

Rhinoceros & Tiger Conservation Act

Summary Report 2001-2003

The U.S. Fish and Wildlife Service's mission is working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. We are the only agency of the U.S. Government with that primary mission. The Service also supports the Department of the Interior's Strategic Plan to involve various partners such as State and local governments, communities, federally recognized Tribes, non-governmental organizations, and private citizens.

The Service's Division of International Conservation and its partners worldwide support these goals through cross-border cooperation to preserve the habitats that sustain migratory and endangered species. The leadership, knowledge, and cooperation of international partners is crucial to ensure the global conservation of these species and their habitats.

Front:

Rhinoceros & Tiger Conservation Act

Summary Report 2001-2003



A child living in the vicinity of Russia's tiger habitat created this painting for an art competition. The competition was a component of an education program supported by the Rhinoceros and Tiger Conservation Fund to develop support for tiger conservation among young people.

Artwork property of Khabarovsk Wildlife Foundation







Government and non-government personnel of Lao PDR, working with Wildlife Conservation Society staff (top), are conducting a tiger camera trap survey (center) of the country's most promising tiger habitat. Resulting camera trap photographs include the tiger (bottom) and its prey, a sambhar (right), in Nam Et Phou Louey National Protected Area.

Wildlife Conservation Society

Introduction

Rhinos and tigers are powerful global symbols of our wildlife heritage. Their large size and dominant ecological position leaves us in awe of them. Conservation of these species and the extensive habitats they require supports many other species and leads to tangible benefits for people such as maintenance of watersheds; open space; ecological balance; eco-tourism, education and sustainable employment opportunities; and maintenance of biodiversity including the gene pools of many wild species important to man. The decline of rhinos and tigers is a matter of global concern.



"The tiger is the world's largest cat and a global icon for wildlife conservation.

Across the tiger's range careful planning must be done to allow tiger to survive in landscapes increasingly dominated by humans."

Tony Lynam, Wildlife Conservation Society



Status

There are five rhino species. Two occur in Africa: the black rhino and the white rhino. Three occur in Asia: the Indian rhino, the Javan rhino and the Sumatran rhino. The tiger occurs only in Asia and has five surviving subspecies: the Bengal, Indochinese, Sumatran, South China and Amur tiger.

By the end of the 19th Century the southern subspecies of Africa's white rhino had been decimated by farmers and hunters and only 50 to 200 survived. Today, although poaching pressure is still intense, the southern subspecies' survival is one of the world's greatest conservation success stories with a population approaching 11,670 animals. It is the most abundant of all rhino taxa and bears witness to the benefits of strong law enforcement and management. In contrast to this, the northern subspecies of the white rhino, which once ranged in large numbers throughout north-central Africa south of the Sahara, has been reduced to only 30 individuals located in the Democratic Republic of Congo's Garamba National Park. The white rhino lives in long-and short-grass savannahs.

Africa's black rhino lost a larger number of individuals than any other species in the last century. Due to poaching, its population fell from 65,000 in 1970, to 2,300 in 1992, a 96% decrease. Since then, intense law enforcement efforts have allowed the population to recover to approximately 3,100. This species lives primarily in grasslands, savannahs and tropical bushlands.

Asia's greater one-horned rhino lives in northern India and southern Nepal. It inhabits riverine grasslands and adjacent woodlands. It is another conservation success story. Intensive conservation efforts provided by Indian and Nepalese wildlife authorities have allowed this species to recover from less than 200 in the early years of the 20th Century to around 2,400 at present.

Fewer than 300 Sumatran rhinos survive in very small, highly fragmented populations, primarily in Indonesia and Malaysia. The Sumatran rhino inhabits rainforest in hilly and mountainous areas. Its numbers have declined by 50 percent due to poaching over the last 18 years, making this the most endangered rhino species.

The Javan rhino, living in lowland tropical forest, has the smallest population of the rhino species with fewer than 60 animals surviving in one population in Indonesia and fewer than ten surviving in one population in Vietnam. This rhino is threatened by poaching, loss of habitat, inbreeding and vulnerability to catastrophic events due to its small population size. Recent surveys indicate there may be no adult males remaining in the Vietnamese population.

The Caspian, Javan, and Balinese tiger subspecies went extinct in the 20th Century leaving only the Bengal, Indochinese, Sumatran, South China, and Amur tiger extant in the wild in the later years of the century.

Approximately 400 Amur tigers survive today in coniferous, scrub oak, and birch woodlands mostly in eastern Russia, with a few in northeastern China and perhaps northern North Korea. They are threatened by habitat fragmentation and degradation, low prey density, illegal hunting and development projects. Vigorous anti-poaching activities for this tiger and its prey along with habitat conservation are needed to enable its survival and return to habitats in China. Amur tigers are the largest tigers in body size.

The South China tiger of central and eastern China is considered the evolutionary antecedent of all tigers. It occurred in montane, subtropical evergreen forests. This tiger's status is now vague as recent surveys have not

With a total world population of some 12,000, the southern white rhinoceros is the most abundant of rhinoceros subspecies. *Approximately* 95% of the worlds white rhinos are found in one country-South Africa.



found evidence that it remains in the wild (47 survive in China's zoos). Its decline resulted from uncontrolled hunting compounded by extensive deforestation and probable reduction in available prey leading to population fragmentation and increased vulnerability to local extinctions. This is the rarest of the five living tiger subspecies, the most threatened, and the closest to extinction.

The Indochinese tiger of Thailand, Burma, southern China, Cambodia, Laos, Vietnam, and peninsular Malaysia occurs in deciduous and tropical evergreen forests and is estimated to have a population of between 1,200 and 1,800. Many of these tigers are subject to poaching and habitat encroachment, fragmentation, and isolation.

The Sumatran tiger numbers about 400 and is found only on the Indonesian island of Sumatra. It occurs primarily in tropical moist forests of the islands five national parks and is threatened by loss of habitat and poaching. Since 1900 an estimated 80% of the tropical forest habitat that once covered the island has been converted to agriculture and other human uses. The remaining habitat is increasingly fragmented, isolated, and degraded. This tiger has the darkest coat and is the smallest of the tiger subspecies.

The Bengal tiger has an estimated wild population of between 3,159 and 4,715. Most of these animals live in India, Nepal, Bangladesh, Bhutan, and Burma. They occur in a wide variety of habitats including broad-leaved humid forests of south India, dry thorn forests of northwestern India, Sundarban mangrove swamp on the border of India and Bangladesh, and tall grasslands of India and Nepal at the foot of the Himalayas. Although wild Bengal tiger populations are considered more secure than subspecies found elsewhere in Asia, there exists the potential for their rapid demise through recently increased levels of poaching and poisoning.

"For over a quarter century, there has been a high level of public concern for tigers, leading to major investments in conservationefforts. However, wild tigers continue to be under grave threat, and their preservation now requires, more than ever before, informedconservationinterventions guided by reliableecologicalknowledge." K. Ullas Karanth and James D. Nichols



Rhinoceros and Tiger Conservation Fund

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the U.S. Endangered Species Act, and the laws of many other countries attempted to place controls on the sale of and trade in rhino and tiger products. Much of this trade was for use in oriental medicine and for souvenirs.

None-the-less, most rhino and tiger populations have continued to suffer from the effects of poaching and habitat destruction. The U.S. Congress, realizing that the survival of these species will ultimately depend upon on-the-ground conservation in range countries, passed the Rhinoceros and Tiger Conservation Act of 1994 (as amended 1998). The Act established the Rhinoceros and Tiger Conservation Fund (Fund) to assist in the conservation of rhinoceros and tigers. The Fund is implemented by the U.S. Fish and Wildlife Service through a competitive grant program by supporting conservation programs of range countries and the CITES Secretariat.

This Fund supports rhinoceros and tiger conservation projects that strengthen law enforcement, acquire information needed for management through population surveys and monitoring, develop local support for conservation through environmental education, strengthen habitat and nature reserve management, and promote sustainable development to remove human pressure on these species' habitats.

The Fund received its first appropriation in 1996. A summary of Fund activity from 1996 through 2000 (for 105 grants) was presented in two earlier reports that are available on the Internet at http://international.fws.gov. Activity from 2001 through 2003 involved 253 proposals from 21 countries. After review of these proposals, 100 grants were awarded totaling \$2,830,112, which generated an additional \$6,749,939 in matching funds and in-kind contributions (a 239 percent return).



"The Nepalese Terai (lowlands) is one of the premier hot spots for large mammalconservation in Asia. For example, Royal Chitwan National Park and the adjacent Parsa Wildlife Reserve form a complex that supports the second largest population of the great one-horned rhinoceros, about 30-35 elephants and one of the largest tiger populations on the Indian subcontinent." Mahindra Shrestha Nepal Department of National Parks and

Wildlife

Conservation

Thirty-six percent of the matching funds and in-kind contributions originated from the range countries. Additional recent and historical information on expenditure of the funds can be found on pages 44 thru 47 of this report.

Highlights of the Fund's 2001 - 2003 grant awards include:

- n Assessments of tigers in Bangladesh's Sundarban river swamp, Burma's proposed Hukaung Valley Tiger Reserve, Cambodia's Lumphat Wildlife Sanctuary, Indonesia's Bukit Barisan Selatan National Park, and certain nature reserves of India's state of Maharashtra, China's Jiangxi, Fujian, Zhejiang, Hunan and Hubei provinces, and Russia's Khabarovsk Krai;
- n Rhino population monitoring in South Africa's Eastern Cape Province (Great Fish River Reserve and Addo Elephant Park), Mpumalanga Province (five reserves) and KwaZulu-Natal Province (Mkhuze Game Reserve); on Kenya's lands under the purview of the Association of Private Land Rhino Sanctuaries; in Namibia's Kunene and Erongo regions; and in Zimbabwe;
- n Field-based, on-the-job training in rhino monitoring, habitat assessment, and management for historically disadvantaged rangers and students from the Eastern Cape Government and the University of Fort Hare in South Africa;
- n Continued development of a means to survey the Javan rhino of Indonesia and Vietnam using DNA obtained from fecal material;
- n Enhanced housing for Kenya's Lewa Wildlife Conservancy anti-poaching unit to improve morale and bring about better security;
- n Increased law enforcement for Sumatran rhinos in Indonesia and Malaysia, and continued anti-poaching activities for Javan rhinos in Indonesia and Vietnam;
- n A rhino conservation education campaign for 60 schools on Namibia's communal lands having high quality black rhinoceros habitat;
- n Strengthened law enforcement for tigers at Russia's Sikhote-Alinskiy Biosphere Nature Reserve, Lazovsky State Nature Reserve, a complex of tiger habitats in southwest Primorye Krai, tiger habitats

- in Khabarovsk Krai and Cambodia's tiger habitats outside nature reserves;
- n Horn and shoulder microchip marking of rhinos in South Africa's KwaZulu-Natal Province to allow individual identification of rhino horns and carcasses recovered after being poached;
- n Translocation of rhinos in Nepal to reestablish populations;
- n Improved mobility for the anti-poaching units at Ithala Game Reserve and Tembe Elephant Park in South Africa's KwaZulu-Natal Province and an enhanced security network to prevent rhino poaching at Tanzania's Ngorongoro Conservation Area;
- n Collaborative efforts to conserve the Amur tiger in habitats adjacent to the Russia-China border;
- Policy framework and management guidelines development for reintroduction of black rhinoceros to Zambia;
- n Restoration of watering points and fences at Lake Nakuru National Park in support of the Kenya Wildlife Service's Black Rhinoceros Metapopulation Management Program;
- n A brochure to inform traditional medicine practitioners in the U.S. of the laws conserving rhinos and tigers;

- n Formal courses presented in India on law enforcement and nature reserve management for forest officials of tiger range countries;
- n Research on black rhinoceros olfactory communication and possible impacts of translocation on embryonic and fetal survival to enhance rhino metapopulation management;
- n Environmental education camps for children living adjacent to important tiger habitats in Nepal, an environmental education workshop for teachers working in the vicinity of Russia's Sikhote-Alinskiy Biosphere Nature Reserve and development of a nature museum at that reserve, an environmental education action plan and conference for teachers and conservationists in Russia's Khabarovsk Krai, conservation awareness programs at India's Manas and Satpura national parks, Central Vietnam's tiger corridor, and Thailand's Huai Kha Khaeng Wildlife Sanctuary;
- n An assessment of black rhinoceros management in Namibia and South Africa for use in planning future recovery efforts; and
- n A standardized survey of Amur tiger prey in the Russian Far East and northeast China.

"Viewed on a regional scale, rhinos probably spread along the flood plains at the base of the world's highest mountain range because of the presence of the highly productive but low diversity grassland community that flanked South Asia's major river systems." Nepal Rhino

Conservation
Strategy
Nepal's
Department of
National Parks and
Wildlife
Conservation



With the support of the Fund, a Nepali forest officer studied rhino movement through a corridor joining Nepal's Royal Chitwan National Park and another habitat.

Wildlife Institute of India/Jhala

Bangladesh Forest Officers and University of Minnesota staff examine tracks left by a tiger when it crossed a tidal creek in the Sundarban syama (tan) $swamp\ (top).$ $Periodic\ counts\ of$ these tracks, carried $out\ in\ a$ standardized $manner;\ will\ provide$ information on the $relative\ abundance$ and population trends of wild tigers (center) in the swamp. A forest officer, working toward his PhD. on the project, measures a track (bottom). University of Minnesota







On-the-Ground Results

Sundarban Tiger Assessment

The Sundarban, located on the Indian-Bangladesh border, is a vast river swamp formed by the confluence of the Ganges, Brahmaputra and Meghna rivers just before their waters enter the Bay of Bengal. It is believed to be home to one of the largest remaining tiger populations in South Asia and due to twice-a-day tidal inundation, is the most unique habitat in which the tiger resides. It is also one of the most intensively utilized areas where tigers still occur in high numbers.

Ecologists have suggested that in the Sundarban, the tiger influences prey populations and through these species has a controlling effect on forest dynamics. If tiger numbers decrease, there could be a cascading impact on the entire system. One such effect would undoubtedly be more human pressure.

With support from the Fund, the Bangladesh Forest Department is conducting a four-year study to obtain information on the tiger population's natural history, behavior, ecology, and population dynamics. This is a prerequisite for tiger conservation if it is to be effectively incorporated into the area's ecosystem management plan.

The project involves development of a cost efficient tiger population monitoring system based on encounter rates of tracks along medium sized waterways. Telemetry behavioral studies are being used to calibrate this index to estimate actual abundance of tigers. The remote sensing component of this project is developing a methodology for monitoring forest condition. This will allow a rigorous, scientific and unbiased approach to detect change in forest condition and is critical to the management of the Sundarban for both sustained use of forest products and biodiversity conservation.

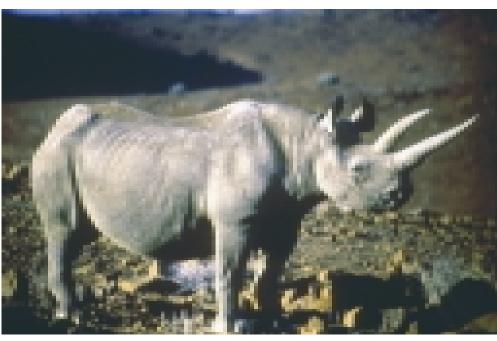
"The tiger is important not only as an indicator of biologicalintegrity of the Sundarban: it has an important symbolic, aesthetic, ecological and economic role for the citizens of Bangladesh." J. L. David Smith, University of Minnesota Trainees practice individual identification of rhinoceros (top) to produce data for metapopulation management at Kenya's Lake Nakuru National Park.

Rhino, such as this $southwestern\ black$ $rhinoceros\ (bottom),$ $are\ individually$ identified by using a system based on ear notches, horn size and shape, and any $other\ outstanding$ characteristics.Individual $identification\ in$ turn allows for in tensivemanagement so as to $increase\ rhinoceros$ population size as quickly as possible.

Far right, a south $central\ black$ rhinocerosphotographedduring a rhino $monitoring\ exercise$ at Mkhuze Game $Reserve\ in$ KwaZulu-NatalProvince, South Africa. With over 1,000 individuals $this\ is\ the\ most$ abundant of the $black\ rhino$ subspecies.



 $World\ Conservation\ Union\ (IUCN)\ African\ Rhino\ Specialist\ Group.$



Save the Rhino Trust, Namibia.

Managing the Black and White Rhinoceros for Maximum Population Growth.

In Africa, rhino recovery efforts have concentrated on law enforcement and intensive management to maximize the survival and reproductive output of rhino populations. Range states and cooperating partners are expanding use of rhino metapopulation management, meaning that the members of a given rhino subspecies found in a given country are managed as a single herd. This approach requires intensive monitoring (based on ear notching and individual recognition) in the wild to better assess survival and reproductive rates. When rhino population growth falls below certain targets or when herd size expands beyond a certain threshold (usually thought to be at 75% of ecological carrying capacity); management actions, such as translocating rhino back to currently unoccupied but historic range, are implemented.

The Fund supported two regional projects and eight national projects that enhanced biological management of rhino populations by monitoring. These projects included:

- n Updating and revising a standardized rhino monitoring training module developed by the World Conservation Union's African Rhino Specialist Group. The module includes a trainers guide and a reference guide for trainees. Thus far 14 management agencies in 7 range states have adopted the materials;
- n Capture, ear-notching, and radio collaring of some 50 black rhinoceros in Zimbabwe by the World Wide Fund for Nature's Southern African Regional Program Office and partners to further metapopulation management goals;
- n Ear notching of some 30 of the eastern subspecies of the black rhinoceros on Lewa and Sweetwaters rhino sanctuaries in Kenya. Jointly implemented by the Association of Private Land Rhino Sanctuaries and the Kenya Wildlife Service, this project is a strong example of a private/public partnership for conservation.

"Experience in a number of (rhino) populations has shown it is possible for multi-observer teams, including field rangers with limited formal education, to collect quality rhino ID data as part of their usual duties."

> African Rhino Specialist Group



Wildlands Trust



Anti-poaching Units for Sumatran Rhinos

The Sumatran rhino (*Dicerorhinus sumatrensis*) is a critically endangered species. Historically it occurred from the foot hills of the Himalayas in India and Bhutan, throughout Burma, Thailand and Malaysia, to the islands of Sumatra and Borneo.

The species has been declining for centuries, mainly because of persistent hunting for the horn and other parts, that are used for Asian medicinal purposes. Loss of habitat is a comparatively new threat for the species, but is becoming more significant with the continuing removal of tropical forests throughout Southeast Asia. About 300 individuals still survive in small populations mostly in the national parks and wildlife reserves of Indonesia and Malaysia.

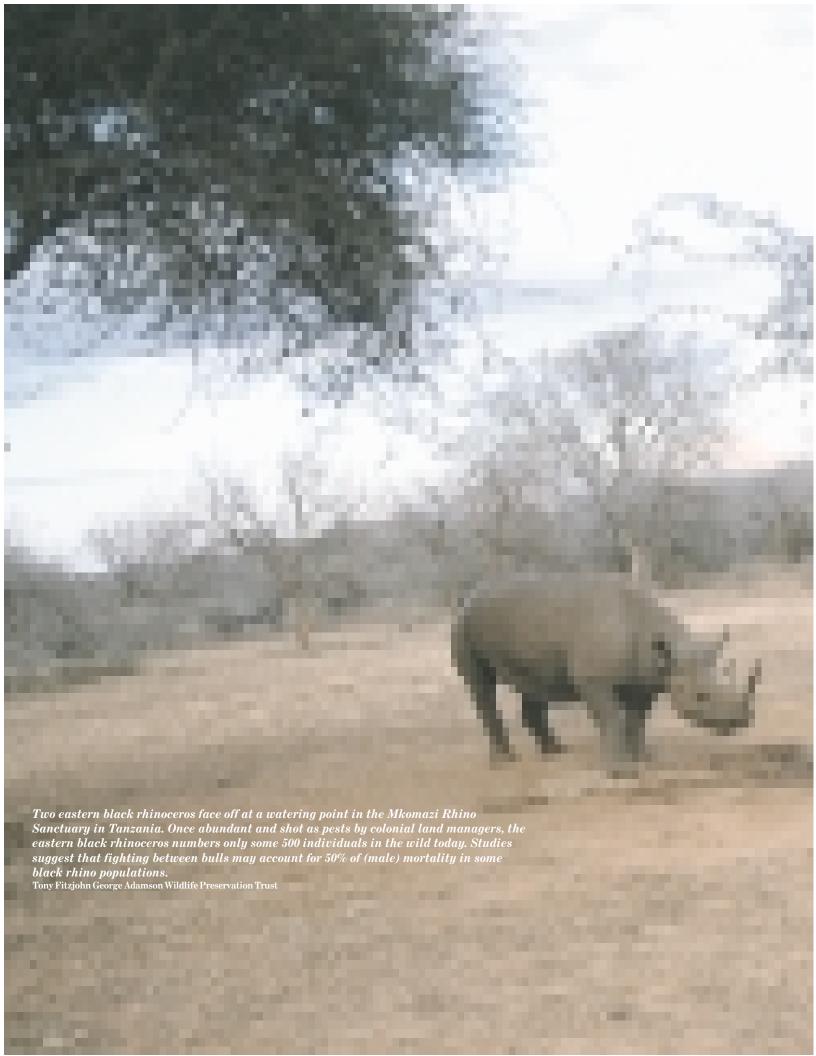
All major populations are being guarded against excessive poaching by the deployment of anti-poaching units. These units operate in areas with viable rhino populations, concentrating on the core areas of the rhino distribution and on areas where rhinos are most vulnerable from poaching, such as near salt licks or on major game trails. The Fund is supporting these units at Bukit Barisan Selatan (two units) and Way Kambas (five units) national parks in southern Sumatra, at Leuser Ecosystem in northern Sumatra (ten units), and in peninsular Malaysia (four units in Taman Nagara National Park and nine units in other areas). This intensified anti-poaching activity has slowed the decline of Sumatran rhinos and is stabilizing the world population. However, the loss of three rhinos in Bukit Barisan Selatan (approximately 10% of that population) since April 2001 emphasizes the continuing need for effective anti-poaching efforts.







A Sumatran rhino (left) caught in a leg hold snare placed on the ground (top right) in Indonesia's Bukit Barisan Selatan National Park ultimately died (center right). Removal of snares is a major contribution of the Rhino Protection Units (bottom). IRCP/IRF



Applied Research on Translocating the Black Rhinoceros

Protecting and translocating rhinos back into a suitable habitat are cornerstones of rhino metapopulation management. Translocated rhinos sometimes fail to disperse and occupy new habitat optimally and their removal has sometimes left patches of underutilized habitat rather than increasing available habitat for remaining animals. The Fund is supporting an ongoing five year applied research project being implemented by the Zoological Society of San Diego and the University of Port Elizabeth in South Africa, to address dung and urinemediated olfactory communication in rhinos. It is anticipated that this project will result in a toolbox of techniques that can be used to manipulate the way rhinos disperse into new and previously occupied range following translocations.

Although translocation of pregnant rhino cows is common practice, controversy currently surrounds this practice because it has been alleged that capture, immobilization, and reintroduction of rhino may cause embryonic or fetal loss. To address this concern the Fund has supported three years of work by the Fossil Rim Wildlife Center and local partners that use ultrasonography to detect pregnancy in immobilized rhinos captured for translocation, ear notching, and other management programs. By following these rhinos to parturition and assessing the survival of calves versus a control group, it will be possible for the first time to better answer the question of whether or not certain management actions, such as capture, significantly decrease parturition frequency and calf survival in rhinos.

(i) establish rhino populations in safe and historical parts of their range from which they recently became extinct: (ii) maintain genetic diversity by encouraging inter-breeding between otherwiseseparate, but historically connected populations, and (iii) maximize population growth rates by maintaining rhino densities below ecological carrying capacity."

Zoological Society of San Diego, Center for Reproduction of Endangered Species

"Translocation is

used to

"The tiger is a very powerful symbol in China. But more than a symbol, the Amur tiger; as other tiger sub-species, is considered a "key species" in biodiversity conservation. Because the tiger needs an adequate number of large prey species and large expanses of suitable habitat to survive, the tiger is an indicator of a healthyecosystem. Its conservationwould lead to the preservation of a range of other species and habitat valuable to people while its extinction would reflect the failure



 $A \ staff \ member \ of \ Hunchen \ Nature \ Reserve \ in \ northeast \ China \ searches \ for \ snares. \ How \ many \ can \ you \ spot \ in \ this \ picture?$ Wildlife Conservation Society



Over 5,000 snares have been removed from the Reserve with Fund support. The extensive network of snares in the Reserve was a key reason for low prey densities, and the virtual absence of both the Amur tiger and Amur leopard. Wildlife Conservation Society

Transboundary Russia/China Collaboration

The Amur tiger formerly occurred throughout the Russian Far East from Lake Baikal to the Sea of Japan as well as in northeast China and the Korean Peninsula. Today the only viable population (estimated at around 350 adult tigers in 1996) is found adjacent to the Sea of Japan in Primorskii and southern Khabarovskii Krais in the Russian Far East. This population may still have some contact with a remnant population in China's provinces of Heilongjiang (five to seven tigers estimated in the winter of 1998 - 1999) and Jilin (seven to nine tigers estimated in the winter of 1997 - 1998).

Despite the dangerously low populations of tigers and their prey in Heilongjiang and Jilin, the presence of extensive tracts of forested land and their proximity to tigers and prey in Russia are cause for optimism that the present range of the Amur tiger could expand back into China.

Building upon the October 2000
International Workshop to Develop a
Recovery Plan for the Wild Amur Tiger
Population (Harbin, China), the
Transboundary Amur Tiger Project,
guided by the Wildlife Conservation
Society, is using policy level government
contacts to foster a cooperative effort
between China and Russia to conserve the
Amur tiger (and Far Eastern leopard)
through the establishment of corridors
and new nature reserves, and the
development of appropriate land-use
regimes on both sides of their border.

The Fund has contributed to this effort through support of the international workshop to develop the recovery plan, an international meeting to standardize prey surveys, conduct of prey surveys in Khabarovsk, Heilongjiang and Jilin provinces, tiger monitoring in Khabarovsk Krai, environmental education activities in Khabarovsk, Heilongjiang and Jilin provinces, and continued efforts to facilitate contacts between relevant agencies of both countries.

to preserve or restore the integrity of a natural ecosystem. The loss of the Amur tiger would be symbolic for the Chinese people, who revere this animal, and it would also represent an important ecological loss."

Heilongjiang

Heilongjiang Forestry Department and the Wildlife Conservation Society



Amur Tiger WCS/John Goodrich



Black Rhino Population Expansion into the Tsavo Ecosystem

Kenya is a stronghold for the eastern subspecies of the black rhinoceros with 88% or roughly 420 individuals of the world's total population. Kenya's Tsavo East and West national parks comprise the largest nature reserve available to build numbers of this subspecies for restoration efforts. With rhino numbers increasing steadily in the Ngulia Rhino Sanctuary, a ring-fenced sanctuary within Tsavo West, the African Wildlife Foundation and the Kenya Wildlife Service have entered into a bold partnership to free release rhino to the adjacent Tsavo East National Park.

Thus far this partnership has released over 40 rhinos into Tsavo East, a rich habitat thought to be large enough for at least 2,500 black rhinos. To help make this potential conservation success story a reality, the Fund has provided improved housing, vehicular support, equipment, and advanced training for Kenya Wildlife Service rangers at both Ngulia and Tsavo East national parks. Provision of this funding has enhanced law enforcement and monitoring efforts crucial to rhino survival and management by raising the living standards and morale of the rangers, thereby emphasizing the importance of their work. Though 12 of the free release rhinos have been lost to poaching, their range has been expanded in Tsavo East to some 4,000 square kilometers, or about 40% of the park's surface area.

An eastern black rhinoceros at the Ngorongoro Conservation Area in Tanzania, site of a successful black rhino conservation partnership between the Ngorongoro Conservation Authority, the Tanzanian Government, the African Wildlife Foundation, and the Frankfurt Zoological Society.

African Wildlife Foundation.



"The translocation of rhinos from Nepal's Royal ChitwanNational Park to Royal Bardia National Park also benefitted the Chitwanpopulation by reducing the potential for conflict with humans along the park's boundaries $as\ well\ as$ reducing pressure on Chitwan's rhino habitat." WWF-Nepal Program





Twenty-two domestic elephants (top) participated in the capture of rhinos (right) at Nepal's Royal Chitwan National Park in 2002. After the rhinos were sedated (center), they were loaded into large crates and trucked 500 km west to Royal Bardia National Park where they were released (bottom). WWF-Nepal Program

Royal Bardia National Park Rhino Population Reaches Target

The greater one-horned rhinoceros (*Rhinoceros unicornis*) was once abundant throughout the flood plains of South Asia's Ganga, Brahmaputra and Sindh rivers and their large tributaries between the Indo-Burmese border in the east and Pakistan in the west. Within Nepal, it ranged throughout the lowlands and nearby foothills of the southern portion of the country. Poaching and habitat encroachment from agricultural expansion eventually isolated these animals to the Chitwan valley, where approximately 1,000 were recorded until the early 1950s.

By the 1960s the Chitwan population was reduced to less than 100 individuals. Since then, efforts to conserve remaining habitat and stop poaching elevated this population to 544 individuals by the year 2000. As this recovery occurred, concern developed that this lone population of Nepal's rhinos was vulnerable to disease, poaching and other natural disasters. As a result, 83 rhinos were translocated from Royal Chitwan National Park to Royal Bardia National Park (300 kilometers to the west of Chitwan) from 1986 through 2003. This brought the Bardia population to the conservation goal of approximately 100 animals and reestablished a second viable rhino population for Nepal. The Nepalese government, under the Terai Arc program, plans to establish a third population in the Sukla Phanta Wildlife Reserve west of Bardia where five rhinos are currently found.

The Fund provided grants to the World Wildlife Fund - Nepal Program in 2000 and 2002, which contributed to the Nepal government's translocation of 20 rhinos to Bardia and participation in the translocation exercise by forestry officials from India's state of Assam.





In Search of Wild South China Tigers

The Chinese State Forest Administration, in collaboration with the Tiger Foundation, conducted a South China tiger (*Panthera tigris amoyensis*) assessment in the provinces of Jiangxi, Fujian, Zhejiang, Hunan and Hubei in south-central China. The South China tiger is the rarest of the five living tiger subspecies and the most critically endangered. They have not been recorded in the wild by officials for 25 years.

To prepare for this assessment, more than 100 Chinese Forestry Staff, university students and local volunteers were trained and/or briefed in tiger survey methodology, interview procedures and remote camera set-up, operation and care. During the field surveys remote cameras were placed in potential habitat to photograph tigers, their prey, and human disturbance. Remote mountain trails and ridges in potential tiger reserves were investigated to verify and document recent and historical evidence of tiger presence, prev presence and trends, habitat quality, and human disturbance. Informal interviews were conducted with local villagers to assess their knowledge of wildlife, and document livestock management practices, local land and resource use, and conservation attitudes.

After surveying eight potential tiger reserves and assessing the available evidence, it was concluded that no viable (greater than 50 adult tigers) wild South China tiger populations remain. It is, however, possible that there may be a single tiger or a few isolated tigers still remaining at sites not surveyed.

While the overall results were disappointing, this assessment was significant as it advanced communication between Chinese conservationists and international tiger specialists, and provided information that will be useful as options for restoration of a viable tiger population are considered.

"Over the last 40 years, wild populations of the South China tiger have declined from thousands to a scattered few...the last time one was brought into captivity was nearly 30 years ago."

Ron Tilson, The Tiger Foundation

Projects Funded By Program Area

Appropriated Funds: \$2,830,112

Matching Funds and In-Kind Contributions: \$6,749,939

Bold/italic type within individual summary indicates project matching funds.



A field ranger at the Ithala Game Reserve in KwaZulu-Natal South Africa monitoring a white rhinoceros. The fund invests heavily in rhino metapopulation management, seen as crucial to rhinoceros survival and range expansion in the long term.

Ezemvelo KwaZulu-Natal Wildlife

Surveys and Monitoring

Assessment of Tigers and Prey in Lumphat Wildlife Sanctuary, Northeast Cambodia

Department of Nature Conservation and Protection, Ministry of Environment \$11,126 + \$10,450—A prerequisite to strengthening the management of the sanctuary. **Funding partners:** Wildlife Conservation Society and World Wildlife Fund

Black Rhino Monitoring and Habitat Use Studies, Great Fish River Reserve, Eastern Cape Province, South Africa University of Fort Hare \$19,939 + \$9,805—Training of field biologists and development of a rhino habitat and rhino monitoring and management program at the Great Fish River Reserve, home to the largest population of black rhino (80) inhabiting the valley bushveld ecosystem. Funding partners: University of Fort Hare and the Eastern Cape Province Government.

Survey Assessment and Conservation of the Sumatran Tiger in Bukit Barisan National Park, Indonesia Wildlife Conservation Society \$32,830 + \$104,157—Continuation of a long-term research and monitoring program, initiated in 1998, to assess the current status of tigers in the park. Funding partners: Wildlife Conservation Society and Save the Tiger Fund.

Monitoring of White and Black Rhino Sub-Populations in Mpumalanga Province as Part of a Meta-Population Strategy, South Africa
Mpumalanga Parks Board. \$28,655 + \$31,202—Reintroduction and monitoring of black rhinoceros at the Songimvelo Game Reserve and enhanced monitoring and management of rhinoceros at a total of five reserves in the Mpumalanga Province, South Africa. Funding partner:
Mpumalanga Parks Board.

Assessment of Forest Corridor linking
Dudhwa National Park and
Katerniaghat Wildlife Sanctuary, India
Bombay Natural History Society \$28,380
+ \$6,276—To determine feasibility of
restoring habitat in the corridor. Funding
partner: Bombay Natural History Society.

Rhino Monitoring Mkhuze Game Reserve, South Africa Wildlands Trust \$21,750 + \$12,427— Development and implementation of a comprehensive rhino monitoring program for rhinoceros at the Mkhuze Game Reserve in KwaZulu-Natal. Funding partners: Wildlands Trust and Ezemvelo KwaZulu-Natal Wildlife.

GIS Capacity Building of the Cambodia Tiger Team and Development of a Cambodia Spatial Tiger Information System

University of Minnesota 12,730 + 8,398 -Strengthen data management capability of personnel operating under the project known as the Cambodian Community Based Tiger Conservation Project. Funding partners: University of Minnesota and Environmental Systems Research Institute (ESRI).

Monitoring of the Black Rhinoceros Populations of the Addo Elephant National Park in South Africa South African National Parks \$27,917 + \$48,809 —To continue, improve, and institutionalize a monitoring program for the black rhinoceros populations of the Addo Elephant Park in South Africa. Black rhino are thought to exist well below carrying capacity at Addo and intensive management of these populations is needed to maximize reproductive output. Funding partners: South African National Parks, Danish Cooperation for Environment and Development, David Shepherd Wildlife Foundation, Barbara Delano Foundation.

Genetic Analysis of the Javan Rhinoceros in Relation to Its Management, Indonesia and Vietnam Columbia University's Center for Environmental Research and Conservation (CERC) \$29,105 + \$31,800 — Second year of funding to develop demographic and genetic data on the Javan rhinos of Ujung Kulon National Park, Indonesia, and Cat Tien National Park, Vietnam. Funding partner: CERC.

Ear Notching of Black Rhinos on Lewa Wildlife Conservancy and Sweetwaters Rhino Sanctuary, Kenya Association of Private Land Rhino Sanctuaries, Kenya \$10,482 + **\$9,066**— Improve monitoring and metapopulation management of some 60 eastern black rhinoceros inhabiting the Lewa and Sweetwaters sanctuaries in Kenya by conducting ear notching and daily monitoring of the animals. Funding partners: Lewa Wildlife Sanctuary and Sweetwaters Rhino Sanctuary.

South China Tiger Field Survey: Guangdong, Hunan, Jiangxi and Fujian Provinces

The Tiger Foundation \$26,900 + \$52,756 training and equipment for field survey teams of the Chinese State Forestry Administration (SFA) on census techniques for wild South China tigers. Funding partners: The Tiger Foundation, The Minnesota Zoo Foundation, Save

China's Tigers, South Lakes Wild Animal Park, The Sumatran Tiger Trust, Colby College, and China's State Forestry Administration.

 $In \, Situ \, \, Ultrasonographic \, Reproductive$ Evaluation of the Female Black Rhinoceros and White Rhinoceros in South Africa (Year 1) Fossil Rim Wildlife Center \$18,790 + \$66,150—Combine ultrasound with ear notching and/or radio collaring to monitor pregnant rhino post capture and document effects of capture and other management actions on embryo and fetal viability. Funding partners: Fossil Rim Wildlife Center, South African National Parks, and International Rhino Foundation.

In Situ Ultrasonographic Reproductive Evaluation of Female Black Rhinoceros and White Rhinoceros in South Africa

Fossil Rim Wildlife Center \$13,300 + *\$77,150*—Applied research on the possible effects of intensive management of female black and white rhinoceros on reproductive success. Funding partners: Fossil Rim Wildlife Center, South African National Parks, International Rhino Foundation, and Tapeats Fund.

In Situ Ultrasonographic Reproductive Evaluation of the Female Black Rhinoceros and White Rhinoceros in South Africa (Year 3) Fossil Rim Wildlife Center \$22,300 + *\$63,650*—Applied research on the possible effects of intensive management of female black and white rhinoceros on reproductive success. Funding partners: South African National Parks and Fossil Rim Wildlife Center.

A Meeting on Tiger Survey Techniques for Bangladesh's Sundarban University of Minnesota \$12,766 + **\$6,000**— Produced a tiger assessment strategy. Funding partners: University of Minnesota, the Bangladesh Forest Department, and the Wildlife Conservation Society.

Revision of African Rhino Specialist Group's updated "Sandwith" Course for Field Rangers in Rhino ID Monitoring and Holding of Second Course to Train Trainers Using the Revised Course,

IUCN Survival Service Commission African Rhino Specialist Group \$43,303 + \$15,72—Improve, standardize, and disseminate the African Rhino Specialist Groups training course for field rangers in rhino population monitoring in six (African) rhino range states. Funding partners: Southern African Development

Projects Funded By Program Area

(continued)



A black rhinoceros cow and calf at the Mkhuze Game Reserve in KwaZulu-Natal South Africa. With support from the Fund, the Wildlands Trust has provided badly needed rhino monitoring support to the Ezemvelo KwaZulu-Natal Wildlife Conservation Service staff. Wildlands Trust.

Community Regional Program for Rhino Conservation, North West Parks and Tourism Board, Ecoscot Consultancy Services, Ezemvelo KwaZulu Natal Wildlife.

Status, Behavior and Ecology of the Tiger in the Sunderban of Bangladesh (Year 1) University of Minnesota \$35,270 + \$140,500—Training and equipment needed to strengthen a Bangladesh Forest Department assessment of the tiger population inhabiting the Sundarban. Funding partners: University of Minnesota, Bangladesh Forest Department, Wildlife Conservation Society, Asian Development Bank, and the Save the Tiger Fund.

Status, Behavior and Ecology of the Tiger in the Sunderban of Bangladesh (Year 2) University of Minnesota \$39,636 + \$48,240—Assistance to the Bangladesh Forest Department in acquiring base line information on the status of tigers in the Sundarban river swamp. Funding partners: University of Minnesota, Bangladesh Forest Department, Wildlife Conservation Society, Asian Development Bank, and the Save the Tiger Fund.

Desert-dwelling Black Rhino Monitoring and Perceptions of Communities
Towards Rhino Conservation in North-Western Namibia
Save the Rhino Trust (SRI) \$33,700 +
\$220,450—Conduct monitoring of the desert-adapted southwestern subspecies of the black rhinoceros and work with local community natural resource management groups in the Kunene and Erongo regions of Namibia to conserve rhinos on communal lands. Funding partners:
David Shepherd Wildlife Foundation and SRI, Darwin Initiative.

Monitoring of the Amur Tiger Population in Khabarovsk Krai, Russia
Wildlife Management Institute-Far East
Branch \$14,170 + \$5,440—Conduct of an annual monitoring program of tigers and their habitat on select study sites.
Funding partners: Wildlife Management Institute-Far East Branch and Khabarovsk Krai Ecology Committee.

Studies on Black Rhinoceros in Zimbabwe During the National Ear Notching Program
World Wide Fund for Nature, Southern African Regional Program Office \$35,340 + \$87,710—Capture, ear notching, radio collaring, and emergency veterinary care to enhance the security and improve monitoring of black and white rhinoceros in Zimbabwe. Funding partner: WWF Southern African Regional Program Office.

Distribution and Dynamics of Tiger and Prey Populations in Maharashtra, India (Year 1)

Wildlife Conservation Society \$28,154 + \$46,345—To develop a state-wide distribution map of tigers, carry out advanced level monitoring of tiger and prey populations on selected sites, and train state forestry officials in various monitoring techniques. Funding partner: Wildlife Conservation Society.

Distribution and Dynamics of Tiger and Prey Populations in Maharashtra, India (Year 2)

Wildlife Conservation Society \$23,450 + \$33,180—To support a study of the distribution of tigers throughout the state, identify the state's breeding populations and meta-populations, and intensively monitor tigers and their prey in three nature reserves. Funding partners: Wildlife Conservation Society and the Save the Tiger Fund.

Kenya Black Rhinoceros Population Performance Dynamics and Status Reporting

Kenya Wildlife Service \$20,432 + \$27,520— Monitoring and metapopulation management of the eastern black rhinoceros in Kenya so as to maximize population growth. **Funding partners:** Save the Rhino International/Chester Zoo, Darwin Initiative/Zoological Society of London, and the recipient.

A Mini-workshop to Coordinate Ungulate Survey Efforts in Russia and Northeast China

Wildlife Conservation Society \$12,800 + \$3,100—Workshop brought together Russian, Chinese, and American scientists to develop a consensus on how to conduct ungulate surveys in tiger habitats of northeast China and the Russian Far East. Funding partner: Wildlife Conservation Society.

Khabarovsk Krai Ungulate Pilot Study, Russia (Year 1)

Wildlife Management Institute-Far East Branch \$14,661 + \$8,700—A project to determine effectiveness of tiger prey survey methodology developed at an ungulate survey workshop. Funding partner: Wildlife Management Institute-Far East Branch.

Khabarosk Krai Ungulate Study, Russia (Year 2)

Wildlife Conservation Society \$45,225 + \$14,000—Support for a survey of the ungulate prey of tigers inhabiting the krai. To allow comparison of data, survey used field methodology and data analysis methods that were standardized throughout the Amur tiger's occupied

habitat. **Funding partner:** Wildlife Management Institute-Far Eastern Branch.

Support for Black Rhino Monitoring in Lowveld Conservancies, Zimbabwe
World Wildlife Fund Southern African
Regional Program Office (WWF SARPO)
\$43,380 + \$237,998—To enhance the
metapopulation management and security
of some 200 black rhinoceros being
managed in a custodianship agreement
between private landowners and the
Government of Zimbabwe. Funding
partners: Bubiana and Save Valley
Conservancies, and the World Wildlife
Fund Southern African Regional Program
Office.

Establishment of a Community Based Tiger Monitoring Network throughout the Terai of Nepal University of Minnesota \$28,637 + \$7,864—Enlistment of villagers across Nepal's terai to act as citizen rangers gathering data needed to assess tiger usage of forest lands outside reserves. Funding partners: University of Minnesota and the International Trust for Nature Conservation.

Status of Amur Tiger Prey Populations in Northeast China
College of Wildlife Resources, Northeast Forestry University \$33,480 + \$2,305—
Map the distribution of prey species and determine their population size, and mean density in the eastern Wandashan Mountains of Heilongjiang Province, China. Funding partners: Northeast Forestry University, Heilongjiang Wildlife Conservation Association, and Heilongjiang Forestry Bureau.

The Establishment of the Hukaung Valley Tiger Reserve in Burma (Year 1)
Wildlife Conservation Society \$39,880 + \$38,700—Assess the tiger population, habitat threats, and human activities in the Hukaung Valley which is situated within a globally significant hot spot for biodiversity. Confirmation of a viable breeding population will provide justification needed for final designation of the reserve. Funding partner: Wildlife Conservation Society.

The Establishment of Hukaung Valley Tiger Reserve in Burma (Year 2) Wildlife Conservation Society \$43,210 + \$50,110—Support to continue study of tiger status, land use patterns, and socioeconomic status of people in the valley. Also includes construction of basic park infrastructure, and initiation of park conservation. Funding partner: Wildlife Conservation Society.

Projects Funded By Program Area

(continued)



Amur Tiger
Artwork by Konstantin N. Tkachenko, RTCF Grant Project
Officer, Bolshekhekhtsirsky State Nature Reserve, Russia

Survey of Amur Tiger Prey Status and Dynamics in Jilin Province, China Jilin Provincial Wildlife Conservation Association \$30,101 + \$6,800—Survey used field methodology and data analysis methods standardized throughout the Amur tiger's occupied habitat. Funding partner: Jilin Provincial Wildlife Conservation Association.

Siberian Tiger Project: Research and Action, a Two-pronged Approach, Russia Wildlife Conservation Society \$40,000 + \$177,810—Study of the dispersal patterns of young tigers and barriers to their dispersal in the vicinity of Sikhote-Alin Reserve, Primorskii Krai. Information obtained will contribute to understanding of tiger/human conflict. Funding partner: Save the Tiger Fund and the Wildlife Conservation Society.

Survey, Assessment and Conservation of Indochinese Tiger in Lao PDR
Wildlife Conservation Society \$31,260 +
\$68,846—Support to train a national tiger assessment field team and carry out a pilot assessment of the status of tiger and prey populations and incidents of livestock depredation in a nature reserve. Funding partner: Save the Tiger Fund and the Wildlife Conservation Society.

 $Assessment\ of\ the\ Rhinoceros\ Population\\ in\ Lao\ PDR$

World Wide Fund for Nature - Indochina Program \$23,713 + \$10,084—To assess the status of rhino in three locations where a recent survey of awareness of rhino among local people indicated rhino may still be present. Funding partners: World Wide Fund for Nature - Indochina Program and National University of Laos.

Conservation Education 2001/2002

Public Awareness and Socio-economic Development for Communities Living in the Periphery of Manas National Park, Assam, India (Year 1)
Dolphin Conservation Society \$34,065 + \$5,757—Public awareness activities on tiger conservation, a socio-economic survey, and small scale socio-economic activities all directed at winning support among local people for the conservation program of the park, conducted 2001/2002. Funding partner: Dolphin Conservation Society.

Public Awareness and Socio-economic Development for Communities Living in the Periphery of Manas National Park, Assam, India (Year 2) Dolphin Conservation Society \$41,495 + \$6,100—To continue development of support among local people for conservation of the park and the tigers and tiger prey that inhabit it, conducted 2003/2004. **Funding partner:** Dolphin Conservation Society.

Rhino—"Back From the Brink"— Educational Film

African Environmental Film Foundation \$10,000 + \$129,340—Development of an educational film documenting the history of the destruction and now the conservation of the rhinoceros in Africa; the film to serve as a catalyst to public support for rhino conservation efforts. Funding partner: African Environmental Film Foundation.

Conservation in Central Vietnam's Tiger Corridor

World Wide Fund for Nature—Indochina Program \$34,780 + \$53,940—Raise awareness, build technical capacity, and conduct surveys relevant to tiger conservation in a corridor of habitat.

Funding partners: World Wide Fund for Nature-Indochina Program and the forest protection departments of Thua Thien-Hue, Kon Tum, and Quang Nam provinces.

The Central Vietnam Tiger Corridor—Species Based Landscape Conservation
World Wide Fund for Nature - Indochina
Program \$29,990 + \$125,606—To increase
the effectiveness of law enforcement and
obtain tiger population information needed
for management in the tiger corridor of
the Central Annamite Mountain Region.
Funding partners: World Wide Fund for
Nature - Denmark, Save the Tiger Fund,
World Wide Fund for Nature - Japan,
Worldwide Fund for Nature - United
Kingdom, Worldwide Fund for Nature United States, and US Agency for
International Development.

Kids for Environment, Namibia
Ugab Wilderness School \$33,499 +
\$25,522—Environmental education and
training of trainers in communal lands
significant to the desert-adapted black
rhinoceros in the Kunene and Erongo
regions of Namibia. Funding partners:
Ugab Wilderness School, Namibia Nature
Foundation and Save the Rhino Trust.

Churia Hill Environmental Awareness Program, Nepal Environmental Camps for Conservation Awareness \$19,964 + \$3,162— Environmental education camps for children, a community forest training program for adults, and a workshop to orient village development committee members to environmental concerns all in a significant corridor of tiger habitat. Funding partner: Environmental Camps for Conservation Awareness.

Reproduction of "Rules on People's Behavior and Livestock Maintenance in Amur Tiger Habitat," Russia Phoenix Fund \$5,775 + \$1,360 — Reprint and distribute an additional 4,000 brochures through nature reserves, environmental law enforcement agencies, environmental non-government organizations, and scientific and research institutes to better inform people and reduce human/tiger conflict. Funding partner: Phoenix Fund.

Environmental Education Workshop for Teachers Working in Vicinity of Sikhote-Alinskiy Biosphere Nature Reserve, Russia

Sikhote-Alinskiy Biosphere State Nature Reserve \$9,126 + \$1,845 — To guide secondary teachers in using the reserve as a resource in their teaching relevant to tiger conservation. Funding partners: Sikhote-Alinskiy Biosphere State Nature Reserve and the district Education Department.

Action Plan and Conference on Environmental Education, Khabarovsk, Russia

The Wildlife Foundation-Khabarovsk. \$30,441 + \$20,300—To design a regional environmental education program directed at enlightening local people on problems confronting Amur tiger conservation. Funding partner: The Wildlife Foundation-Khabarovsk.

Development of a Nature Museum, Russia

Sikhote-Alinskiy Biosphere State Nature Reserve \$25,564 + \$11,029—Organize and design exhibits and exhibit halls addressing tigers, associated species and their habitat for the new Information Center and Nature Museum of the reserve. Funding partner: Sikhote-Alinskiy Biosphere State Nature Reserve

Sustainable Conservation Awareness for Rural Communities in Huai Kha Khaeng Buffer Zone, Thailand
Royal Forest Department of Thailand.
\$8,930 + \$9,374. Continuation of a program (begun under an earlier RTCF grant) to develop support for tiger conservation among people living adjacent to Thailand's Western Forest Complex. Funding partner: Royal Forest Department of Thailand

An Educational Kit for the Schools of Primorye, Russia
Phoenix Fund \$10,880 + \$2,888—
Development, publishing and distribution of posters and a teacher's guide addressing tiger biology, habitat, prey species, breeding and threats to survival

fact that the edges of any wildlife population or plant community's habitat is the most susceptible to impacts limiting distribution and population growth. The Amur tiger is no exception. Khabarovskii Krai is the northern edge of Amur tiger range, and this southern species exists here in what must be called extreme conditions. Negative impacts more intensely, and more dramatically, affect the population in Khabarovskii Krai than in the central portion of tiger range in Primorskii Krai." Wildlife Management Institute.Far Eastern Branch

"It is an accepted

Projects Funded By Program Area

(continued)

"The need for public awareness of and commitment to conservation of biodiversity has never been more crucial over the entire Earth. In biodiversity-rich countries, such as the tropics in Asia, there is a myriad of ways to exploit nature and natural resources unsustainably and it is a wellknown fact that these countries are losing far more, far faster than temperate countries."

Sally Walker, Zoo Outreach Organization for use in the krai's biological education curriculum for secondary schools. **Funding partners:** Phoenix Fund and the Primorsky Institute for Further Training of Educators.

Teachers for Tigers: Training Teachers and other Educators to Teach How We Might Save the World's Greatest Cat, India

Zoo Outreach Organization \$45,307 + \$67,100—Support for training public school teachers and zoo educators to teach tiger conservation more effectively using educational tools designed specifically for this purpose. Funding partners: Zoo Outreach Organization and the Wildlife Conservation Society.

Law Enforcement

Rhino Protection and Monitoring Units, Cat Tien National Park, Vietnam
World Wide Fund for Nature - Indochina
Program. \$35,100 + \$87,765—To
strengthen law enforcement activities for
the Javan rhino population, increase data
gathering, and maintain public awareness
on conservation efforts among local people.
Funding partner: World Wide Fund for
Nature - Asian Rhino and Elephant Action
Strategy.



An Indian teacher, attending a Teachers for Tigers workshop, investigates educational materials designed to teach students how scientists identify tigers in a study area by comparing tigers' stripe patterns in camera trap photos.

WCS/Tom Naiman

Acquisition of Motorcycles to Enhance
Law Enforcement Activities and Area
Coverage within and outside the Reserve,
KwaZulu-Natal, South Africa
Ezemvelo KwaZulu-Natal Wildlife \$15,600
+ \$154,232—Provide motorcycles to
improve antipoaching patrolling of the
rhino habitat at the Ithala Game reserve,
home to the third largest rhino population
in the Province of KwaZulu-Natal, South
Africa. Funding partner: Ezemvelo
KwaZulu-Natal Wildlife.

Continued Operation of Sumatran Rhino Protection Units in Way Kambas National Park, Sumatra, Indonesia International Rhino Foundation \$36,350 + *\$52,183*—Continue and further reinforce operation of anti-poaching law enforcement teams for Sumatran rhinos at the park during 2001/2002. Funding partners: International Rhino Foundation (with support from Gilman International Conservation, The Walt Disney Company Foundation, Disney's Animal Kingdom, The Anna Merz Trust, American Association of Zoo Keepers' Bowling for Rhinos Program and Save the Rhino International), World Wide Fund for Nature-Indonesia, World Wildlife Fund-United States, and the Government of Indonesia.

Continued Operation of Sumatran Rhino Protection Units (RPUs) in Way Kambas National Park, Sumatra, Indonesia International Rhino Foundation \$46,206 + \$30,804—Support for operation of the park's RPUs in 2003/2004. Funding partners: International Rhino Foundation (with support from Gilman International Conservation, The Walt Disney Company Foundation, Disney's Animal Kingdom, The Anna Merz Trust, American Association of Zoo Keepers' Bowling for Rhinos Program and Save the Rhino International), World Wide Fund for Nature-Indonesia, World Wildlife Fund-United States, and the Government of Indonesia.

Continuation of Sumatran Rhino Protection Units in Peninsular Malaysia: Taman Negara International Rhino Foundation \$25,120 + \$133,930—Continue and further reinforce operation of Sumatran rhino protection units at the park, 2001/2002. Funding partners: International Rhino Foundation (with support from The Howard Gilman Foundation, The Walt Disney Company Foundation, Disney's Animal Kingdom, the Cincinnati Zoo and Botanical Garden, and the Greater Los Angeles Zoo Association),

Save the Tiger Fund, and the Government of Malaysia.

Continuation of Sumatran Rhino Protection Units (RPUs) in Peninsula Malaysia: Taman Negara National Park International Rhino Foundation \$45,240 + \$166,700—Support for operation of seven RPUs in the park, 2003/2004. Funding partners: International Rhino Foundation (with support from Gilman International Conservation, The Walt Disney Company Foundation, Disney's Animal Kingdom, the Cincinnati Zoo and Botanical Garden, the Greater Los Angeles Zoo Association, and the American Zoo and Aquarium Association Tiger Species Survival Plan (SSP)), Save the Tiger Fund, and the Government of Malaysia.

Continuation of Sumatran Rhino Protection Units in Peninsular Malaysia: Trengganu, Pahang, Johore, Kelantan, and Perak International Rhino Foundation \$32,747 + **\$216,930**—Continue and further strengthen operation of Sumatran rhino protection units in Peninsular Malaysia at these locations, 2001/2002. Funding partners: International Rhino Foundation (with support from The Howard Gilman Foundation, The Walt Disney Company Foundation, Disney's Animal Kingdom, the Cincinnati Zoo and Botanical Garden, and the Greater Los Angeles Zoo Association), Save the Tiger Fund, and the Government of Malaysia.

Continuation of Sumatran Rhino Protection Units (RPUs) in Peninsula Malaysia: Rhino Areas other than Taman Negara National Park International Rhino Foundation \$29,640 + \$120,500—Support for operation of six RPUs, 2003/2004. Funding partners: International Rhino Foundation (with support from Gilman International Conservation, The Walt Disney Company Foundation, Disney's Animal Kingdom, the Cincinnati Zoo and Botanical Garden, the Greater Los Angeles Zoo Association, and the American Zoo and Aquarium Association Tiger Species Survival Plan (SSP)), Save the Tiger Fund, and the Government of Malaysia.

Rhino Protection Units for Bukit Barisan Selatan National Park, Sumatra, Indonesia International Rhino Foundation \$36,109 + \$125,232—Support for two of the six Sumatran rhino protection units (RPUs) currently deployed in the park. Funding

Projects Funded By Program Area

(continued)



The bushmeat trade—the commercial sale of wildlife as a source of meat protein—is responsible for the maintenance of vast numbers of (wire) snare lines throughout much of the African continent. In Africa, rhino are not usually the targets of such snares, but they do fall victim to them, often receiving deep wounds that become septic and cause a lingering death.

Wildlands Trust.

partners: International Rhino Foundation (with support from The Howard Gilman Foundation, The Walt Disney Company Foundation, Disney's Animal Kingdom, The Anna Merz Trust, and the Bowling for Rhinos Program of the American Association of Zoo Keepers), WWF-Indonesia, World Wildlife Fund-United States, the Critical Ecosystem Partnership Fund (CEPF), and the Government of Indonesia.

Continuation of Rhino Protection and Monitoring Units in Ujung Kulon National Park, Java, Indonesia International Rhino Foundation \$42,926 + \$89,149—Support for two units at the park. Funding partners: International Rhino Foundation (with support from The Howard Gilman Foundation, The Walt Disney Company Foundation, Disney's Animal Kingdom, and The Anna Merz Trust), WWF-Indonesia and the Government of Indonesia.

Support for Black Rhino Surveillance in the Ngorongoro Conservation Area, Tanzania

African Wildlife Foundation \$36,000 + \$84,320—Development and implementation of a comprehensive black rhino security and monitoring program at the Ngorongoro Conservation Area in Tanzania. Funding partners: African Wildlife Foundation and Ngorongoro Conservation Area Authority.

Wildlife Inspection in Khabarovsk Krai, Russia

Wildlife Hunting Management
Department \$29,485 + \$10,605—
Strengthen law enforcement patrols and
conservation education to increase local
people's support of measures to conserve
tigers and other wildlife. Funding
partner: Wildlife Hunting Management
Department-Khabarovsk.

Refurbishment and Extension of the Security Housing Network for the Conservation of the Black and White Rhinoceros on Lewa Wildlife Conservancy and Surrounding Areas, Kenya

Lewa Wildlife Conservancy, Kenya \$39,015 + \$10,689—Improvement of housing and field stations in support of the (black and white rhinoceros) anti-poaching units at the Lewa Wildlife Sanctuary. Funding partner: Lewa Wildlife Sanctuary.

Strengthening Reserve Anti-poaching Efforts, Russia
Sikhote-Alin Biosphere State Nature
Reserve \$25,527 + \$58,357—Satellite
telephones, fuel and spare parts for a

patrol vehicle, and field allowances for anti-poaching units. **Funding partner:** Sikhote-Alin Biosphere State Nature Reserve.

Tembe Elephant Park, South Africa
Ezemvelo KwaZulu-Natal Wildlife, South
Africa \$28,704 + \$248,000—Purchase of a
vehicle to support the anti-poaching unit at
Tembe Elephant Park and Sileza Game
Reserve in KwaZulu-Natal. These
reserves hold growing populations of
approximately 25 black and 50 white
rhinoceros. Funding partner: Ezemvelo
KwaZulu-Natal Wildlife.

Support for Reserve Anti-poaching Program, Russia
Lazovsky State Nature Reserve \$20,926 + \$55,900—Support of field equipment, a patrol vehicle, fuel, spare parts and a small salary increase for anti-poaching team members. Funding partners:
Lazovsky State Nature Reserve and World Wide Fund for Nature.

Passive Transponder Marking of Rhinoceros in KwaZulu-Natal, South Africa (Year 2)
Ezemvelo KwaZulu-Natal Wildlife, South Africa \$9,775 + \$8,764—Transponder implantation into rhinoceros shoulders and horns of some 750 rhino in KwaZulu-Natal to insure individual recognition of carcasses and horns so as to combat the illegal killing and trade of rhino. Funding partner: Ezemvelo KwaZulu-Natal Wildlife.

Passive Transponder Marking of Rhinoceros in KwaZulu-Natal, South Africa (Year 3)

Ezemvelo Kwa-Zulu Natal Wildlife. \$6,350 + \$7,752—Transponder implantation into rhinoceros shoulders and horns of some 750 rhino in KwaZulu-Natal to insure individual recognition of carcasses and horns so as to combat the illegal killing and trade of rhino. Funding partner: Ezemvelo Kwa-Zulu Natal Wildlife.

Tiger Enforcement Training Course CITES Secretariat \$20,000 + \$61,964—An intensive two week law enforcement training course to strengthen capacity of enforcement personnel from tiger range states in combating poaching and illegal trade. Funding partners: Conservation Treaty Support Fund and the World Wildlife Fund-United States.

Training Program for Zambia Wildlife Authority Wildlife Scouts, North Luangwa National Park Frankfurt Zoological Society \$18,050 + \$29,346—Training of wildlife scouts to enhance the security of black and white rhinoceros being reintroduced into one of their former strongholds in Zambia. **Funding Partners:** Zambia Wildlife Authority and the Frankfurt Zoological Society.

Protection of Rhinoceros and Tiger Populations in the Leuser Ecosystem, Indonesia

Leuser International Foundation \$29,760 + \$54,456—Support for an anti-poaching unit to conserve Sumatran rhinos and tigers and a camera-trapping program in one of the core zones of the Ecosystem. Funding partners: Leuser International Foundation and Leuser Development Program.

The Wildlife Sanctuary Fund, Inc., Northern Serengeti Rhino Project, Tanzania

The Wildlife Sanctuary Fund, Inc. \$30,000 + \$109,340—Enhanced monitoring and law enforcement for black rhinoceros in the Serengeti by building park infrastructure and providing field support to game guards. Funding partners:

Tanzania National Parks and The Wildlife Sanctuary Fund, Inc.

Improved Coordination of Anti-poaching Activities in Southwest Primorye, Russia

Tigris Foundation \$25,900 + \$63,100— Provision of wireless communication equipment and training for anti-poaching teams to conserve Amur tigers, leopards and their prey. **Funding partners:** Tigris Foundation, 21st Century Tiger, Phoenix Fund, and the Save the Tiger Fund.

Provision of a Toyota Landcruiser for the antipoaching unit at Ndumo Game Reserve, KwaZulu-Natal South Africa. Ezemvelo Kwa-Zulu Natal Wildlife \$34,589 + \$168,174 - Purchase of a vehicle to support the anti-poaching unit at Ndumo Game Reserve in KwaZulu-Natal. Ndumo holds growing populations of approximately 22 black and 45 white rhinoceros. Funding partner: Ezemvelo Kwa-Zulu Natal Wildlife.

Community-Based Monitoring and Protection of Endangered Species in Cambodia's Largest Wildlife Areas CAT Action Treasury \$36,355 + \$90,888—Support for operational expenses (including support for a partnership with local law enforcement), provision of essential equipment, and training for the Tiger Conservation Program of Cambodia's Wildlife Protection Office, 2002/2003. Funding partner: Save the Tiger Fund.

"As black rhino's are listed on CITESAppendix 1 (mostthreatenedspecies) list, it is important that all Namibians understand the significance of looking after the black rhino and their environment. We must create a love for this creature with the leaders of tomorrow and to achieve this. they have to be informed and educated."

Ugab Wilderness

School

Projects Funded By Program Area

(continued)



This wild Sumatran rhino, wallowing in a puddle, was photographed by an alert Rhinoceros Protection Unit team member in Indonesia's Way Kambas National Park. International Rhino Foundation

Community-Based Monitoring and Protection of Endangered Species in Cambodia's Largest Wildlife Areas Cat Action Treasury \$35,048 + \$48,300— To continue monitoring wildlife, particularly tigers, their prey and elephants, investigating wildlife crime, responding with appropriate measures, and conducting wildlife awareness and education at the village level, 2003/2004. Funding partners: Save the Tiger Fund and the Royal Government of Cambodia.

Protection of Rhino and Elephant in Garamba National Park, DR Congo
International Rhino Foundation \$35,000 + \$355,000—To conserve the last 30 individuals of the northern subspecies of the white rhinoceros, now found only in the Garamba National Park in the Democratic Republic of the Congo. Funding partners: United Nations (UNESCO), Frankfurt Zoological Society, International Elephant Foundation, Save the Rhino International, and the International Rhino Foundation.

Protection of Sumatran Tiger in Kerinci Seblat National Park, Indonesia Fauna and Flora International-Indonesia Program \$45,190 + \$100,461—Support to anti-poaching units operating in and around the park. Funding partners: 21st Century Tiger, Fauna and Flora International, and Save the Tiger Fund.

Support for the Anti-Poaching Unit at Umfolozi Game Reserve, KwaZulu-Natal, South Africa

Ezemvelo Kwa-Zulu Natal Wildlife \$51,042 + \$253,000—To increase the security of the some 320 black rhinoceros and 1,680 white rhinoceros at the Hluhluwe-Umfolozi Game Reserve complex. Funding partner: Ezemvelo Kwa-Zulu Natal Wildlife.

Enforcement Guide on Wildlife Crimes, China

Endangered Species Import Export Management Office \$34,200 + \$28,200—To produce and publish an enforcement guide on wildlife crime for dissemination to China's enforcement, prosecution and judicial authorities. Funding partner: Endangered Species Import Export Management Office.

Capacity Building in Wildlife Trade Monitoring in Terai Arc Landscape, Nepal.

World Wildlife Fund, Inc. \$35,608+\$28,627—Training in control of illegal trade at both field and headquarters levels, development of a wildlife trade database, and an awareness campaign. Funding partner: World Wildlife Fund, Inc.

Nature Reserve Management

Development of Support for Tiger
Conservation among Villagers Living on
the Fringe of Satpura National Park,
Madhya Pradesh, India
LifeForce \$29,172 + \$53,839—Support for
infrastructure and staff needed to
administer a program of small loans to
villagers living adjacent to the park's tiger
habitat. Funding partners: LifeForce
Charitable Trust, Born Free Foundation,
Madhya Pradesh State Forest
Department, and the Madya Pradesh
Tiger Foundation.

Lake Nakuru Park Rhino Sanctuary, Restoration of Fences and Water Supply, Kenya

Rhino Rescue Trust \$34,357 + \$34,687— Improvement of habitat for the black rhinoceros at the Lake Nakuru National Park, home to some 10% (50) of the eastern subspecies of the black rhinoceros. Funding partner: Rhino Rescue Trust.

A Study of Tiger-Human Conflict in the Buffer Zone of Corbett Tiger Reserve, India

Wildlife Society of India \$17,594 + \$24,099—Support for tiger-human conflict study needed for development of a comprehensive strategy to mitigate the conservation problems of the reserve. Funding partners: Wildlife Society of India, Aligarh Muslim University's Department of Wildlife Sciences, and The Corbett Foundation.

Managing Black Rhino Dispersal,
Range-Use, and Conflict Escalation After
Translocation for Meta-Population
Management, South Africa
Zoological Society of San Diego, U.S.A.
and University of Port Elizabeth, South
Africa \$35,400 + \$261,843—Applied
research into olfactory communication in
the black rhinoceros to facilitate
reintroduction and maximize reproductive
output of black rhino populations. Funding
partners: Zoological Society of San Diego,
U.S.A., University of Port Elizabeth,
South Africa, and a Biotechnology
Industry Organization.

Evaluate the Status and Management of Black Rhino Populations Throughout South Africa and Namibia January 1999 - December 2001

The Rhino Management Group \$2,632 + \$2,632—Assessment of the performance of site specific and national rhinoceros management plans during the period 1999-2001 in South Africa and Namibia so as to improve rhino conservation actions in the future. Funding partners: Provincial Conservation Authorities in South Africa,

South African National Parks, the Rhino Management Group, and the Ministry of Environment and Tourism, Namibia.

Establishment of a Viable Population of Greater One-horned Rhinoceros in Royal Bardia National Park, Nepal World Wildlife Fund-Nepal Program \$44,800 + \$93,650—Ten rhinos moved from Nepal's Royal Chitwan National Park to Royal Bardia National Park. (An additional ten rhinos were moved under a fiscal year 2000 grant.) Funding partners: WWF-US, WWF-UK, WWF-AREAS.

Training of Tiger Range State Officials in Wildlife Management, India
Global Tiger Forum \$20,000 + \$38,435—
Support for three months of training at the Wildlife Institute of India for selected tiger conservation staff of range countries (other than India), 2002/2003. Funding partner: Government of India.

Training of Tiger Range State's Officials in Wildlife Management, India Global Tiger Forum \$29,736 + \$26,250—To train tiger conservationists from tiger range countries (other than India) at the Wildlife Institute of India, 2003/2004. Funding partner: Government of India.

Formulation of Policy for Rhinoceros Management in Zambia
Zambia Wildlife Authority \$16,840 +
\$25,800—Develop a national policy to guide the management of the black rhinoceros and the white rhinoceros in Zambia.
Funding partner: Zambia Wildlife Authority.

The Transboundary Amur Tiger Project, China (Year 1)

Wildlife Conservation Society - China Program \$39,681 + \$33,500—To foster a cooperative effort to conserve the Amur tiger and Far Eastern leopard in Russia and China leading to establishment of corridors and new nature reserves, and the development of appropriate land-use regimes, 2002/2003. Funding partner: Wildlife Conservation Society.

The Transboundary Amur Tiger Project, China (Year 2)

Wildlife Conservation Society \$49,976 + \$40,971—Support to continue fostering a cooperative effort between China and Russia to conserve the Amur tiger through the establishment of corridors and new nature reserves, and the harmonization of wildlife and forestry practices on both sides of the China-Russia border, 2003/2004. Funding partner: Wildlife Conservation Society.

Projects Funded By Program Area

(continued)

"In order to progress towards a state in which there isunderstanding and support within and between local communities for conservation actions that protect tigers and their habitat, an atmosphere of mutual trust and respect needs to be developed between the relevant Forest Department staff and the localcommunities." Thailand's Royal Forest Department Establishment of a Rhino Sanctuary for the Breeding of White and Black Rhinoceros, Uganda
Rhino Fund Uganda \$30,000 + \$308,184—
Construction of a rhino sanctuary to initiate the steps needed to restore both white and black rhinoceros to their native habitat in Uganda. Funding partners:
United Nations Development Program and the European Union.

Habitat Management in the Extension Area of Royal Suklaphanta Wildlife Reserve, Nepal World Wildlife Fund, Inc. \$35,098 + \$34,962—To restore grassland and wetland habitat for tigers, tiger prey, and rhinos through improved management and education of cattle herders. Funding partner: World Wildlife Fund, Inc.

Strengthening and Capacity Building of The Wildlife Areas Development and Welfare Trust, India Wildlife Areas Development and Welfare Trust \$21,440 + \$29,000—To strengthen the Trust's ability to raise and manage funds and carry out other activities in support of the Forest Department of Assam's large mammal conservation programs (for rhinos, tigers, elephants, and gibbons). Funding partners: Wildlife Areas Development and Welfare Trust and the International Rhino Foundation (with support from the Zoological Society of San Diego and the Greater Los Angeles Zoo Association).

Rhino Sanctuary Development at Mkomazi Game Reserve, Tanzania
Tony Fitzjohn/George Adamson African Wildlife Preservation Trust \$30,350 + \$130,000—Provision of a continuous high-quality water supply at the Mkomazi Rhino Sanctuary; an important source for eastern black rhinoceros being produced for free release in Tanzania. Funding

partner: Tony Fitzjohn/George Adamson African Wildlife Preservation Trust.

Strengthening the Management and Protection of Valmiki Tiger Reserve, Bihar, India

Wildlife Trust of India \$31,945 + \$30,490— To place a trained biologist at the reserve to gather information for management, conduct law enforcement training, provide equipment, and develop local stakeholder support for management. **Funding partner:** Wildlife Trust of India.

Fencing of Weenen Nature Reserve, South Africa KwaZulu-Natal Nature Conservation Service. Project cancelled.

Expansion and Continued Support to Ngulia Rhino Sanctuary in Tsavo, Kenya.

African Wildlife Foundation \$49,984 + \$238,703—Increasing the area of the Ngulia (eastern black) rhino sanctuary by some 67% so that this source area for the free release of black rhino can sustain a base population of some 90 rhino rather than the 30-40 currently possible.

Funding partners: Kenya Wildlife Service and the African Wildlife Foundation.

Substitutes for Tiger/Rhinoceros Products

Medicinal Trade - Raising Public Awareness About the Most Immediate Threat to the Survival of Tigers and Rhinos, USA World Wildlife Fund - United States \$22,957 + \$37,377—Production of a bilingual (English/Chinese) brochure to publicize relevant U.S. laws on

conservation of rhinos and tigers and encourage use of substitutes. **Funding partner:** World Wildlife Fund-United States.



Brochure produced for use in a campaign being carried out in the U.S. to reduce the demand for and illegal trade in Traditional Chinese Medicine products containing tiger bone and rhino horn. World Wildlife Fund-US

Grants — **Africa**

Fiscal Years 2001-2003



Grants — **Asia**

Fiscal Years 2001-2003



Eight Year Summary of Grants Awarded by Country and Species

Africa

						nd White		
Country	Black R Grants	Shinos Funding	White R Grants	hinos Funding	Rhinos Grants	Funding	Total Grants	Funding
Botswana			1	20,818			1	20,818
Democratic Republic of Congo			2	54,680			2	54,680
Kenya	7	153,248			3	83,372	10	236,620
Namibia	4	125,299					4	125,299
South Africa	11	153,218	3	19,211	20	438,009	34	610,438
Tanzania	4	115,180					4	115,180
Uganda					1	30,000	1	30,000
Zambia	2	34,890					2	34,890
Zimbabwe	2	78,720					2	78,720
TOTAL	28	625,665	6	94,709	26	586,271	61	1,306,645

Asia

11 0000								
Country	Tigers Grants	Funding	Rhinos Grants	Funding	Tigers a Grants	nd Rhinos Funding	Total Grants	Funding
Bangladesh	3	87,672					3	87,672
Burma	2	83,090					2	83,090
Cambodia	7	183,199					7	183,199
China	10	286,288			1	34,200	11	320,488
India	18	429,593	3	79,145	11	301,824	32	810,562
Indonesia	3	80,800	11	276,340	7	260,500	21	617,640
Lao PDR	1	31,260	1	23,713			2	54,973
Malaysia			1	18,114	6	182,747	7	200,861
Nepal	3	58,787	3	117,504	4	104,544	10	280,835
Russia	30	641,034					30	641,034
Thailand	3	48,567					3	48,567
Vietnam	6	124,008	6	114,395	3	53,420	15	291,823
TOTAL	86	2,054,298	25	629,211	32	937,235	143	3,620,744

North America & Europe

Country	Tigers Grants	Funding	Rhinos Grants	Funding	Tigers 8	Rhinos Funding	Total Grants	Funding
U.S.A.					1	22,957	1	22,957
TOTAL					1	22,957	1	22,957

Eight-Year Summary of Appropriations

Annual Appropria	ations	Amount Available for Grants*				
Fiscal Year 1996 = S	\$ 200,000	\$ 194,000				
Fiscal Year 1997 = S	\$ 400,000	\$ 388,000				
Fiscal Year 1998 = S	\$ 400,000	\$ 388,000				
Fiscal Year 1999 = S	\$ 500,000	\$ 485,000				
Fiscal Year 2000 = S	\$ 696,500	\$ 675,605				
Fiscal Year 2001 = S	\$ 748,000	\$ 725,560				
Fiscal Year 2002 = S	\$ 1,000,000	\$ 920,000				
Fiscal Year 2003 = S	\$ 1,192,000**	\$1,187,326***				
Total S	\$ 5,136,500	\$4,963,491				

^{*} Amount available for grants after removal of administration costs.

Eight-Year Program Budget Summary

U.S. Congressional RTCF appropriations	\$5,136,500
Administration costs	\$ 248,335
Additions to budget	\$ 75,326
Available for grants	\$4,963,491
Expended for grants	\$4,950,346
Matching funds leveraged	\$10,684,327

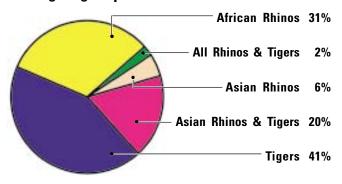
^{**} Amount appropriated by the U.S. Congress for RTCF in fiscal year 2003.

^{***} Amount available from fiscal year 2003 RTCF appropriation (\$1,112,000) plus \$75,326 provided from other appropriated funds.

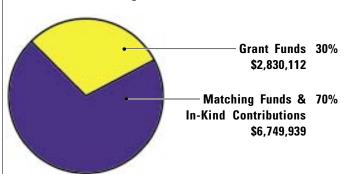
Distribution of Funds

Fiscal Years 2001, 2002, & 2003

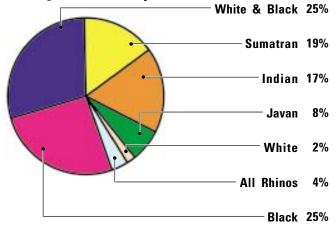
Among Target Species



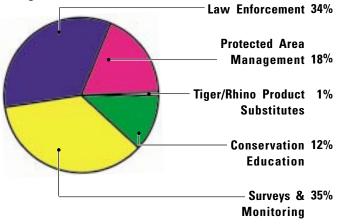
Grant and Matching Funds



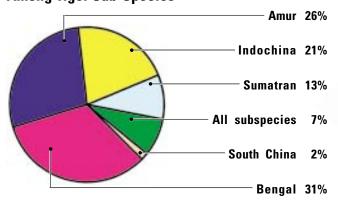
Among Rhinoceros Species



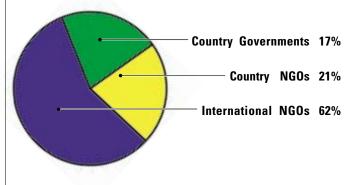
Program Areas Funded



Among Tiger Sub-Species



Organizational Funding



For more information about the Fund, please contact:

Chief, Division of International Conservation U.S. Fish & Wildlife Service 4401 N. Fairfax Drive, Room 730 Arlington, VA 22203 703.358.1754



U.S. Department of the Interior U.S. Fish & Wildlife Service Division of International Conservation Washington, DC 20240

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