mapassa Big Game Hunting Safaris for the last 5 years, as well as offering his services as a freelance professional hunter and guide.

02 GIBSON NCUBE

Executive Director & Founder

Born in Zimbabwe, Gibson is 47 and brings a wealth of business and public relations experience to the team. As well as having a Masters in Business Administration and previous experience as COO of Mapassa Big Game Hounds, Gibson has been Conservation Manager in Mangwe District for 4 years.

03 JO SHARP

Research Manager

Jo has an honours degree in Bsc Tourism Management, a diploma in Professional Photography as well as being a qualified Learner Professional Hunter and Guide and having 7 years of experience in managing safari camps and lodges, and a further two years guiding experience.

04 GARTH ADAMS

Operations Manager

Having established a deeply rooted passion for all the critters that can be found in the African bush at the tender age of 6, Garth pursued his lifelong dream to work in the bush. In 2015 Garth got his professional hunters and guiding licence and has endeavoured to pass his passion for conservation and wildlife onto all who cross his pass. Garth 4 years experience in managing anti-poaching operations.

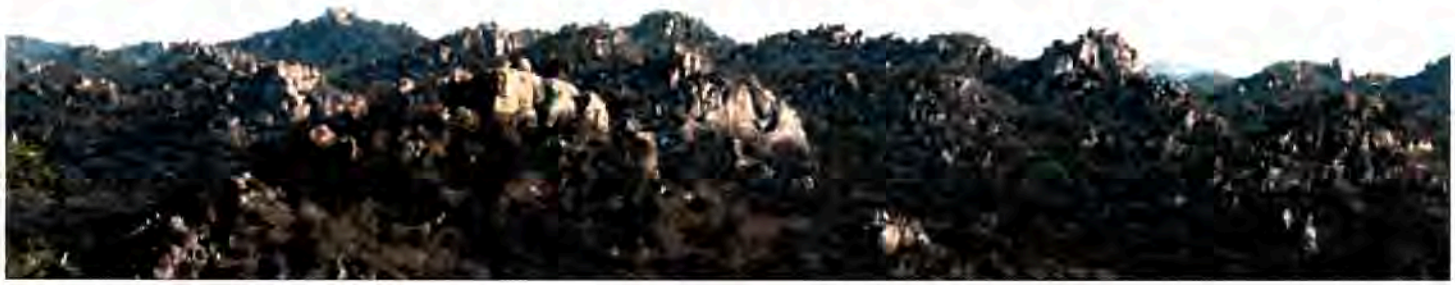
05 SARAH CRAIG

Marketing & Communications

With 5 years of marketing and digital strategy experience, and a background studying chemical engineering, Sarah will be bringing a creative element to the Isibaya team. The newest member of the team to find her feet in the bush, Sarah is excited to pour her digital skills into promoting our cause.

ISIBAYA PROJECT PLAN

The Isibaya project will tackle the current human/wildlife conflict in the Matabeleland Mangwe District in the South of Zimbabwe. This Project aims to reduce the persecution of leopards and other predators by people in the Mangwe District, in particular, this will be done through an inclusive, proactive approach towards the peripheral neighbours of the conservancy. The Isibaya Leopard Project's main strategy will be to raise cattle for the benefit of communal farmers through replacement of their stock that gets killed by predators.



The Area

Mangwe District, Zimbabwe

Mangwe District has a significant place in the history of Zimbabwe; from the home to the KhoiSan, whose paintings tell their stories on the caves nestled amongst the rocky outcrops, to the original wagon routes used by the pioneers en route to Bulawayo - opening the way for colonisations and development - to the present-day Mangwe District, which consists primarily of informal small scale cattle and grain subsistence farms, with a scattering of private farms, cattle ranches and wildlife conservancies.

The farms immediately around the conservancy are managed by Mangwe Rural District Council and utilised by communal farmers as three-tier farms. While these farms are not part of the Conservancy but they form an immediate buffer to the conservancy. Therefore it is important to consider the fact that the conservancy cannot exist in isolation; what happens in these neighbouring farms is always likely to affect the conservancy as much as the developments within the conservancy are likely to have an impact on the surrounding farms.

As one area cannot flourish without detriment to the other in its current state, it is important to identify and act on potential areas of mutual benefit. Isibaya has identified these potential areas of mutual cooperation as including but not being limited to; disease control, livestock movements, maintenance of fencing, anti-poaching and management of shared resources such as water.

Current wildlife-based tourism operations

Mangwe District is a vastly overlooked area which holds great promise. Currently, the area utilises just 35% of its tourism revenue generation potential.

Currently, only one tourism operation is present in the area; offering hunting safaris. Revenues released from these hunting operations are channelled to the communities through the CAMPFIRE concept via the Local Authority and to date, these communities have benefitted immensely from their share of the proceeds generated by hunting in the area.

The current safari operation in the area has been running their own anti-poaching initiative until the outbreak of COVID 19 disease. While the safari industry has come to a standstill, the anti-poaching operation is still in place, albeit without the much-needed revenue for funding it.

Field reports from this operation currently indicate significantly increased poaching activities on the ground. As the situation goes from bad to worse at-risk people will resort to increasingly desperate measures to sustain themselves.

THE PROBLEM

The immediate threat facing the communities in Mangwe is the drying up of revenues as a result of the outbreak of the COVID 19 and the subsequent lockdown measures taken to contain it. Consumptive tourism previously provided a large portion of the employment opportunities in the area as well as funded the anti-poaching initiatives which have ground to a halt as a result of the pandemic.

The most immediate problem facing the communities is the loss of employment; both those who had permanent positions of employment or seasonal employment from the industry have lost their primary income stream. As unemployment levels continue to climb, more and more people will be searching for alternative sources of sustenance and income, increasing the pressure on the wildlife in the area, especially for the key species like leopards.

The leopard, in particular, is under serious threat from poachers who turn to it as a source of revenue through the illegal sale of its skin. Farmers also see the leopard as a pest to their livestock and therefore respond by either snaring or poisoning them.

"Cattle are part of our culture, since we were born and before us we had lots of cattle, but those predators killing our cattle are also killing our culture."

THE STATISTICS

67 005 people Live in Mangwe District with:

68165	51684	9753
heads of cattle	goats	sheep

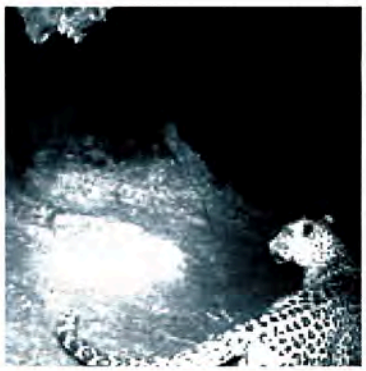
SOURCE: ZIMSTATS CENSUS 2012

We estimate about 10% of these livestock herds are in direct conflict with predators.

Estimated livestock losses due to predators in Mangwe district amounts to:

2-5%	3-7%	1-3%
amounting to approximately 120 to 340 cattle killed by predators each year	amounting to approximately 155 to 362 goats killed by predators each year	amounting to approximately 98 to 293 sheep killed by predators each year

*These estimates are taken from one farm's records in the area and research data from Botswana. As the research project gets under way, we'll understand more about the livestock losses in Mangwe due to predators.



Our solution

Human nature strives for instant gratification; which often comes down to a choice of "reward" or "revenge", especially when livelihoods are in question. In Mangwe, instant gratification for the small scale farmers often takes the form of "revenge" by removing the threat that has cost them a significant loss.

Isibaya aims to remove this need for revenge by establishing a recompensation program. When a farm loses a cattle calf, goat or sheep to a predator, Isibaya will replace the lost livestock from its herd. Through this recompensation model, the farmers will now be "rewarded" a new cow which removes the need for "revenge".

Farmers will only qualify to be "rewarded" with a livestock replacement if they cease to stop taking "revenge" on predators. Through this system, Isibaya will systematically reduce sustenance poaching activities, thus paving the way for us to tackle the commercial poaching operations which come to light.

Our action plan

01 Establish a foundation herd.

Isibaya plans to purchase and then breed livestock animals on a large scale to be able to replace those livestock animals that have been killed by wild animals in the Mangwe District, reducing the need for people to retaliate against the wildlife in the area.

02 Develop an anti poaching force.

Isibaya will establish an anti-poaching network which will double up as the livestock inspectors. This network will patrol the areas removing snares and poisoned baits, at the same time creating a database of poaching activity within the area. This network will be mobilized through the use of motorbikes and will have patrol routes outlined to ensure the whole area is canvassed on a regular basis.

Isibaya will hire local community members to establish the anti-poaching network. This strategy achieves two goals; the first being to create additional income streams within the community through job creation, the second to create a vested interest in the community for the project's survival.

03 Establish a livestock reimburment system

For every head of livestock killed by predators, Isibaya will provide a replacement to maintain their stock numbers and livelihood. Hand in hand with education and conservation the end goal is to protect the leopards and wildlife in the area and allow humans and the wildlife to coexist in harmony.
There will be standard controls and inspections in place to ensure that a wild animal has definitely killed their livestock before qualifying for a replacement animal. In order to qualify for a replacement, the farmer must meet the following criteria:

1. Provide evidence that the animal was killed by a leopard. This will be done by dispatching members of the Isibaya team to inspect the carcass. If the evidence does not correlate to a leopard kill, no replacement will be offered.
2. Have no evidence of continued poaching in the area. The Isibaya team will patrol the area removing snares and poison bait. If an application is submitted within an area that has been flagged as a continued poaching zone after project initiation, farmers within the area will lose their ability to qualify for a replacement until such a time we are confident in their efforts to reduce poaching practices.

04 Additional income generation in the area.

The spinoff from the cattle project in the form of surplus stock will be given to the council as an annual lease fee, which they will in turn share with the community. The current suggestion is to share the surplus livestock with the Council, and the community is 10% of the total project proceeds which they will share equally amongst themselves: 5% each party.

In addition to the shares of surplus stock, the community will benefit from our employment iniatives and education drive learning valuable livestock maintenance and crop growing techniques which will, in turn, afford them with a valuable skill set that is in demand on larger-scale farms in nearby areas.

The Isibaya Baling Iniative.

The Isibaya Baling Project will be the first comunity iniative to be started in Mangwe.

Women and children in rural communities are a particularly vulnerable demographic during hard economic periods. Isibaya will focus on creating initiatives and education opportunities to create additional income streams for women enabling them to provide a brighter future for their children.

Currently, many women rely on cultivating grass to sell as thatching for roofs as their sole income. The Isibaya baling project will be established to purchase grass baled by the women in these communities to sustain our herds during winter months. This provides a larger market for their bales and creates more income for the women in the surrounding communities.

Isibaya will employ women from the local communities to participate in the baling initiative. The baling initiative's purpose will be to provide alternative food sources for the project's herds during the dry season. Previously these women would have found part-time employment collecting thatching grass, which they would then sell to camps and local settlements for roofing. The Isibaya Baling initiative's benefit to the local community will be three-fold:

01

Larger income generation

While thatched roofing only needs to be replaced every 10 years, livestock needs to eat every day. Isibaya's livestock herds will consume more grass than the thatching market thus creating the potential for increased earnings utilising the same skillset.

02

Increased market demand

As the livestock will require large amounts of grass to sustain them through the dry season, more bales will need to be purchased. The baling initiative will create more job opportunities for women in the communities than the thatching market could previously accommodate.

03

Better grazing practices

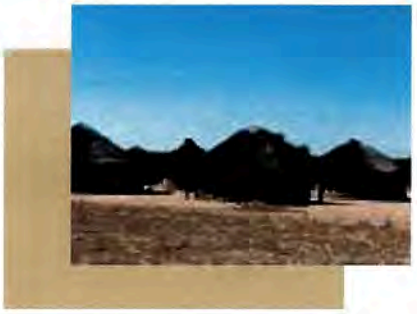
Teaching the benefits of feeding herds from grass bales to subsidise their grazing requirements during the dry season will counteract overgrazing of the lands surrounding the villages and ultimately assist in creating a more balanced ecosystem around the settlements.

PROJECT BENEFITS

THE FARMER

Any livestock owner in the area

- will get a replacement for their livestock killed by predators
- will get a divided in the form of a percentage of the net surplus each year
- will still benefit from CAMPFIRE proceeds



RDC

Rural District Council

- Council gets a percentage of the net surplus annually
- A healthy leopard population which means more business for Council
- Takes off the pressure of dealing with PAC

ISIBAYA

LEOPARD CONSERVATION PROJECT

- Achievement of the ultimate goal of saving and increasing the leopard population
- A balanced ecosystem
- promotion of opportunities in consumptive and non-consumptive tourism

PROBLEM AREAS AND POTENTIAL SHORTFALL.

SHORT TERM

COMMUNITY PENETRATION AND UNDERSTANDING

The first problem we expect to encounter is relaying our mission to communities in the area. Due to the lack of telecommunication infrastructure in the area, many of these communities are relying on traditional information flows, such as word of mouth, which means our message will need to be spread by getting boots on the ground. This means going to each village, school or church in the area and explaining the recompensation project and how to get hold of us about any livestock killed by predators.

SHORT TERM

LACK OF LIVESTOCK DATA IN THE AREA.

Our current statistics of the number of livestock in the area and the percentage killed by predators is based on estimated figures from the government veterinary program in the area and one large scale farm's records. As the project kicks off, Isibaya will gain a better understanding of the extent of farms in the area and be in a better position to understand how many heads of livestock we will need to have on hand to ensure we meet recompensation demands.

LONG TERM

THE BACKLASH FROM COMMERCIAL POACHERS

As Isibaya establishes a presence in the area it is expected to experience retaliation from commercial poachers due to reducing their income. Currently, commercial poachers are providing a "service" to communities in the area by removing problem animals and then selling their skins, meat and bones for profit. Isibaya's presence in the area will be removing the need for this "service" which is likely to be met with resistance from the poaching operations.

LONG TERM

MAINTENANCE OF INFRASTRUCTURE AND EQUIPMENT.

Recurring damage to infrastructure and equipment, either by wild animals or humans, will be an on-going battle faced by Isibaya. Current problem areas Isibaya will need to monitor will be Fences, the condition of fences will need constant monitoring and repair.

Camera traps for the research and anti-poaching initiatives will need to be frequently repaired or replaced as they are prone to be damaged or stolen.

Project Finances

START UP COSTS

The Isibaya Leopard Conservation Project will need an estimated $450,000.00 to get started. This funding will be dedicated to establishing the breeding herd and sustaining the anti-poaching iniative until such a point that the project is self sustainable.

DESCRIPTION	AMOUNT (USD)
ADMINISTRATIVE/GENERAL EXPENSES This expense allocation covers insurance, legal, anti-poaching equipment and vehicle fleet	**$ 30,200.00**
LOCATION/OFFICE SET UP This money will be put towards establishing an Isibaya headquarters in Mangwe district wich will form the base of operations.	**$ 2,075.00**
MARKETING Marketing cost allocation covers website design and developement, the launch awareness campaign and inital fundraising campaigns.	**$ 4,530.00**
PRE-LAUNCH LABOR EXPENSES This cost allocation covers the salaries of the team hired to develop the infrastructure needed to sustain the herds.	**$ 2,000.00**
LIVESTOCK HERD DEVELOPMENT This money will be put towards establishing Isibaya's fooundation herd and the cost of the infrastructure needed to accomodate them.	**$ 193,000.00**
OPERATING COSTS Operating costs covers basic salaries, vehicle maintainence, fuel costs, etc. A further breakdown of operating costs is provided in the next section.	**$ 191,160.00**
TOTAL FUNDING REQUIRED:	**$ 422,965.00**

WILDLIFE RESEARCH GRANTS.

Goal: $200,000/YR

Applications will be submitted to research grants in hope to secure enough funding to establish the anti-poaching and research side of Isibaya. This will account for just under 50% of the funds needed to get Isibaya to its full capacity.

OPERATING COSTS

DESCRIPTION	AMOUNT (USD)
LIVESTOCK FEED, SUPPLEMENTS AND MINERALS This is the estimated expense allocation covers the cost of feeding the livestock during the winter months.	**$2,000.00**
REPRODUCTION, VETERINARY AND HEALTH This is the monthly estimated cost of maintaining a healthy herd.	**$ 1,000.00**
FUEL AND VEHICLE MAINTANENCE The estimated fuel and vehicle maintainence required to mobilise the anit-poaching team using 10 motorbikes and 1 landcruiser	**$ 1,030.00**
EQUIPEMENT MAINTANENCE The estimated monthly cost of maintaining anti-poaching equipment such as camera traps.	**$ 500.00**
UTILITES; WATER, ELECTIRCITY, ROAD TOLLS ETC. The estimated monthly cost of utilities to run the Isibaya Headquarters.	**$ 400.00**
STAFF BENIFITS; FOOD & BEVERAGES The estimated monthly cost to sustain the anti-poaching team in the field.	**$ 1,000.00**
STAFF SALARIES Total salary requirements for a team of 6 Admin staff, 10 anti-poaching staff, 10 herdsmen, and 2 general staff.	**$ 9,000.00**
OFFICE EXPENSES	**$1,000.00**
TOTAL ESTIMATED MONTHLY OPERATING COSTS:	**$ 15,930.00**

PATH TO SUSTAINABILITY

DESCRIPTION	VALUE OF LIVESTOCK
YEAR 1 130 head of cattle 125 goats 50 head of sheep	**$ 70,166.00**
YEAR 2 450 head of cattle 150 goats 90 head of sheep	**$233,176.00**
YEAR 3 500 head of cattle 200 goats 150 head of sheep	**$300,541.00**
YEAR 4 550 head of cattle 170 goats 170 head of sheep	**$ 230,585.92**
YEAR 5 550 head of cattle 170 goats 170 head of sheep	**$ 230,585.92**

Once the heards have reach the sustainable threshold, where the estimated number of livestock bred each year exceeds the number of animals given away in the recompensation program, Isibaya will be able to sustain itself through the sale of stock to cover operating costs. We will prioritise the growth of our cattle herd before the goats and sheep as they are more valuable and recompensation demand will be higher.

The growth rate of the heard has taken into account the rise in demand as more people become aware of the recompensation program.

TIMELINE

REGISTRATION

DONE

The Isibaya Leopard Conservation Project has been registered as a non profit organisation in Zimbabwe.

FUNDRAISING

6 MONTHS

Raising the funds Isibaya needs to get fully operational is estimated to take 6 months. During this time the project will be started on a smaller scale.

ESTABLISH HERD

2 YEARS

Within 2 years Isibaya aims to 450 head in its herd of cattle, 150 goats, and 90 sheep to run the recompensation program .

MOBILISE THE ISIBAYA ANTI-POACHING UNIT

3 YEARS

Isibaya aims to employ an anti-poaching unit of 32 personel within 3 years of operation.

EXPAND THE RECOMPENSATION PROGRAM

4 YEARS

The livestock recompensation program is expected to be large enough to expand into new areas after 4 years

SUSTAINABLE BREEDING PROGRAM

5 YEARS

After 5 years the breeding program should be large enough to support Isibaya's operational costs.

SPONSORSHIP REQUIREMENTS

FUNDRAISING STRATEGY

Target Goal: $15,000/month

To kick off the project as soon as possible the Isibaya team will be staging a fundraising walk of 160km through the area that the project will be supporting. Funds generated by this walk will be directed to building infrastructure and securing our first 75 heads of cattle which will pave the way for Isibaya to alleviate the community pressure on the leopard population.

Recurrent fundraising activities
Fundraising activities will be hosted in the area on a quarterly basis. Funds raised through these activities will be directed towards growing the livestock herds to boost the compensation program and fast track Isibaya's path to self-sustainability.

Online fundraising drives will be running permanently through the Isibaya website, social media and online marketing campaigns.

SUPPORTING SPONSORS

Goal: $250,000/ year

Isibaya will need donations from supporting sponsors until such a point that the herd is large enough to generate income to cover the project's operating costs. We have estimated a 5 year period of dependability on our supporting sponsors. The funds brought in through supporting sponsorships will cover the costs of:

- Herd maintenance - this be including but not limited to the cost of stock feeds and veterinary bills.
- Operating costs such as staff salaries, staff meals, uniforms and vehicle maintanance.

GENERAL SPONSORS

Goal: $10,000/month

Funds raised through general sponsors will be directed towards subsidising the projects operating costs. Local businesses will be approached for general sponsorship of either goods, services or funds, these donations will be directed towards maintaining the herds or project equipment as well as providing staff with basic benefits. Business or entities who can provide the following will be approached as general sponsors:

- Veterinary Supplies or assistance
- Stock feeds
- Vehicle maintenance or spares
- Uniforms
- Staff food vouchers

In return for their support, local businesses will be thanked on our website, social media platforms, marketing materials and newsletters as well as be able to display the Isibaya supporters badge in their marketing or on the premises of their business.

Compassion, understanding and pride of our natural heritage can only be attained once we have removed the source of pain and conflict. For many Zimbabweans, Isibaya will pave the way to attain peace with our wildlife by bringing them livestock security.

ISIBAYA
LEOPARD CONSERVATION PROJECT

Isibaya will be established as a non-profit project organisation, whose aim is to promote the conservation and protection of leopards through the provision of alternative solutions to local farmers who usually perceive the leopard as a pest to their livestock.

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