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Species fact sheet:

# Asian Rhinoceros



**Mysterious, often unseen, and very low in numbers, two of the three Asian rhino species hover on the brink of extinction**

Greater one-horned rhino. © WWF-Canon / Jeff Foott

Historically hunted for their horn, a prized ingredient in traditional Asian medicines, and devastated by the destruction of their lowland forest habitat, Asian rhino populations are now distressingly small. These animals are among the world's most endangered, with one species numbering only around 60 individuals. Throughout their range, their habitat continues to dwindle fast due to illegal logging and other human pressures, and the threat of poaching is ever-present.



Young greater one-horned rhino. © WWF-Canon / Michel Gunther

## At a glance:

<b>Species:</b>	Greater one-horned rhino (or rhinoceros; <i>Rhinoceros unicornis</i> ), Javan rhino ( <i>R. sondaicus</i> ), Sumatran rhino ( <i>Dicerorhinus sumatrensis</i> )
<b>Habitat:</b>	Tropical and subtropical grasslands, savannahs and shrublands, tropical moist forests
<b>Location:</b>	Southeast Asia, South Asia
<b>Population:</b>	Less than 3,000
<b>Status:</b>	Endangered to Critically Endangered (IUCN–The World Conservation Union)

© WWF-Canon / Michel Gunther





Greater one-horned rhino, Royal Chitwan National Park, Nepal.  
© WWF-Canon / Jeff Foott

## There are three species of Asian rhino:

1. The Critically Endangered **Sumatran rhino** is the smallest rhino species and the only Asian rhino with two horns. Also called the lesser two-horned rhino or hairy rhino, it once ranged from north-eastern India through Indochina, Malaysia, and the islands of Sumatra (Indonesia) and Borneo (Brunei Darussalam, Indonesia, and Malaysia). Their numbers are thought to have at least halved between 1985 and 1995. Today, the population is estimated at less than 300 individuals in small pockets of Sumatra, peninsular Malaysia, and Borneo, making it the most threatened rhino in the world. The Borneo population is considered a distinct sub-species, numbering between 20 and 30 animals.

2. Also known as the Indian rhino, the **greater one-horned rhino** is enjoying the greatest conservation success. Its original range extended from Pakistan all the way through India, Nepal, Bangladesh, Bhutan, and Myanmar. However in 1975, only 600 remained. By 2002, conservation efforts resulted in the swelling of greater one-horned rhino populations to 2,400 in the Terai Arc Landscape of India and Nepal, and the grasslands of Assam and north Bengal, northeast India. This success aside, however, the greater one-horned rhino is still listed as Endangered as only two populations number more than 100 individuals.

3. The Critically Endangered **Javan rhino** is also known as the lesser one-horned rhino, and is probably the rarest large mammal species in the world. Only around 60 individuals are thought to survive in the wild, and there are none in captivity. The Javan rhino historically roamed from north-eastern India through Myanmar, Thailand, Cambodia, Lao PDR, Vietnam, and the islands of Sumatra and Java (Indonesia). Today, just 50–60 remain in Ujung Kulon National Park in Java, and no more than 10 survive in Cat Tien National Park in Vietnam. Both groups belong to distinct sub-species.

## What are the problems facing Asian rhinos?

### Poaching

The greatest threat by far to Asian rhino populations is poaching. Although there is no scientific proof of its medical value, rhino horn is highly prized in traditional Asian medicine as a cure for a variety of illnesses such as nosebleeds, strokes, convulsions, and fevers. As a result, poachers continue to kill the animals to take the horn, despite increased surveillance and protection.

Rhino horn is not like cattle horn, which grows from the bone. Rhino horn grows from the skin and is made of keratin — the same fibre found in fingernails and hair. In traditional Asian medicines, the horn is ground into a fine powder or manufactured into tablets.

### Habitat loss and conflict with humans

Habitat loss and conflict with humans over living space is a significant problem for all three Asian rhino species. Thanks to conservation efforts, the greater one-horned rhino has grown in number from 600 to 2,400 since 1975, with the largest population, 1,700 individuals, in India's Kaziranga National Park. At the same time, tree growth has reduced the rhinos' grassland habitat, and concurrent human population growth has led to conflict with rhinos over the remaining available non-forest areas. In this reduced living space, rhinos have destroyed farm crops and caused some human casualties, and humans have retaliated against the animals.

The same problem exists for the other two species, with slightly different parameters. The issue leading to conflict with humans is not that trees are reducing grassland, but that defoliation and land-clearing are reducing the rhinos' tropical forest habitat.

In southern Vietnam, over a quarter of a million people live in the buffer zone around Cat Tien National Park, home to the last 10 Vietnamese Javan rhinos in the world. The area was badly defoliated by Agent Orange during the Vietnam War in the 1960s and 1970s and continues to lose natural forest cover at a shocking rate. Similarly, deforestation for farming and plantation crops is severely threatening Sumatran rhino habitats in Indonesia.

This habitat loss not only reduces the available living space for rhinos. It also isolates and fragments rhino herds, making reproduction and genetic mixing difficult to impossible.



Illegal logging, Sumatra, Indonesia.  
© WWF / Volker Kess

Local resident carrying off grass harvested from Terai Arc Habitat, Nepal.  
© WWF-Canon / Tshewang R. Wangchuk

## What is WWF doing to reduce threats to Asian rhinos in the wild?

WWF considers the three Asian rhino species as ‘flagships’ – that is, charismatic representatives of the biodiversity of the complex ecosystems they inhabit. Conserving the rhinos and their habitat will also help many other species.

WWF has been working on rhino conservation for over four decades. In 1998, WWF created the *Asian Rhino and Elephant Action Strategy (AREAS)* out of recognition that conservation success will only be possible through a wide-ranging approach that goes beyond protecting isolated areas and addresses issues of land-use practices.

Through AREAS, WWF is working with law-makers and law-enforcement agencies to actively patrol rhino habitats to prevent poaching, and to pursue, capture, and prosecute any currently active poachers. WWF also works with communities to reduce human-rhino conflict through the relocation of rhinos from crowded habitats, and through the creation of buffer zones around protected areas and between forests and human settlements and farms.

### Examples of current work to conserve Asian rhinos include:

**1. In the Terai Arc Landscape in India and Nepal,** various conservation efforts for the greater one-horned rhino have enjoyed success (see *Focus Project box*).

**2. In India,** WWF is working with local stakeholders to secure a habitat corridor between Kaziranga National Park – home to the largest population of greater one-horned rhinos (approximately 1,700) – and Karbi Anglong so that the rhinos have access to higher areas during floods.

**3. In Cat Tien National Park in Vietnam,** WWF and the Vietnamese government are working together to preserve the remaining population of 10 Javan rhinos – the only Javan rhinos to have survived outside Java (Indonesia). Thanks to WWF’s efforts, Cat Tien National Park is now benefiting from increased management and protection, biological monitoring and research, redrawn park

boundaries, and the involvement of the local community in understanding and recognising their unique environmental inheritance.

**4. In the heart of Borneo, straddling both Malaysia and Indonesia,** WWF is working with local landholders, agri-businesses, and the government to stop the conversion of more than 20,000km<sup>2</sup> of forest to oil palm and timber plantations between Kinabatangan and Sebuku Sembakung. The destruction of this forest would very probably lead to poaching of the remaining Sumatran rhinos in the area. WWF is working to engage forest concession holders, using forest certification and forest restoration as tools in this effort.

**5. In Bukit Barisan Selatan National Park, on the Indonesian island of Sumatra,** the critically endangered population of 60–85 Sumatran rhinos faces increasing threat from the conversion of forest to cash crops on both the eastern and western sides of the island’s central mountain range. WWF is operating with park officials to collect population data on the rhinos and other endangered wildlife in the area, and with local communities to halt deforestation and preserve and restore natural habitat.

**6. In Ujung Kulon National Park, on the island of Java, Indonesia,** WWF funds anti-poaching patrols to protect the park’s population of 50–60 Javan rhinos – the largest population of Javan rhinos in the world. WWF and its partners also help the park’s staff monitor the rhinos through camera traps and faecal DNA analysis. WWF is also working with local communities to create awareness and generate alternative livelihoods.

**7. Throughout all rhino habitats,** WWF and TRAFFIC – the international wildlife trade monitoring network organized and operated as a joint programme by and between WWF and IUCN–The World Conservation Union – monitor the illegal trade in rhino horn, fund anti-poaching patrols, and support intelligence networks in strategic locations to prevent over-exploitation of rhinos for international trade. Work is also ongoing with practitioners of traditional Asian medicine to find and promote alternatives to rhino horn.



Sumatran rhinoceros. © WWF-Canon / Michel Terretaz

## Focus Project: Terai Arc Landscape, India and Nepal

The rich grasslands and forests running along the southern base of the Himalayas provide critical habitat for greater one-horned rhinos, Bengal tigers, Asian elephants, and thousands more animals and plant species. This Terai Arc Landscape covers 49,500km<sup>2</sup>, from the Bagmati River in Nepal's east to India's Yamuna River in the west, and includes 12 protected areas. The region is also home to over 6 million people who depend on its resources for their livelihoods.

When it became apparent that forest cover and grasslands would be rapidly lost to human settlements and agricultural fields, a new landscape approach to conservation beyond protected areas was introduced to prevent wildlife from being isolated in small 'islands'. Loss of habitat is the most pressing problem facing rhinos in this landscape as their numbers grew at the same time as a human population boom. For instance, rhinos in Royal Chitwan National Park in Nepal have increased fivefold in number since 1960. The park, which now has the second-largest population of greater one-horned rhinos in the world, also faces enormous pressure as this district has a human population of over 400,000.

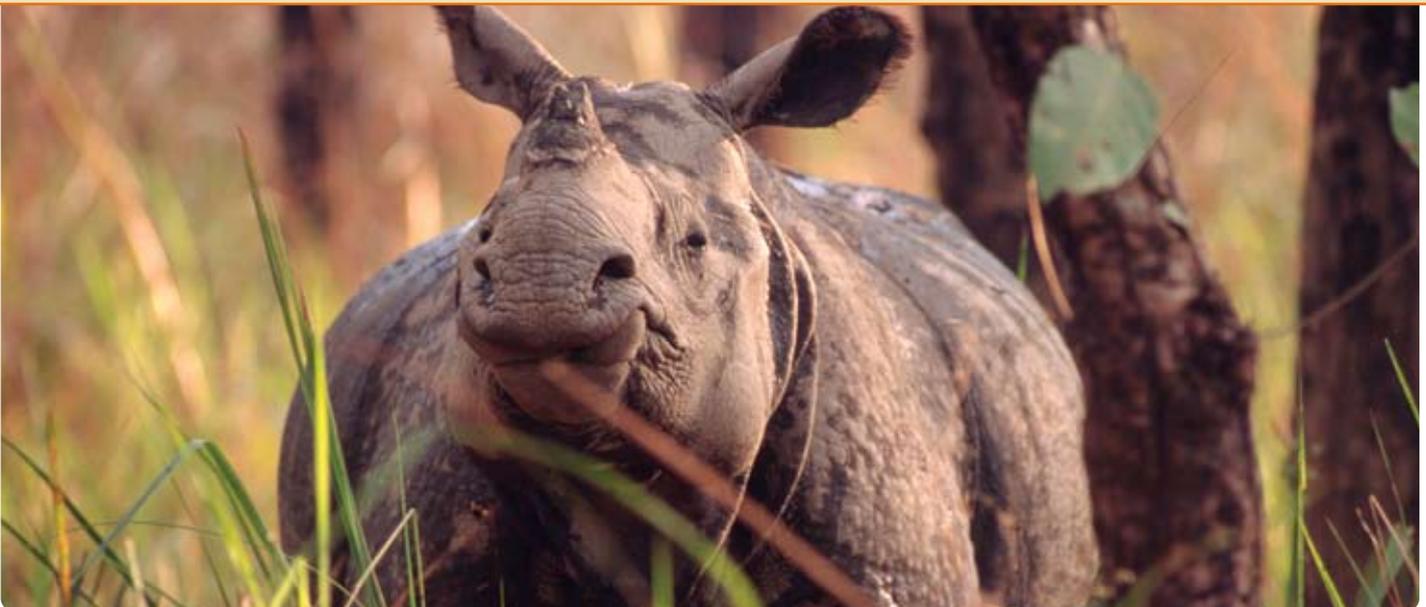
In order to increase genetic diversity and protect the rhinos from catastrophic losses due to disease or a natural disaster, WWF and its partners embarked on a programme to relocate rhinos from densely populated

parks to other reserve areas. This also served to spread the resource burden across a greater space. Since 1986, WWF has helped to translocate 87 rhinos from Royal Chitwan National Park to Royal Bardia National Park and Royal Shuklaphanta Wildlife Reserve, both in Nepal.

Recognising that conservation success in the Terai Arc Landscape, as is the case everywhere, needs the active involvement of local people, WWF works with communities and stakeholders to address sustainable livelihoods, capacity building, and conservation awareness. WWF also supports extensive anti-poaching patrols and informer networks within the community to catch poachers. WWF believes communities must safeguard their natural resources, and this has been implemented through projects like community management of forests.

Strong partnerships with the government, international non-government organizations, and community-based organizations have been fostered. This has generated synergy in biodiversity conservation that has been instrumental in policy formulation, reform, and advocacy.

The Terai Arc Landscape is part of the Terai-Duar Savannas and Grasslands Ecoregion – one of WWF's Global 200 Ecoregions, biologically outstanding habitats where WWF concentrates its efforts.



Greater one-horned rhino, Royal Chitwan National Park, Nepal. © WWF-Canon / Michel Gunther

### Find out more...

This fact sheet is designed to give a broad overview of some of the threats faced by Asian rhinos, and to give examples of WWF and TRAFFIC's work and solutions on the ground. For more detailed information on species, WWF, TRAFFIC, and the work we do, please visit [www.panda.org/species](http://www.panda.org/species) and [www.traffic.org](http://www.traffic.org)

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