

HORNS OF CONTENTION



Rhinos In Crisis (Intro)

Rhinos. One of the oldest living mammals on earth. Instantly recognisable. Undeniably iconic. Surprisingly charismatic and utterly irreplaceable.

Their role in the ecosystem is unsurpassed. Rhinos are nature's environmental engineers. As well as shaping landscape topography through grazing, wallowing, and defecating, they also increase biodiversity. The changes they make ensure the survival of countless other species of flora and fauna. Lose rhinos and we risk losing other species too.

Our unprecedented activities have had a profound impact on rhinos and their habitats, contributing to the decline of rhino populations. Environmental pressures and illegal wildlife trade are threatening rhinos' survival, putting this magnificent, sentient animal at risk.

If rhino populations continue to decline at the same rate as they have in the past decade, rhinos could be extinct in the wild by 2032.

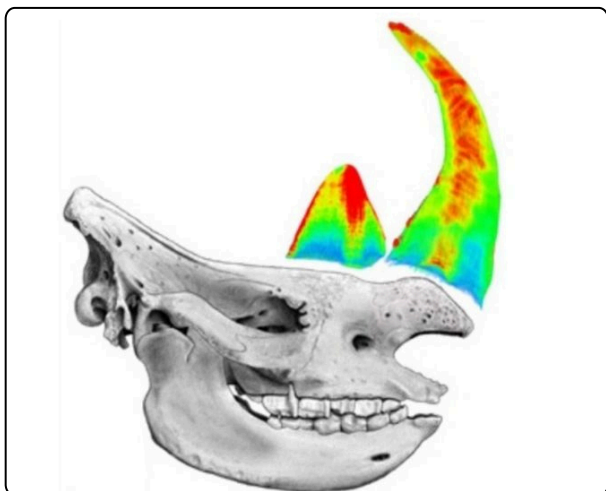


What are rhino horns?

While other horned animals have horns made up of a bony core covered with a thin layer of keratin, a fibrous protein found in human hair and nails, rhino horns are entirely composed of keratin. Keratinized tubules form an outer sleeve around a calcium-rich inner core that provides strength and melanin deposits that protect the core from degradation from ultraviolet rays. The structure of rhino horn is similar to that of horse hooves.

Are rhino horns attached to the skull?

Rhino horns are independent of the skull and are attached to the nasal bone by connective tissue.



The above image of a CT scan shows rhino horns 'floating' above the skull. Red areas highlight denser areas of melanin and calcium content (Credit: A review of rhino horn, 2011)

Do rhino horns grow?

Yes. Growing at a rate of around 7-8cm a year, rhino horns can grow up to 150cm in length, depending on the species. However, after analysing images and artwork held on file at the Rhino Resource Centre, Utrecht, Netherlands, researchers found that rhino horns have become shorter relative to body size over the last century, which could be attributed to selection pressures such as hunters and poachers targeting rhinos with larger horns, although this has not been confirmed.

Natural wear and tear causes them to become rough and worn and may also contribute to their curvature, as well as an uneven keratin growth rate at the front of the outer sleeve, which grows faster at the front than at the back, according to Ohio University research.



Dehorning takes between 20-30 minutes from immobilisation to the administration of the reversal antidote

How do rhinos use their horns?

Rhino horns serve several behavioural functions. As a warning sign or when engaging in combat, males use their horns to display their prowess, posturing, and intimidation. In addition to self-defence, horns are also used to defend territory, though Asian rhinos tend to use their teeth more for this purpose, defending and guiding calves, foraging for food, uprooting vegetation, and digging for water.



Is it possible to remove rhino horns in order to deter poaching?

Yes. Rhino horns can be safely removed by dehorning, a non-surgical procedure that involves immobilisation before the horn is partially removed.

Dehorning began in Damaraland, Namibia in 1989 in response to escalating poaching. The experiment was considered a success at the time, but it was conducted in conjunction with an increase in anti-poaching funding, increased security, and translocation efforts. It has since become a primary deterrent to poaching.

It is usually necessary to dehorn every 12-18 months. The rhino is darted to immobilise. Markings are applied to the horn to indicate where it will be removed, protective covers are placed over the eyes and ears to reduce stress and noise disturbance, and the horns are removed either manually or with a chainsaw. This procedure is relatively safe, despite the risks associated with any medical intervention. Complications may arise from preexisting medical conditions. The risks also increase with the frequency of immobilisation.

A visible stub is left after the horn is removed around 7 cm from the base above the germinal layer. Pain, infection, injury, and horn deformity are significantly increased if cutting below this area (similar to cutting your own nails too far down).

Dehorning however, is not performed on calves. Their horns are not developed enough, and their growth plates are too soft. Chainsaw vibrations will cause severe pain in the calf's growth plate if the horns are removed during these early years.



Dehorning is an invasive procedure performed by a veterinarian. A blindfold and ear plugs are placed over the rhino's eyes and ears before the unnerved section of horn is removed with a chainsaw.

Does dehorning cause behavioural changes?

Possibly. There is some disagreement regarding the ethics of dehorning, as well as conflicting observations regarding the behaviour of dehorned rhinos, but the consensus is that dehorning is a safe, widely accepted deterrent to poaching.

Research published in August 2022 found no significant differences in population growth, breeding, birth, survival, life span, or death between dehorned and horned rhinos.

The University of Cambridge conducted a study in 2001 which found that frequent immobilisation negatively affected the fertility of dehorned black rhinos. According to a study done by the University of Neuchâtel, de-horned black rhinos' home ranges decreased by 53% for females and 38% for males, while their social interactions decreased by 37%.

Researchers have found similar conflicting results in other studies. However, rhinos' reliance on their horns certainly justifies their preservation, regardless of research findings.



Is dehorning an effective anti-poaching measure?

Maybe. Dehorning has become a commonplace practice in national and private reserves, especially when combined with other anti-poaching measures, like increased security, patrols, and monitoring. Dehorning is not considered an effective solution on its own.

Besides the ongoing cost of the procedure, dehorning has other disadvantages. Despite being less profitable, stumps of dehorned rhinos remain valuable on the black market, and dehorned rhinos are still poached, particularly in areas with limited rhino populations. It has also been reported that poachers have killed dehorned rhinos to save time retracking or as vengeance, when they found rhinos without intact horns when they tracked them. In addition, the vulnerability of rhinos with intact horns is increased by dehorned rhinos.

After horns are removed, what happens to them?

National and/or provincial agencies follow their own standard operating procedures when collecting and storing horns from dehornings, confiscations by police, and natural deaths, including captive rhino horns and horns from states without rhinos.

In South Africa, for example, the measurement of rhino horns and fragments (except horn shavings which are destroyed) after dehorning is followed by assigning a serial number and marking the horns with permanent ink. Hair, blood and tissue samples are collected and owners/custodians may also opt to microchip horns. Tags and tracking collars may also be fitted while the rhino is sedated. Once the procedure is complete, a veterinarian will administer a reversal antidote.

DNA samples are added to the Rhino Indexing System (RhODIS) if not already on record. A representative from the Department of Forestry, Fisheries, and the Environment should be present, but this isn't always the case. Horns are stored by owners/custodians in secure facilities at their discretion. Private stockpiles undergo regular audits to ensure they are accounted for.



Rhino horn stockpile (Credit: Traffic)

Why do countries have stockpiles of rhino horn and other wildlife derivatives?

National stockpiles of confiscated horn, dehorning, and natural mortality exist in most rhino range states. South Africa and Namibia, which allow private ownership of white rhinos, also have private rhino horn stockpiles.

Non-range states, particularly those along illegal supply routes, may also hold stockpiles of confiscated horns as well as horns from captive-bred rhinos unless destroyed or returned to their country of origin.

Can rhino horns be legally traded internationally?

No. Since 1977, the Convention on International Trade of Endangered Species (CITES) has prohibited international trade of rhino horns. Eswatini (formerly Swaziland) made subsequent proposals to lift the international ban, but they were rejected.

All five rhino species are listed in Appendix I by CITES, except the southern white rhinos of South Africa, Eswatini, and Namibia.

South Africa and Eswatini's southern white rhinos are listed as Appendix II, permitting the trade of live animals to acceptable and appropriate destinations, and hunting trophies.

During CoP19, Namibia's southern white rhinos were downlisted to Appendix II exclusively to facilitate international trade of live animals within their natural and historical ranges in Africa, allowing trade with other African range states only, but prohibiting trophy hunting.

Can rhino horns be legally traded domestically?

Some countries, such as South Africa and China allow domestic trade of rhino horns.

Two rhino breeders sued the South African government in 2015 claiming they were entitled to sell rhino horns. The constitutional court dismissed an appeal in 2017 by the Department of Forestry, Fisheries and the Environment (then Department of Environmental Affairs) to keep a moratorium on the domestic trade in rhino horn.

Despite a high and unsustainable demand for rhino horn, China's State Council announced in 2018 it would permit the use of rhino horn for scientific and medical research, lifting a domestic ban that had been in place since 1993.



Assam burned 2,479 rhino horn pieces at Bokakhat stadium on September 22nd (International World Rhino Day), 2022 (Credit: Rupjyoti Sarmah)



Should stockpiles of rhino horn and other prohibited wildlife derivatives be destroyed?

Destroying rhino horns, ivory, and other wildlife derivatives is as contentious and controversial as legalising their sale.

It is argued that stockpile destruction increases perceived prestige, fuels poaching, and increases the item's resale value by making items scarcer, but these arguments fail to take into account stockpiles are not intended for distribution.

Unless items are being used as evidence in criminal cases, Action For Rhinos believes all rhino horn stockpiles should be destroyed. Stock inventory will always pose a storage, security, financial, and administration burden, regardless of how robust standard operating procedures are. In July 2023, 51 rhino horns were stolen from the North West Parks and Tourism Board (NWPB), South Africa, as evidence of their vulnerability to theft and corruption.

As long as prohibited wildlife derivatives exist, there is an expectation of a potential legalisation of the trade. Historically, stockpile sales have been disastrous. In 1999 and 2008, CITES-governed sales of stockpiled ivory (mostly due to natural mortality) were conducted. Asia imported 49 and 108 metric tonnes of African ivory, respectively. After the 'one off' sales, the number of ivory carving factories and retail outlets approved by the Chinese government increased, resulting in an influx of poaching of African elephants.

The quality and potential resale value of rhino horns can deteriorate over time due to factors such as temperature and weevil infestations.

Staff safety and security risks are increasing at facilities that store rhino horns, such as museums, zoos, and auction houses, and cases of theft at these facilities are not isolated occurrences.

Finally, the destruction of these items is a symbolism of commitment to species preservation and sends a clear message that wildlife crimes will not be tolerated, and no one will benefit financially from them.



The Kenyan government burned more than 105 tons of ivory and one ton of rhino horn in April 2016, among the largest stockpile destructions ever recorded

Which countries have destroyed their stockpiles?

The first ever public ivory destruction took place in 1989 when Richard Leakey was newly appointed head of Kenya's Wildlife Conservation and Management Department, now known as Kenyan Wildlife Service (KWS), with former President Daniel Arap Moi, setting fire to the country's 12 tonnes of stockpiled ivory sourced from African elephants.

Around 300 tonnes of ivory and rhino horn have been burned or crushed in high-profile events since then.

In addition to Kenya, ivory and rhino horn stockpiles have been destroyed in Zambia, Gabon, the United States, the Philippines, the United Arab Emirates, Hong Kong, China, France, Belgium, Ethiopia, Chad, the Republic of Congo, Mozambique, India, Sri Lanka, Italy, and Vietnam.



The full Rhinos In Crisis series can be found at actionforrhinos.com/rhinos-in-crisis



Horns Of Contention



Environmental Pressures



Illegal Wildlife Trade



Poaching: The Aftermath