



Securing a **Future**
for ASIA's Wild

RHINOS & ELEPHANTS



WWF'S ASIAN RHINO AND ELEPHANT ACTION STRATEGY





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A light beige background featuring a faint, stylized map of Asia. The map shows the outlines of the continent and surrounding islands, with some areas shaded in a slightly darker beige. The title text is overlaid on the map.

*Securing a Future
for ASIA's Wild*
**& RHINOS
ELEPHANTS**

WWF'S ASIAN RHINO AND ELEPHANT ACTION STRATEGY



Symbols of Yesterday's **WILDERNESS,** *their future is in our hands...*

Living representatives of a lost world, rhinos and elephants once roamed freely across tropical Asia. Today, poaching and habitat destruction have reduced them to remnant populations struggling for survival. While they still are the flagship species of some of the world's most biologically diverse ecosystems, Asia's rhinos and elephants may soon vanish altogether ... unless we act now.

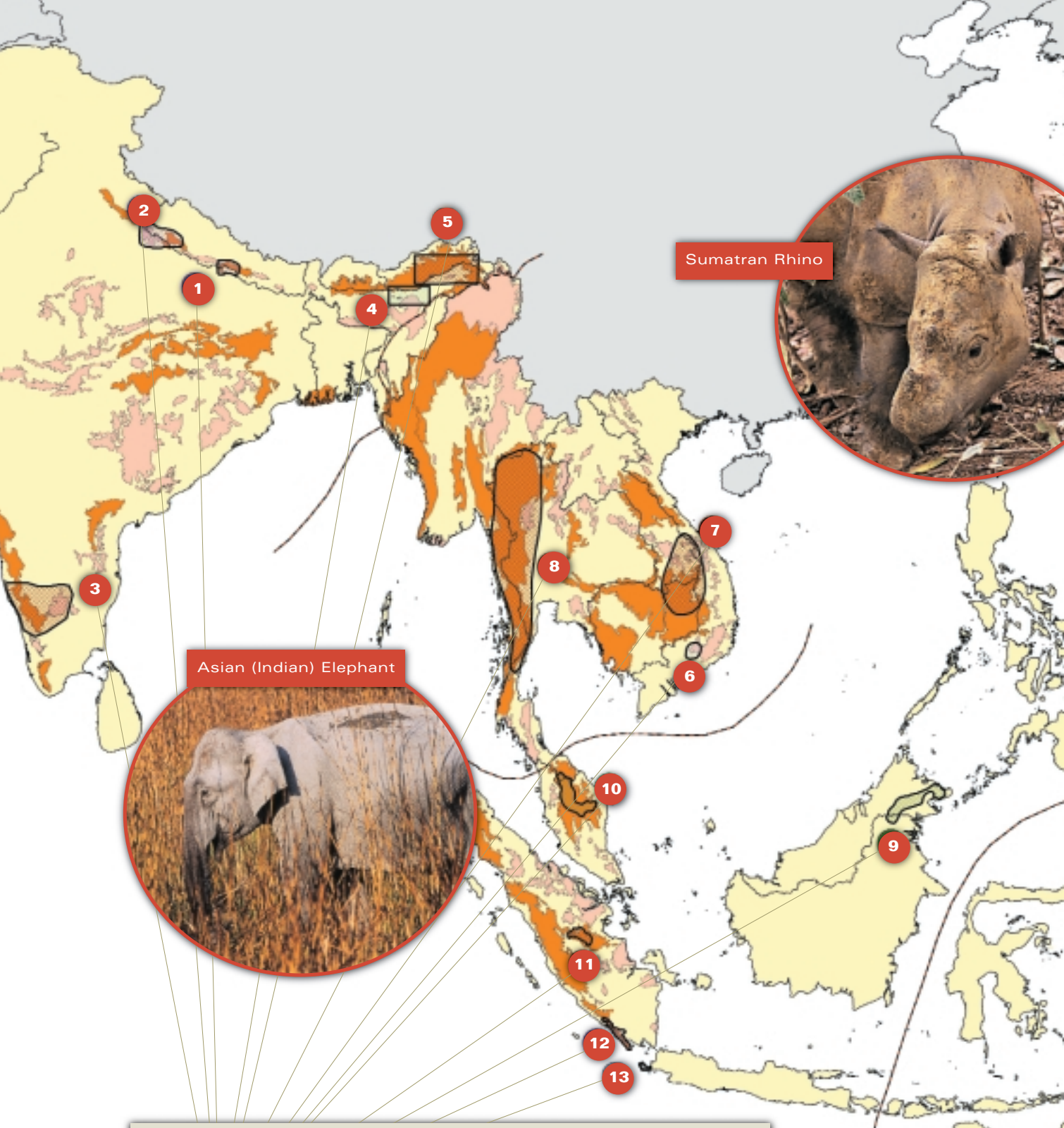
While their ecological needs may differ, Asia's elephants and three species of rhinos can be saved from extinction in the same overarching manner. WWF is working to secure a future for Asia's wild rhinos and elephants by protecting habitat and controlling poaching. These twin objectives lie at the heart of a comprehensive new WWF strategy aimed at rescuing these magnificent species before it's too late.

The stakes are high, but if successful, the strategy will also conserve some of the most biologically important Asian landscapes and protect the many other rare and imperiled species that live in these precious habitats.

The survival of rhinos and elephants in Asia cannot be taken for granted ... their future is in our hands.

Photo Credits: Javan Rhino, Foead, Yahya, Sumiadi/WWF & BTNUK; Greater Asian One-Horned Rhino, Tom & Pat Leeson; Asian Elephant, Tom & Pat Leeson; Sumatran Rhino, Gerry Ellis/gerryellis.com.
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Note: The material and the geographical designations on maps do not imply the expression of any opinion whatsoever on the part of WWF concerning the legal status of any country, territory, or area, or concerning the delineation of its frontiers or boundaries.



Sumatran Rhino

Asian (Indian) Elephant



PRIORITY LANDSCAPES for WWF'S ASIAN RHINO and ELEPHANT ACTION STRATEGY PROGRAM	
South Asia	Central Terai Arc (Nepal, India) ¹
	Western Terai Arc (Nepal, India) ²
	Nilgiris (India) ³
	Kaziranga-Karbi Anglong & Southern Brahmaputra Valley (India) ⁴
	The "North Bank" of Arunchal Pradesh Assam-Namdapha (India, Bhutan) ⁵
Indochina	Cat Tien (Vietnam) ⁶
	Lower Mekong Forests (Cambodia, Lao P.D.R., Vietnam) ⁷
	Tenasserim Western Forest Complex (Thailand, Myanmar) ⁸
Southeast	"Heart of Borneo" Kinabatangan to Sebuku-Sembakung Landscape (Malaysia, Indonesia) ⁹
Asia	Peninsular Malaysia & Southern Thailand ¹⁰
	Riau, Sumatra (Indonesia) ¹¹
	Bukit Barisan Selatan, Sumatra (Indonesia) ¹²
	Ujung Kulon, Java (Indonesia) ¹³

SPECIES on the Edge

Throughout South and Southeast Asia and Indochina, populations of

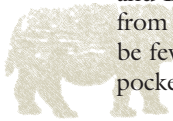
Asian elephants and rhinos cling to survival in some of the few remaining homes that sustain them. The future of these spectacular creatures is clearly at risk, for they live in a rapidly changing environment that they must share with humans struggling for sustainable livelihoods.

Asian RHINOS

Widely slaughtered for their horn – a highly prized commodity in traditional Asian medicines – and decimated by the destruction of their lowland rainforest habitat, many Asian rhinos now hover on the brink of extinction.

THE SUMATRAN RHINO

The Sumatran rhino – which once ranged from Assam in India to Indochina, Malaysia, and the islands of Sumatra and Borneo – lost at least half its population in the decade from 1985 to 1995. Today, scientists estimate, there may be fewer than 300 wild Sumatran rhinos left in scattered pockets in Sumatra, Borneo, and Peninsular Malaysia.



Sumatran Rhino

REMAINING WILD POPULATIONS OF ASIAN RHINOS BY SPECIES AND SUBSPECIES FOR YEAR 2000

Species	Subspecies	Wild Population Estimates
Greater Asian one-horned rhinoceros (<i>Rhinoceros unicornis</i>) in India and Nepal	Not applicable	~2,400
Javan rhinoceros (<i>Rhinoceros sondaicus</i>)	(<i>R. sondaicus sondaicus</i>) in Java	50-60
	(<i>R. sondaicus annamiticus</i>) in Vietnam	<10
Sumatran rhinoceros (<i>Dicerorhinus sumatrensis</i>)	(<i>Dicerorhinus sumatrensis harrissoni</i>) in Borneo	~30-70
	(<i>D. sumatrensis sumatrensis</i>) in Peninsular Malaysia and Sumatra	200-300

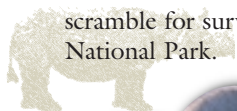
Photo Credits: Sumatran Rhino, Wildlife Conservation Society–Indonesia Program; Javan Rhino, Alain Compost; Greater Asian One-Horned Rhino, WWF-Nepal; Asian Elephant, Tom & Pat Leeson.
Maps: ©International Rhino Foundation



Javan Rhino

THE JAVAN RHINO

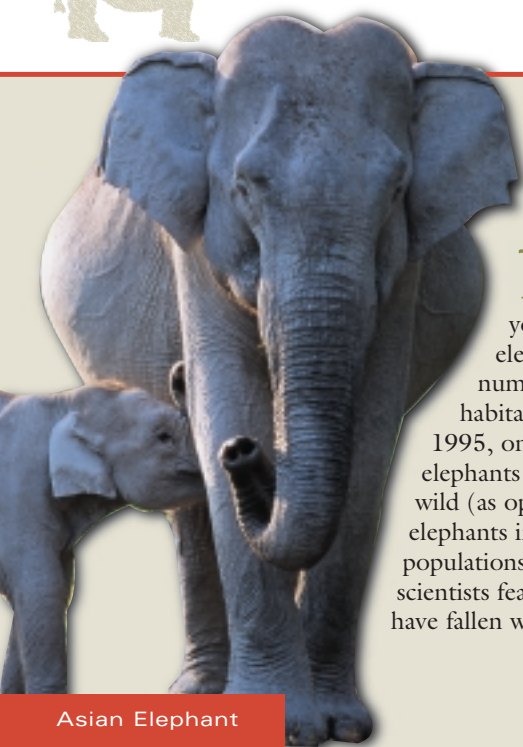
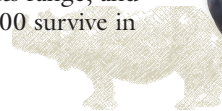
Historically, the Javan rhino roamed from Assam through Myanmar, Thailand, Cambodia, Lao P.D.R., Vietnam, Sumatra, and Java. Today, fewer than 60 remain in Ujung Kulon National Park in Java, and no more than 10 scramble for survival in Vietnam's Cat Tien National Park.



Greater Asian One-Horned Rhino

THE GREATER ASIAN ONE-HORNED RHINO

The greater one-horned rhino could once be found from Pakistan all the way through India, Nepal, Bangladesh, Bhutan and Myanmar. By the turn of the century, this species had vanished from the majority of its range, and today, only about 2,400 survive in India and Nepal.



Asian ELEPHANTS

Killed for their ivory, meat, and bone, and for their live young, Asia's last remaining elephants continue to decline in number in the face of poaching and habitat destruction. As recently as 1995, only 35,000 to 50,000 Asian elephants were thought to remain in the wild (as opposed to 10 times as many elephants in Africa). Since then, several populations have dwindled still further, and scientists fear that current populations may have fallen well below 1995 estimates.

Asian Elephant

WILD POPULATIONS OF ASIAN ELEPHANTS (*Elephas maximus*) BY ESTIMATED POPULATION SIZES IN SELECTED COUNTRIES AS OF 1995

Country	Estimates
India	20,000-25,000
Myanmar	5,000-6,000
Indonesia (Sumatra)	2,800-4,800
Sri Lanka	2,500-3,000
Thailand	2,000
Lao P.D.R.	1,000
Cambodia	<600
Peninsular Malaysia	1,000
Borneo (Malaysia, Indonesia)	500-2,000
Vietnam	<200
World Total	35,000-50,000

Note: Data based on 1995 rough estimates. Several populations have experienced steep declines since that time. Small populations also remain in Bangladesh, Bhutan, China, and Nepal.

SAVING LANDSCAPES: *Large Animals...Large Spaces*

Large animals like rhinos and elephants require large areas to support them. Unfortunately, many of Asia's protected areas are relatively small, and when the animals that live in them cross over into surrounding land, they inevitably clash with humans.

WWF knows that the only way to rebuild rhino and elephant populations is to help secure the peaceful coexistence of people and wildlife, both inside and outside protected areas. Our approach, known as landscape conservation, goes beyond isolated parks and reserves to address land-use practices in surrounding areas.

a Strategy for the TWENTY-FIRST CENTURY

The ultimate goal of landscape conservation is to connect and safeguard networks of protected areas. This way, endangered species requiring large amounts of habitat can freely migrate through forested corridors between reserves that might otherwise be too small to maintain them.

To secure existing reserves and create new wildlife corridors, conservationists must reconcile the needs of wildlife and local stakeholders. We must also encourage policies

that make conservation politically, economically, and socially acceptable for local communities and central governments. And we must think and act along the broadest lines possible, in keeping with our understanding of the complexities inherent in our planet's diverse web of life.

Although Asia's rhinos and elephants are in a precarious position today, experience has shown that these populations can recover with adequate habitat protection and control of poaching. In Africa, for example, rigorous antipoaching efforts and habitat protection have helped populations of the southern white rhinoceros rebound from fewer than 100 in the late 1800s and early 1900s to more than 10,000 today. And in Asia, greater one-horned rhinos are recovering within protected areas in Nepal and in the floodplains

of India's Brahmaputra River. The greater one-horned rhinos of Nepal have crossed the 600 mark, up from a low of fewer than 100 animals in Royal Chitwan National Park in the 1960s.

Photo Credits: (below), Greater Asian One-Horned Rhino, Masahiro Iijima/ARDEA London; (right top) Javan Rhino, Alain Compost; (right bottom) Greater Asian One-Horned Rhino, Tom & Pat Leeson; (opposite, top) Sumatran Rhino, WWF-Canon/Alain Compost; (opposite, bottom right) Asian Elephant, Jagdeep Rajput/ARDEA London.



(Above) The Javan Rhino is perhaps the rarest mammal on the planet.

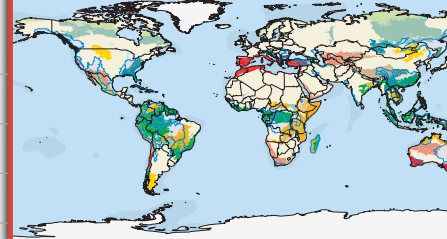
(Right) One can still see groups of Greater Asian one-horned rhinos grazing in the spectacular Royal Chitwan National Park, anchor of the Terai Arc landscape.



(Lower Left) The Greater Asian one-horned rhino survives in Nepal and India.



WWF scientists have worked to identify not just the problems facing rhinos and elephants but the underlying causes as well.



Mapping a future for the natural world.

WWF's Asian RHINO and ELEPHANT Action Strategy

In 1998, WWF developed the **Asian Rhino and Elephant Action Strategy (AREAS)**, a comprehensive conservation framework targeting priority landscapes in South Asia, Indochina, and Southeast Asia. Within these key habitats, WWF and its partners work to:



(Above) The Sumatran rhino, while greater in number than the Javan, is perhaps closest to extinction. The clear-cutting of its rainforest habitat must be abated if it is to survive.

(Lower right) While the sight of Asian elephants may make one think of ceremonies and circuses, wild Asian elephants need more help than ever to survive, unfettered by chains, in Asia's remaining forests.

- Restore and secure wilderness
- Strengthen antipoaching efforts to reduce losses in species numbers
- Mitigate conflicts over resources to benefit both humans and elephants
- Facilitate creative land-use planning to solve problems facing wildlife and people
- Translocate rhinos to strengthen existing populations and establish new ones
- Monitor populations to improve management strategies for Asian elephants and rhinos

In addition to addressing such cross-cutting issues as illegal wildlife trade, sustainable forestry, and human-elephant conflict, our strategy provides a long-overdue cohesive approach to the conservation of the three Asian rhino species and the Asian elephant.

By conserving key habitat, we can do more than secure a future for Asia's wild elephants and rhinos. We will protect many of the most biologically important places in Asia and help conserve countless other endangered species, including tigers and orangutans. In fact, eight of the priority landscapes overlap with areas already identified as tiger conservation priorities, and all of the landscapes lie within areas ranked by WWF as Global 200 Ecoregions.

WWF'S GLOBAL 200: A NEW AGENDA FOR THE 21ST CENTURY

To help make strategic conservation decisions, WWF has developed the **Global 200**® – a science-based global ranking of the Earth's most biologically outstanding terrestrial, freshwater, and marine habitats. These are areas where the Earth's biological wealth is most distinctive or richest, where its loss will be more severely felt, and where we must fight the hardest for conservation.

Developed by WWF scientists in collaboration with regional experts around the world, the **Global 200** is the first comparative analysis of biodiversity to cover every major habitat type, spanning six continents and all the world's oceans. The ranking provides a critical blueprint for biodiversity conservation at a global scale.

By saving the **Global 200**, we can conserve the broadest variety of the world's habitat and species as well as the ecological and evolutionary processes that maintain life on Earth.





Major Challenges to CONSERVATION of Elephants & Rhinos in ASIA

WWF's Asian Rhino and Elephant Action Strategy addresses a complex set of challenges that go beyond the biological and ecological concerns of each individual species. These challenges call for solutions that take into account the needs of both wildlife and human stakeholders.

Human-Elephant CONFLICT

Often ending in death for the elephants, human-elephant conflict poses perhaps the most serious threat to elephant survival in heavily populated Asian countries. WWF works to reduce elephant deaths and the damages people suffer. We engage communities in creative solutions that keep elephants out of cropland and villages and that limit human activities in core wildlife habitat.

HABITAT *Islands*

Important core conservation areas are increasingly isolated by logging, agricultural expansion, human settlements, road projects, and dam construction. WWF brings together government officials, technical experts, and local stakeholders to create regional land-use plans that provide wild elephants and rhinos with vital habitat corridors connecting otherwise isolated reserves.

UNSUSTAINABLE *Forestry and Agriculture*

To combat the pressures of both illegal and legal logging as well as agricultural expansion, WWF promotes stronger law enforcement and more sustainable natural resource management practices. The emphasis is on both government and corporate accountability for stopping incursions into key forest habitat.

Wildlife POACHING and ILLEGAL *Wildlife Trade*

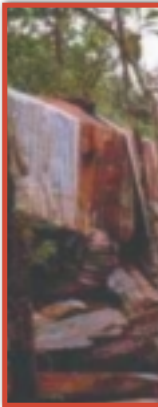
Even where suitable habitat exists, poaching remains one of the greatest threats to elephants and rhinos in many areas. WWF supports antipoaching patrols and intelligence networks in strategic locations and monitors international wildlife trade. WWF also works with practitioners of traditional Chinese medicine to promote appropriate alternatives to the parts of endangered species.

ELEPHANTS *in Captivity*

Although WWF is focused on saving elephants in the wild, large numbers of elephants are held in captivity in Asia. As many as 15,000 have been put to work for tourism or in timber camps, or have been isolated in holding facilities to decrease conflict with human populations. These animals could someday be reintroduced into secure habitats and improve the long-term genetic viability of still wild elephant populations.

Political UNREST

Insurgency, political and economic instability, and unresolved lines of official authority complicate conservation efforts in many priority areas.



(Below left) Inappropriate lands are often cleared for agriculture, such as floodplain forest cleared for oil palm. As more habitat is destroyed, elephants increasingly run into conflict with human settlements and farms. (Below right) Crops are often damaged as a result, and elephants are sometimes killed in retaliation.



The Pull of the **WILD**

Asia's remaining wild elephants live in a landscape where the competition for limited natural resources is significant. These magnificent creatures seem to be caught in a tangled web of powerful forces as they struggle for survival.

One force pulls them out of the forests and into agricultural fields, either because they find crops more appetizing or because the depletion of their forest habitat has left them with no food alternatives. Another pulls them back into the safety of the forests to give birth and raise young. Yet another has them running – literally for their lives – from people who want to kill them to harvest their meat and ivory or to eliminate them as agricultural pests.



Large groups of elephants still roam northeastern Borneo – but for how long?

Photo Credits: Asian elephants and flooded oil palm, WWF/Michael Stuewe

Mapping Strategic **SOLUTIONS**



WWF is using computerized geographic information systems (GIS) to map food resources, forest habitat, human-elephant conflict sites, and elephant migration routes, as well as agriculture, roads, and other potential barriers to elephant and rhino dispersal.

WWF and local authorities in priority areas are able to use this spatial information to create land-use plans to conserve wild rhinos and elephants, delineating the spaces they need for survival, to help humans and wildlife peacefully coexist.

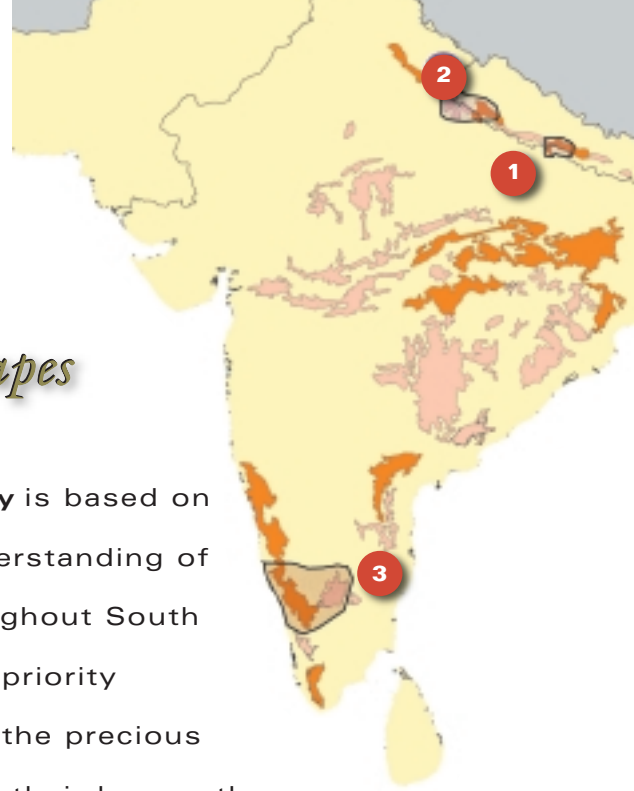
In Sumatra's Riau Province, for instance, WWF has joined with wildlife and forestry officials to prepare what is called a managed elephant range. The range is a network of core protected areas connected by forest corridors and surrounded by low-impact logging, well-managed agroforestry, or other activities that are compatible with elephant population needs. The managed elephant range is a land-use concept that will help secure viable elephant populations while limiting elephant damage to neighboring oil palm plantations and small farms.

This GIS work is supported by software graciously donated by ESRI, Inc.

The Last Stand

PRIORITY

Rhino & Elephant Landscapes



WWF's Asian Rhino and Elephant Action Strategy is based on both scientific information and a deep understanding of the forces at work in key landscapes throughout South Asia, Indochina, and Southeast Asia. Each priority landscape presents its own challenges for the precious remaining pachyderm populations that find their homes there.

While the WWF plan for meeting those challenges takes a long-term view, the efforts have already begun to show results.

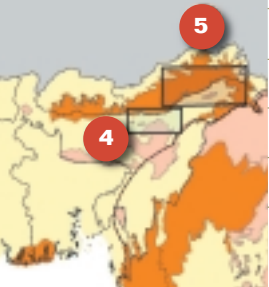
Priority Landscapes in SOUTH ASIA

South Asia is home to the largest number of Asian elephants in the wild and the entire wild population of greater one-horned rhinos. Here, WWF is focusing on the Terai Arc landscape in what is the single largest conservation initiative ever undertaken in this region. WWF and its partners are working to link 11 protected areas along the base of the Himalayas, from Nepal's Royal Chitwan National Park to Rajaji-Corbett National Parks in India. This transboundary project will focus on restoring habitat through the use of community forestry and other methods, translocating rhinos, and strengthening antipoaching efforts.

Bioregion	Priority Landscapes	Global 200 Ecoregions	Estimated Rhino Population			Estimated Elephant Population*	Tiger	Examples of Other Endangered Species Present **
			Greater one-horned	Javan	Sumatran			
South Asia	Central Terai Arc (Nepal, India)	Terai-Duar Savannas and Grasslands	~540			<100	Terai Arc Priority Tiger Landscape	Sloth bear, gaur, gharial, hispid hare
	Western Terai Arc (Nepal, India)	Terai-Duar Savannas and Grasslands	~70			~700-850	Terai Arc Priority Tiger Landscape	Sloth bear, swamp deer, Ganges river dolphin
	Nilgiris (India)	Southwestern Ghats Moist Forest, Western Ghats Rivers and Streams				6,300-10,000	present	Gaur, lion-tailed macaque, Nilgiri langur, Nilgiri tahr
	Kaziranga-Karbi Anglong & Southern Brahmaputra Valley (India)	Naga-Manupuri-Chin Hills Moist Forests	~1,480			2,000-2,500	present	Water buffalo, pygmy hog, swamp deer, hispid hare, gharial
	The "North Bank" of Arunchal Pradesh-Assam-Namdapha (India, Bhutan)	Naga-Manupuri-Chin Hills Moist Forests, Eastern Himalayan Broadleaf and Conifer Forests				<3,000	present	Clouded leopard, sun bear, Asian black bear, takin, musk deer

* Elephant population data are for the most part speculative at best. Several elephant populations have likely continued to decline, making it even more likely that numbers presented here have significant margins of error.

** There are many more endangered species inhabiting the priority landscapes than listed in this chart.



SOUTH ASIA

Priority Landscapes for WWF's Asian Rhino and Elephant Action Strategy

Note: The material and the geographical designations on maps do not imply the expression of any opinion whatsoever on the part of WWF concerning the legal status of any country, territory, or area, or concerning the delineation of its frontiers or boundaries.

Photo Credits: WWF Nepal
Maps: ©WWF, Conservation Science Program



The Terai Arc Landscape in Nepal and India

TERAI ARC (NEPAL, INDIA)

As one of the few places in the world where rhinos, elephants, and tigers coexist, the Terai Arc offers exciting opportunities for conservation. Thanks to strong government support and assistance from WWF and other organizations, the greater one-horned rhino continues to thrive here. In Nepal's Royal Chitwan National Park, greater one-horned rhino numbers have increased fivefold since 1960, making it the world's second largest population. Nepal now has more than 600 rhinos.



In the Terai Arc, WWF is replenishing rhino populations by moving, or translocating, animals from well-established populations to reinforce smaller populations and to establish new ones. These photos show anesthetized rhinos being translocated.

To accommodate these growing numbers and to improve connectivity among protected areas, WWF and its partners have been actively restoring key habitat. Between 1986 and 2001, WWF helped translocate 62 rhinos from Royal Chitwan National Park to Royal Bardia National Park. Those efforts were further bolstered in November 2000, when the Nepalese government moved to double Bardia's size. In the coming years, WWF plans to use translocation and habitat restoration to increase rhino populations in Nepal's Royal Bardia National Park and the Shuklaphanta Wildlife Reserve, and perhaps in India's Dudhwa National Park as well.

NILGIRIS (INDIA)

The Nilgiris landscape harbors the greatest number of Asian elephants in the world, with an estimated 6,300 to 10,000 living in habitats that range from evergreen forest and dry deciduous forest to thorn scrub jungle and grasslands. Unfortunately, habitat fragmentation and conflicts with humans continue to threaten these elephants, and the poaching of tusked males threatens population growth for generations to come. WWF and its partners are working to secure forested corridors, reduce human-elephant conflicts, and strengthen antipoaching efforts.



The Nilgiris Landscape in India



The North Bank Landscape in India and Bhutan

NORTH BANK (INDIA, BHUTAN)

Lying between the north bank of the Brahmaputra River and the Himalayas, and stretching almost to Myanmar, the North Bank harbors up to 3,000 elephants and boasts great swaths of relatively intact and contiguous forest. But cracks are developing in this fragile haven. People moving in from densely populated Bangladesh are building settlements and logging illegally, and poachers continue to kill elephants for meat and ivory. WWF will join with local partners to assess the status of the forest, evaluate elephant distribution, and bolster antipoaching forces.

Priority Landscapes in INDOCHINA

Some parts of Indochina are still so unexplored that new species of large mammals have recently been discovered there. In the mid-1990s, for instance, WWF-supported scientists discovered the saola antelope and giant muntjac deer in the Annamite mountains of Vietnam.

To get accurate counts of wildlife in these little-known areas, WWF uses automatic “camera traps” that photograph animals as they cross infrared sensors. Collecting up-to-date data on rhino and elephant populations is an important part of our work in Indochina. In 1999, these cameras helped capture the first known images of Javan rhinos in Vietnam’s Cat Tien National Park.

Bioregion	Priority Landscapes	Global 200 Ecoregions	Estimated Rhino Population			Estimated Elephant Population*	Tiger	Examples of Other Endangered Species Present **
			Greater one-horned	Javan	Sumatran			
Indochina	Cat Tien (Vietnam)	Annamite Range Moist Forests		<10		<50	present	Gaur, orange-necked partridge, Germain's peacock pheasant, white-winged duck, Siamese crocodile
	Lower Mekong Forests (Cambodia, Lao P.D.R., Vietnam)	Annamite Range Moist Forests, Indochina Dry Forests, Mekong River				Several hundred	Lower Mekong Forests Priority Tiger Landscape	Sun bear, gaur, giant ibis, Siamese crocodile
	Tenasserim Western Forest Complex (Thailand, Myanmar)	Northern Indochina Subtropical Moist Forests, Kayah-Karen/Tenasserim Moist Forests, Salween River				~1,000	present	Water buffalo, green peafowl

* Elephant population data are for the most part speculative at best. Several elephant populations have likely continued to decline, making it even more likely that numbers presented here have significant margins of error.

** There are many more endangered species inhabiting the priority landscapes than listed in this chart.

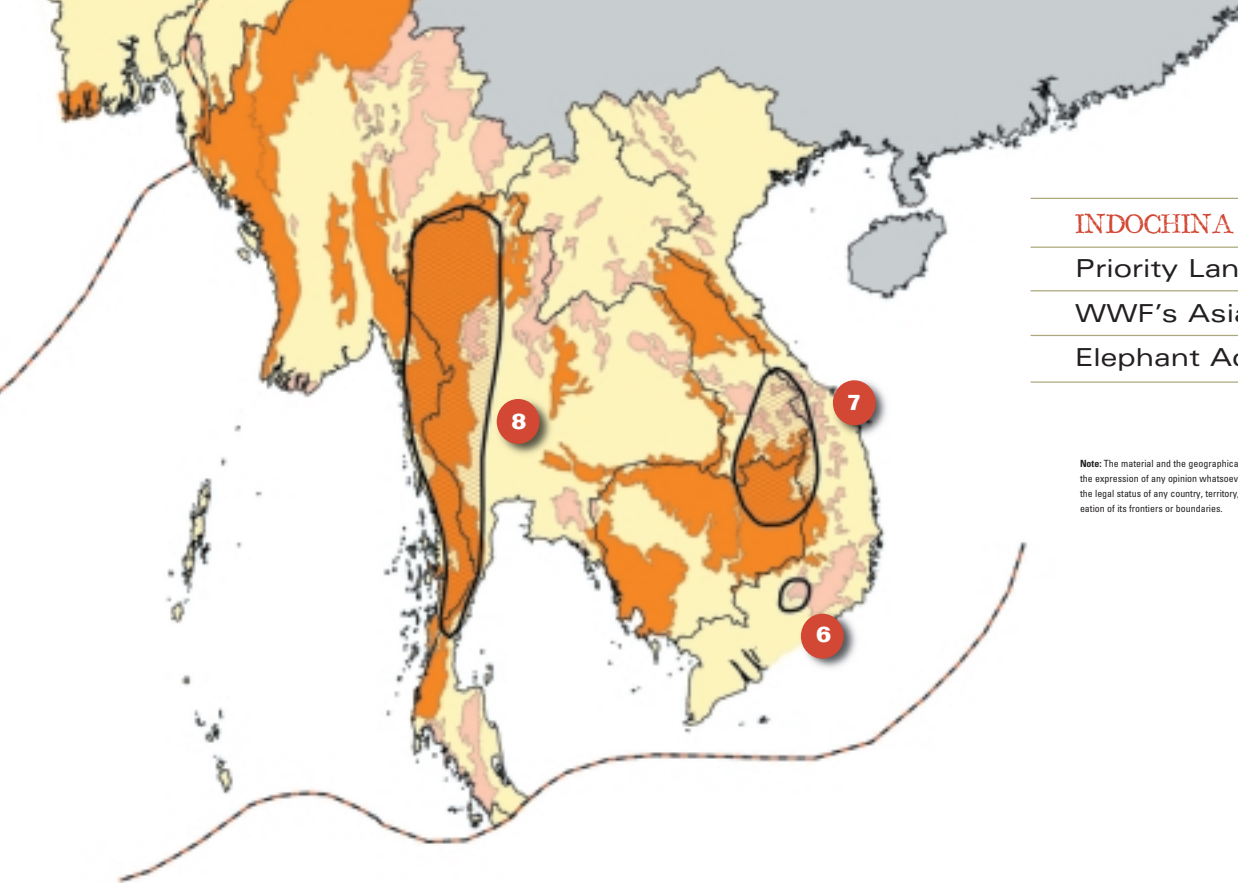
Lower Mekong Forests Landscape of Cambodia, Lao P.D.R., and Vietnam

LOWER MEKONG FORESTS LANDSCAPE (CAMBODIA, LAO P.D.R., VIETNAM)

One of the last large wilderness areas in Indochina, this remote landscape encompasses several large national parks and wildlife sanctuaries and, at one time, could have harbored between 600 and 800 elephants. Unfortunately, extensive logging and poaching may have seriously reduced their numbers. WWF is currently working with Cambodian officials to find ways to combat wildlife poaching and illegal trade. WWF is also assisting with efforts to secure a network of connected core protected areas and promote cooperation among the three countries that share this region.



Poaching for ivory and meat is a serious problem for elephants, particularly in Indochina. WWF gives park guards training, tools, and incentives to better enforce antipoaching laws.



INDOCHINA

Priority Landscapes for WWF's Asian Rhino and Elephant Action Strategy

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Photo Credits: (left) WWF Indochina; (center) WWF/David Murphy & Bui Huu Manh; (right) WWF/Mike Baltzer
Maps: ©WWF, Conservation Science Program



The Cat Tien
Landscape in
Vietnam

CAT TIEN (VIETNAM)

In addition to harboring a modest population of Asian elephants, Cat Tien National Park hosts a remnant population of fewer than 10 Javan rhinos. This population is the only one of this species outside Indonesia's Ujung Kulon National Park on the island of Java (see page 15). To ensure a future for these imperiled animals, WWF and the Vietnamese government are spearheading a special conservation project to improve park protection and management, conduct biological research, and train park staff. The project places special emphasis on involving surrounding communities in the conservation of wildlife habitat, revising park boundaries to exclude agricultural land, and developing innovative educational materials that emphasize the links between local well-being and intact natural resources such as forest watersheds.



(Above and right) These snapshots, obtained by automatic "camera traps," help Vietnamese authorities monitor Cat Tien National Park's population of Javan rhinos – which now number fewer than 10 individuals.

Priority Landscapes in SOUTHEAST ASIA

Over the last 10 years, rhino and elephant habitat in Southeast Asia has been rapidly logged and converted to oil palm and pulp wood plantations. In the process, fires used to clear land have often raged out of control, consuming additional forests and producing smoke visible from outer space.

WWF has worked with partners to establish Sumatra's Bukit Tigapuluh National Park in Riau province and to block access to illegal logging roads within the park. WWF is also working to improve the management of palm oil plantations and looking to the international banking sector to stop the financing of environmentally destructive practices. In addition, WWF works to reduce conflicts between elephants and people, bringing to this region techniques proven effective in other parts of Asia.

The Heart of Borneo Landscape in Malaysia and Indonesia

BORNEO: KINABATANGAN TO SEBUKU SEMBAKUNG (MALAYSIA, INDONESIA)



To help secure habitat for elephants and rhinos, WWF works with its partners to develop land-use plans that keep biologically rich natural habitats from being logged or worse – completely cleared and converted into agriculture like many areas (above) close to Bukit Tigapuluh National Park in Riau, Sumatra, Indonesia.

Known as the Heart of Borneo, this landscape contains more than 6 million acres of mostly unbroken forest and nurtures such critically endangered species as the orangutan and proboscis monkey, as well as perhaps 2,000 elephants and several dozen Sumatran rhinos. Much of the remaining forest is now slated for conversion to oil palm and timber plantations, a move that could exacerbate human-elephant conflicts and ultimately lead to the death of hundreds of elephants and poaching of the remaining Sumatran rhinos.

To protect this vital habitat, WWF and its partners are coming together to establish a new national park in the Sebuks-Sembakung region and to enhance forest protection in and among Danum Valley Forest Reserve, Maliau Basin Forest Reserve, and the Kinabatangan Sanctuary. WWF is also calling for compliance with signed legal agreements that require logging operators to use environmentally compatible low-impact timber management techniques to reduce their impact on Borneo's remaining tropical forests.

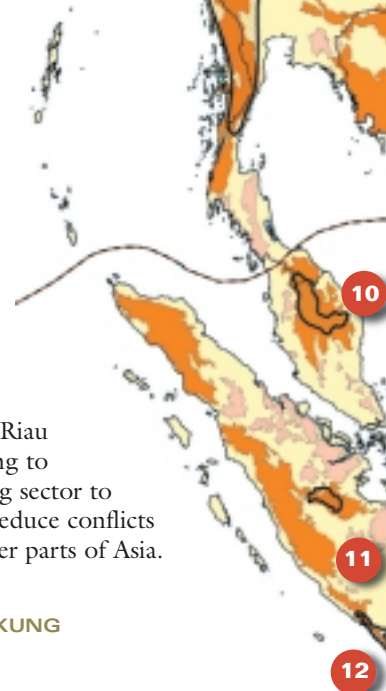
RIAU PROVINCE (INDONESIA)

While this area likely contains the largest elephant population in Sumatra – as many as 700 by local estimates – the number is shrinking fast as elephants struggle to survive amidst homesteads, oil palm and paper pulp plantations, and logging concessions. Habitat is now vanishing so quickly that all of Sumatra's lowland forest may be gone in the next five to seven years.



The Riau Province Landscape in Sumatra, Indonesia

In partnership with local, provincial, and federal authorities, WWF is hoping to set aside the Teso Nilo forest complex as an elephant conservation area. If successful, this could be the first step in a vast conservation network connecting Teso Nilo to Bukit Tigapuluh National Park – which WWF was instrumental in helping to establish in 1995 – and to the Bukit Rimbang, Bukit Baling, and Kerumutan reserves. WWF and its partners will also encourage the province's largest pulp mill operator to draw exclusively on legally harvested wood and investigate ways to use acacia plantations as buffers to keep elephants inside natural forest. WWF will help oil palm plantations develop management practices to increase efficiency and preclude encroachment on additional forests in priority landscapes.





SOUTHEAST ASIA

Priority Landscapes for
WWF’s Asian Rhino and
Elephant Action Strategy



Bukit Barisan Selatan, Sumatra, Indonesia

BUKIT BARISAN SELATAN (INDONESIA)

Lying at the southern end of Sumatra, this national park is home to tigers and elephants, plus a priority population of from 20 to 40 Sumatran rhinos. Unfortunately, agricultural encroachment on both the eastern and western sides of the park is fraying the boundaries and destroying forest. To help secure and, where necessary, restore this habitat, WWF is partnering with park officials to collect population data on tigers, rhinos, elephants, and other endangered wildlife, while working with local communities to slow and eventually stop forest encroachment.



(Above) Antipoaching patrols remove snares from Bukit Barisan Selatan National Park on the island of Sumatra. The patrols are part of the Rhino Protection Unit (RPU) Program supported jointly by WWF and the International Rhino Foundation. The U.S. Fish and Wildlife Service (USFWS) also provides critical funding for RPUs.

UJUNG KULON (INDONESIA)



Ujung Kulon, in Java, Indonesia

The world’s largest population of Javan rhinos – between 50 and 60 animals – can be found in this national park on the westernmost tip of the island of Java. WWF funds antipoaching patrols to ensure the rhinos’ protection, and helps park staff monitor the rhino population through camera traps and fecal DNA analysis. Studies on habitat improvement to increase the rhinos’ natural food supply are underway. In the coming years, WWF and its partners will look at the possibility of translocating rhinos from this park to establish a new population in other suitable habitat, security permitting.

(Below) Javan rhino in Ujung Kulon National Park.

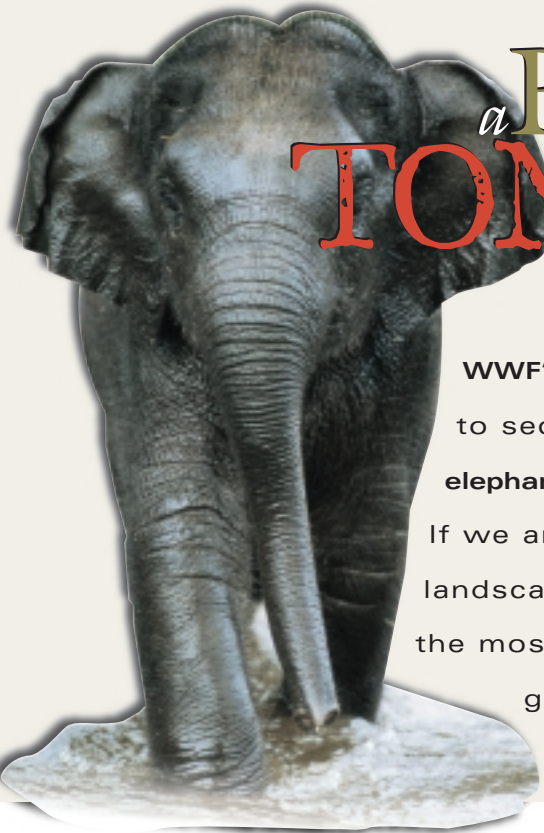


Bioregion	Priority Landscapes	Global 200 Ecoregions	Estimated Rhino Population			Estimated Elephant Population*	Tiger	Examples of Other Endangered Species Present**
			Greater one-horned	Javan	Sumatran			
Southeast Asia	"Heart of Borneo" Kinabatangan to Sebuku-Sembakung Landscape (Malaysia, Indonesia)	Borneo Lowland and Montane Forests, Sundaland Rivers and Swamps			~30-70	<2,000		Orangutan, clouded leopard, Bornean bay cat, sun bear, banteng
	Peninsular Malaysia & Southern Thailand	Peninsular Malaysian Lowland and Montane Forests			~50	~600	"HaBeTa" Priority Tiger Landscape	Malayan tapir, gaur, siamang
	Riau, Sumatra (Indonesia)	Sumatran Islands Lowland and Montane Forests, Sundaland Rivers and Swamps				~700	BBS-Kerinci-Riau Complex Priority Tiger Landscape	Clouded leopard, Malayan tapir, serow, Storm's stork
	Bukit Barisan Selatan, Sumatra (Indonesia)	Sumatran Islands Lowland and Montane Forests, Sundaland Rivers and Swamps			20-40	present in small numbers	BBS-Kerinci-Riau Complex Priority Tiger Landscape	Sun bear, Malayan tapir, great argus pheasant, Salvadori's pheasant, rhinoceros hornbill
	Ujung Kulon, Java (Indonesia)	Banda-Flores Sea			50-60			Banteng, Javan gibbon, Grizzled leaf monkey

* Elephant population data are for the most part speculative at best. Several elephant populations have likely continued to decline, making it even more likely that numbers presented here have significant margins of error.

** There are many more endangered species inhabiting the priority landscapes than listed in this chart.

Photo Credits: Indian Elephant Calf, Konrad Wothe/Minden Pictures; Rhino Calf, WWF Indonesia & BTNUK.



a Brighter TOMORROW

WWF's Asian Rhino and Elephant Action Strategy aims to secure a brighter future for **wild Asian rhinos and elephants** and for the ecosystems they inhabit. If we are successful in conserving these priority landscapes, we can at the same time save some of the most biologically important places in Asia, and give a new lease on life to countless other endangered species.

But the survival of elephants and rhinos in Asia cannot be taken for granted. We must act now to secure the commitments and financial resources needed to conserve these magnificent symbols of wild Asia.

WWF scientists have worked on the ground and in the policy arena to identify not just the problems facing these species, but the underlying causes as well. In developing our conservation action strategy, we have combined biological and social sciences, as well as economics, finance, and policy expertise to develop original approaches to these critical challenges.

WWF is the only organization able to work simultaneously and side-by-side with local communities, world governments, international financial institutions, and global industries to protect critical habitat and species, and to craft international agreements to end the policies and practices that lead to the loss of biological diversity.

Although we cannot singlehandedly win the battle to protect our planet's wildlife and wildlands, WWF is leading the way. From fighting to save a remote rainforest to marshalling support for international treaties, WWF members, affiliates, partners, and allies are changing the world.

WWF encourages individuals, organizations, and policymakers to learn more about Asian elephants and the three species of Asian rhino. *Their future is in jeopardy ... and you can become involved in efforts to save them and their distinctive habitats.*



This Javan rhino calf, photographed by a "camera trap," is a symbol of hope for the future of its species as well as for many other species inhabiting Ujung Kulon National Park.

For more information visit WWF's Web site at www.worldwildlife.org/areas, or call 800-CALL-WWF (800-225-5993) to learn how you can help.

Conservation Partners in WWF's Asian Rhino and Elephant Action Strategy

WWF collaborates with many governmental and non-governmental organizations on many projects in order to conserve Asia's rhinos and elephants. These include the U.S. Fish & Wildlife Service (USFWS), the Wildlife Conservation Society (WCS), and the International Rhino Foundation (IRF).



LIVING LANDSCAPES: A Snapshot of Priority Species and Spaces

Bioregion	Priority Landscapes	Global 200 Ecoregions	Estimated Rhino Population			Estimated Elephant Population*	Tiger	Examples of Other Endangered Species Present**
			Greater one-horned	Javan	Sumatran			
South Asia	Central Terai Arc (Nepal, India)	Terai-Duar Savannas and Grasslands	-540			<100	Terai Arc Priority Tiger Landscape	Sloth bear, gaur, gharial, hispid hare
	Western Terai Arc (Nepal, India)	Terai-Duar Savannas and Grasslands	-70			-700-850	Terai Arc Priority Tiger Landscape	Sloth bear, swamp deer, Ganges river dolphin
	Nilgiris (India)	Southwestern Ghats Moist Forest, Western Ghats Rivers and Streams				6,300-10,000	present	Gaur, lion-tailed macaque, Nilgiri langur, Nilgiri tahr
	Kaziranga-Karbi Anglong & Southern Brahmaputra Valley (India)	Naga-Manupuri-Chin Hills Moist Forests	-1,480			2,000-2,500	present	Water buffalo, pygmy hog, swamp deer, hispid hare, gharial
	The "North Bank" of Arunchal Pradesh-Assam-Namdapha (India, Bhutan)	Naga-Manupuri-Chin Hills Moist Forests, Eastern Himalayan Broad-leaf and Conifer Forests				<3,000	present	Clouded leopard, sun bear, Asian black bear, takin, musk deer
Indochina	Cat Tien (Vietnam)	Annamite Range Moist Forests		<10		<50	present	Gaur, orange-necked partridge, Germain's peacock pheasant, white-winged duck, Siamese crocodile
	Lower Mekong Forests (Cambodia, Lao P.D.R., Vietnam)	Annamite Range Moist Forests, Indochina Dry Forests, Mekong River				Several hundred	Lower Mekong Forests Priority Tiger Landscape	Sun bear, gaur, giant ibis, Siamese crocodile
	Tenasserim Western Forest Complex (Thailand, Myanmar)	Northern Indochina Subtropical Moist Forests, Kayah-Karen/Tenasserim Moist Forests, Salween River				-1,000	present	Water buffalo, green peafowl
Southeast Asia	"Heart of Borneo" Kinabatangan to Sebuk-Sembakung Landscape (Malaysia, Indonesia)	Borneo Lowland and Montane Forests, Sundaland Rivers and Swamps			-30-70	<2,000		Orangutan, clouded leopard, Bornean bay cat, sun bear, banteng
	Peninsular Malaysia & Southern Thailand	Peninsular Malaysian Lowland and Montane Forests			-50	-600	"HaBeTa" Priority Tiger Landscape	Malayan tapir, gaur, siamang
	Riau, Sumatra (Indonesia)	Sumatran Islands Lowland and Montane Forests, Sundaland Rivers and Swamps				-700	BBS-Kerinci-Riau Complex Priority Tiger Landscape	Clouded leopard, Malayan tapir, serow, Storm's stork
	Bukit Barisan Selatan, Sumatra (Indonesia)	Sumatran Islands Lowland and Montane Forests, Sundaland Rivers and Swamps			20-40	present in small numbers	BBS-Kerinci-Riau Complex Priority Tiger Landscape	Sun bear, Malayan tapir, great argus pheasant, Salvadori's pheasant, rhinoceros hornbill
	Ujung Kulon, Java (Indonesia)	Banda-Flores Sea		50-60				Banteng, Javan gibbon, Grizzled leaf monkey

* Elephant population data are for the most part speculative at best. Several elephant populations have likely continued to decline, making it even more likely that numbers presented here have significant margins of error.

** There are many more endangered species inhabiting the priority landscapes than listed in this chart.

WWF is the world's largest and most experienced independent conservation organization. We have 4.7 million supporters and a global network active in 96 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption



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using soy-based inks.

