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We seek to save a planet, a world of life. Reconciling the needs of human beings and the needs of others that share the Earth, we seek to practice conservation that is humane in the broadest sense. We seek to instill in people everywhere a discriminating, yet unabashed, reverence for nature and to balance that reverence with a profound belief in human possibilities. From the smallest community to the largest multinational organization, we seek to inspire others who can advance the cause of conservation.

We seek to be the voice for those creatures who have no voice. We speak for their future. We seek to apply the wealth of our talents, knowledge, and passion to making the world wealthier in life, in spirit, and in living wonder of nature.

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pulse

the heart of conservation

2010 / Volume 1 / Issue 1

Bringing Tigers Back from the Brink

Confronting the Tiger Crisis

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A positive sign for the planet's rarest cat



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Cover image: Bengal tiger in the grasses of India's Bandhavgarh National Park.

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FROM THE PRESIDENT

Nature's Masterpieces for Sale



Here's something you might be surprised to learn about conservation: *it can be life-threatening work.*

Perhaps the gravest danger of all comes from illegal wildlife traffickers who trade in tigers, rhinos, rare birds and reptiles, and more. These criminals operate with no regard for the law – and certainly no regard for the species being plundered. Wildlife trade is big business. Every year, wildlife worth billions of dollars is bought and sold around the world – and the rarer the prize, the higher the price.

A central tenant of WWF's tiger conservation strategy confronts this illegal trade, through enhanced enforcement and antipoaching brigades operated in partnership with local communities. We combine this with more traditional conservation techniques on the ground – such as creating massive new protected areas where tigers can live and reproduce in relative safety – and with the cutting-edge science that is WWF's calling card. Our global reach – we have field programs in all 13 of the landscapes where tigers still live – gives us a unique advantage in this admittedly uphill battle.

But if tigers are to come back from the brink of extinction, extraordinary measures must be taken, including a stronger role played by national-level law.

So we are also working with the World Bank and Russian Prime Minister Vladimir Putin to organize the first-ever international Tiger Summit in Vladivostok, Russia, in September 2010. The summit will bring together the heads of state from all 13 countries where tigers still live, and will be instrumental in ensuring that tiger conservation emerges as a top priority for these governments.

Robert Zoellick, head of the World Bank and a former WWF National Council member, has made tiger conservation a top priority during his tenure. So we are also working with the Bank and the Global Tiger Initiative (an alliance of governments, international agencies, civil society and the private sector committed to saving tigers) to secure long-term financing and policy commitments for tiger conservation in every nation that has wild tigers within its borders.

This is the inaugural issue of *Pulse: The Heart of Conservation* which comes to you twice a year with a deep dive into a singular, pressing conservation issue. We want you to feel the urgency of the work we do – on the ground, in the lab, around the world – and the exigency with which we operate. The future of our wild world rests in our hands, and we must move with all due speed to make sure tigers and other extraordinary creatures don't disappear forever.

Carter S. Roberts
President & CEO



The epitome of power, grace and beauty, tigers are the essence of wildness. They are a marvel of resilience and adaptation, thriving in the snowy forests of Russia, the tropical jungles of India, and even the mangrove swamps of Bangladesh. Yet tiger populations are plunging as they face pressures to which they can never adapt: habitat loss and fragmentation, human-tiger conflict and rampant poaching. In the last century, we have lost 95 percent of the world's wild tigers.



Poaching. Habitat loss. Human-tiger conflict.
WWF proposes a plan to save the tiger
from an uncertain future.

Year of the Tiger

THE CHINESE CALENDAR designates 2010 as the Year of the Tiger. With this charismatic Asian species fast approaching extinction, conservationists agree this may indeed be a critical year for tigers – one that could turn their plight around or, lacking critical action, signal its demise. On a cold day in December three WWF tiger experts sat down in our D.C. headquarters to discuss the complexities involved in “saving the tiger” and why doing so would reap benefits for a multitude of species – including mankind.

ERIC DINERSTEIN: Why is WWF so focused on saving the tiger? Well first of all, most people in the world do not realize that there are as few as 3,200 tigers left in the wild. Nor do they realize how much good can come from efforts to save this one species. Tigers are what we call an “umbrella species” – one that, when you protect it and address its conservation needs, you address the needs of hundreds, thousands, perhaps even millions of other species in the process.

Tigers are a far-ranging species, and the forests within the tiger's range, from western India across to the edge of the Siberian Taiga and down to Indonesia, are home to some of the richest biodiversity in the world. Many of the species that live in these places haven't even been named yet. But we can guarantee their protection by saving enough area for wild tigers to persist.

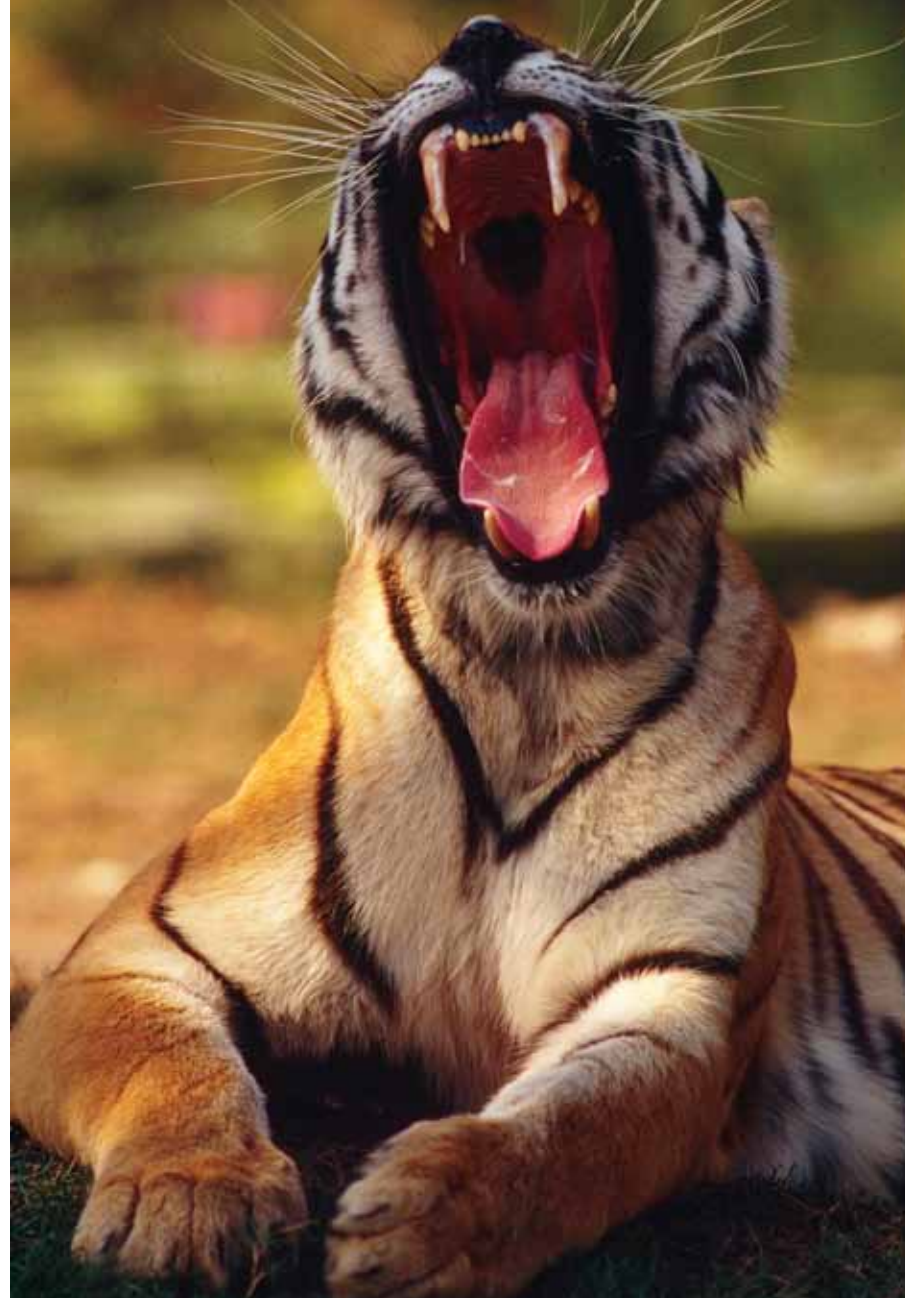
CRAWFORD ALLAN: Another way in which tigers act as an umbrella species is

that a lot of the efforts to stop poaching and trafficking in tigers – one of the most critical elements of tiger conservation – are also actions that will mitigate poaching and trafficking in other species.

For example, at a well-known border point where there is a lot of smuggling of tiger parts, if we invest in training and good cross-border joint operations between law enforcement agencies, we find that we can start to shut down that trade route. We can start to infiltrate the organized crime gangs that are running a trade that involves any number of different species, such as the Asian leopard skins or otter skins that we find along with tiger skins and bones being smuggled across the Nepal border into Tibet.

SYBILLE KLENZENDORF: In Russia, there was recently a big shipment of bear paws and bear gall bladders, combined with tiger bone and skins.

CRAWFORD: Yes, over 600 bear paws in one seizure. It's frightening really. There's been an increase in poaching



working with less traditional partners, such as the World Bank and others, and what sort of model this can be for us?

ERIC: One of the reasons the relationship with the Bank is so vital is that there are certain audiences that we simply have a difficult time gaining access to, whether they're finance ministers in the tiger range states, who help control the budgets for protection of tigers, or the prime ministers themselves. President Zoellick has a direct relationship with all of these individuals, these heads of state, and we can use that to leverage our desire to get our voices heard.

SYBILLE: Another really important factor is that many banks – the World Bank included – invest in a lot of infrastructure within Asia. What we're striving for is that these infrastructure projects, with costs that number in the billions of dollars, do measurable good for tigers and tiger habitat, rather than doing harm. And that is a big change.

ERIC: For example, when countries are planning to build new roads, sometimes governments don't even do the economic assessment of what it would cost to simply divert the road around a tiger reserve. This matters because wherever you have roads, development and population growth follow. And those changes are really harmful to long-term tiger conservation.

We know that this is a challenge because the tiger range states are some of the fastest developing countries on Earth. But for that same reason, they have the most investment dollars. And so I think that using the Year of the Tiger as a way of changing many things, including how we design these landscapes and how we can leave enough room for tigers, is really critical. This will be a kickoff to a longer-term investment in the tiger's future.

CRAWFORD: Another issue with infrastructure development is that putting a road through a reserve is enormously

because the growth of the economies within Asia is generating a whole new level of nouveau riche, a sector that's desiring status symbol products: exotic, wild and rare food items; medicine items; and clothing items. Our mission is to "stop the bleeding" of all of these species by halting trafficking and reducing demand. Going after the tiger trade helps all of these species.

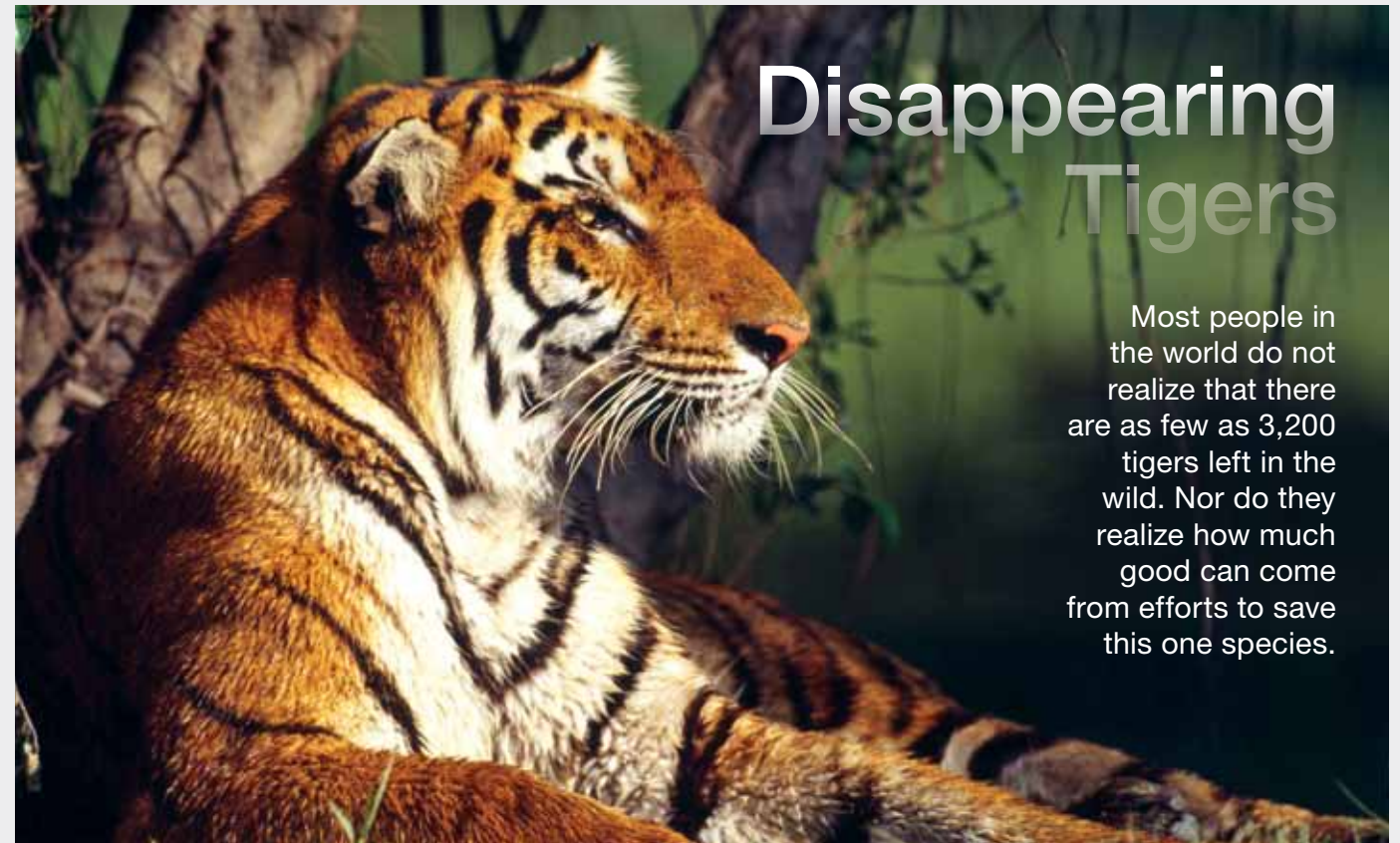
ERIC: You know, that's why the tagline we have for the Year of the Tiger is "The Year of Saving the Tiger and Saving So Much More." And the exciting news is that we're going to have help in this effort from the highest levels, through a new partnership we've forged with the World Bank.

The president of the World Bank, Robert Zoellick, is a tiger enthusiast and he's chosen to make tigers the species and the conservation issue where he wants to leave a mark. He's determined to make sure that tigers don't go extinct and that the Year of the Tiger marks the year we finally commit to saving the tiger.

Our goal, both for World Wildlife Fund and the World Bank, is "T x 2," which stands for doubling the number of wild tigers between now and the next Year of the Tiger, in 2022. We want to see a range-wide recovery, instead of the range-wide collapse that we have going on now.

CRAWFORD: Eric, can you explain a little more about why WWF has started

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Disappearing Tigers

Most people in the world do not realize that there are as few as 3,200 tigers left in the wild. Nor do they realize how much good can come from efforts to save this one species.

© MARTIN HARVEY / WWF-CANON



Bengal (Indian) Tiger
(*Panthera tigris tigris*)
Location: Bangladesh, Bhutan, China, India, Myanmar and Nepal. India is home to the largest population.
Status: Endangered

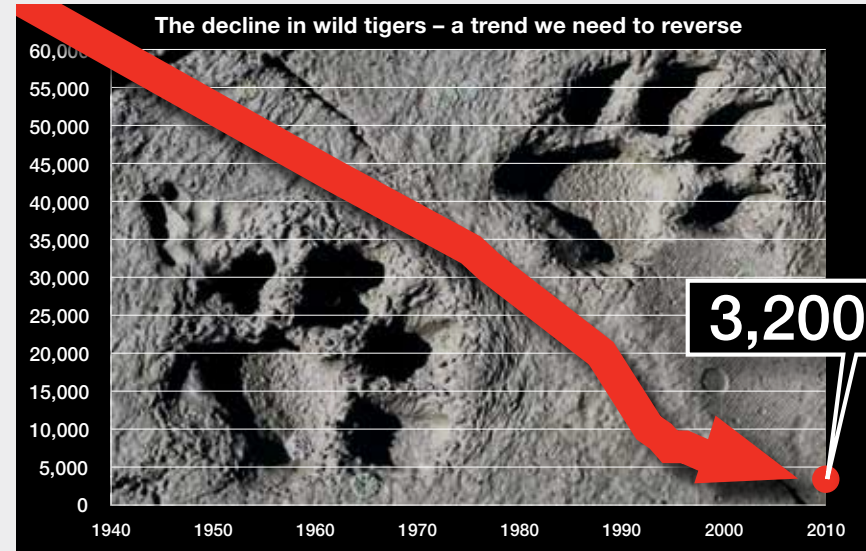
Indochinese Tiger
(*Panthera tigris corbetti*)
Location: Mainly in Thailand, but also found in Myanmar, southern China, Cambodia, Laos and Vietnam.
Status: Endangered

Malayan Tiger
(*Panthera tigris jacksoni*)
Location: Southern tip of Thailand and Peninsular Malaysia
Status: Endangered

South China Tiger
(*Panthera tigris amoyensis*)
Location: Central, eastern China. It is estimated that the South China tiger is functionally extinct.
Status: Critically Endangered

Sumatran Tiger
(*Panthera tigris sumatrae*)
Location: Found exclusively on the Indonesian island of Sumatra.
Status: Critically Endangered

Amur (Siberian) Tiger
(*Panthera tigris altaica*)
Location: Primarily eastern Russia, with a few found in northeastern China and possibly northern North Korea.
Status: Endangered



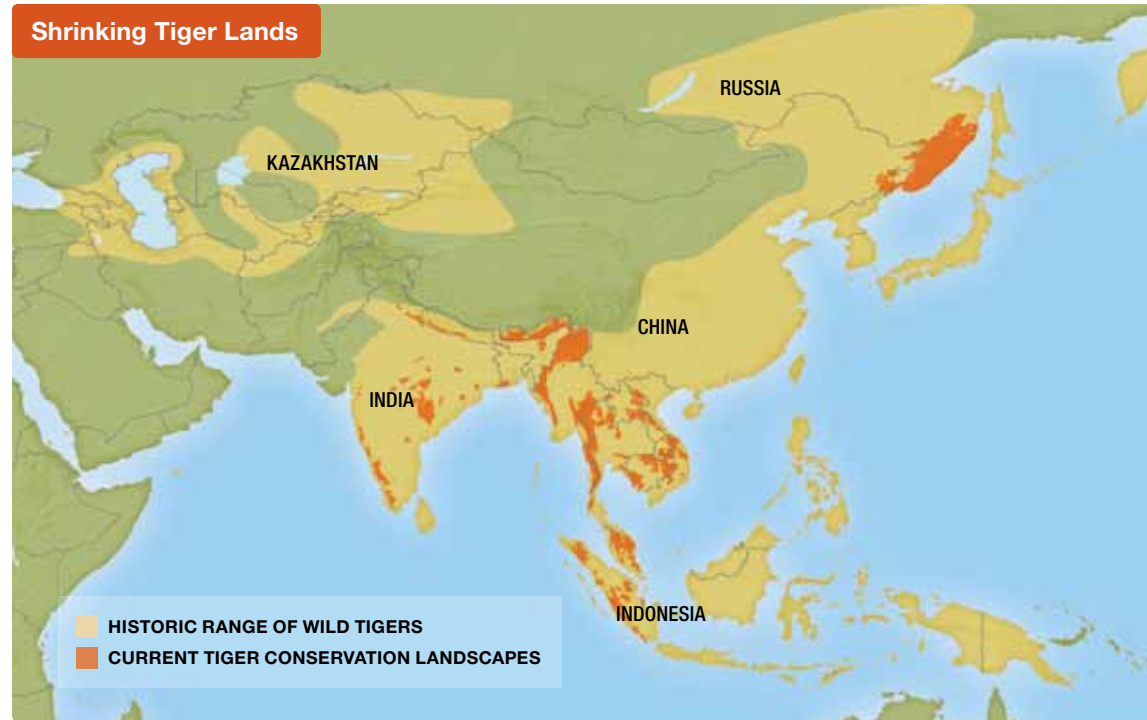
© GERALD S. CUBITT / WWF-CANON

Bali Tiger
(*Panthera tigris balica*)
Status: Became extinct in the 1940s

Caspian (Persian) Tiger
(*Panthera tigris virgata*)
Status: Became extinct in the early 1970s

Javan Tiger
(*Panthera tigris sondaica*)
Status: Became extinct in the mid 1970s

Shrinking Tiger Lands



The tiger once roamed throughout much of Asia. Today this magnificent cat clings to existence in just 7 percent of its historic range.

© WWF-US

helpful to the poachers, smugglers and traders, who are able to get access to rare wildlife commodities much more quickly.

So we need to work with governments to put in place certain checks and balances with infrastructure development projects that actually try to stop that trafficking flow, through border controls, through checks, through inspections on trains – these sorts of things.

SYBILLE: One tool we have to link infrastructure development to poaching impacts is mapping. In a GIS, or geographic information system, we can have a visual display of where the tigers are. We can ask ourselves, “If a road goes through here, what impact will

it have?” We often see that poaching happens within 5 to 10 miles of a road. Poaching has the highest intensity in these areas because it’s easy to walk in and set a snare. The farther away from a road you get, the more serious the investment of time. And so you can actually measure poaching intensity a lot of times just by showing the road and then putting a buffer around it.

CRAWFORD: Similarly, we’re working on developing a trade mapping tool that’s looking at where the poaching is happening, what the trade routes are, and where we believe the crime gangs are operating, to try and help direct law enforcement effort to the right places. This will help authorities target their effort at key points – the bottlenecks of the trade.

ERIC: Getting back to infrastructure, the challenge is that the World Bank is not the only player here. There are other organizations – like the Asian Development Bank or the Bank of China – that invest much more. And so our big challenge is going to be changing not only the investment strategies of the World Bank to make them more tiger- or biodiversity-friendly, but

also changing the strategies of the other major investors.

Probably the biggest project that the World Bank has online in the tiger’s range right now is with the government of China. The plan is to upgrade the forestry sector in what we used to call Manchurian China – the northeastern part of China that’s on the border with Russia and North Korea. It’s in this area that the forest practices need to be improved just for basic management of the forest. And this in itself might be a \$100 million loan to the government of China from the World Bank.

But through the Global Environment Facility (that’s a funding agency), we can attach a conservation grant to create two model protected areas on the Chinese side of the border with Russia. Then tigers that are crossing the Russian border into China actually have a place to go where they can find prey and where they can become resident animals again and reestablish the population. Because wildlife doesn’t recognize political borders, cross-boundary cooperation in setting up these areas is critical.

The critical weak link in all of this has been the lack of sustainable funding for tigers. We typically find money to sustain tiger conservation for a short period of time. Tigers partially recover, and then the money runs out and tiger populations shrink again as the conservation measures stop. If we can sustain the financing and meet the recurrent costs of tiger and biodiversity conservation, we’ll be much more successful. But these mechanisms take time to put into place.

SYBILLE: We’re also working with some of the corporations that are operating on these lands. For example, a big timber company in the Russian Far East has gone through certification by the Forest Stewardship Council, and under this model they have pledged that they will also work on enforcement against poachers.

CRAWFORD: There’s one more vital point that’s been left out of this conversation, and that is the possibility of having a carbon market – a system that transfers funding from polluting countries, the industrialized countries, to countries that are rich in tropical forests, in order to keep those forests intact.

We know that up to 20 percent of greenhouse gas emissions are released from the conversion and degradation of tropical forests. And the cheapest and easiest way to reduce the emission of greenhouse gases is to conserve those forests and keep them standing.

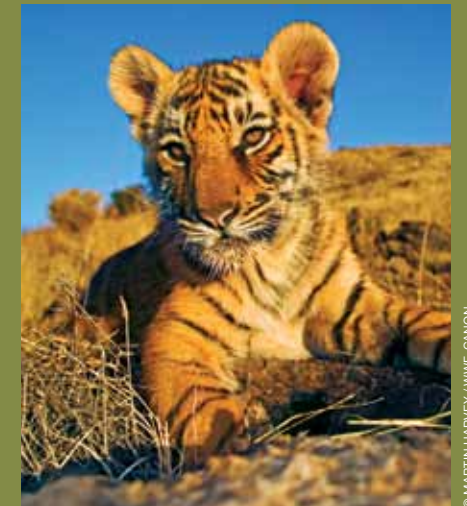
It’s fortunate that tigers occupy forests in Asia that have some of the highest carbon densities recorded. There’s an opportunity here to do three good things at once: help the planet by keeping the carbon in the ground and in the trees, save tiger habitat, and create a new income stream so that communities will have another incentive for keeping these forests intact.

SYBILLE: People in the Western world who consume forest products, such as furniture, don’t realize how valuable the forests are to the local communities and to the world. For example, from the Amur region where the Siberian tiger lives, comes a product that’s very popular with American consumers: pine nuts. Pine nuts come from the Korean pine, which is an important tree within the Siberian tiger’s ecosystem and is a food tree for all of the prey species that the tiger relies upon. There’s actually a fine balance for WWF, helping local communities make money from collecting pine nuts and yet leaving enough on the forest floor for all those other species to thrive, so that tigers will actually survive.

CRAWFORD: Everything is connected. There are a lot of powerful connections to tiger conservation in Asia – connections back to the consumer in the U.S., back to investors in the U.S., back to the banking systems that make the development loans. We need to emphasize these connections more so that people think about them. When you go and buy that piece of furniture, where did it come from and how were tigers – and so many other species – affected to bring it to you?

THERE IS HOPE Eric Dinerstein on Why We’re Optimistic About Saving the Tiger

The great thing about all this is that we have nature on our side. We’re talking about one of the two top predators that breed as fast as their prey; tigers have tremendously high reproductive rates.



© MARTIN HARVEY / WWF-CANON

So all we have to do is protect their habitats and make sure there’s enough prey for them, and tigers will rebound very, very quickly. It’s really just a matter of a sustained commitment and marshaling the resources and the political will to do it. We’ll be amazed at how fast this recovery takes place.

There was another species that was widely persecuted for its body parts, whose population crashed to much lower numbers than the tiger’s has: the white rhino of southern Africa. At the turn of the last century, there were fewer than 100 white rhinos left, and today there are more than 16,000. If we can bring back even a very slow-breeding mammal like the white rhino, which was killed for its horn, then we can certainly do the same for tigers, which breed much more quickly.

Like most large predators, tigers use the route of least resistance, often traveling on roads and other well-worn paths. This makes the introduction of roads through tiger country especially perilous for these large cats.



© WWF-INDONESIA

(l-r) Crawford Allan,
Director, TRAFFIC
North America;
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Managing Director,
Species Conservation
Program;
Dr. Eric Dinerstein,
Chief Scientist and
Vice President,
Conservation Science



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FROM THE FIELD

Tracking Progress One Tiger at a Time

Flexibility is key in wildlife conservation, and sometimes a creative approach is just what the doctor ordered.

By Dr. Barney Long

Ten years ago, I walked the dry forests of Eastern Cambodia for three solid weeks, searching for signs of banteng, the chocolate-brown, horned cattle favored as prey by the Indochinese tiger. My years in the field surveying near-extinct animals told me that what I was seeing – or rather not seeing – did not bode well for the tigers. In 21 days, I saw just a single pair of the animals.

What I see in these same forests today paints a far more optimistic picture. Now, with a bit of searching, I can spot banteng any given day in the Mondulkiri Protected Forest, part of the 7,700 square-mile area where WWF has been striving to protect Cambodia's dwindling tiger population. It is a sure sign that we are making progress,

and hopefully a harbinger of better times ahead for the majestic striped animals so sought after by poachers that they currently hover on the edge of extinction here.

My job as WWF-US's lead on Asian species conservation requires me to play many roles that aid in the conservation of tigers:

strategist, technical advisor and assistant to WWF fundraising efforts. I help support those whose job it is to raise the money, then advise local law enforcement and conservation teams on how best to use those funds to maximize our efforts to restore tiger populations in Cambodia, Sumatra, China, Thailand, Nepal and elsewhere across Asia.

How we do that differs from place to place. Part of my job is sharing my knowledge of what works with our local field teams, to help them figure out what's going to work best under local conditions.

For example, in Cambodia aggressive tiger patrols coupled with efforts to thwart the tiger market itself have successfully kept poachers in check in recent years. But now it's time for us to collect the hard data to determine just how much progress we've made, and how much further we still have to go. That means tackling a tricky task: counting the tigers that remain, as well as the animals upon which they feed.

Counting the tigers and their prey is harder in some places than in others. One of the more popular methods – camera traps – works well in places like Nepal, where prey is more plentiful and there is a relatively higher density of tigers than in a place like Cambodia.

Recently, we installed a series of these heat-and movement-detecting cameras along roads and streambeds, where tigers like to walk, in the four protected areas of the Terai Arc (Suklaphanta, Bardia, Chitwan and Parsa). We set up a camera trap every 1.2 miles in a grid pattern. The cameras – contained in waterproof boxes and fixed to trees or wooden posts – are set up in pairs that take pictures of the tigers from either side. This allows us to identify each individual animal by its unique stripe pattern, which in turn allows us to accurately count the animals. Like snowflakes, no two stripe patterns are alike.

One drawback to camera traps is that not every landscape lends itself to this method. Cambodia, unfortunately, is one such

place. It has such a low density of tigers it's simply not cost efficient to do this, although it is working very well for leopards in the area. So here we tried walking a grid to find other clues to the tigers' existence, such as tracks and scat. This, too, is fairly labor intensive. In Cambodia we determined we would have to walk 37.3 miles in each of 20 grids to find the animals. Again, however, we failed to find enough signs of tigers in the forest of Mondulkiri Province, so we suspended the survey and looked for a more efficient method.

We're hopeful now that we've found one. With our partner, The Center for Conservation Biology at the University of Washington, we're in the process of training dogs selected from animal shelters here in the U.S. to identify and seek out tiger scat. The dogs were trained here using scat from American zoos and in December, left for Cambodia for further training in the field. Ultimately the dogs will be used as part of the survey team to help locate the scat, which we will then collect and analyze to identify the unique DNA of individual tigers in the landscape.

Flexibility is key in wildlife conservation. When one method fails, it's important not to waste precious resources on it but to find something else better suited to that landscape. Restoring tiger populations is a complex and often dangerous task that requires a great deal of caution, planning and resourcefulness.

It's satisfying to see our work beginning to pay off. Today there are signs of progress. The tiger surveys we're conducting throughout Asia will soon tell us how much.



© WWF

Banteng are a favored prey of tigers in Cambodia's dry forests.



© PHOTO COURTESY OF BARNEY LONG

Placing a camera trap in Eastern Cambodia's Mondulkiri Protected Forest are (l-r) Phan Channa, biodiversity research and monitoring team leader for the Eastern Plains Landscape Project; Eric Dinerstein, WWF-US chief scientist and vice president of conservation science; and Dr. Barney Long.

BEGINNINGS

The Evolution of Camera Traps and a Career

I've been working with camera traps since I first got involved with wildlife conservation as a teenager. By the time I was 16, I had spent much of my youth in England fascinated with wild animals. Curious as to whether I could make a career out of studying them, I wrote to a number of different conservation projects around the world looking for a chance to gain firsthand experience. After 18 months of searching, I found a project surveying tigers and primates in the Indonesian rain forests that was willing to take me on. There I was exposed to one of the earliest uses of camera traps, and my experiences on that surveying team convinced me I had found my calling. I've been doing it ever since, and seen the technology evolve over time to what it is now. — Barney Long



Global Action

From the Amazon to the Arctic, WWF is building a future where human needs are met in harmony with nature.

► We are strategically focusing on conserving critical places and species while also working to reduce humanity's ecological footprint. Here are some highlights of WWF's recent successes made possible by your support.

SPECIES NEPAL EXPANDS CRITICAL TIGER HABITAT

At the inaugural session of the Kathmandu Global Tiger Workshop in September, the government of Nepal announced it would expand Bardia National Park in the Terai Arc Landscape by 347 square miles, effectively doubling the size of Nepal's largest protected area that harbors wild tigers.

The announcement was an encouraging signal of leadership at the first in a series of high-level meetings that will culminate at the Heads of State Tiger Summit in Vladivostok, Russia, in September 2010. WWF is playing a key role in leveraging political support and sustainable financing for tiger conservation during 2010, which is being celebrated as

the Chinese Year of the Tiger. Prime Minister Madhav Kumar of Nepal also committed to establishing a National Tiger Conservation Authority and a Wildlife Crime Control Committee.

Earlier this year, Nepal's first nationwide estimate of wild tiger populations using standard survey methods revealed the presence of between 100 and 191 breeding tigers in the lowland sections of the four Terai protected areas. WWF and its partners called on the government to increase antipoaching activities and habitat protection.

REINTRODUCED CANADIAN BLACK-FOOTED FERRETS FARING WELL

Seventy years after the black-footed ferret disappeared from Canada, WWF

has helped bring these nocturnal mammals back. In a highly celebrated release in October, the organization played a key role in reintroducing more than 30 captive-bred ferrets into Canada's Grasslands National Park, marking the return of the species to all three countries of its former North American range. A month later, WWF staff were among the "ferret trackers" who surveyed the area and found signs that the animals appear to be doing well so far.

The survey effort, organized by Parks Canada, included partners from WWF, the Calgary Zoo, the Toronto Zoo, the Canadian Wildlife Service, and the Saskatchewan Ministry of the Environment. The trackers conducted dusk-to-dawn surveys in November, noting 14 confirmed sightings and a favorable sex ratio of 10 females to 4 males in the prairie dog towns where the ferrets had been released. Park staff continued to monitor their survival throughout the winter, and in the spring this intrepid group will spend several more nights doing spotlight surveys to assess overwinter survival.

NEW RUSSIAN ARCTIC PARK TO PROTECT KEY POLAR BEAR HABITAT

Russian Prime Minister Vladimir Putin announced in June that Russia would create a new 5,791 square-mile park in the Arctic, dedicated to the polar bear populations of the Barents and Kara seas. WWF has long been advocating for such a park, which also provides habitat for walrus, wild reindeer and bird populations, while excluding future industrial activities.

WWF continues to encourage Arctic governments to create a well-designed network of marine and terrestrial protected areas as part of a broader spatial planning initiative to provide more breathing room for species that are losing habitat due to climate change. We are also encouraging urgent global action on climate change to ensure that the Arctic stays cold enough, not only for the continued existence of animals such as polar bears, walrus, and caribou, but also to maintain its key role in moderating our global climate.



WWF's work with black-footed ferrets begins by managing the habitat upon which they depend for survival: prairie dog colonies.



The announcement of the new Russian Arctic park was followed by a U.S. proposal to designate key areas of polar bear habitat across Alaska.



Nepal's bold expansion of critical tiger habitat in Bardia National Park set an important precedent for other tiger range countries heading into the Global Tiger Summit this fall.



Preparing to dart a black rhino from a helicopter. This animal will soon be transported to a new home.



An interagency group that includes WWF, Russian government agencies and other conservation groups photographed these three Amur leopards during an antipoaching operation.

(L-R) © HELGE DENKER, NACSO / WWF IN NAMIBIA, © VALERII MALEE/WWF-RUSSIA

BLACK RHINO CAPTURE AND CONSERVATION IN NAMIBIA

In Africa, where many species of animals are dwindling due to lucrative illegal poaching, one country stands out for its success in actually increasing its wild game populations and restoring them to their historical ranges: Namibia.

Efforts to restore the number of black rhinos, for example, have been so successful that since the 1990s the project has been able to expand beyond federal reserves and into community conservancies and private lands. Namibia's community-based natural resource management program, in which WWF has played a key supporting role, has been so successful that it is now internationally recognized as a model for conservation.

Over the past few years, WWF has supported a project to capture and translocate black rhinos in order to spread the risk of poaching impacts over

a larger area, while at the same time repopulating former black rhino ranges. This elaborate project involves using helicopters and spotter planes to find the animals, then darting them, blindfolding them and transporting them by truck to their new homes.

The rhino is highly vulnerable to poaching because rhino horns – sold for use as dagger handles in the Middle East and for medicinal ingredients throughout Asia – have become one of the most valuable products in Africa.

HOPE FOR BORNEO'S ORANGUTANS

Orangutans, Asia's only great apes, could once be found across Southeast Asia. Today, they cling to survival in fragile and fragmented habitats on the islands of Sumatra and Borneo, where massive land conversion for agriculture, plantations, and logging has taken a toll on their populations.

WWF has been hard at work to restore degraded land in the Heart of Borneo – an area encompassing the highlands of Indonesia and Malaysia and parts of Brunei – to provide critical habitat for this species.

During a regional forum on enhancing forest ecosystems in October, WWF and the Malaysian state government of Sabah signed a five-year Memorandum of Understanding to restore 2,300 acres of degraded land in the North Ulu Segama landscape. WWF recently finished restoring 500 acres of habitat containing critical food sources for the orangutan, and we plan to restore an additional 5,500 acres over the next 10 years.

SIGNS OF PROGRESS FOR AMUR LEOPARDS

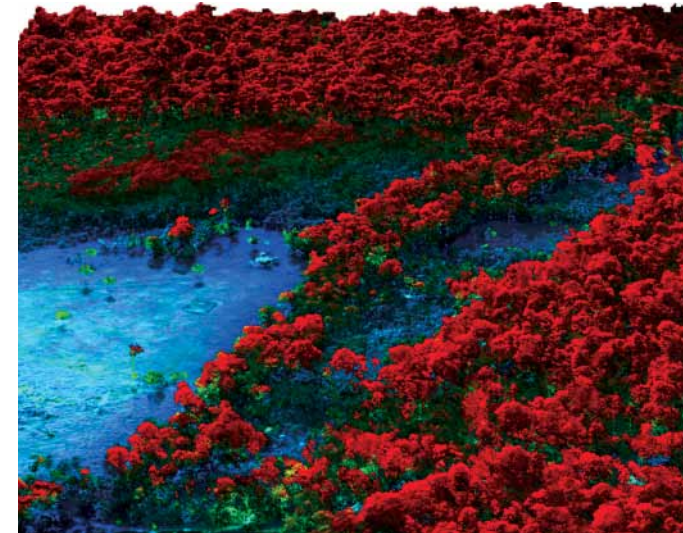
On November 17, 2009, three Amur leopards were photographed around a sika deer kill in southwestern Primorskii, Russia. This is the rarest cat on the planet – there are only about 40 in the

wild. These three animals – a female and two cubs – have never before been identified. Finding breeding females and offspring is very good news.

CLIMATE PERU CREATES FIRST-EVER LARGE-SCALE FOREST CARBON MAP

For the first time in the Amazon, a region the size of Austria has a forest carbon map which will make it easier to monitor carbon stocks and to reduce emissions from deforestation and degradation.

WWF and the Carnegie Institution for Science at Stanford University, in close collaboration with the Peruvian Ministry of the Environment, launched this groundbreaking project in the Madre de Dios region of Peru. At the center of this project is a fully integrated system that combines satellite imagery, airborne laser measures of biomass, strategic ground plots and an automated software system. It is designed to



Laser readings combined with satellite and other data yield a three-dimensional color image showing the biomass of a section of forest.

do cost-effective measurement of the amount of carbon locked up in forests and to track changes over time – an exercise that may become a crucial foundation for a new global climate treaty.

Preserving forests that contain high levels of carbon by reducing deforestation and forest degradation prevents the release of that carbon into the atmosphere – a result that is critical to the success of global efforts to mitigate climate change, and to the long-term survival of the Amazon basin and its people.

CEO ROUNDTABLE: WWF'S PARTNERS PUSH FOR CLIMATE ACTION

A global agreement on how to address climate change, coupled with legislation passed by the U.S. Congress, could help businesses innovate, become more efficient and profitable, and create millions of new jobs – so said the chief executives of four

major corporations at a business roundtable during the UN climate change negotiations in Copenhagen in December. The event, hosted by WWF and moderated by Becky Anderson of CNN's "Business International," brought together the heads of The Coca-Cola Company, JohnsonDiversey, Duke Energy, Canadian grocery chain Loblaw, and WWF.

MODELING CLIMATE ADAPTATION IN COSTA RICA

For years, poaching and habitat loss posed the biggest threats to many species nearing extinction. But now climate change presents an additional series of challenges. In Costa Rica, WWF has found ways to successfully overcome some of these in its work with leatherback marine turtles.

The story of WWF's success was recently



Young volunteers from the local community release leatherback turtle hatchlings into the sea at Junquillal Beach in Costa Rica.

chronicled in the New York Times and in a 24-minute film, "Playas Calientes, Olas Furiosas" (Hot Beaches, Angry Waves), released in October. The film focuses on the Junquillal marine turtle climate change adaptation program and the climate-related perils marine turtles face due to increased temperatures, warmer beaches, and changing sea levels.

Over the last four years, communities in the Junquillal area planted more than 1,300 native trees on the beaches to restore coastal vegetation and create the cooling shade needed by turtle nests. Then they released nearly 40,000 turtle hatchlings into the sea. Using this program as a pilot, WWF developed a Climate Change Adaptation Toolkit and distributed it to communities in Latin America and the Caribbean last fall, hoping to encourage others to follow in Costa Rica's footsteps.

PEOPLE WWF'S GREEN RECOVERY AND RECONSTRUCTION TRAINING TOOLKIT

For five years, WWF's Humanitarian Partnerships Program and the American Red Cross have collaborated to help survivors of the 2004 Indian Ocean tsunami rebuild their communities and the ecosystems upon which they depend. Now we are developing a toolkit and training program to help organizations integrate environmental sustainability into disaster recovery and reconstruction.

In November, the Humanitarian Partnerships program conducted pilot testing of its Green Recovery and Reconstruction Training Toolkit. The toolkit was created to equip field staff working in humanitarian aid, government, and conservation with practical, solution-oriented techniques for making disaster recovery efforts more environmentally friendly. To examine the effectiveness of the toolkit,

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Russell E. Train Fellow Phaivanh Phiapalath hopes to build capacity for conservation in his home country, Laos.



The WWF's Girls' Education Program teaches students the importance of conserving the marine environment and the need for sustainable resource use management in the region.

(L-R) PHOTO COURTESY OF PHAIVANH PHIAPALATH, © WWF-TANZANIA

WWF conducted eight workshops for field practitioners. The 45 participants in Sri Lanka and 40 in Indonesia came from organizations such as Mercy Corps, International Federation of Red Cross and Red Crescent Societies, the International Union for the Conservation of Nature, CARE, the UN Development Programme, Conservation International and UNICEF.

Green reconstruction aims to improve the quality of life for communities and affected individuals while minimizing the negative impacts of reconstruction on the environment and maintaining the long-term biological diversity and productivity of natural systems.

WWF'S TRAIN FELLOWSHIP SUPPORTS LAOS' FIRST PRIMATOLOGIST

When Russell E. Train Fellow Phaivanh Phiapalath completes his doctoral studies at Suranaree University of

Technology, he will become the first primatologist in his home country of Laos. Phaivanh did his doctoral research on the distribution, abundance and behavioral ecology of the red-shanked douc in Hin Namno National Protected Area. His work highlighted the impact that local communities have on natural resources and wildlife.

After graduating, Phaivanh hopes to launch an initiative that will build a corps of young Lao conservation professionals, create a network to encourage communication between conservationists, and assist the Lao government in creating an effective protected area management system.

Russell E. Train is founder and chairman emeritus of WWF and one of the most influential conservation leaders in the U.S. WWF-US became a global force for conservation under his leadership in the 1990s. To honor

him and perpetuate his vision, WWF created the Russell E. Train Education for Nature program, which awards fellowships to help build capacity for conservation in Africa, Asia and Latin America.

GIRLS' EDUCATION IN TANZANIA

Through WWF's Girls' Education Program, the Kirongwe Secondary School in Mafia Island, Tanzania, received 219 assorted textbooks, 2 globes and 6 world maps. To help create a better learning environment for the girls at their school, WWF funding supported the renovation of a building into a dormitory and the purchase of 10 bunk beds and 20 mattresses. Girls living in the dormitory do not have to travel to come to school. They have a safe place to stay, and can study in the evenings without the distraction of household chores.

MARKETS FIRST GLOBAL STANDARDS FOR AQUACULTURE

In December, the Aquaculture Dialogues, a series of roundtables coordinated by WWF, finalized global standards for mitigating the negative impacts of tilapia farming on the environment and society.

Final standards for 11 additional aquaculture species, including salmon and shrimp, will be rolled out by WWF during 2010. They will be the most effective standards available worldwide, largely because of the process used to create them. The process is open, transparent and includes more than 2,000 people, such as fish farmers, scientists and conservationists. The standards will play a major role in reducing the industry's environmental footprint.

The tilapia standards are the product of almost five years



WWF's Global Forest & Trade Network participants are committed to increasing the availability of forest products from well-managed forests, helping protect biodiversity in the Amazon and beyond.

of work by the Tilapia Aquaculture Dialogue, a network of more than 200 people. The standards address such impacts as nonnative tilapia being accidentally introduced into the wild and chemicals being released into the water.

PARTNERSHIP EXPANDS SUSTAINABLE LUMBER MARKET IN AMAZON

Slowly but surely, WWF's efforts to transform global markets into a force for saving the world's forests are beginning to pay off.

The most recent accomplishment? In Brazil, WWF helped bring together Cikel, one of the world's largest manufacturers of sustainably produced forest products, and B&Q, the third-largest home improvement retailer in the world, in a partnership that will supply green-certified timber for flooring.

WWF's Global Forest & Trade Network helps stakeholders benefit and profit

from sustainable forest management, ending the purchase of forest products from illegal and controversial sources. As part of this process, the Network relies on certifications awarded through the Forest Stewardship Council (FSC). The FSC label provides a credible link between responsible production and consumption of forest products, enabling consumers and businesses to make purchasing decisions that benefit people and the environment, as well as providing ongoing business value.

The joint commitment of B&Q and Cikel provides an extraordinary model for others in the forest product industry. B&Q is now the first retailer to gain FSC certification for its entire tropical plywood supply.

GALÁPAGOS LOBSTER FISHERY TAKES LESSONS FROM GULF OF CALIFORNIA

If it works in the Gulf of California, will it work in the Galápagos Islands? Fisheries



With WWF's help, the Gulf of California spiny lobster fishery was the first in Latin America to receive Marine Stewardship Council (MSC) certification.

scientists with WWF's Galápagos Program, looking for ways to improve the sustainability of the area's spiny lobster fishery, certainly hope so.

They recently met with the Federación de Cooperativas de Baja California to learn about their successful sustainability certification efforts in the gulf, where special lobster traps are being used to improve selectivity and catch efficiency. Fishermen from the gulf then traveled to the Galápagos to provide assistance with the construction and design of traps, share techniques for catching lobster, and design a system to commercialize live lobster. They also designed a monitoring and assessment protocol to help Galápagos fishermen likewise obtain certification, which strengthens the fishery's credibility and improves its marketability.

CHINESE FINANCIAL INSTITUTIONS GET LESSON ON SUSTAINABLE LENDING IN AFRICA

WWF has long held that financial institutions can play an important role in conservation. But sometimes those institutions don't have the information they need to understand what a difference they can make, or how.

As part of an effort to bring that information to lenders, WWF co-led a two-week study tour for seven Chinese financial institutions (including China EXIM, SINOSURE, ICBC – the world's largest bank – and Chinese regulators) to promote more sustainable lending and investment in Africa. The first leg of the tour was in Europe and involved meetings with over 20 financial institutions including commercial banks, export credit agencies, multi-lateral and bilateral agencies, and regulators. The second leg will be in Africa in May and will take in Mozambique and South Africa.

(L-R) © EDWARD PARKER / WWF-CANON, © GUSTAVO YBARRA / WWF-CANON

The Gift of a Lifetime



PHOTO COURTESY OF GERTRUDE PAGET

Gertrude Paget is a conservation hero who thinks and acts both locally and globally.

After a 45-year career in marketing for the aircraft industry, Gertrude Paget purchased a cattle ranch along a beautiful creek in the rural Pacific Northwest. For more than 20 years, she worked on the land with her own hands, clearing brush and mending fences. To ensure it would remain at least partially undeveloped in perpetuity, she placed a portion of it under a conservation easement.

In 2007, Paget sold the ranch while retaining the right to live there for a limited time. Having always intended to leave the bulk of her estate to WWF, she decided to give most of the proceeds of the sale as a lifetime gift for tiger conservation. She had learned much about the issue while traveling in the tiger-range areas of China, Vietnam, Laos, Thailand and Myanmar, where poaching and illegal trade are rampant.

“I am not sure how long I will live,” said Paget, now 91, explaining her decision to sell the ranch early, “but I knew that there was a critical need in tiger conservation, so I decided to accelerate my bequest, in effect. Also, I wanted to be involved in the sale of the property I worked so hard to build, to be sure that top dollar was realized from it.”

During a trip to the U.S., Dr. Yury Darman, the head of WWF-Russia’s program office in Vladivostok, visited with Paget. “Gertrude’s commitment to support our work in Russia and China now and in the future is critical to the success of our projects protecting large cats. I can see how hard she has worked in her life and she inspires me and hopefully many others to do what they can to help.”

Paget also understands the complex web of activities that must be funded and coordinated to achieve success.

“Surveys, cameras and tracking devices are needed to help scientists understand how many animals are present in a defined area,” she said. “Education of the local population, antipoaching patrols, and the means to negotiate with logging and energy companies and governments are also essential activities that I hope to benefit with my gifts.”

“Gertrude has always inspired me with her knowledge of tiger conservation issues and with the flexibility she has in offering support when and where we need it the most,” said Sybille Klenzendorf, managing director of WWF’s species conservation program. “Her gifts enable our field team to provide the necessary protection and monitoring of tigers and to train WWF leaders in conservation.”

Because real progress in tiger conservation requires a long-term commitment, Paget is happy to know her gifts will make a difference – and that her legacy will continue to benefit these majestic cats long after she’s gone.

“The forests tigers occupy are some of the richest in the world for biodiversity. We can guarantee the protection of that biodiversity by saving enough area for wild tigers to persist.”

Dr. Eric Dinerstein
Chief Scientist and Vice President,
Conservation Science

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