

2022 State of the Rhino Report

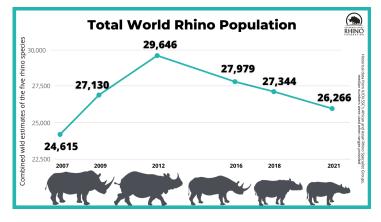
Every September, the International Rhino Foundation (IRF) publishes our signature report, State of the Rhino, which documents current population estimates and trends, where available, as well as key challenges and conservation developments for the five surviving rhino species in Africa and Asia.

Through grants and field programs, IRF has funded rhino conservation efforts in ten countries in its 31-year history, focusing on scientific research, anti-poaching, habitat and population management, conservation breeding, community support, wildlife crime investigation, legal training and support to fight illegal wildlife trade, environmental education and demand reduction. Over the past decade alone, IRF has invested more than \$20 million in rhino conservation and research.

Key takeaways from the 2022 State of the Rhino Report:

- The greater one-horned rhino population surpassed 4,000 individuals in India and Nepal.
- The world's last remaining population of Javan rhinos remained stable but faced threats including human encroachment and insufficient habitat.
- Experts estimated a 13% decline for Sumatran rhinos.
- Africa's white rhino population, under pressure from poaching, continued to decline.
- Africa's black rhino population grew across the continent.
- Illegal trade in rhino horn continued to drive poaching, with an estimated 1,000 rhino horns traded each year.



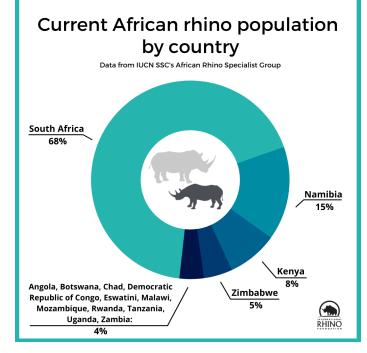


The total worldwide rhino population is estimated to be fewer than 27,000.

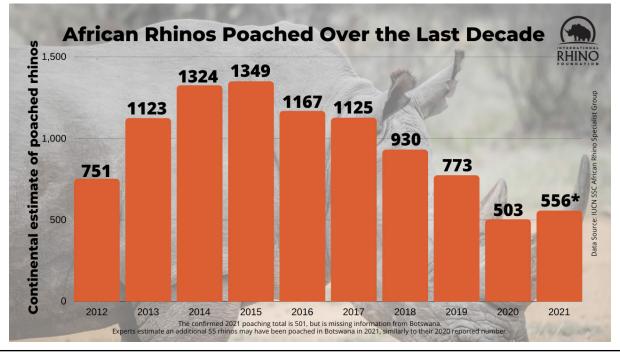
AFRICAN RHINOS

The two African rhino species, white (*Ceratotherium simum*) and black (*Diceros bicornis*), are found in fifteen countries: Angola, Botswana, Chad, Democratic Republic of Congo, eSwatini, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. Not all countries report population numbers or poaching data.

The African Rhino Specialist Group (AfRSG) of the IUCN's Species Survival Commission (SSC) released a report in 2022, *The African and Asian Rhinoceroses - Status, Conservation and Trade*, which estimates there are currently 22,137 rhinos in Africa: 6,195 black rhinos and 15,942 white rhinos. The overall number has decreased 6%, from 23,562, since the last Specialist Group report in 2017.



Poaching remains the greatest threat to African rhinos. Since 2017, there have been 2,707 recorded rhino poaching incidents in Africa, 90% of which took place in South Africa. During 2020, when governments implemented COVID mitigation measures, including lockdowns, there was a significant reduction in poaching – from 3.9% of the continental population in 2018 to 2.3% in 2021. Now that travel has reopened, poaching is on the rise again.



AFRICAN RHINOS

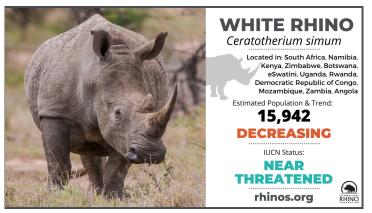
State of the Rhino 2022

White Rhino (Ceratotherium simum)

Near Threatened Estimated 15,942; Population Decreasing

White rhinos are decreasing primarily due to poaching losses. The population has decreased by almost 12% in the last four years, from an estimated 18,067 to fewer than 16,000 today.

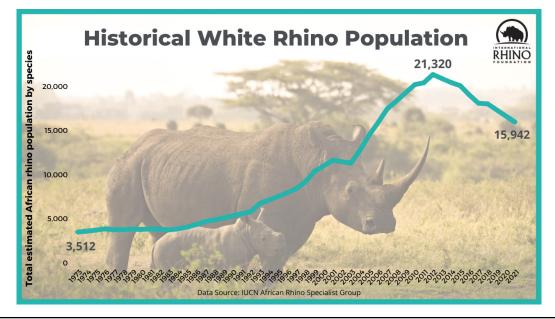
The white rhino, along with the roughly equalsized greater one-horned rhino, is the largest land mammal after the elephant. It has two distinct subspecies, but only populations of the



The International Rhino Foundation

southern white rhino (*Ceratotherium simum simum*) remain viable. The northern white rhino (*Ceratotherium simum cottoni*) is extinct in the wild due to poaching, and only two females remain at a sanctuary in East Africa.

Institutions and researchers around the world are working to bring the northern white rhino back from extinction by producing northern white embryos from genetic material, and eventually implanting those embryos into southern white rhino females to produce calves. In three sets of procedures between October 2021 and September 2022, the BioRescue consortium, a team of scientists and conservationists of the Leibniz Institute for Zoo and Wildlife Research, Safari Park Dvůr Králové, Kenya Wildlife Service, Wildlife Research and Training Institute, Avantea, University of Padua and Ol Pejeta Conservancy, created seven new northern white rhino embryos, bringing the total created to 22. Oocytes (egg cells) were collected from northern white rhino Fatu in October and January at Ol Pejeta Conservancy, Kenya, and were matured and inseminated at Avantea laboratory, Italy. Recent embryos were produced using semen from deceased northern white rhino bull Angalifu. The developed embryos were cryopreserved and await transfer to southern white rhino female surrogates in the foreseeable future. A greater number of embryos increases the chances of eventually producing a northern white rhino calf.



Black Rhino (Diceros bicornis)

Critically Endangered Estimated 6,195; Population Increasing

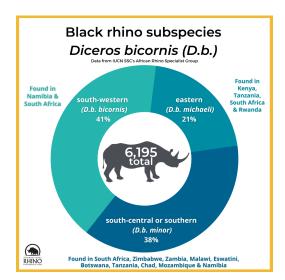
The AfRSG estimates a 12% growth in black rhino populations in recent years, from approximately 5,495 individuals in 2017 to more than 6,000 today.

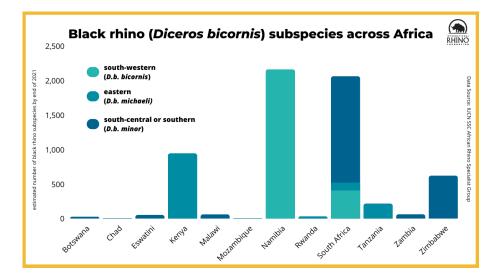
Black rhino populations suffered a drastic decline at the end of the 20th century. Between 1970 and 1993, the population of black rhinos decreased by 96% from approximately 65,000 to only 2,300 surviving



in the wild. Since 1996, intense anti-poaching efforts and strategic translocations to safer areas have allowed the species to slowly recover. Poaching still looms as the greatest threat.

There are three subspecies of black rhino, the southern, eastern and southwestern. All three subspecies' populations have grown, with the largest gains (33-42%) seen by the eastern black rhino over the past decade. In 2020, the AfRSG upgraded the most numerous subspecies, the southwestern black rhino, from Vulnerable to Near Threatened due to its sustained population growth over the last three generations. The other two subspecies and the species as a whole are still classified as Critically Endangered.





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Botswana

Botswana has experienced a significant decline in its rhino populations over the last four years, losing approximately half of the population. White rhinos are estimated to have declined from 452 to 242. Black rhinos have declined from 50 to 23. Poaching has escalated each year, from nine rhinos killed in 2017 to an estimated 55 in 2021.

The AfRSG has called on Botswana to evaluate the current approaches to reduce poaching and to adapt or implement new programs to respond to the crisis. Controlled by an organized criminal network that spans at least four countries, including the Democratic Republic of Congo, Zambia, Namibia and Botswana, rhino horn is smuggled from Botswana to markets in Vietnam. Work is being done to disrupt trade routes and intercept horn shipments.

eSwatini

The AfRSG reports that eSwatini currently holds an estimated 48 black rhinos and 98 white rhinos as of the 2021 count.

eSwatini is small; the whole country could fit inside South Africa's Kruger National Park. The habitat is well suited for rhinos though. eSwatini's Mkhaya Game Reserve, acquired in 1979 by Big Game Parks, is a protected area with stringent conservation security. As a result of its high security and proactive efforts to protect endangered species, rhinos have been translocated from South Africa to the park for safety.

Kenya

Kenya is estimated to have 938 black rhinos and 873 white rhinos. This includes the last two known northern white rhinos (*Ceratotherium simum cottoni*), one of two subspecies of white rhino.

In the early 1980s, the Kenyan government, realizing that the black rhino was headed for local extinction, implemented several strategies aimed at saving the species. One successful collaborative strategy was to place the remaining black rhinos into relatively small, intensively protected fenced sanctuaries on government and private land. All black rhinos in Kenya are owned by the state; private and community conservancies may apply to the Kenya Wildlife Service to become black rhino 'guardians.'

Kenya produces a new Black Rhino Action Plan every five years. The current plan's goal was to achieve a population of 830 black rhinos by the end of 2021. The country met and exceeded that goal.

Malawi

Rhinos disappeared from Malawi by the 1980s, but in 2003, a collaboration with the Malawian Government and African Parks returned black rhinos to Majete Wildlife Reserve. Since their return, not one has been lost to poaching. Malawi is currently home to 56 black rhinos, with a population in Liwonde National Park established through later translocations as well.



Mozambique

Mozambique's wildlife populations were significantly impacted by a 15-year civil war that ended in 1992, as well as by poaching. After being locally extinct for 40 years, rhinos were returned to Mozambique in 2022. So far this year, Peace Parks Foundation translocated seven black rhinos and 20 white rhinos from Manketti Game Reserve in South Africa to Mozambique's Zinave National Park. Plans are to translocate more than 40 rhinos into the park.

The main threat to the reintroduced population is poaching. Mozambique is a transit country for the illegal rhino horn trade, fueled by rhinos poached in South Africa. In response, Mozambique has signed an agreement with Vietnam to cooperate on wildlife conservation and protection, and is working to strengthen law enforcement activities. Mozambique also participated in "Golden Strike," an operation that helped authorities in Malaysia seize 50 rhino horns and Qatar confiscate 10 kg of rhino horn that originated from Mozambique.

Namibia

Namibia holds the second largest population of rhinos in Africa behind South Africa, and is home to the largest black rhino population in the world. The country is currently estimated to hold 2,156 black rhinos and 1,234 white rhinos.

Etosha National Park in northeast Namibia is home to the world's largest black rhino population, and rhino numbers are increasing steadily under an innovative and well-established conservation and management program implemented by the government of Namibia. The Community Rhino Ranger Incentive Programme, spearheaded by Save the Rhino Trust (SRT), was initiated in 2012 at the onset of the poaching escalation in Namibia to protect rhinos while providing economic opportunities for local people. The program enables Rhino Custodians, private landowners who hold rhinos and appoint and employ their own Rhino Rangers, to hire rangers from local communities, making use of local skills and knowledge to improve rhino monitoring while providing income from rhino conservation.

Poaching remains the highest threat to Namibia's rhinos. Poaching incidents are lower than in neighboring South Africa, but vigilance is critical in the country. Namibia experienced a surge in poaching in June 2022, with 11 rhino carcasses found. The country has recorded 22 cases in the first half of 2022 compared to 43 all of last year and 40 the year before.

Rwanda

At the end of last year, 30 white rhinos were translocated to Akagera National Park in Rwanda from a private game reserve in South Africa, establishing the species in the country. They have joined 28 black rhinos that began arriving in the park in 2017.

In 2010, African Parks and the Rwanda Development Board (RDB) helped reestablish Akagera National Park after the 1994 Rwandan genocide, which had nearly destroyed the park. The National Park has not had a high level poaching incident for the past 11 years, and has become a sanctuary for translocated species such as lions and rhinos, according to African Parks, which helps to manage Akagera.

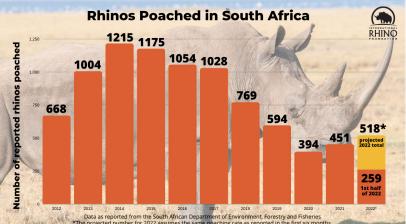
AFRICAN RHINOS



South Africa

South Africa accounts for about half of the total black rhino population on the African continent and is also home to the world's largest population of white rhinos. Currently, 2,056 black rhinos and 12,968 white rhinos are estimated to remain for a total of more than 15,000.

Following a welcome respite during COVID, poaching is again on the rise in South Africa. A staggering 259 rhinos have been poached for their horns in the first six months of 2022. This is 10 more than the 249 poached countrywide in the first six months of 2021. Kruger National Park, home to the largest population of rhinos in the world, reported that 82 rhinos were poached during this period.



Due to its large population of rhinos, expansive size (making it challenging to protect), a shared border with Mozambique and being surrounded by poor, heavily populated local communities, the Kruger National Park has been targeted by poachers since the current poaching crisis began in 2008. More recently though, poaching syndicates have increasingly shifted to other state, provincial and private reserves, especially in the KwaZulu-Natal province where the majority of rhinos have been killed this year. This could be because of the significant population declines reported for black and white rhinos in Kruger last year. Fewer rhinos makes poaching more difficult. That, combined with ongoing anti-poaching efforts and wide-scale dehorning in the Greater Kruger area, has led poachers to shift to hunting in other regions.

South African poaching statistics for the first half of the year show a loss of 210 rhinos on state properties and 49 in privately-owned reserves. KwaZulu-Natal recorded a loss of 133 rhinos to date in 2022, which is more than triple the 33 rhinos killed there in the first six months of 2021 but perhaps comparative to 2017 when they lost 222 for the year.

State and private rhino owners are increasingly dehorning rhinos to deter poachers, and SANParks is investigating the feasibility of additional actions, such as new anti-poaching initiatives focused on apprehending poachers and establishing additional founder populations outside the Kruger National Park.

In the first six months of 2022, there have been 69 people arrested in connection with rhino poaching and rhino horn trafficking. Of these, 13 alleged poachers were arrested in the Kruger National Park. The arrest rates for poaching activities are concerningly lower than in previous years.

In 2021, there were 189 arrests in connection with poaching activities: 77 within Kruger National Park and 109 outside the Park. This compares to 156 people arrested countrywide in 2020. In the 38 verdicts handed down by the courts, 37 cases resulted in the conviction of 61 accused rhino poachers and traffickers.



Higher level arrests and seizures are a result of greater coordination between police forces and increased enforcement activities at OR Tambo International Airport to intercept shipments. South Africa has also collaborated with authorities in Malaysia and Qatar to arrest a major rhino trafficker, illustrating increased country-to-country collaboration.

Tourism is rebounding in the country, but economic losses from the pandemic have placed a strain on protection and monitoring activities. The AfRSG recommendations for the country include adapting resources and plans to meet the current crisis, reducing corruption in the court system and increasing cooperation and coordination with other countries in combating illegal wildlife trade.

Africa's close-knit conservation community and partners from around the world have been reeling since Anton Mzimba, head ranger at the Timbavati reserve in South Africa, was gunned down in front of his family while at home on July 26th. Mr. Mzimba had been named Field Ranger of the Year and is the protagonist of an upcoming documentary film, "Rhino Man."

While this is, sadly, not the only murder of a wildlife ranger in 2022, the nature of this incident has stoked concerns that criminal syndicates may be growing more brazen and violent in their efforts to secure illegal wildlife products. IRF sends our heartfelt condolences to Mr. Mzimba's family and others who have lost their lives in the line of duty. IRF also extends our deep gratitude to all the brave men and women who put their lives on the line fighting to protect rhinos and other species.

Tanzania

Tanzania is home to an estimated 212 black rhinos, but experts fear that number may be lower. There are several rhino protection zones in the Serengeti National Park, around the centrally located Moru Kopjes as well as in the north of the park. A small population of rhinos is also found in the western Selous, in southern Tanzania.

Uganda

Uganda has plans to reintroduce rhinos back into its wild spaces. Once numbering more than 700, rhinos disappeared from the country in 1983 as a result of poaching. In 2005, the Ziwa Rhino Sanctuary was founded, importing six white rhinos into a breeding program with the hope of releasing them back to the wild.

That initial population has now grown to 35 rhinos. A 2021 feasibility study determined the first release would be planned for Murchison Falls National Park in the northwestern area of the country. Uganda hopes to release rhinos into 11 protected areas across the country in total, while continuing the captive breeding program.

Zambia

Zambia's black rhino population was once the third largest in Africa, but by 1998, black rhinos were extinct there. In 2003, after increased security was put in place, black rhinos were reintroduced in North Luangwa National Park, under a partnership between the Zambian Government and the Frankfurt Zoological Society. That population has grown to approximately 58 individuals.

AFRICAN RHINOS

Mosi-Oa-Tunya National Park also holds a small population of approximately eight white rhinos, heavily protected by rangers. With the successful reintroduction of rhinos in North Luangwa, additional national parks are being considered for translocations of founder populations.

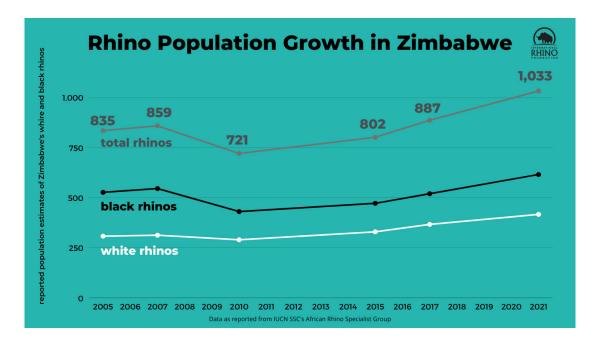
Poaching remains a concern and Zambia is a transit country for illegal trade from Botswana and elsewhere. The country has been cooperating in cross-border investigations in an effort to interrupt trade routes.

Zimbabwe

Zimbabwe holds the fourth largest population of rhinos in Africa. The country is home to 616 black rhinos and 417 white rhinos. This is the first time that Zimbabwe has surpassed 1,000 rhinos in over three decades. The Lowveld region, which includes Malilangwe, the Bubye Valley Conservancy, the Save Valley Conservancy and the newly restocked Gonarezhou National Park, holds the majority of Zimbabwe's rhinos.

Zimbabwe has experienced two consecutive exceptional rainy seasons, creating a lush habitat for rhinos and other wildlife. In the first half of 2022, six black and two white rhino calves were spotted in the Bubye Valley Conservancy.

Poaching has also been significantly reduced thanks to intensive monitoring and protection, from a recent high of 77 in 2019 to 10 in 2021. Six poaching incidents have been reported in the first half of 2022. Experts believe that an increase in the illegal trade of gold in Zimbabwe has played a part in reduced poaching for rhino horns, which is viewed as a higher risk activity. Nonetheless, poaching remains the greatest threat for Zimbabwe's rhinos and protection and monitoring activities must remain strong.



AFRICAN RHINOS

State of the Rhino 2022



ASIAN RHINOS

Greater One-Horned Rhino (Rhinoceros unicornis)

Vulnerable Estimated 4,014; Population Increasing

The Asian Rhino Specialist Group (AsRSG) announced that the greater one-horned rhino (*Rhinoceros unicornis*), found only in India, Nepal and Bhutan, has increased to 4,014 individuals after a biannual survey was completed in early 2022. The population is growing largely due to the governments of India and Nepal creating habitat for rhinos, while also preventing poaching.



India

The current population of greater one-horned rhinos in India:

Kaziranga National Park: 2613 Orang National Park: 125 Pobitora Wildlife Sanctuary: 107 Manas National Park: 40 Jaldapara National Park: 287 Gorumara National Park: 52 Dudhwa National Park: 38

Kaziranga National Park, home to the world's largest greater one-horned rhino population, announced an increase of 200 individuals since 2018, despite 400 deaths that were due mainly to natural causes.

Earlier this year, the Indian government increased Orang National Park by about 200 square km, connecting it to the Laokhowa and Burachapori Wildlife Sanctuaries, to build a larger landscape corridor for rhinos and other threatened species. This increase follows several expansions of Kaziranga National Park in recent years, which have added 919.48 square kilometers to the Park.

With NGO partners, including IRF, the government of Assam (a state in northeastern India), initiated translocations of rhinos within protected areas of Assam to give rhinos more room to breed. The state government also closes all rhino bearing protected areas in Assam to visitors during breeding season.

ASIAN RHINOS



Indian Rhino Vision 2020 (IRV2020), the program established in 2005 for the purpose of increasing the rhino population in Assam to 3,000 by establishing populations in seven protected areas, came to a close in 2021 with a final translocation of two rhinos from Kaziranga National Park to Manas National Park. Thanks to IRV2020, rhinos are now found in four Protected Areas in Assam: Pobitora Wildlife Sanctuary, Orang National Park, Kaziranga National Park and Manas National Park.

In 2022, the IRV2020 partners met to outline goals for the coming years, with plans to build on the successes and learnings from the previous program. Meetings to approve the plan, known as IRV 2.0, have been delayed due to the global pandemic, but the new program is scheduled to begin soon under the leadership of Assam Forest Department, along with supporting partners, and translocations could begin again by the end of the year.

Poaching remains a threat, but authorities in India have had great success in significantly reducing poaching, through intense security and strict enforcement of wildlife crime laws. In 2021, there was only one recorded poaching incident. There has been only one recorded incident in the first half of 2022 as well.

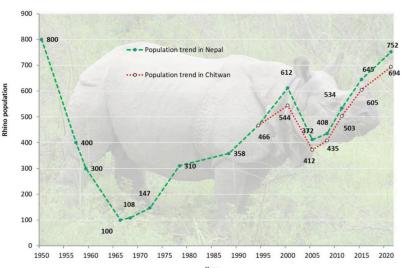
Habitat management, in particular control of invasive species, is also paramount to rhino recovery in India. Programs in several parks, including Kaziranga and Manas, are working to restore grasslands for rhinos. India and Nepal are also sharing best practices to control invasive species.

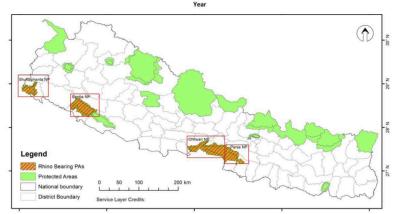
Nepal

Nepal completed a nationwide census of greater one-horned rhinos in 2021, and the population now stands at 752, an increase of 107 from the previous survey in 2015. Rhinos in Nepal are found in Chitwan National Park, Parsa National Park, Bardia National Park and Shuklaphanta National Park. The Bardia and Shuklaphanta rhino populations were established through reintroductions.

The greater one-horned rhino population is gradually increasing at a rate of 3% per year in Nepal, and the current populations are as follows:

Chitwan National Park: 694 Bardia National Park: 38 Suklaphanta National Park: 17 Parsa Wildlife Reserve: 3





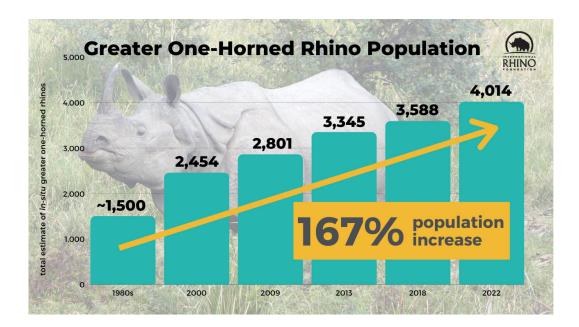
ASIAN RHINOS

Nepalese officials reported 37 rhino deaths in 2021. Four were attributed to humans, but only one was classified as a poaching incident. The other three were from human/rhino conflict, one fell in a roadside ditch, one was killed in retaliation and one was accidentally electrocuted. The remaining deaths were from natural causes, including old age, floods, accidents, intraspecies aggression and tiger predation of calves. Twelve suspected poachers were arrested during the year.

Changing climate situations are impacting rhino habitat, including an increase in invasive plant species taking over grasslands and the loss of traditional water holes due to dryer conditions. Programs are in place to restore native grass species and water holes to help further increase rhino carrying capacity in Chitwan and other areas. Officials are forecasting a continued growth rate of 3-5% for rhino populations in the country, and hope the habitat management activities will help them exceed this goal. Poaching and the illegal wildlife trade remains a threat to wildlife in Nepal. Therefore, maintaining the current level of law enforcement is also necessary.

Bhutan

Manas National Park straddles the border between India and the Kingdom of Bhutan. Rhinos are known to cross between the countries and are included in the population figures for India. Bhutan is an active member of the Asian Rhino Range States, a group of nations collaborating to secure sustainable populations of each of the three Asian rhino species. Bhutan, India and Nepal work together to unify the trans-boundary management strategy for the greater one-horned rhino.



State of the Rhino 2022

Indonesia

Indonesia is home to two of the five remaining rhino species - the Javan rhino (*Rhinoceros sondaicus*) and the Sumatran rhino (*Dicerorhinus sumatrensis*).

Javan Rhino (Rhinoceros sondaicus)

Critically Endangered Estimated 76; Population Stable

Indonesia's Ministry of Environment and Forestry (MOEF) estimates the Javan rhino population at 76 individuals in 2022, a small increase over last year's 75, with one birth and no deaths reported so far this year.

Javan rhinos are found only in Indonesia's Ujung Kulon National Park (UKNP), where ten years ago there were fewer than 50 Javan rhinos. The rhino population has gradually increased, with at least one new calf recorded every year since 2012.

Ujung Kulon National Park runs a comprehensive rhino monitoring program, tracking every individual Javan rhino. The monitoring program, which is supported by IRF and onthe-ground partner the Alliance of Forest Integrated Conservation (ALeRT), plays a critical role in the protection and management of this species and provides demographic data on the park's Javan rhino population that can be used for population management. In time, the data will also guide decisions on which rhinos to move to a second site in order to reduce the species' risk of extinction and allow for further population growth.

Javan rhinos are kept safe by Rhino Protection Units (RPUs) operated by Yayasan Badak Indonesia (YABI) in partnership with Ujung Kulon National Park (UKNP). The two marine Rhino Protection Units launched by YABI and UKNP with funding from IRF in January 2020, continue to monitor the Park's coastline.

Javan rhinos face increased threats from human encroachment in UKNP and officials are concerned that this could lead to poaching incidents. The population is also threatened by limited habitat and potential natural disasters. IRF is working with the Indonesian Government, park officials and local partners to increase the amount of suitable habitat available for Javan rhinos in Ujung Kulon so their population can continue to grow.



ASIAN RHINOS

State of the Rhino 2022

Sumatran Rhinos (Dicerorhinus sumatrensis)

Critically Endangered Estimated <80; Population Decreasing

Fewer than 80 Sumatran rhinos survive in small populations in Indonesia's Gunung Leuser and Way Kambas National Parks (both located on the island of Sumatra) and a few isolated animals inhabit central Kalimantan. While the government's official estimate is fewer than 80 individuals, a recent joint report from Asian Rhino Specialist Group (AsRSG), African Rhino Specialist Group and TRAFFIC estimated the Sumatran Rhino population at 34-47, based on internal assessment carried out by AsRSG through its members. This population estimate would indicate a decline of 13% between 2017-2021. Because so few Sumatran rhinos remain, and because those few surviving animals have increasingly moved into more remote areas to avoid human disturbance, it is extremely difficult to track Sumatran rhinos and to accurately estimate the population. This lack of data further complicates efforts to protect and conserve the species.

Living in fragmented rainforest habitats makes it difficult for breeding-age animals to encounter one another. And, as in other rhino species, reproductive problems usually ensue if females do not become pregnant. The Government of Indonesia and rhino experts from around the world have agreed that the only way to bring the Sumatran rhino back from the brink of extinction is to consolidate the widely dispersed, fragmented wild populations into managed breeding facilities under an emergency action plan.

In 1996, the International Rhino Foundation (IRF) built the 250-acre Sumatran Rhino Sanctuary (SRS) in partnership with Indonesian nonprofit Yayasan Badak Indonesia (YABI), which currently manages the facility. Located in the heart of Way Kambas National Park on the island of Sumatra, the SRS is home to the only reproductively viable captive Sumatran rhinos in the world. This captive population of eight Sumatran rhinos at best represents 10% of the total population of this species and could be as much as a quarter of the entire population if the lower estimates are accurate.



ASIAN RHINOS

State of the Rhino 2022



photo courtesy of the Indonesian Ministry of Environment and Forestry

On March 24, 2002, the Government of Indonesia announced the birth of a female Sumatran rhino at the SRS. The calf was born to first-time parents Rosa and Andatu.

In late 2021, Indonesian government officials and conservation partners broke ground on a new Sumatran Rhino Sanctuary in the Leuser Ecosystem in Aceh Province, in the north of Sumatra. The new SRS will be the third breeding facility, joining the current facilities in Way Kambas National Park and a small sanctuary in East Kalimantan that houses Pahu, a female Sumatran rhino captured in 2018. The Aceh sanctuary is scheduled to be completed by the end of this year.

Despite ongoing delays caused by the pandemic, plans are moving forward to begin capturing and translocating rhinos into the rhino sanctuaries later this year or early 2023.

In May, the Indonesian Institut Pertanian Bogor University (IPB University) and the German Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW) signed a memorandum of understanding outlining a new collaborative strategy for advancing future scientific and educational solutions to local and global sustainability and biodiversity conservation challenges.

The collaboration will establish "The Center for Assisted Reproductive Technologies and Biobank" at the IPB University. The center will provide a state of the art laboratory, networking opportunities for scientists and others, and capacity building support in Indonesia for assisted reproduction techniques (ART) and biobank applications, particularly targeting Sumatran rhinos.

ASIAN RHINOS



Illegal wildlife trade is the fourth largest global criminal activity, estimated at between \$7 and \$23 billion per year. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) estimates from available data that nearly 1,000 rhino horns are illegally traded each year. The majority of seizures occurred in places other than where the rhinos were poached.

Rhino poaching is conducted by highly-organized, well-funded and often dangerous criminal syndicates that are able to quickly exploit security gaps and weaknesses. Multiple range countries report that though traditional poaching methods have become increasingly unsuccessful, rhino poachers are adapting and changing their methods.

Catching poachers, hopefully still in possession of evidence such as a weapon, poaching tools and/or freshly cut rhino horns, is the culmination point of the enormous effort and investment that goes into building an integrated reaction capability. It is also just the starting point of a lengthy and often frustrating process towards what will hopefully be a successful prosecution. However, identifying and then further investigating more complex cases where suspects are involved in poaching across multiple regions, or from an enabling position – such as giving information on rhino locations or letting poachers posing as tourists in through a gate - is a painstaking process and needs to be conducted within the legal parameters of the country in order for the evidence gathered to be admissible in court.

The need to constantly respond to these changing poaching tactics puts relentless strain on protection and investigation resources. Reserves and other stakeholders are using proven technology solutions, such as Cmore, WildCrime and EarthRanger to improve the effectiveness of patrol, policing and investigation activities, but are usually constrained by challenges such as a lack of funding to purchase new equipment, inadequate staff capacity and training.

Collaboration, cooperation and intelligence sharing by law enforcement on the national and global levels remains critical to combating the large criminal syndicates that finance poaching of rhino horns and other wildlife and control the worldwide illegal trade. Inclusive approaches at the local level, including shared decision making and livelihood assistance and education, are also key measures to decrease poaching.

CITES identified the following countries as most impacted by the illegal trade in wildlife either from poaching losses, transit of illegal horn or consumption: South Africa, China, Vietnam, Malaysia, Botswana, Mozambique, the United Arab Emirates and Qatar.



Rhinos continue to face many threats from poaching, habitat loss, encroachment by people and fragmented populations that inhibit breeding. IRF recommends the following priorities for all five species in order to combat these pressures:

- 1. Remain vigilant with anti-poaching activities, or "boots on the ground," to meet the challenge of increased poaching.
- 2. Work with local communities to ensure they are active participants in wildlife conservation and receive economic incentives that improve livelihoods.
- 3. Improve enforcement of wildlife crime laws and international treaties by range and consumer country governments.
- 4. Foster more effective international collaboration in investigations to address the entire illegal wildlife product supply chain.
- 5. Continue to restore and improve rhino habitats and return rhinos to their former ranges.
- 6. Support the activities of governments, people and organizations making a difference for rhinos.



This report was prepared by the International Rhino Foundation from sources including the Convention on International Trade in Endangered Species of Wild Fauna and Flora <u>African and Asian Rhinoceroses - Status, Conservation and Trade report</u> (August, 2002), the African Rhino Specialist Group, the Asian Rhino Specialist Group, TRAFFIC, African Parks and input from IRF's international advisors and partners.

RECOMMENDATIONS