

**U.S. Fish and Wildlife Service
Division of International Conservation
Rhinoceros and Tiger Conservation Fund
FY 2018 Summary of Projects**

In FY 2018, the U.S. Fish and Wildlife Service (USFWS) awarded \$3,709,085 to the conservation of rhinos in Africa and rhinos and tigers in Asia through the Rhinoceros and Tiger Conservation Fund, which leveraged \$10,407,248 in additional matching funds. In total, Congress appropriated \$3,440,000 to the Rhinoceros and Tiger Conservation Fund, and additional funds were provided by other sources, as identified below. These funds supported 49 projects in 16 individual countries as indicated below (alphabetically, by continent).

AFRICA

New Awards

KENYA

RT1869

Award # F18AP00767

Enhancing the recovery and conservation of eastern black rhinos through resilient habitat management in partnership with local communities at Sera Wildlife Conservancy, Kenya. In partnership with Fauna and Flora International. Kenya is home to more than 75 percent of the surviving eastern black rhinos (*Diceros bicornis michaeli*). In 2015, USFWS supported the first reintroduction of rhinos in Kenya onto community land, in Sera Wildlife Conservancy in northern Kenya. The founder population has increased to 15 animals, has not suffered any poaching, and the area has the potential to support as many as 35 rhinos. The population could also expand onto neighboring community conservancies, if they can be secured. Funds will support operational costs of anti-poaching and security patrols on and around Sera Wildlife Conservancy through 2019, and developing and implementing plans to expand the rhino sanctuary for the long term.

USFWS: \$105,639

Leveraged Funds: \$0

NAMIBIA

RT1864

Award # F18AP00762

Facilitating the 13th IUCN SSC African Rhino Specialist Group meeting, to be held in February 2019, Namibia. In partnership with Save the Rhino International. This Award will provide support for a continent-wide meeting, hosted by the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) African Rhino Specialist Group, to assess the state of all of Africa's rhino species and subspecies, to assess the viability of the remaining populations, and to identify actions urgently needed to combat poaching. This meeting will only be the 13th such global meeting of experts since 1979. Technical experts (including site managers, veterinarians and national rhino coordinators) and official

representatives of each range country will attend in order to compile the information required by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for the 18th Meeting of the CITES Conference of the Parties in 2019, and to provide unified, objective, and impartial advice on emerging issues affecting Africa's rhinos.

USFWS: \$26,052

Leveraged Funds: \$119,265

TANZANIA

RT1865

Award # F18AP00764

Engaging the communities living around Mkomazi National Park to foster support for black rhino conservation initiatives in Tanzania. In partnership with Save the Rhino International. This proposal focuses on outreach to promote conservation of the most endangered black rhino subspecies, the eastern black rhino (*Diceros bicornis michaeli*), in Mkomazi National Park in Tanzania (the country where they are most threatened -- fewer than one hundred rhinos remain). Using a custom-built bus that functions as classroom, library, and safari vehicle, the *Rafiki wa Faru* (friends of rhinos) program engages in education and outreach to promote environmental awareness and conservation buy-in within villages bordering the national parks. The educators on board this bus visit communities near Mkomazi National Park and present materials about the biology and economic importance of Tanzania's wildlife. The requested funds will support ongoing running costs from July 2018 through June 2020, during which the program will reach 730 school children, conduct 26 visits to Mkomazi National Park, and develop and distribute a new Activity Book for teachers.

USFWS: \$44,511

Leveraged Funds: \$73,740

RT1868

Award # F18AP00766

Support for black rhinoceros conservation in Serengeti National Park, Ngorongoro Conservation Area, and adjacent dispersal areas, Tanzania. In partnership with the Frankfurt Zoological Society. Eastern black rhinos (*Diceros bicornis michaeli*) have disappeared from all of Tanzania except Mkomazi National Park, Serengeti National Park, and Ngorongoro Conservation Area. The few surviving rhinos continue to be under severe threat. USFWS previously supported all three sites throughout the 1990s, but had to terminate funding due to questionable performance and lack of commitment from the host country government. Now, an international non-governmental organization has stepped in to reinitiate and reinvigorate rhino protection programs. This year's funds will support black rhino monitoring and protection, and improve communications between wildlife authorities and community wildlife management areas and Masai Mara National Reserve in Kenya.

USFWS: \$116,630

Leveraged Funds: \$84,720

ZAMBIA

RT1861

Award # F18AP00761

Engaging the communities living around North Luangwa National Park to foster support for black rhino conservation initiatives in Zambia. In partnership with Save the Rhino International. North Luangwa is home to Zambia's largest and most stable elephant population

and the country's only black rhino population (reintroduced in 2003). In addition to traditional security, anti-poaching, and wildlife management, the North Luangwa Conservation Program in Zambia works to promote buy-in among local people for conservation through outreach and education. To increase support for black rhino conservation and the protected areas, this Award will support the production of lesson plans and resource materials for 21 local schools, school visits by the program's outreach officer, training and mentoring for the officer and for appointed conservation teachers at each school, holding conservation celebration days, and conducting field trips with school or community groups into North Luangwa National Park.

USFWS: \$49,720

Leveraged Funds: \$109,274

RT1867

Award # F18AP00765

Securing the greater North Luangwa landscape for the protection of black rhinos (*Diceros bicornis minor*) in North Luangwa National Park, Zambia. In partnership with the Frankfurt Zoological Society. This proposal will provide ongoing support for reintroduction of the southern black rhino (*Diceros bicornis minor*) subspecies to Zambia. In the past, Zambia had the highest number of rhinos of any African country, but they were poached to extinction in the 1990s. Throughout the early 2000s, USFWS sponsored efforts to restore security to North Luangwa National Park (NLNP) in eastern Zambia. The first rhinos were released in NLNP in 2003, and the population has increased steadily with no poaching in the past 15 years. Funds this year will support core operations, including construction of a new, modernized security operations room, road improvement within the secure area, and operating expenses for aerial and ground-based monitoring and anti-poaching patrols.

USFWS: \$99,880

Leveraged Funds: \$300,570

ZIMBABWE

RT1860

Award # F18AP00760

Matobo National Park: Annual darting and immobilization of black and white rhino for routine dehorning and ear-notching to aid monitoring and protection strategies. In partnership with the Dambari Wildlife Trust. This project funds essential annual operations in Matobo National Park, the most viable remaining population of rhinos on public land in Zimbabwe. The Government of Zimbabwe has decided to dehorn black and white rhinos in Matobo National Park routinely to minimize the risk of poaching, and to notch the rhinos' ears to facilitate individual monitoring for security and management. This Award will support a partner organization to hire a qualified, experienced veterinarian and capture team to conduct the veterinary operations necessary to immobilize rhinos for dehorning and notching in 2018, and operating expenses to conduct monitoring of all individual rhinos throughout the year.

USFWS: \$21,412

Leveraged Funds: \$58,500

RT1872

Award # F18AP00768

Developing a new, cost-effective rhino tracking system in Zimbabwe. In partnership with the International Rhino Foundation. Because of their horns and neck shape, it is challenging to fit tracking devices on rhinos. Two rhino conservation organizations have joined forces with a technology company that specializes in the production of miniaturized, robust transmitters to

produce a new, smaller tracking device specifically for rhinos. Funds will be used to produce the first 100 transmitters and to pilot-test them in conservancies in Zimbabwe. The anticipated outcome of this project is the development of a fully functional rhino tracking system that is more efficient and cost-effective than any other systems currently in use. If successful, this will allow more detailed locational monitoring of rhinos and better targeted protection.

USFWS: \$37,705

Leveraged Funds: \$24,500

Modifications to existing Awards

KENYA

RT1753

Award # F17AP00874

Maintaining the integrity of the protection efforts for Borana Conservancy's black rhino population. In partnership with Save the Rhino International. Kenya is the only remaining stronghold of eastern black rhinos. A significant portion of Kenya's rhinos are on conservancies. This project will support ongoing protection and monitoring of black rhino on the Borana Conservancy and Lewa Wildlife Conservancy. Specific activities include ranger training, daily monitoring of Borana's black rhino population, and upgrading the housing facilities for the field-based rhino monitoring team.

USFWS: \$46,806

Leveraged Funds: \$369,177

RT1759

Award # F17AP00884

Building capacity in the private and community sector in Kenya to tackle rhino and elephant poaching. In partnership with Save the Rhino International. This project will provide training on investigation to various rhino and elephant custodians, including representatives from individual conservancies of Ol Jogi, Ol Pejeta, Borana, and Lewa, as well as the Northern Rangelands Trust and Big Life Foundation, which work with conservancies and communities across a larger scale. Funds will support training, mentoring, and collective analysis of data in collaboration with the Kenya Wildlife Service.

USFWS: \$99,139

Leveraged Funds: \$190,371

RT1764

Award # F17AP00889

Building security capacity at Ol Jogi black and white rhino sanctuary in Laikipia, Kenya. In partnership with Save the Rhino International. Ol Jogi Conservancy in Laikipia County in northern Kenya is home to an important population of eastern black rhinos, reintroduced to the area in 1980. Although the population has steadily increased over time, poaching remains a threat. Funds will be used for ranger training to protect Ol Jogi's black rhino and other wildlife, and for operating expenses related to daily monitoring of rhinos, including the purchase and deployment of a vehicle exclusively for security and law enforcement use.

USFWS: \$50,156

Leveraged Funds: \$950,314

RT1769**Award # F17AP00892**

Enhancing protection of eastern black rhinos (*Diceros bicornis michaeli*) at Ol Pejeta Conservancy, Kenya, through improved surveillance and monitoring, infrastructure, and incentives for community support. In partnership with Fauna and Flora International. Ol Pejeta Conservancy in Laikipia County, Kenya, holds the largest population of black rhino in East Africa. Funds will be used to improve on-site accommodation for protection and monitoring staff, implement ear-notching operations, procure a field patrol vehicle and radio communications supplies, and provide conditional community incentives for proactive support for rhino protection.

USFWS: \$48,558

Leveraged Funds: \$78,900

NAMIBIA**RT1751****Award # F17AP00438**

Dehorning and translocating rhino throughout Namibia for biological management and security reasons. In partnership with Save the Rhino International. In response to the increased threat of poaching, Namibia has decided to minimize the risk of poaching by removing horns from rhinos in vulnerable areas, and by translocating rhinos out of the highest-risk areas. Funds will be used to support dehorning and translocation operations. Specific activities include: darting, immobilizing, and dehorning live rhinos in situ, installing security devices in all horns and submitting horn samples for DNA fingerprinting for forensic purposes, and darting, capturing, and relocating rhinos when necessary.

USFWS: \$93,002

Leveraged Funds: \$270,047

RT1756**Award # F17AP00881**

Maintaining high standards of monitoring and protection of the Kunene Region's Key 1 black rhino population. In partnership with Save the Rhino International. To ensure the long-term security of the desert-adapted black rhino of the Kunene and Erongo Regions of Namibia, and to prevent poaching and other illegal activities, these funds will be used to provide the training and operational expenses necessary to conduct anti-poaching patrols and monitoring of the free-ranging rhinos, to liaise with law enforcement officials if suspicious activities, illegal incursions by people or livestock into protected areas, or threats to rhinos are encountered, to secure crime scenes, and to work with the police, prosecutors, and judiciary to collect and present evidence in rhino-related court cases.

USFWS: \$101,586

Leveraged Funds: \$619,317

RT1757**Award # F17AP00882**

Developing canine unit capacity in Etosha National Park, Namibia, to support law enforcement efforts and reduce rhino poaching. In partnership with Save the Rhino International. This project will establish a canine unit trained for detection of target substances and for tracking for Etosha National Park. Activities include the construction of kennels at the Wildlife Protection Service School in Waterberg National Park and Etosha National Park, the

purchase and training of four dogs, training of eight handlers, and operational expenses for deployment of the dog teams.

USFWS: \$39,600

Leveraged Funds: \$127,798

RT1761

Award # F17AP00886

Using satellite and RFID-tag bracelets in two Namibian national parks to assist black rhino monitoring and law enforcement efforts. In partnership with Save the Rhino International. The Awardee aims to reduce rhino poaching in Etosha and Mangetti National Parks by increasing rhino monitoring and improving anti-poaching efforts. Specific activities include implanting tracking devices on black rhinos in order to monitor their movements in high-density and high-risk areas in Etosha and Mangetti National Parks, and using predictive modelling, based on the data collected, in order to determine movement patterns and deploy anti-poaching patrols accordingly.

USFWS: \$69,769

Leveraged Funds: \$146,510

SOUTH AFRICA

RT1754

Award # F17AP00878

Combating the rising tide of poaching attacks on Hluhluwe-iMfolozi Park's Key 1 black and white rhino populations. In partnership with Save the Rhino International. To protect the black and white rhino populations of Hluhluwe-iMfolozi Park in KwaZulu Natal, South Africa, and to help law enforcement staff combat further rhino poaching losses, funds will be used to support and equip teams to monitor rhinos and provide anti-poaching presence through ground patrols (foot, vehicle, with tracking dogs, and horseback), road blocks, and aerial surveillance, to maintain and patrol perimeter fencing, and to provide capacity building and cover operating expenses related to building cases against and prosecuting poaching crimes, and to maintain and upgrade camp infrastructure for security outposts throughout the park.

USFWS: \$64,985

Leveraged Funds: \$1,163,677

RT1758

Award # F17AP00883

Building law enforcement capacity and ranger morale to protect uMkhuze Game Reserve's black and white rhino populations. In partnership with Save the Rhino International. In order to protect the indigenous black and white rhino populations in uMkhuze Game Reserve in KwaZulu-Natal, South Africa, funds will support operating costs and equipment for rangers to conduct daily rhino monitoring and analysis of rhino sightings, anti-poaching patrols, rapid response to security incidents, and provide training courses for first aid and gunshot and trauma wounds, and will support upgrades to ranger camps to provide reliable water and electricity.

USFWS: \$45,852

Leveraged Funds: \$1,288,518

TANZANIA

RT1755

Award # F17AP00879

Providing a reliable water supply and security for Mkomazi Rhino Sanctuary's expanding population of black rhino in Tanzania. In partnership with Save the Rhino International. In order to maintain security for Mkomazi's eastern black rhinos, this project supports ongoing expenses for ground and aerial patrolling, and maintenance of park infrastructure. Funds will be used to replace the water tanker necessary to supply water inside the fenced habitat, maintain the security fence and security systems within the protected area, and support operating costs of ground and aerial anti-poaching patrols.

USFWS: \$57,074 Leveraged Funds: \$644,800

ASIA

New Awards

BANGLADESH

RT1843

Award # F18AP00859

Protecting tigers in the Bangladesh Sundarbans through strengthened SMART patrols and improved understanding of wildlife crimes. In partnership with the Wildlife Conservation Society (WCS). The Bangladesh Forest Department is implementing Spatial Monitoring and Reporting Tool (SMART) wildlife enforcement and monitoring patrols with technical support from WCS Bangladesh. Project objectives are to: (1) map high-risk areas and assess spatial and temporal patterns of illegal activity affecting tigers and their prey using data from SMART patrols and camera trapping; (2) establish a long-term system for monitoring threats to tigers and their prey based on SMART data and camera traps set in strategic locations; and (3) support the SMART patrol teams to achieve zero poaching of tigers and their prey in the Sundarbans.

USFWS: \$59,812 Leveraged Funds: \$60,409

BHUTAN

RT1803

Award # F18AP00799

Examining livestock depredation by tiger and its impact on farmers' livelihoods in Bhutan's Jigme Dorji National Park. In partnership with Yonten Jamtsho. Human-wildlife conflict in Jigme Dorji National Park (JDNP), Bhutan, is costing farmers additional expenses, and possible personal injury. This project aims to examine the extent and magnitude of conflict between tiger and agro-pastoralists and propose a measure that may reduce the conflicts. Project objectives include: (1) examining livestock depredation by tigers and assessing the impact on farmers' livelihoods; (2) evaluating people's perceptions and attitudes towards conservation of tigers; (3) raising awareness of the role of the tiger in the forest ecosystem amongst inhabitants of JDNP through education programs and distribution of educational materials; and (4) laying the

groundwork for establishing an effective network of citizens to monitor and protect tigers, their prey species, and their habitat amongst farmers in the lowland areas of JDNP.

USFWS: \$13,871¹ Leveraged Funds: \$4,000

RT1805

Award # F18AP00669

Conservation of endangered royal Bengal tiger (*Panthera tigris tigris*) in South Central Bhutan. In partnership with Sonam Phuntsho. The predator-prey relationship for management of the tiger and its prey is poorly known in the south central region of Bhutan. Human-tiger conflict is also a serious issue in this area due to depredation on livestock. Project objectives include: (1) assessing the prey population structure and prey preferences of the Bengal tiger; (2) evaluating the extent of human-tiger conflict and people's attitude towards tiger conservation; and (3) providing tiger conservation education to youth and farmers.

USFWS: \$23,420 Leveraged Funds: \$8,020

CHINA

RT1848

Award # F18AP00861

Anti-poaching and population monitoring in Tiger and Leopard National Park, China. In partnership with the Wildlife Conservation Society. The Amur tiger is the flagship species of the forest ecosystem of northeast China and the Russian Far East. There are approximately 400-500 Amur tigers in the Russian Far East, but fewer than 30 individuals thought to be in China. The newly-designated Tiger and Leopard National Park (TLNP) in northeast China can play a critical role in re-establishing tiger populations there, but development and management of this new protected area are needed. Project objectives are to: (1) introduce and institutionalize SMART (Spatial Monitoring and Reporting Tool) for patrolling across the ten subunits of TLNP; and (2) continue monitoring tiger populations in northeast China.

USFWS: \$59,000² Leveraged Funds: \$60,717

INDIA

RT1808

Award # F18AP00772

Strengthen the protection measures in Manas National Park as a part of the program 'Indian Rhino Vision 2020' to expand the numbers and range of wild rhinos in Assam, India, Phase-XII. In partnership with the Wildlife Areas Development and Welfare Trust. The entire Indian rhino population of Manas National Park (MNP), numbering around 100 individuals, was poached in the 1990s. Today, only two of the populations of greater one-horned rhinoceros (*Rhinoceros unicornis*) inhabiting protected areas (Kaziranga National Park in India, and Chitwan National Park in Nepal) have more than 100 individuals. Assam Forest Department and various non-governmental organizations are assisting with range expansion of rhinos in Assam through translocations from Kaziranga and Pobitora National Parks. MNP now has 30 rhinos.

¹ Of this, \$5,583 was funded by carryover funds.

² Of this, \$402 was funded by proceeds from sales of the Save Vanishing Species stamp, and \$11,000 by carryover funds.

This project aims to maintain security of MNP by: (1) supporting the salary of 15 guards for 12 months; (2) selecting guards from villages adjacent to MNP to improve their socioeconomic status and to foster good relations between the MNP management and the nearby villagers; and (3) providing special training to the newly recruited guards on wildlife conservation and how to combat poaching.

USFWS: \$32,142

Leveraged Funds: \$96,880

RT1819

Award # F18AP00774

Conservation of tiger and its habitat through unique law enforcement and livelihood model support in Manas National Park. In partnership with Aaranyak. Manas National Park (MNP) management, through its Manas Tigers smart protection programs, identifies Illegal Natural Resource Extractors (INRE) and warns them about their illegal activities in MNP. These INRE are then introduced to the Aaranyak livelihood program to provide them with an alternative sustainable livelihood. So far, 1,400 households have been included in this program. This project plans to support 100 INRE, thus further securing the MNP and removing direct threats to tigers, rhinoceroses, and Asian elephants. Project objectives are to: (1) strengthen protection in MNP using the Manas Tigers protection model; (2) reduce human disturbance in the park by reducing dependence of 100 INRE using alternative farm and non-farm livelihood options; and (3) monitor and evaluate the impacts of conservation interventions on the ground using sets of indicators.

USFWS: \$74,611

Leveraged Funds: \$208,653

RT1821

Award # F18AP00813

Conservation of tiger, rhino, elephants and hoolock gibbons in Kaziranga-Karbi Anglong Landscape using PNRM approach by forest dependent indigenous Karbi Tribe in Kohora River Basin in India. In partnership with Aaranyak. To protect habitats in Karbi Anglong Hills and the biological corridors to Kaziranga National Park, the project will engage communities using traditional knowledge and appropriate technology to design sustainable and adaptive Participatory Natural Resources Management (PNRM) models for habitat conservation and to reduce human disturbances. Specific activities include: (1) conducting an inventory and mapping of Non-Timber Forest Products (NTFP) in the river basin that have a potential for sustainable management and creating a baseline; (2) establishing a participatory perspective plan for natural resource management; (3) developing natural resource-based sustainable livelihood and entrepreneurship models involving 100 households to initiate habitat protection and improve quality of life; (4) documenting the process and system of best practices for communication with communities and stakeholders more broadly; and (5) raising awareness among communities and stakeholders about ecosystem health, PNRM, livelihoods, and entrepreneurships.

USFWS: \$89,540

Leveraged Funds: \$61,500

RT1823

Award # F18AP00780

Developing mitigation strategies to tiger-rhino and other wildlife-vehicle collisions in Kaziranga Tiger Reserve, Assam. In partnership with Aaranyak. Kaziranga National Park (KNP) is a critical protected area in India for rhinos, tigers, Asian elephants, and other endangered

wildlife. Nearly 60 kilometers of National Highway 37 (NH 37) run adjacent to KNP, with a width of at least 7.5 meters. Extensive flooding during the rainy season increases wildlife crossings of NH 37. Plans are in place for an imminent expansion of NH 37 from two to four lanes. Adverse consequences of this expansion to wildlife include increased vehicular traffic volumes resulting in more wildlife-vehicle collisions, a barrier to animal crossings, and the road widening rendering the existing key elephant corridors and crossings potentially ineffective. This project will: (1) identify and prioritize highway stretches that require mitigation measures to reduce wildlife-vehicle collisions and provide safe crossing for wildlife based on: (i) crash and carcass data, (ii) observational data of wildlife seen alive on and along the highway segments, and (iii) maps and local expert knowledge of important wildlife habitat and corridors bisected by the NH 37; (2) recommend mitigation measures for wildlife at the selected locations; and (3) conduct cost-estimate analyses for a range of mitigation measures for the selected highway segments.

USFWS: \$67,050

Leveraged Funds: \$4,800

RT1839

Award # F18AP00795

Monitoring of key tiger (*Panthera tigris tigris*) populations in corridors in Central Indian Tiger Landscape, India. In partnership with the Wildlife Conservation Trust. Recent scientific work on tigers shows that focusing on corridors connecting tiger source sites is essential to ensure long-term viable tiger populations. A landscape-level approach towards maintaining meta-populations is key, but in a developing economy like India, which supports approximately 60 percent of the global tiger population, conserving multiple use areas (corridors) is very challenging. The burgeoning infrastructural expansion, linear structures, and projects such as mining threaten the persistence of these corridors and strongly impact wildlife. The goal of this project is to upgrade the status of important areas for tigers outside protected areas, ensuring better wildlife management strategies and mainstreaming of such areas into tiger conservation strategies. Project objectives include: (1) generating long-term spatial data on tiger densities and population dynamics of tigers outside of protected areas to influence the larger tiger conservation policy framework at the landscape and national level; and (2) strengthening capacity of forest staff and other stakeholders in monitoring tiger populations outside of protected areas and in using individual-level data in mitigating human-tiger conflict and monitoring tiger populations and dispersal events.

USFWS: \$75,210³

Leveraged Funds: \$291,803

RT1845

Award # F18AP00854

Facilitating expansion of the network of tiger source populations within the Malenad Tiger Landscape. In partnership with the Wildlife Conservation Society (WCS)-India. The Malenad Tiger Landscape (MTL) supports a large tiger population. Project objectives are to: (1) facilitate government-sponsored, voluntary relocation of forest-interior families to new sites outside the forest by assisting these families; (2) prevent, detect, and control threats to wildlife and habitats

³ Of this, \$9,083 was funded by proceeds from sales of the Save Vanishing Species stamp.

through an active intelligence network in the new sites; and (3) assess and map the emergent threat of minor forest products collection.

USFWS: \$57,968

Leveraged Funds: \$58,350

RT1847

Award # F18AP00860

Facilitating tiger population recovery through threat mitigation at landscape level in Eastern Ghats of Andhra Pradesh, India. In partnership with the Wildlife Conservation Society (WCS)-India. A recent assessment of tiger populations in the Eastern Ghats of Andhra Pradesh helped identify new corridors, with tigers presumably dispersing from breeding populations within Nagarjunasagar Srisailem tiger reserve (NSTR) and Gundla Bramehwaram Wildlife Sanctuary (GBM). Project objectives are to: (1) identify and map threats to tigers and prey species; (2) mitigate threats by involving government agencies and local communities in the tiger landscape of the Eastern Ghats; (3) aid in consolidating tiger habitats within tiger reserves by promoting government schemes; and (4) provide scientific and conservation support to the Andhra Pradesh Forest Department.

USFWS: \$58,898

Leveraged Funds: \$59,070

INDONESIA

RT1807

Award # F18AP00672

Sumatran tiger protection and monitoring in Bukit Tigapuluh, Indonesia. In partnership with the Frankfurt Zoological Society. The Sumatran tiger is at the brink of extinction. Less than 500 individuals remain in the wild. Immediate on-site action and improved conservation planning are both needed to turn the fate of the Sumatran tiger around. Bukit Tigapuluh represents one of the last retreats of these magnificent animals. This project aims to: (1) implement ranger foot patrols to detect and deter poaching of tigers and tiger prey; (2) support local police and forest police in their law enforcement efforts by providing key information on wildlife crime in the target area; (3) conduct camera trap surveys to monitor tigers in key areas; (4) support a collaborative, landscape-wide tiger survey with well-trained and experienced rangers and equipment for the field work; and (5) support the compilation of a site-specific tiger conservation action plan for Bukit Tigapuluh by assisting in survey data management and analysis.

USFWS: \$48,147

Leveraged Funds: \$76,907

RT1820

Award # F18AP00769

Sumatran Tiger conservation in Ulu Masen, Indonesia, island wide survey assessment. In partnership with Fauna and Flora International (FFI). The Leuser-Ulu Masen Landscape in Aceh province, Indonesia, represents a very important forest habitat for the Critically Endangered Sumatran tiger. After ten years, a reassessment of the island-wide population is needed to evaluate the implementation of past conservation strategies in different landscapes, including Ulu Masen. The survey result will help the Government of Indonesia and the Government of Aceh to meet the National Tiger Recovery Plan target of doubling the number of Sumatran tigers by 2022. This proposal will enable FFI to contribute the Ulu Masen portion of the island-wide survey. Project objectives are to: (1) increase the capacity of government officers on tiger site

occupancy in Ulu Masen; and (2) conduct and analyze occupancy survey data in the Ulu Masen landscape.

USFWS: \$49,986

Leveraged Funds: \$27,609

RT1849

Award # F18AP00853

Genetic analysis of Sumatran and Javan rhinoceros by Indonesian researchers. In partnership with the University of Illinois. The two most highly endangered species of rhinoceros are the Javan rhinoceros (*Rhinoceros sondaicus*) and Sumatran rhinoceros (*Dicerorhinus sumatrensis*); both are at very high risk of extinction. Molecular tools can aid in conservation management decisions by providing information on genetic diversity and population structure within and among populations; estimating total and effective population sizes; assessing population viability; elucidating historical and contemporary gene flow patterns and mating systems; and identifying the population of origin of illegal wildlife products. Project activities are to: (1) conduct molecular genetic analyses of wild Sumatran and Javan rhinoceros at the Eijkman Institute for Molecular Biology, using dung samples collected in the field to establish the species identity, sex, individual identities, kinship, population size, and other population characteristics of wild rhinos; and (2) build the capacity of laboratory professionals to store and grow cells, which would enable the production of very high quality DNA and additional in vitro and genomic studies on a longer-term basis.

USFWS: \$129,430

Leveraged Funds: \$43,736

MALAYSIA

RT1810

Award # F18AP00838

Peninsular Malaysia's first conservation K9 unit to combat poaching and illegal wildlife trade of Malayan tiger and rhinos. In partnership with Persatuan Penyelidik Rimba Malaysia. Malaysia is a source and transit country for internationally trafficked wildlife products. Conservation K9 units, the first of its kind in Peninsular Malaysia, will increase snare detection, poacher apprehension, and wildlife seizures. This project will enhance effectiveness and efficiency of law enforcement efforts in wildlife trafficking points and in tiger habitats through the formation of K9 detection units.

USFWS: \$168,320⁴

Leveraged Funds: \$26,400

RT1841

Award # F18AP00858

Supporting SMART patrols to improve protection of the Malayan Tiger in the Kenyir-Taman Negara Core Area, Peninsular Malaysia. In partnership with Panthera. Direct poaching of tigers and their principal prey, the sambar (*Rusa unicolor*), are the main threats to the long-term survival of Malayan tigers, and current trends throughout Peninsular Malaysia show that this threat is increasing. This project will support the Spatial Monitoring and Reporting Tool (SMART)-based patrol team of the non-profit research group, Rimba to: (1) monitor tiger and prey populations in the core area through annual camera trapping, and help evaluate the

⁴ Of this, \$165,528 was funded by U.S. Agency for International Development – Combating Wildlife Trafficking (USAID-CWT) funds.

effectiveness of law enforcement interventions over time; and (2) eradicate poaching threats in tiger hotspots.

USFWS: \$51,294

Leveraged Funds: \$1,202,205

NEPAL

RT1814

Award # F18AP00800

Strengthening rhino (*Rhinoceros unicornis*) conservation in Chitwan National Park, Nepal.

In partnership with the National Trust for Nature Conservation (NTNC). Chitwan National Park (CNP) is the oldest National Park in Nepal and a World Heritage Site. This project, developed jointly by NTNC and CNP, will involve a total rhino count in the Chitwan Valley and other rhino conservation activities as prioritized by the Rhino Conservation Action Plan (2018-2022) of Nepal. Project objectives are to: (1) support the Government of Nepal on completing the national population survey of rhino; (2) conduct DNA-based individual profiling; (3) manage habitat for rhino; and (4) carry out ID-based rhino monitoring.

USFWS: \$68,530

Leveraged Funds: \$65,725

RUSSIAN FEDERATION

RT1832

Award # F18AP00801

Safeguarding Amur tiger conservation, through strengthening the effectiveness and funding of UALZZT protected area.

In partnership with the Zoological Society of London. There are around 500 individual Amur tigers today. The Zoological Society of London (ZSL) has been working in Lazovsky Zapovednik State Nature Reserve and Zov Tigra National Park (UALZZT), using camera traps to monitor tiger density, reproduction, survival, and distribution. This project aims to: (1) enhance the long-term tiger monitoring program in UALZZT by maintaining and upgrading the camera trap grid and expanding the grid to an additional 500km²; (2) improve the long-term poacher camera surveillance “Forest Eyes Initiative” system to sustain and enhance anti-poaching in UALZZT by comparing and evaluating systems and identifying gaps in monitoring; and (3) strengthen capacity for effective and sustainable protected area management by enabling partnerships between tiger range states, supporting a knowledge exchange visit, and strengthening a partnership between two tiger range states, Russia and Nepal.

USFWS: \$99,771

Leveraged Funds: \$170,020

RT1846

Award # F18AP00856

Building SMART anti-poaching methods to protect tigers and their prey in Russia.

In partnership with the Wildlife Conservation Society (WCS). Since 2010, one of the primary activities of WCS in Russia has been to target conservation efforts with Amur tigers at key protected areas. WCS works with protected area staff to utilize a management system called SMART (Spatial Monitoring and Reporting Tool), which increases the efficiency and accountability of their anti-poaching programs. Project objectives are to: (1) support implementation of the SMART system at seven existing protected areas with tigers in Russia; (2)

improve capacity at sites to provide protection; and (3) foster institutionalization of SMART patrol monitoring and management at these sites.
USFWS: \$59,500⁵ Leveraged Funds: \$62,811

VIETNAM

RT1833

Award # F18AP00788

Tackling the illegal trade of tigers, rhinos, and other endangered species of wildlife in Vietnam. In partnership with Education for Nature-Vietnam (ENV). As a leading conservation organization in Vietnam, ENV actively and strategically works with government agencies, the general public, and other conservation partner organizations to stop the poaching and trafficking of wildlife in Vietnam. This project aims to: (1) strengthen policy and laws to help protect tigers, rhinos, and other endangered species; (2) combat the illegal tiger trade and disrupt criminal networks engaged in smuggling and trafficking of tigers, rhinos, and other endangered wildlife; and (3) reduce consumer demand for wildlife and wildlife products with a focus on high priority species including tigers, rhinos (horn), and pangolins, and mobilize public action in efforts to stop wildlife crime and reduce consumption of wildlife.

USFWS: \$84,472 Leveraged Funds: \$44,517

Modifications to existing Awards

INDIA

RT1661

Award # F16AP00915

Recovering tigers at the confluence of Western and Eastern Ghats in southern India. In partnership with the Nature Conservation Foundation India. The purpose of this project is to enable the recovery of tigers and their prey and habitat in the Malai Mahadeshwara Wildlife Sanctuary (MM Hills) – Cauvery Wildlife Sanctuary (CWS) landscape by assisting park officials in reducing conservation threats and leveraging conservation opportunities with approaches that are based on an understanding of both ecology and society. The project objectives are to: (1) work with Karnataka Forest Department to improve capacity for wildlife protection and management of frontline staff of the recently gazetted/expanded protected areas; (2) strengthen habitat connectivity between MM Hills and CWS by (a) working with government agencies to implement mitigation measures to reduce impacts of a highway, increase driver awareness through public outreach, use camera traps to assess corridor use by wildlife, complete surveys of vehicular traffic volume on the Hasanur Ghat road to understand corridor usage, and (b) designing, developing, and undertaking a wildlife collision prevention program through driver awareness programs and educational materials, such as billboards and handouts, and, based on study results, develop suitable mitigation plans and initiate discussions with various government agencies to explore possibilities of implementing mitigation measures; (3) undertake outreach activities around the parks to improve support of local communities, social leaders, and other

⁵ Of this, \$16,987 was funded by contributed funds.

influencers for wildlife conservation in the landscape; and (4) assess and evaluate conservation impacts of the above interventions by monitoring tigers and their prey and livestock.

USFWS: \$48,163

Leveraged Funds: \$86,988

RT 1720

Award # F17AP00991

Mitigating human-tiger conflicts through stakeholder participation in Dudhwa-Pilibhit Tiger Reserve, of Uttar Pradesh, India—Establishing a unique integrative conflict mitigation model.

In partnership with the Wildlife Trust of India. The purpose of this project is to: (1) enhance the integration of local community participation in conflict mitigation through formation and mobilization of voluntary Primary Response Teams (PRTs) in identified conflict hotspots in the Dudhwa-Pilibhit Tiger Reserve landscape; (2) increase the reach of the Rapid Response Teams (RRTs) through the operation of two RRTs in the Pilibhit and Dudhwa Tiger Reserves, respectively; and (3) increase awareness about wildlife, conservation, and human-wildlife conflict by at least 40-50 percent among teachers and students at 125 rural schools in the project landscape by the end of project period.

USFWS: \$95,741

Leveraged Funds: \$53,606

INDONESIA

RT 1670

Award # F16AP00762

Conservation of the tigers of Bukit Barisan Selatan through improved law enforcement and reduced human-tiger conflict, Sumatra, Indonesia.

In partnership with the Wildlife Conservation Society. The purpose of this project is to bring tigers back to their natural carrying capacity in Bukit Barisan Selatan National Park and to bring the tiger population of the Bukit Balai Rejang Protection Forest to a level that is capable of sustained breeding and compatible with human activities legally permitted within this protected area. To reduce human-tiger conflict and poaching threats to tigers and their prey, the project will: (1) protect tigers, their prey, and habitat; and (2) continue to successfully reduce the frequency of conflicts between tigers and humans in and around the Bukit Barisan Selatan National Park through a number of interventions, including responding to human-wildlife conflict events, establishing tiger-proof enclosures, and developing and implementing other human wildlife conflict mitigation measures.

USFWS: \$58,718

Leveraged Funds: \$62,494

RT 1743

Award # F17AP00471

Protection of Sumatran rhinos in Bukit Barisan Selatan and Way Kambas National Parks, Sumatra, Indonesia.

In partnership with the International Rhino Foundation. The purpose of this project is to protect the Sumatran rhinoceros as well as tigers, elephants, tapirs, and other wildlife, with the long-term strategy being the recovery of these species and biodiversity in the Bukit Barisan Selatan National Park (BBSNP) and Way Kambas National Park (WKNP) ecosystems. The Rhino Protection Units (RPU), administered by Yayasan Badak Indonesia (YABI), are the law enforcement patrols working with the National Park patrols on the ground. The project has the following four main objectives: (1) patrol and survey the full extent of WKNP and BBSNP, and conduct foot patrols throughout the National Parks; (2) monitor rhino and other threatened wildlife populations, including recording signs of rhinos and other wildlife

and entering these into a GIS database; (3) curtail illegal hunting and trapping of wildlife, detect and destroy snares set for rhinos, tigers, and other wildlife, identify and apprehend wildlife criminals, and report and deliver suspects to appropriate authorities; and (4) minimize the effects of human encroachment, and work with Park authorities to discourage additional illegal encroachment.

USFWS: \$505,326

Leveraged Funds: \$288,935

RT1671

Award # F16AP00764

Conservation of the tigers of Gunung Leuser National Park through improved law enforcement and reduced human-tiger conflict, Sumatra, Indonesia. In partnership with the Wildlife Conservation Society. The purpose of this project is to bring tigers in Sumatra's Gunung Leuser National Park (GLNP) back to their natural carrying capacity, and to a level that is capable of sustained breeding and compatible with human activities legally permitted within the Park. To reduce poaching threats to tigers and their prey, the project will: (1) protect tigers, their prey, and habitat, and patrol the key tiger core area of GLNP; and (2) mitigate human-tiger conflicts in key areas of GLNP, including by maintaining tiger-proof enclosures to protect livestock.

USFWS: \$59,129

Leveraged Funds: \$61,504

RT1706

Award # F17AP00820

Javan Rhino Protection Units in Ujung Kulon National Park, Java, Indonesia. In partnership with the International Rhino Foundation. The purpose of this project is to work within Ujung Kulon National Park to: (1) patrol and survey the full extent of the Park; (2) monitor rhino and other threatened wildlife populations; (3) curtail illegal hunting and trapping of wildlife; and (4) minimize the effects of human encroachment.

USFWS: \$96,422

Leveraged Funds: \$111,810

MALAYSIA

RT 1638

Award # F16AP00706

Conservation of tigers of the Endau-Rompin Landscape, Malaysia, through on the ground law enforcement, 2016-2019. In partnership with Wildlife Conservation and Science (Malaysia) Bhd (WC&S). The purpose of this project is to bring the tigers of the greater Endau-Rompin Landscape up to their full natural carrying capacity. The project will continue robust, on the ground anti-poaching law enforcement efforts in the Endau-Rompin Landscape (Johor and Pahang), by: (1) maintaining anti-poaching enforcement activities, including multi-agency anti-poaching foot patrols and vehicular patrols (4WD or motorbike) and mobile checkpoints, WCS-only foot patrols, and WCS-only vehicle patrols (motorbikes), based on inputs from threat analyses, intelligence, and reconnaissance trips; and (2) maintaining a Swift Response Unit (SRU); and (3) establishing surveillance camera-trapping or access point monitoring for poachers in Johor and Pahang.

USFWS: \$59,998

Leveraged Funds: \$59,965

NEPAL

RT 1741

Award # F17AP00925

Recovering Tigers in Nepal: expanding a comprehensive law enforcement strategy to eradicate poaching in the Terai Arc Landscape. In partnership with Panthera. The purpose of this project is to eradicate the threat of poaching beginning with four critical protected areas, by: (1) supporting the National Census to establish new baselines for tiger populations; and (2) building capacity with technological support to increase the detection of crimes, identification and prosecution of criminals, and, ultimately, reduce illegal activities.

USFWS: \$25,586 Leveraged Funds: \$91,226

THAILAND

RT 1733

Award # F17AP00924

Securing a future for tigers in southeastern WEFCON, Thailand. In partnership with the Zoological Society of London. The purpose of this project is to: (1) develop a tiger-specific Strategic Action Plan for southeast Western Forest Complex (sWEFCOM); (2) engage communities in tiger conservation by increasing awareness and assessing the occurrence of human-tiger conflict; (3) strengthen the capacity of management agencies to protect tigers, prey species, and habitat in sWEFCOM; and (4) monitor the presence and distribution of tigers in sWEFCOM.

USFWS: \$65,394 Leveraged Funds: \$118,037

RT 1740

Award # F17AP00995

Securing the future of tigers: Improving law enforcement capacity in the southeastern Western Forest Complex, Thailand. In partnership with Panthera. The purpose of this project is to strengthen capacity of partners to detect, deter, disrupt, and prosecute wildlife crime within the southeastern WEFCON landscape. Under this primary objective, Awardee and government partners as well as non-governmental organization partners will: (1) provide base tactical, operational, investigative, and strategic training, and regular in-situ mentoring to managers, rangers, officers using SMART (Spatial Monitoring and Reporting Tool) technology, to improve capacity to develop and implement intelligence-based patrolling strategies; (2) provide technological support to enhance protection operations in key tiger habitat areas; (3) institutionalize response protocols and data systems for SMART patrols and incorporate qualitative profiling; (4) monitor, report, and evaluate protection effectiveness using SMART; (5) provide advanced training to key personnel in quantitative and qualitative crime analysis and investigation; and (6) facilitate cross-site and interagency learning and collaboration through offsite exchanges and trainings.

USFWS: \$45,791 Leveraged Funds: \$157,925

RT1672

Award # F16AP00765

Conservation of tigers through law enforcement and education campaign in the Western Forest Complex, Thailand Year 9-11. In partnership with the Wildlife Conservation Society.

The purpose of this project, is to bring tigers back to their natural carrying capacity in the Western Forest Complex, a World Heritage Site, in Thailand. To reduce poaching threats to tigers and their prey and other threatened wildlife, the project will: (1) maintain the SMART (Spatial Monitoring and Reporting Tool) patrol system in Thung Yai West at the current intensity and coverage, while providing 35 park rangers with refresher training with a focus on use of firearms, arrests, and other law enforcement skills, examine data collected for errors and quality and enter data into a SMART database, and carry out all other SMART protocol requirements; (2) build a volunteer network from existing volunteer groups and conservation clubs in key universities to conduct nature education activities in Huai Kha Khaeng Wildlife Sanctuary (HKK); and (3) train undergraduate wildlife students from Kasetsart University on SMART patrol and wildlife monitoring techniques in HKK.

USFWS: \$59,768 Leveraged Funds: \$60,628