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WORLD WILDLIFE CRIME REPORT

TRAFFICKING IN PROTECTED SPECIES

2024

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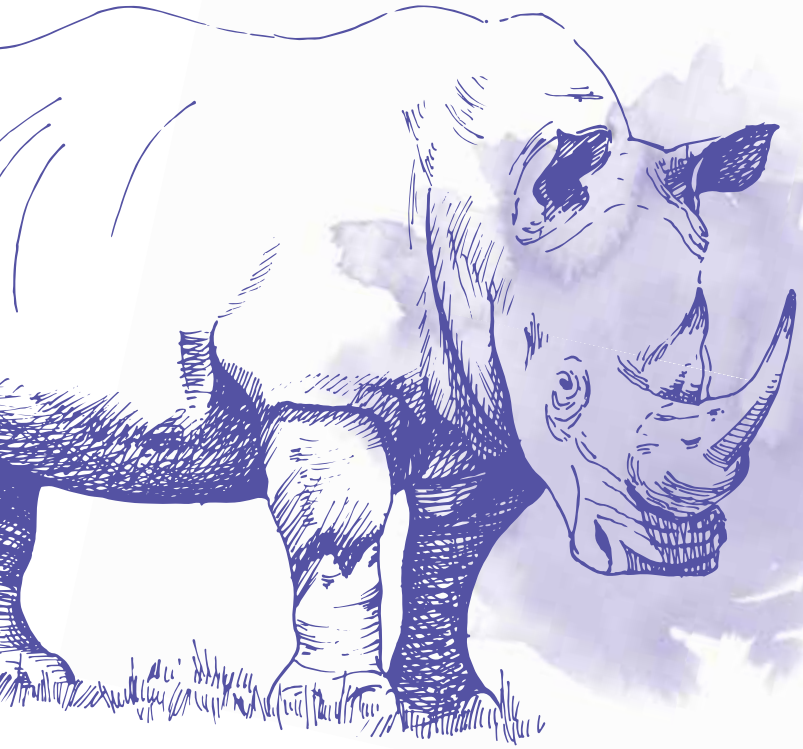
Table of Contents

Case study 5

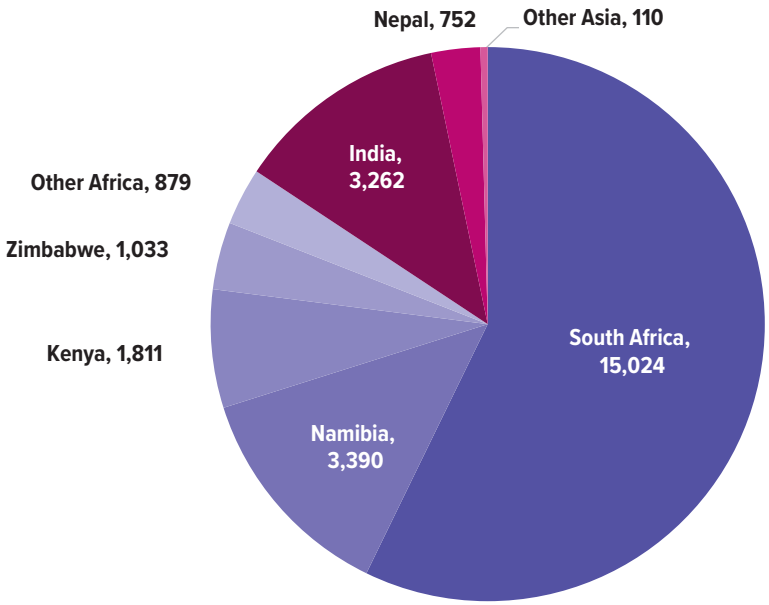
Rhinoceros horn



Rhinoceros horn

Rhinoceros horn trafficking was the subject of case studies in both previous editions of the *World Wildlife Crime Report*. The analysis in the 2020 report noted mixed signals, with decreases in poaching levels and price indicators standing in contrast to a consistent upward trend in seizures during the period 2014–2018, after which comprehensive data were at that time unavailable.[1] It was speculated that increased seizures could be owing either to improved enforcement interdiction or the entry into the market of new supply from private stocks. The current case study aims to update knowledge on rhinoceros horn trafficking, particularly the evidence on overall market trends. It benefits in particular from regular comprehensive updates on rhinoceros status, poaching and illegal trade carried out for CITES by the International Union for the Conservation of Nature (IUCN) and TRAFFIC.[2]

FIG. CS5.1 Estimated rhinoceros population in 2021 by range country



Source: Compiled from data in CITES CoP19 Doc 75, Tables 1 and 3[3]

Knowledge about rhinoceros populations is clearer than that available for species such as elephants and pangolins because there are far fewer rhinoceros left in the world and those that remain are relatively well monitored. There are five rhinoceros species today with a combined global population at the end of 2021 estimated to total just over 26,000 animals, with over half residing in a single country, South Africa (Figure CS5.1).[4]

The vast majority of this global population is comprised of the two African species, the black rhinoceros and the white rhinoceros, for which more recent population estimates at the end of 2022 totalled 6,468 and 16,801 animals respectively.[5]

Between 1970 and 1990 the combined populations of the two African rhinoceros species declined from about 70,000 to close to 10,000 animals under heavy poaching pressure for their horns, after which they recovered to over 25,000 by the early 2010s owing to increased protection and suppression of end markets.[6] After that time, the most recent wave of renewed poaching caused a decline of almost 20 per cent in the total number of rhinoceros in Africa between 2012–2021.[7] Although revised population data for the end of 2022 indicate that these populations were 5 per cent higher than estimated a year earlier,[8] poaching remains the biggest threat to the two African species.[9]

Rhinoceros horn is a solid continuously growing material that consists mostly of keratin, calcium and melanin and can be removed with minimal adverse physical effects to the animal, beyond those related to immobilization for dehorning, so long as the horn is not cut too close to the growth plate.[10] Dehorning of rhinoceros has been conducted as a management measure to deter poaching by reducing the potential rewards from poaching. The widespread adoption of dehorning as an anti-poaching tactic has also resulted in a considerable increase in stockpiled rhinoceros

horn; at least 2,217 rhinoceros were dehorned between 2018–2021, mostly in South Africa and Namibia, which means over 4,000 rhinoceros horns were added to private and government stockpiles during this period.[11]

The possibility of non-lethal horn removal has also been a feature of advocacy that the legal trade in rhinoceros horn from managed rhinoceros populations be allowed as a way of financing conservation measures on public and private land.[12] As of 2021, more than 50 per cent of the remaining white rhinoceros were privately owned in South Africa,[13] where acquisition and breeding has been motivated by different reasons, including attraction of tourist visitors and the hope that commercial horn sales might be allowed.[14] However, a 2017 survey of some 10 per cent of the private rhinoceros owners in South Africa found that, owing to the high price of security, they believed the costs of having rhinoceros generally exceeded the revenues generated by them, and some private rhinoceros owners had considered removing the animals from their lands.[15]

In 2009, the Government of South Africa placed a moratorium on the legal domestic sale of rhinoceros horn, which was lifted by the Constitutional Court in 2017.[16] Once domestic sales in South Africa again became possible, a major auction was organized by the largest commercial rhinoceros breeding operation but, likely due to uncertainty about export possibilities, revenues were not as high as anticipated.[17] Eventually, according to media sources, owing to its high maintenance costs the breeding facility itself was put up for auction in April 2023, but failed to attract any bids.[18] The herd of some 2,000 white rhinoceros was finally purchased by African Parks in September 2023, and the buyers expressed their intent to release the animals into the wild over a ten year period.[19]

With all commercial international trade in rhinoceros horn prohibited under CITES,[20] trade in horn from poached animals is trafficked to be marketed in several Asian countries in contravention of their long-standing legal prohibitions on domestic trade and use. In 2018, Viet Nam strengthened its legislation on possession, transport and trading of rhinoceros horn products to include up to 15 years imprisonment and high fines, after which enforcement efforts are reported to have increased.[21] In China, some uncertainty about the continuation of the 1993 ban on rhinoceros horn trade and use arose when a new regulatory circular was issued in October 2018 that appeared to provide room for sale under "special circumstances", including for traditional medicines.[22] However, in December 2018, the State Council issued a statement asserting that, after study, the ban on the import, sale and medical use of rhinoceros horn would remain in place.[23]

Poaching

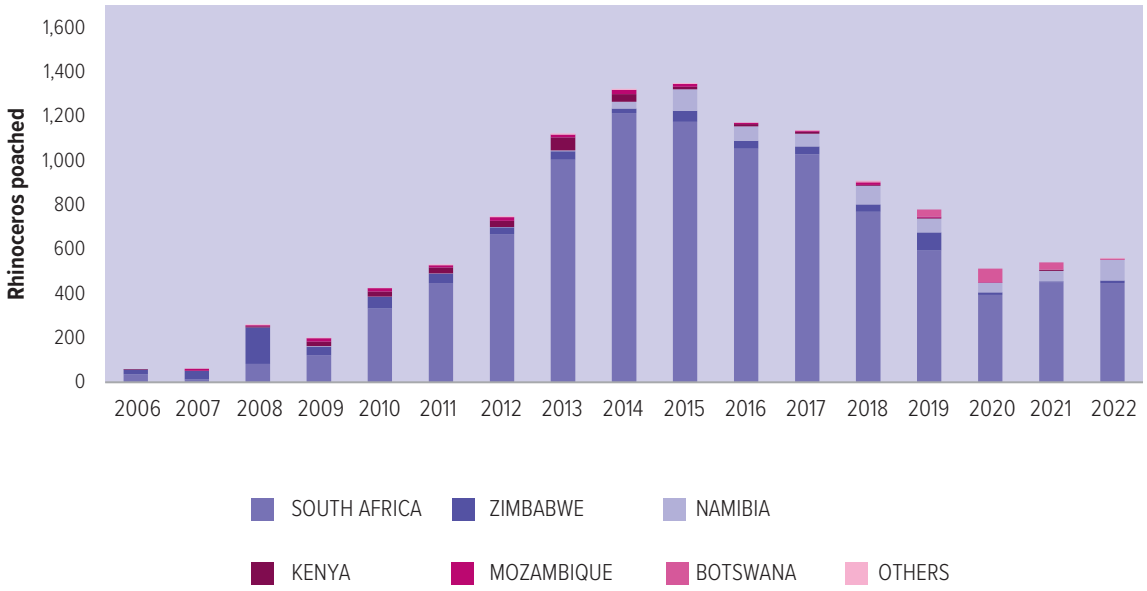
Owing to their limited numbers and because of their location, it is possible to give a relatively reliable estimate of the number of rhinoceros poached annually.[24] According to IUCN data, between 2006–2022, at least 11,700 rhinoceros were poached in Africa.[25] If each was bearing about 5 kg of horn,[26] then at least 58 tons of rhinoceros horn entered illegal trade.

Like elephant ivory, however, rhinoceros horn can also enter the market from other sources, including government and privately held stocks. A CITES survey with responses from seven out of 13 African rhinoceros range states concluded that at least 87 tons of horn was being held in 2020, a significant proportion of which was held privately, with the rest comprised of state stocks from legal sources (e.g. retrievals from natural mortalities and dehorning activities), and illegal sources (seizures).[27] Court proceedings from a 2020 conviction of traffickers in Namibia demonstrate how such horn enters the trafficking chain: those convicted had stolen 33 rhinoceros horns from one private property and were connected by investigators with a syndicate spanning several towns in Namibia and Angola that specialized in illegally obtaining rhinoceros horns and selling them internationally.[28]

The recent continental wave of rhinoceros poaching in Africa began around 2006, about the same time as the current wave of elephant poaching began. It peaked later, around 2015, and like elephants, the trend showed a decrease in the following years, with less than half the number of poaching incidents in the last three years as during the peak years (Figure CS5.2).

As might be expected, South Africa accounted for the bulk of the detected incidents, having lost almost 10,000 rhinoceros to poaching between 2006–2022.

FIG. CS5.2 Number of African rhinoceros poached per year 2006–2022



Source: Compiled from data in CITES CoP19 Doc 75[29] and SC77 Doc. 45[30]

Efforts to suppress poaching have been substantial, with greater focus in recent years on anti-corruption measures, financial crime investigations and large-scale dehorning.[31]

While South Africa saw the largest gross losses, some countries with smaller populations experienced greater relative losses (Figure CS5.3). Mozambique is clearly one of the countries most impacted by poaching, with 141 recorded poaching incidents over the 16 years (2006–2021) and a remaining population of only 16 rhinoceros. Losses in Zimbabwe also comprise a larger share of the remaining population than in South Africa, although reported incidents have declined in recent years. The overall losses in Namibia and Kenya are relatively small since 2006 compared to the current population as both countries have imported rhinoceros from South Africa over the years.[32]

Although poaching levels for African rhinoceros species are significantly lower than they were in the peak years in the mid-2010s and are now below the threshold level likely to cause continental population decreases,[33] there remains cause for concern.

In recent years alarms were raised when Botswana, a country known for the relative safety of its wildlife, saw a rash of rhinoceros poaching incidents between 2018–2021.[34] The Government of Botswana reported to the CITES Secretariat subsequently a 90 per cent reduction in poaching incidents for 2022 and 2023, attributing this to several measures including the dehorning of over one-third of the white rhinoceros population.[35] In 2022, Namibia experienced a sharp increase in the number of rhinoceros poached, from 47 in 2021 to 93 incidents in 2022,[36] and the most recent poaching data for South Africa indicate an increase in 2023, with 499 rhinoceros poached, compared to 448 in 2022.[37] However, Kruger National Park, where heavy poaching pressure was a problem in the past and strong remedial measures have been recently implemented, recorded a 37 per cent decrease from 2022 with a total of 78 rhinoceros poached in 2023.[38]

FIG. CS5.3 **African rhinoceros lost to poaching 2006–2022 compared to the 2021 rhinoceros population by country**

Source: Compiled from population data in CITES CoP19 Doc 75[39] and IUCN poaching data[40]

Trafficking

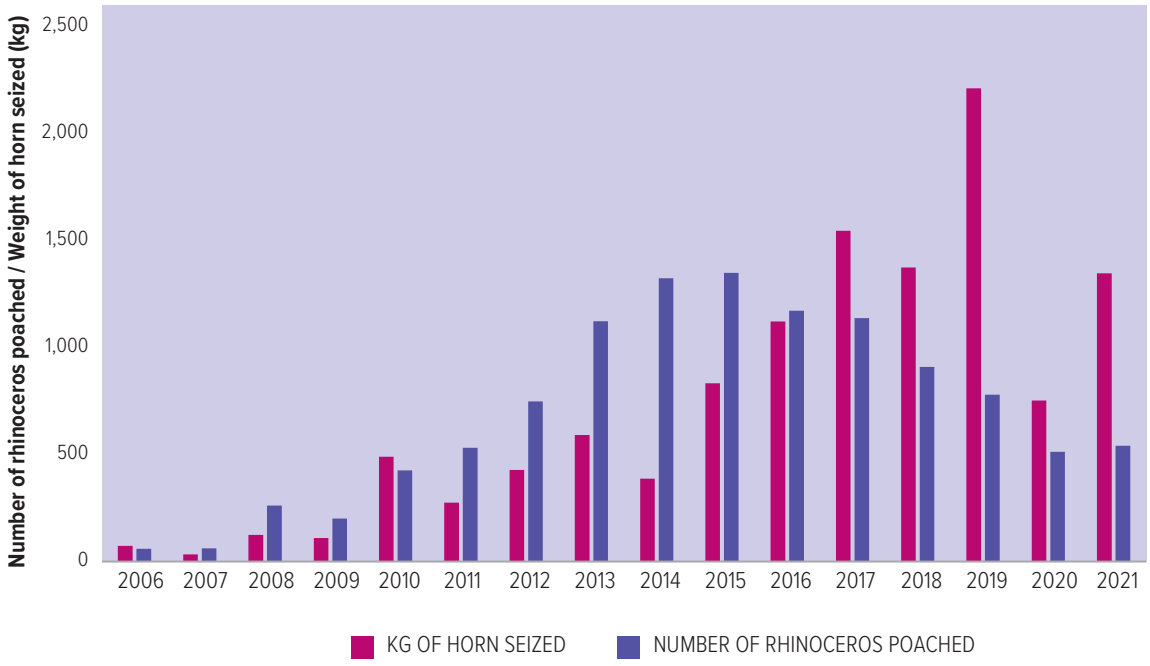
As a high value and reasonably portable commodity, most rhinoceros horn is trafficked by air.[41,42] From 2017, however, a number of mixed-species containerized shipments have been found to contain rhinoceros horn. Combined shipments of rhinoceros horn and lion bone have been detected coming from South Africa where lion farming for the bone trade has been widespread but subject to increasing regulatory restriction,[43] according to the WWCR3 analytical dataset. Research by a non-governmental organization has highlighted the important role multi-species brokers can play in connecting seller and buyers in this market.[44]

With a lag of about two years, up until 2018 there is some correspondence between the pattern of rhinoceros poaching and the amount of rhinoceros horn seized. Annual seizures varied from about 5–25 per cent of the new horn entering the market,[45] with one exceptional year: 2019 (Figure CS5.4). Just as the three largest seizures ever made of elephant ivory and pangolin scales occurred in 2019, two of the three largest recent rhinoceros horn seizures were made that year, as well as the largest annual total. This spike has in part been attributed to mixed signals about legalizing the sale of rhinoceros horn under "special circumstances" and then an immediate ban on the trade and medical use in China in late 2018; tougher wildlife legislation in Viet Nam as of 2018; and better international cooperation.[46] The peak was followed by a trough during the early phase of the COVID-19 pandemic in 2020, but seizures in 2021 increased again. Once data from 2022 are available the underlying trends should become clearer.

Just over a third of recent global rhinoceros horn seizures in the WWCR3 analytical dataset were made in South Africa (Figure CS5.5). For many of the seizures in South Africa, no source or destination are specified, since the horn was not yet in international transit. When a country of shipment departure was reported, in the majority of cases between 2015–2022 it was either South Africa or Mozambique (Figure CS5.6).

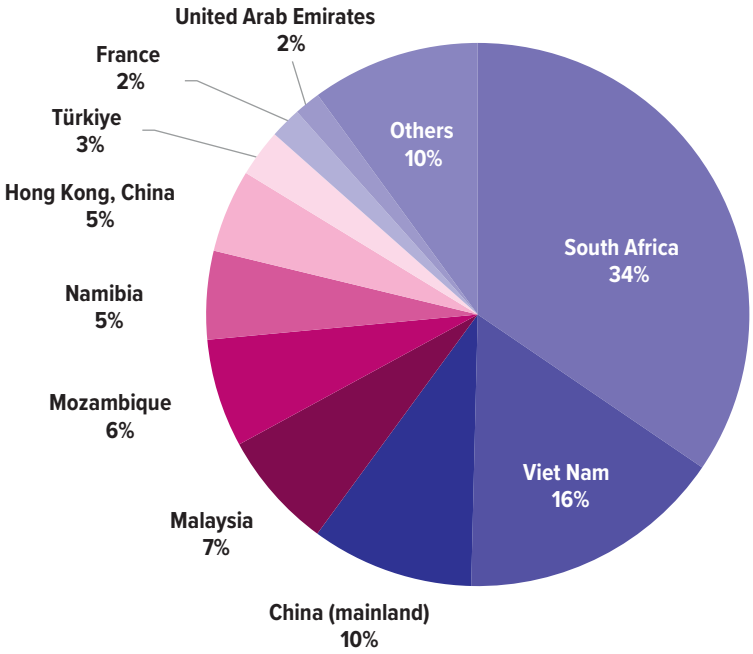
For the majority of reported seizures (69 per cent), no shipment destination was reported. In cases where a shipment destination was reported, Viet Nam, mainland China, Malaysia, Hong Kong, China and South Africa were most often cited (Figure CS5.7). As with ivory and pangolin scales, it appears, based on examination of records in the WWCR3 analytical dataset, that the size of individual shipments had become larger over time.

FIG. CS5.4 Rhinoceros horn seized (kg) and number of rhinoceros poached in Africa 2006–2021



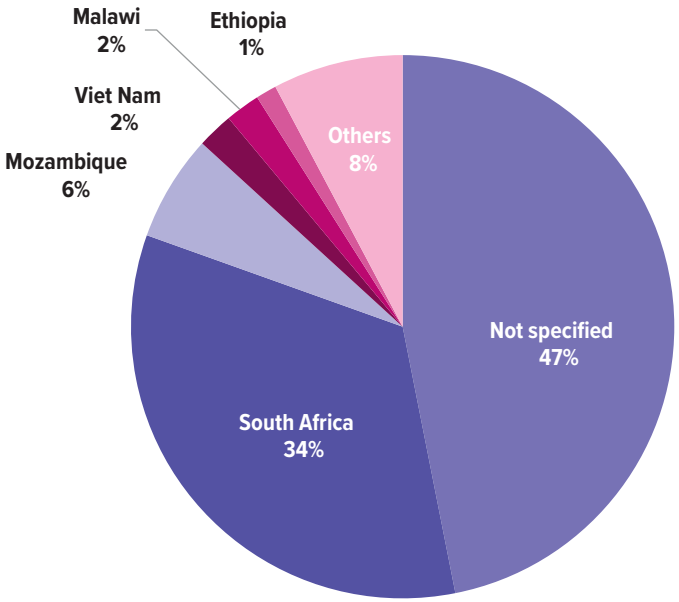
Source: CITES Illegal Trade Database and World WISE (WWCR3 analytical dataset) and CITES CoP19 Doc 75[46]

FIG. CS5.5 Distribution of rhinoceros horn seizures (kg) by country or territory 2015–2021



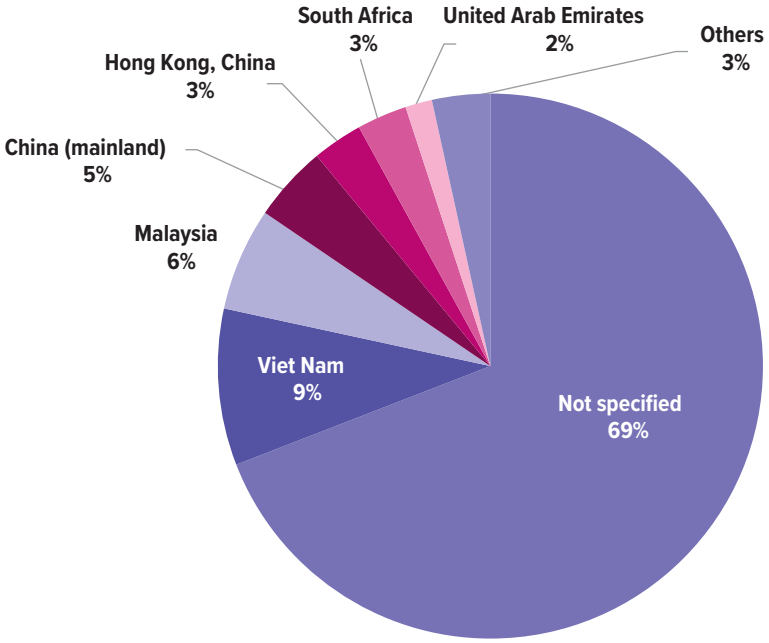
Source: CITES Illegal Trade Database and World WISE (WWCR3 analytical dataset)

FIG. CS5.6 Distribution of rhinoceros horn seizures (kg) by country of shipment departure 2015–2021



Source: CITES Illegal Trade Database and World WISE (WWCR3 analytical dataset)

FIG. CS5.7 Distribution of rhinoceros horn seizures (kg) by country or territory of shipment destination 2015–2021



Source: CITES Illegal Trade Database and World WISE (WWCR3 analytical dataset)

End market use

As noted above, Viet Nam remains the primary destination of detected rhinoceros horn shipments where the destination is known and appears to be the primary place where it is processed into objects for sale, but processing has also been detected in Southern Africa.[48] On 12 June 2017, police seized a large quantity of beads, rhinoceros horn powder, and manufacturing equipment from a house outside Johannesburg.[49] This was not the only seizure of beads and powder made in South Africa.[50] Transforming the horn in Africa, or simply cutting it into blanks or disks, makes it more difficult for law enforcement to detect.[51]

The nature of the demand for rhinoceros horns appears to have changed over the years. Reports closer to the beginning of the present poaching wave emphasized its use as a traditional medical product, albeit one with some non-traditional applications and undertones of being a status symbol.[52]

In Viet Nam, in addition to being used in a last resort to treat terminal diseases such as cancer, it was employed to cure hangovers and as a general tonic.[53] According to academic research published in 2021, some Vietnamese consumers expressed the belief that its price and use by the wealthy proved its efficacy.[54] In Viet Nam, rhinoceros horn has been associated with corruption, since it is purportedly used as a gift to those in power in return for preferential treatment.[55] One study found that part of the attraction of rhinoceros horn for consumers in Viet Nam was that it was illegal.[56]

From around 2017, however, rhinoceros horn has found a different use as a carving medium, similar to ivory. This use is also rooted in tradition, as antique objects carved of rhinoceros horn can be found. Rhinoceros horn is carved into beads, libation cups, and other objects, sold in Asian end markets.[57,58] The most recent data and research indicate that this channel of demand (ornamental) may have eclipsed medical uses.[59] An academic paper claimed that the importance of the arts and antiques market for rhinoceros horn products has been overlooked for some time.[60] On the basis of weight, the carved objects sell for ten times the price of the raw horn.[61]

Yet another new market development emerged during research monitoring online advertisements in Viet Nam for wildlife products in 2022, where multiple offers were made to sell rhinoceros horn “glue”, a relatively new commodity made from a combination of rhinoceros horn, rhinoceros skin, pangolin, seahorse, gecko, and other medicinal ingredients.[62]

If the market for rhinoceros horn has transitioned between different demand types, there is some likelihood that the supply of rhinoceros horn is driving the market, with traffickers finding new uses for the product as old markets wane. There is past evidence of other supply driven markets in the illegal wildlife trade, such as a 2012 study of trade in manta gill-rakers.[63]

Implications

There are positive signs that multiple interventions to deter and intercept rhinoceros horn trafficking along the trade chain and suppress end markets may have contributed to decreases in both poaching and seizure trends. However, neither poaching nor illegal trade have stopped and evidence from end markets suggests that traffickers continue to innovate to create new opportunities for illegal sales. This is a business characterized by high unit values for smuggled horn and large profit margins for traffickers, which has clearly attracted the involvement of organized crime groups and a significant degree of corruption. Nevertheless, compared to some other wildlife crime challenges, rhinoceros horn trafficking operates within relatively restricted geographical areas at both ends of the trade chain. Significant resources are being committed to remedial interventions and key indicators of progress are accessible. This is a problem that can be solved if these efforts continue.

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61 Wildlife Justice Commission, 'Rhino Horn Trafficking as a Form of Transnational Organised Crime 2012–2021'.

62 CITES, 'CoP19 Doc. 75 (Rev. 1) Rhinoceroses (Rhinocerotidae Spp.)'.

63 For example, manta gill-rakers were unknown to traditional medicine until some entrepreneur ound use for this form of by-catch.. See John R Platt, 'Manta Rays Endangered by Sudden Demand from Chinese Medicine', *Scientific American*, 17 January 2012, https://blogs.scientificamerican.com/extinction-countdown/manta-rays-endangered-by-sudden-demand-from-chinese-medicine/. Similarly, demand for jaguar claws was unknown in China prior to their collection by foreign workers from Asia involved in development in South America. See Hong Kong University Species Victim Impact Statements Initiative, 'Jaguar Tooth Trade – a Victimless Crime?', Hong Kong University Law School, Species Victim Impact Statements (blog), n.d., https://www.svis.law.hku.hk/post/jaguar-tooth-trade-a-victimless-crime.