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APR 24 1997

MEMORANDUM

To: Chief, Office of Management Authority

From: Chief, Office of Scientific Authority

Subject: Reconsideration of Convention permit applications for import of sport-hunted cheetah trophies from Namibia

Please be advised that, after reconsideration of the subject applications listed below, and based on additional information provided by the applicants, the Government of Namibia, and other sources, we are now able to find that the import of these specimens is likely to be for purposes that are not detrimental to the survival of the species.

Application number	Applicant	Species	Specimen
778597	Francis Carnes	Cheetah (<i>Acinonyx jubatus</i>)	Sport-hunted trophy
778674	Mareen Waterman	"	"
781179	Richard Pickard	"	"
781481	Roy Montgomery	"	"
802428	Tamara Scott	"	"
802429	Christian B. Jackson	"	"
812362	Russell Underdahl	"	"

BASIS FOR ADVICE:

In our memorandum of July 2, 1996, in which we were unable to find that such imports would be for purposes that would not be detrimental to the survival of the species, we specified information on the cheetah population itself as well as management of the species in Namibia that would be necessary for reconsideration. Information obtained from various sources (applicants, Government of Namibia/Ministry of Environment and Tourism, and others) has been used to evaluate current information in view of each of our previous concerns.

Population Information

Design of population indexes and implementation of monitoring program

The Namibian Ministry of Environment and Tourism (MET) has appointed a full-time Predator Coordinator, who will be responsible for developing a national monitoring program for cheetahs. The person appointed to this position, Dr. Philip Stander, is a well-qualified Ph.D.-level biologist with over 10 years of experience in predator research and conservation in Namibia. According to a letter dated February 27, 1997, from Mr. Malan Lindeque of MET, Dr. Stander is designing a long-term cheetah monitoring program. Therefore, whereas a monitoring program is still in the developmental stages, we expect such a program to be put in place for determining future effects of sport hunting and other forms of offtake of cheetahs, but current assessments are based on existing estimates of population size, offtake levels, and other factors, and by using conservative values when these estimates vary.

Implementation of accurate, standardized methods of documenting total offtake from all sources

Offtake levels, particularly for removal of animals on wildlife ranches and farmlands to prevent predation, are partly determined from actual reports, although an unknown level of unreported offtake is still subject to estimation only, usually believed to be 30-50% of the total offtake. This may continue to be a problem, although most individuals involved with cheetahs in Namibia, including the Cheetah Conservation Fund, a non-governmental conservation organization promoting improved protection and tolerance of the presence of cheetahs on farmlands, believe that the removal of cheetahs on ranches and farms, both reported and unreported, is declining.

Requirement for professional hunters and farmers to make carcasses available to experts for demographic analysis

Mr. Lindeque of the MET has indicated that Namibia may be willing to require hunters, as a condition on hunting permits, to make cheetahs they have taken available for inspection by experts to obtain demographic information (estimated age, sex, and other characteristics). For U.S. hunters, this can be reinforced by requiring that imported sport-hunted cheetah trophies must have been made available to Namibian authorities or their designees for the collection of such information (see Conditions). This will provide information for management in Namibia as well as for evaluating the effects of sport hunting for the issuance of future import permits, such as determining whether allowable levels of offtake of adult females are being exceeded.

Management

Completion of Management Plan, with basis for quotas

The Namibian Cheetah Conservation Strategy (Strategy) was sent as a review draft to the Office of Management Authority on July 1, 1996 (received July 8, 1996). At the time, the MET had not adopted the document as a formal management plan for cheetahs, but we understand that this was done in October 1996. The MET has indicated, however, that the Strategy would be updated and revised over the next 12 months to reflect current information (per letter dated October 21, 1996,

from G.J. Hanekom, Namibian Minister of Environment and Tourism). Based on discussions with Mr. Malan Lindeque of the MET, provisions of the Strategy will be phased in, as resources permit, over time. The Strategy does provide a basis for cheetah quotas, and this has been further elaborated by Mr. Lindeque in his February 27, 1997, letter, in which he advised us that the export quotas will be partitioned as follows (annual basis): 50 live specimens, 55 sport-hunted specimens taken in the current year, and 45 sport-hunted specimens from previous years (=total CITES export quota of 150 specimens). Sport-hunted trophies in the current year would be partitioned, with 25 assigned to U.S. hunters and 30 to hunters from other countries. Upon further discussions with Mr. Lindeque during his visit to Fish and Wildlife Service offices on March 20, 1997, he advised that exports of live specimens could be restricted to include only, or predominantly, male cheetahs, to ensure that offtake would be skewed toward a greater proportion of males. The evaluation of the Namibian Strategy and the manner in which quotas were derived were compared with population and mortality estimates and modeling scenarios developed from the Population and Habitat Viability Assessment conducted by the IUCN Conservation Breeding Specialist Group, which used a different model from that used for the Strategy.

Information on how Namibia Professional Hunting Association (NAPHA) compacts will relate to the Strategy: Will hunting be limited to compact lands, and/or will non-signatories to the compact be required to collect conservation fees and abide by other terms of the compact?

According to Mr. Lindeque, the MET currently has no authority to regulate the fees collected from hunters, including the conservation fee collected for hunts on compact lands, and therefore they could not impose a requirement for non-signatories to the NAPHA compact to collect the conservation fees or otherwise adhere to compact provisions. However, he agreed that U.S. hunters could be restricted to hunting on compact lands only, and U.S. permits could similarly contain such restrictions (see Conditions) to ensure that the taking of cheetahs by U.S. hunters is conducted in a manner consistent with efforts to conserve cheetahs. As detailed in our July 2, 1996, finding, signatories to compacts agree to:

- a) cooperate in the Namibian government's cheetah management plan;
- b) take reasonable steps to control the indiscriminate killing of cheetahs on their property and to educate employees, tenants, and others in their vicinity about the importance of cheetah conservation;
- c) manage their property to maintain appropriate habitat for cheetah;
- d) abide by hunting limits established for cheetah by the Namibian government;
- e) assure that cheetah trophies taken on their property are properly documented and tagged, to be consistent with the requirements of CITES and the Namibian government;
- f) levy a surcharge of N\$1,000 as a conservation fee, in addition to the trophy fee, to be administered by the Namibia Nature Foundation in support of cheetah conservation activities (although there is provision for changing this amount);

- g) select a committee to review proposals for funding activities by organizations or individuals that will enhance the survival of the cheetah in Namibia;
- h) be included in a list of properties managed under the compact, such list to be provided to the competent CITES Management Authorities of any country requesting information for trophy import purposes; and
- i) conduct an annual survey of cheetah on properties under their control.

In our previous finding we noted that there were about 100 signatories representing about 3% of the cheetah range in Namibia. We expect that the number may increase further if U.S. hunters, representing 45% of the allowed trophy export quota, are restricted to hunting on compact lands. Furthermore, the compact system appears to be a potentially valuable mode of educating farmers to reduce indiscriminate or unnecessary removals of cheetahs on farmlands.

No-detriment Finding

To reach a conclusion that the imports would be for purposes that are not detrimental to the survival of the species, two critical questions needed to be answered:

1. Can the cheetah population in Namibia sustain the level of offtake that can be expected if these imports are allowed, and
2. Are there sufficient offsetting benefits to the conservation of the species that can be expected by allowing a limited number of sport-hunted cheetah trophy imports?

Sustainability of offtake

Different models have been used to estimate a mortality level that would result in a stable population, and different figures for some of the same parameters have been used in the calculations. To develop an opinion on the allowable offtake, we have had to make judgments as to the most appropriate model and information to use. Most of the time, we selected the more conservative decision of the most reasonable options presented, and when we did not do so, we have explained the reasoning behind our decision.

We consider that the stochastic approach used in the VORTEX model used in the Population and Habitat Viability Assessment (PHVA) by the Conservation Breeding Specialist Group (CBSG) provides the better model for estimating the population trends over time when compared to the Erb model used as a basis for the Strategy. We also accept that the consensus resulting from the PHVA workshop was that the present population consists of an estimated 2500 individuals over 3 months of age. We also accept that the human-induced offtake occurs in a 2-to-1 male-to-female ratio. We make this assumption even though the Figure 10 from the Cheetah Conservation Fund report, which we correctly questioned as being highly skewed towards males, might be interpreted as suggesting a 1-to-1 ratio. In fact, the large number of animals of unknown sex presented in this table (after correcting for the error in the legend) makes any

conclusion from the table questionable, and there are several other data sources that indicate a 2-to-1 ratio is more accurate. We recognize that there were other parameters used in the model whose accuracy should be assessed further (i.e., as further assessment of the Namibian cheetah population occurs), but for which we are not aware of bases for any significantly differing opinions.

Furthermore, on the subject of whether to factor in catastrophic losses, and if so at what frequency of occurrence and at what mortality level, we have opted to exclude catastrophic losses from the process of determining annual allowable offtake. We believe that such losses are likely to occur, and when they do occur we believe that population monitoring efforts will be sufficient to detect their occurrence. We accept that it will be possible for the Namibian government, when a catastrophe occurs, to make the necessary adjustments in offtake to stabilize the cheetah population.

Finally, for the purpose of these calculations, we have accepted (for the purposes of this modeling effort) that the present estimated population size (i.e., 2,500 individuals over 3 months of age) represents the present carrying capacity or the level at which the population will be managed, and can be used as the upward limiting factor in calculating long-term trends in numbers of cheetahs in the population. We realize that current drought conditions in Namibia, which have prevailed since 1979, are likely to have resulted in some reduction in the carrying capacity, and presumably with the return of wet years the prey base will increase and the cheetah population may exceed this level.

Therefore, in selecting from the modeling results presented in the CBSG report, we have accepted the conclusion that scenario 36 in Table 3a approximates a stable population, and we compared this 0.058 growth rate from this scenario with information in the no-catastrophe scenario in Table 6, which uses a 2-to-1 male-to-female offtake ratio. This indicates that a natural female mortality rate of 10%, a female offtake mortality of 12.5%, a natural male mortality rate of 10%, and a male mortality offtake of 25% constitute mortality levels that would allow for a stable or increasing population. In fact, a female offtake of 15% would still show a positive growth rate according to that same table, but we have used the more conservative figure.

Translating these mortality levels to numbers of cheetahs that may be sustainably harvested requires not only a total population estimate, but age distribution and sex ratio estimates of the population. Assuming the total population is 2,500, then 10% natural mortality is 250 and 12.5% offtake of females is 312. This assumes that there is no compensatory mortality; that is, as the percentage of offtake increases, we have assumed that the level of natural mortality does not decrease. Then, based on the PHVA report, adult females represent 27% of the population (and presumably 27% of allowable offtake), and with an offtake of 10% or 250 total animals, 68 could be adult females. Thus, the PHVA recommended that an offtake of 60-70 adult females could be sustained. Accepting that the Namibian government could manage for catastrophes by adjusting the offtake when catastrophes occur, and thus could otherwise manage at an annual 12.5% offtake level, the allowable offtake would be 84 adult female cheetah.

In reviewing figures of offtake, we referred to the information on MET records and noted that the depredation offtake (all reported offtake not including trophies and live animals) was reported as 145 for 1991 (the extremely low figure for 1992 seems to be an anomaly), and 105 and 116 for 1993 & 1995 (the 1994 figure was recorded as an average of 1993 and 1995 figures). [These offtake figures are reportedly higher than those presented by the Cheetah Conservation Fund.] With the implementation of the compact agreements, we believe that some reduction in depredation take has occurred, and that additional reduction can be expected. Alternatively, a reduction in take on compact lands might be offset or partially offset by an increase in take on non-compact lands, but there is no reason to believe that the total depredation offtake would exceed that which has occurred in recent years. While this suggests that we should use only figures from the most recent year, we have made calculations of projected offtake using both the 1991 figure and the 1993 and 1995 average figure of 111. Reporting rates have been given as low as 50% and as high 70%, but using the more conservative figure, the corrected depredation offtake would be 222 (lower, more recent value for 1993-1995) or 290 (higher, older value for 1991). Assuming that 64% of the depredation offtake was adults and subadults, a total depredation offtake of adults and subadults would be 142 or 186. An offtake sex ratio of 2 males to 1 female would mean that 47 or 62 females would be removed for depredation purposes.

In calculating the live animal and trophy offtake, we have accepted the suggestion from Namibia that the live exports could be limited to male-only offtake and export, at least until more accurate estimates of population numbers and parameters can be made. If the offtake for trophy purposes is limited to 55 total animals (25 for U.S. hunters and 30 for hunters from other countries) and the offtake is 50% females and 50% males, the trophy offtake would consist of 28 females and 27 males. [We are assuming that the export quota of 50 permits for trophies taken in previous years does not represent additional within-year annual offtake]. Adding the individual offtake categories together results in a total offtake of 75-90 adult female cheetahs. Since we have used the most conservative figures at almost each step of our assessment, we believe that this projected offtake would be sustainable (i.e., would not result in a decline in the population) provided that the monitoring and research effort being implemented is continued and that information provided from these undertakings is used to adjust offtake, if appropriate.

Offsetting benefits from hunting

In our July 2, 1996, advice, we noted that the NAPHA compact scheme requires that all hunters contribute a N\$1,000 conservation fee for each trophy taken, and we estimated that this would result in perhaps US\$10,000 annually based on the maximum number of trophies previously taken in a given year. If U.S. hunters are restricted to hunting on compact lands, and assuming all 25 trophies are taken annually, this would result in conservation fees of approximately US\$6,250. It is probably unlikely that this level would be achieved, since cheetah hunters are often not successful in obtaining a cheetah. We further acknowledge that such an amount would not solely support the cheetah management and research activities required to operate a comprehensive conservation program for the species (i.e., to fund the Strategy). However, such funds would augment other monies already available or that may become available to support cheetah conservation activities, many of which have already been conducted without these fees.

In addition to fees being paid directly for conservation, trophy fees paid to professional hunters and landowners, which may be N\$5,000 or higher, would also provide incentives to maintain cheetah populations, particularly if these prices increased due to increased competition from U.S. sportsmen entering the market. It is unclear as to what extent such trophy fees compensate for losses of other (ranch) wildlife and livestock, and it is obvious that every landowner will not have the opportunity in a given year to collect a trophy fee, since the number of landowners far exceeds the number of cheetahs that may be hunted. However, the increased presence of cheetahs on a given farm would increase the likelihood of a given farmer having trophies to offer (i.e., opportunities for a successful hunt), and therefore may provide some incentive for tolerating the presence of cheetahs. Furthermore, the MET is encouraging landowners to form multi-farm conservancies, where multiple farmers operate their lands as a unit for the purposes of game management. Presumably all members of a conservancy would benefit from a trophy taken on any one member's land, which then increases the potential incentives among individual farmers. Merging of the NAPHA compact scheme and a conservancy approach would further increase the potential benefits of cheetah sport hunting to a larger number of farmers.

According to information in the Strategy, NAPHA has approached the MET to discuss ways in which to provide information to professional hunters about problem cheetahs (i.e., those taking livestock) so that sport-hunting offtake can be directed toward animals that would otherwise be taken for depredation purposes. Such an approach, if implemented, could have several positive effects:

1. sport-hunting offtake would then be compensated by a reduced depredation offtake instead of being additive;
2. offtake of depredating cheetahs may be better reported and controlled, since farmers would be reporting such animals in advance of their removal from the wild; and
3. farmers experiencing actual losses of livestock to cheetahs may be able to use such an approach to improve their opportunities for compensation of losses.

Finally, while the United States has not yet authorized the import of sport-hunted cheetah trophies from Namibia, the possibility of such imports has already resulted in positive measures taken by the Namibian MET and NAPHA, such as:

1. the appointment of a Predator Coordinator, who will be responsible for studying and monitoring cheetah populations in Namibia toward their long-term conservation;
2. the development of the Namibian Cheetah Conservation Strategy and its adoption by the MET as a comprehensive management plan for the species; and
3. the development of the NAPHA compact system, which targets farmers, who are the primary threat to cheetah survival in Namibia due to perceived threats to livestock and other valuable wildlife.

Implementation of the Strategy is in the beginning stages and will not be fully implemented immediately. Therefore, while we find that the present import of cheetah trophies from Namibia may provide some benefits to the species that would offset the removal of a limited number of individuals from the wild, continued progress toward full implementation of the Strategy, especially further study of the population to better assess various population parameters (e.g., improved estimate of population size, age distribution, and sex ratio estimates as well as natural and removal mortality of females, proportion of non-producing breeding-age females, and cub survival to one year) that are important for determining sustainable offtake levels and monitoring of population trends, as well as continued efforts to reduce indiscriminate removal of cheetahs from the wild, will be important considerations in future findings on such applications. Furthermore, progress should be made toward an improved understanding of disease as a potential limiting factor or threat to the survival of the cheetah. We also believe that, for imports to result in benefits to cheetah conservation efforts, which are important for offsetting removals of animals from the wild, the following **CONDITIONS** must be included on each permit:

1. Only trophy specimens that were hunted on lands covered by the Namibia Professional Hunting Association compact may be imported, and permittees must provide documentation to show that their trophies were hunted on such lands.
2. Permittees must contact the Ministry of Environment and Tourism in advance of the hunt to determine if any blood or other tissue specimens should be collected from hunted animals, to assist in gathering information on disease in cheetahs. Permittees must cooperate in the collection of such specimens, as instructed by the MET or their designee to ensure proper handling of specimens.
3. Permittees must notify the Ministry of Environment and Tourism when a cheetah is taken and make the specimen available to the MET or their designee for purposes of examining the specimen and collecting demographic and other appropriate information that may be useful for monitoring the impact of hunting on cheetah populations and for assessing the status of the population.

CSA Charles Dane

for the Scientific Authority

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