

Threats of the Rhino Horn Trade to the Species in India

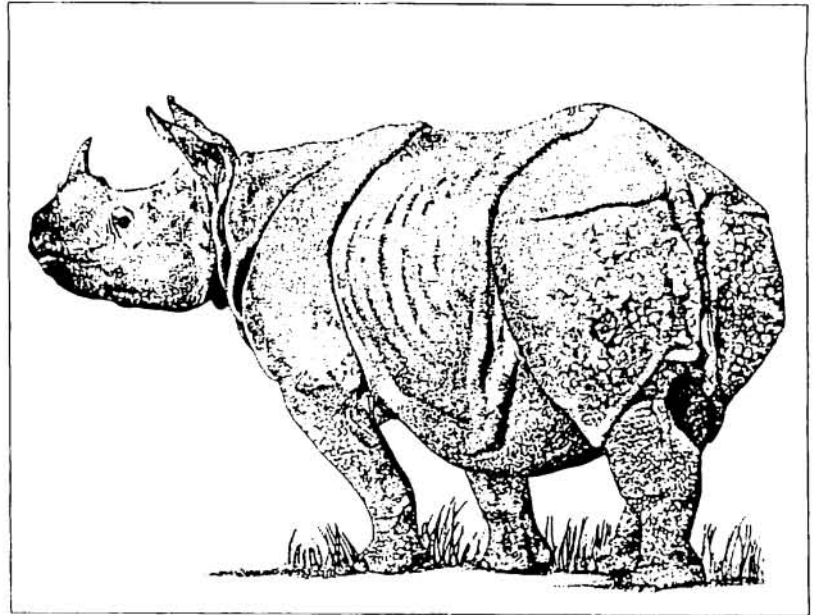
by VIVEK MENON

An Introduction

THE great one-horned Indian rhinoceros (*Rhinoceros unicornis*) or simply the Indian rhino is perhaps the most endangered of India's charismatic mega-fauna. There are fewer rhinos than half the number of tigers and one-tenth the number of elephants in India. The Indian rhino is protected under Indian wildlife laws and CITES. But this has not stopped its indiscriminate killing. It is the horn of the rhino, which fetches high prices in medicinal markets in south-east Asian countries, that is the chief cause of its decline.

According to a 1994, IUCN Asian Rhino Specialist Group report 1,900 rhinos are found in the Terai areas of India and Nepal. Their populations are scattered in nine sites of fragmented habitat. Before the publication of the IUCN report a tenth population in India, at Laokhawa in Assam, had lost all its resident rhinos with as many as 40 of them in 1983-84. According to an earlier IUCN (1989) report only three of these sites in India - Kaziranga National Park, Manas National Park and Orang Wildlife Sanctuary located in Assam had viable populations. These three sites were spread over 897 sq. kms. These sites are home to nearly 1200-1300 Indian rhinos.

Since then, however, Manas National Park has lost most of its rhinos and Orang has also seen an upsurge in poaching. Between 1989-93 India lost at least 266 rhinos to poaching which is as much as 15% of its population. Unofficial figures suggest a higher death toll. Only Kaziranga National Park with 1,164 rhinos as per the official census seems to be somewhat safe. A sudden poaching surge could change this scenario drastically. Orang with 100-odd rhinos is already facing the brunt of a recent spurt in poaching. The 56 rhinos at Pobitara, 34 at Jaldapara and 15 at Gorumara are all highly threatened.



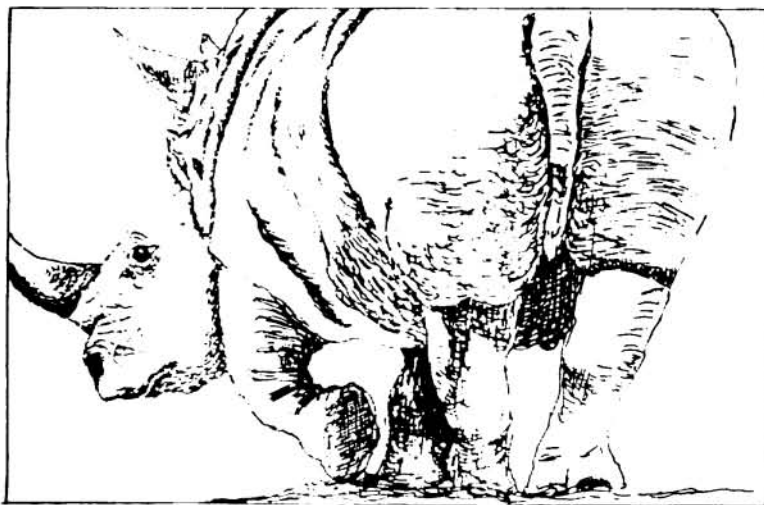
Rhino Horn and Poaching

The horn of the rhino is mainly responsible for the indiscriminate killing of this rare and prehistoric animal.

An average rhino horn is 20 cms in length and weighs 720 gms. and is the main part of the rhino's body that is threatening its very existence. An epidermal derivative, much like the human nail, the rhino is a keratinised (cemented mass of hair growing on the snout of the rhinos and separated from the skull.

Rhinos do not use the horn for defence nor for digging as is commonly believed. The Indian rhino will much rather bite or trample its opponents. However, it is still not known very clearly as to whether the horn plays any role in the social behaviour of the animal. Apart from the fact that the male possesses a horn of slightly wider base it is virtually the size as that of the female. A larger horn, therefore, need not necessarily be that of a male.

The Indian Rhinoceros is one of the most endangered species of India's mega-fauna



Top: Rhinos are killed for their horns.
Bottom: Five rhino species of the world and their descriptions

The decline of the Indian population of the rhino started with habitat loss and killing for sport. Poaching as a commercial activity to supply the lucrative Oriental medicinal trade was a much later occurrence and poaching for the domestic markets was also very negligible.

Today poaching has fast become the single most important reason for the decline of the rhino in India. The two main poaching waves that have hit the Indian rhino were from 1982-86 and from 1989-93. The waves peaked in 1983 and 1993 respectively and centred around the Laokhawa and Manas massacres. The 1982-86 wave which claimed 304 rhinos was definitely the worst one to hit India since the protected areas were established.

Incidentally, Nepal which otherwise reports a very low poaching rate also shows the 1982-86 period as having been the worst with 11 of the 38 rhinos poached between 1973-90 falling in the period.

Methods of Rhino Poaching

Indian poachers employ five different methods for killing rhinos. These are shooting, pit-poaching, electrocution, poisoning and the use of a noose. There is only one known case in India when a steel noose was used to kill a rhino in 1989 in Manas National Park. This method, however, is more common in Africa. The other four methods are used in varying degrees in different parts of the country depending on the terrain, availability of arms, time and other constraints.

Shooting a rhino with a rifle or shotgun appears to be a common method to kill a rhino. The modus operandi is simple. A financier or rhino horn trader hires hit-men (poachers) for the job. Poachers take full advantage of any breakdown in law and order in Assam; in such situations losses are high. The horns are later sold to intermediaries or small-time traders who in turn sell them on to the agents or dealers.

An analysis of arms captured by park authorities during anti-poaching operations show that no particular weapon is preferred. Country made muzzle loaders and shotguns, 315 and 303 rifles, medium-calibre self-loading rifles and other semi-automatic weapons are all used. As far back as 1987, Martin, Martin and Vigne noted that poaching syndicates procured their arms from Nagaland. They had obtained arms that only Indian armed forces have access to. Despite Operation Rhino and Operation Bajrang, two army operations carried out to suppress separatist movements in the region, there is allegedly availability of arms in the State of Assam.

The most ingenious way of poaching a

From 1982 to 1986 poachers killed 304 rhinos in India

Species	Height at the shoulder	Weight	Horn Size (average)	Horn weight
One-horned Rhino <i>Rhinoceros unicornis</i>	1.20 - 1.50 m (Lang, 1961)	1,500 - 2,070 kg (Lang, 1967)	20 cm average (Ghosh, 1993) can reach upto 52 cm (Nowak, 1991)	0.720 kg (Martin, 1983)
Black Rhino <i>Diceros bicornis</i>	1.40 - 1.80 m (Nowak, 1991)	800 - 1,400 kg (Nowak, 1991)	50cm average (Nowak, 1991), can reach 135 cm (Ward, 1935)	2.8 kg (Leader-Williams, 1992)
White Rhino <i>Ceratotherium simum</i>	1.50-1.85 m (Nowak, 1991)	1,400-3,600 kg (Nowak, 1991)	60 cm average, can reach 150 cm (Nowak, 1991)	4.0 kg (Leader-Williams, 1992)
Javan Rhino <i>Rhinoceros sondaicus</i>	1.60-1.75 m (Nowak, 1991)	1500-2300 kg (Mcneely, 1977)	15cm average, can reach 25 cm (Nowak, 1991)	0.68 kg (Leader-Williams, 1992)
Sumatran Rhino <i>Dicerothinos sumatrensis</i>	1.12-1.45 m (Nowak, 1991)	800-900 kg (Owen-Smith 1975)	One specimen was 38 cm (Nowak, 1991) usually smaller	0.27 kg (Leader-Williams, 1992)

The horn of the rhino is the chief cause of its decline



north-east. Wealthy Assamese and Bengalis do figure in the list of traders but the Marwari community more or less controls the trade. The rhino horn agent or trader is not an exclusive entity and deals in a number of other contraband items such as narcotics and arms.

The trade syndicates run in a parallel and interconnected fashion that is characteristic of other clandestine activities being monitored by enforcement agencies such as CBI and DRI. In some instances there are two levels of dealers with the initial agent offering it to the main dealer.

It is now known that there are at least two distinct operations in central and lower Assam with different centres. The inherent nature of this trade is such that trade-routes are never permanent although some such as Calcutta

route are well known due to previous enforcement action. However the use of the Nagaland-Myanmar route was lesser known and the Siliguri-Jaigaon-Bhutan was only uncovered recently.

The town of Dimapur on the Nagaland-Assam border and the trading town of Tuensang are equally important. Smaller storage points such as Behali, Tezpur, Naogaon (once the headquarters of one arm of the trade), Bokakhat, Golaghat etc., may be primary storage points depending on the particular situation. For central Assam horns the involvement of the district of Karbi Anglong as a conduit to Nagaland cannot be under emphasised specially because of the lack of enforcement action in the region. The same route is used by traders in lower Assam although the traditionally known trade-route was from Bongaigaon or Barpetta road to Siliguri and then to Calcutta (with Kalimpong as a possible centre of storage).

In the 1990's revealed the use of Bhutan as an exit point. This was brought home forcefully after the arrest of a Bhutanese Princess in Taiwan with 22 Indian rhino horns ostensibly from lower Assam that used the Jaigaon-Paro route of smuggling. The emergence of Paro as an airport with direct connections to south-east Asia and lax enforcement was not noticed by many. Similarly, Kathmandu is still used as an exit point.

Although the syndicates are well established this rhino trade is largely an opportunistic one. What is of paramount importance for enforcement is the fact that all or any of these routes, perhaps with new ones being added, are in operation. Due to the small size of the commodity and the high cost of one horn, the risks taken by individuals do not preclude it from being carried by a passenger from any airport in the country. Controlling the movement of rhino horn once it enters the trade syndicates is an extremely difficult task. It is perhaps easier to curb the trade by controlling the actual poaching of the animal.

Post-mortem enforcement in this case is more difficult and indeed far less useful to the cause of conservation. Due to the existence of well-established poaching and trading syndicates, enforcement actions of the post-mortem kind can only be significant if proper interrogation and follow-up investigation is done by a competent agency. The involvement of non-wildlife enforcement agencies such as the CBI, Customs, DRI, etc. along with the para-military forces is of paramount importance.

PRICES OF ASIAN/INDIAN RHINO HORN OVER THE YEARS

Price (INR)/KG	Price Category	Year
Poacher's Price		
14,798	Assam (Manas)	1985-86
20,000-25,000	Assam (Kaziranga)	1987
1,01,331	Assam	1989
69,375	Assam	1993
1,00,000	Assam	1994
Trader's Price Abroad		
1,39,266	Taipei	1979
2,63,472	Taiwan	1985
5,95,989	Taiwan	1988
9,45,268	Taipei	1990
3,73,524	Retail in Bangkok	1990
9,61,563	Retail in Taipei (powder)	1993
12,82,188	Retail in Taipei (powder)	1993
16,02,500	Retail in Taipei (powder)	1993

rhino is by electrocution. This method was first reported in 1989. It is used effectively by diverting power from high tension power lines or lower voltage lines that run near the park. A bamboo rod is used as insulation and a length of wire is attached to the main lines with a metal hook or sometimes with just the wire looped on itself. This creates a dangling trap carrying enough current to kill any unsuspecting animal that walks into it. These traps are laid on regular rhino pathways. It is presumed that the chances of killing a rhino employing this method are relatively high.

Pit poaching meanwhile is the most traditional way to capture or kill a rhino and consists simply of a rectangular or trapezium shaped pit normally of the dimensions of 2x2x1.25 metres (these may vary depending on terrain) are dug and covered with grass. The pit sometimes have bamboo stakes lining its interior. Once a rhino falls into the pit, it is unable to climb out. The poachers, who check up on the pits, merely hack the horns off and leave the rhino to bleed to death.

Commercial Value of Rhino Horns

The international trade in Asian rhino horn is over 2000 years old (Martin, 1991). "Fire horn" or the Asian horn is believed to be far more effective in traditional Oriental medicines and therefore is of far greater value than the African rhino horn. The Oriental trade uses the horn chiefly as an anti-pyretic (to reduce fever), much as the use of Paracetamol and not as an aphrodisiac as was commonly believed for many years. Studies at the Chinese University of Hong Kong have shown that the rhino horn does in fact have antipyretic properties.

The use of rhino horn as a medicine is not well established in India. Indian royalty supposedly used cups made of carved horn to detect poison. Rhino urine was also used for medicinal preparations. Although documented as an aphrodisiac in Gujarat, this practice seems to have almost died in India. However, Tibetan medicine, which is becoming increasingly popular in India, uses rhino horn as an ingredient in some of its preparations.

Commercial production of medicines containing rhino horn began in India only after 1959 when the Tibetan colonies started taking root. The Tibetan Medical and Astrological Institute at Dharamsala formulates about 200 different medicines out of which 6 have rhino horn listed as one of their ingredients. The

medicines range from those curing renal disorders to haemetamesis, hepatic malfunctions, pulmonary disorders and for normalising blood circulation. Prominently advertised in their publications, is the only overt use of rhino horn in the country.

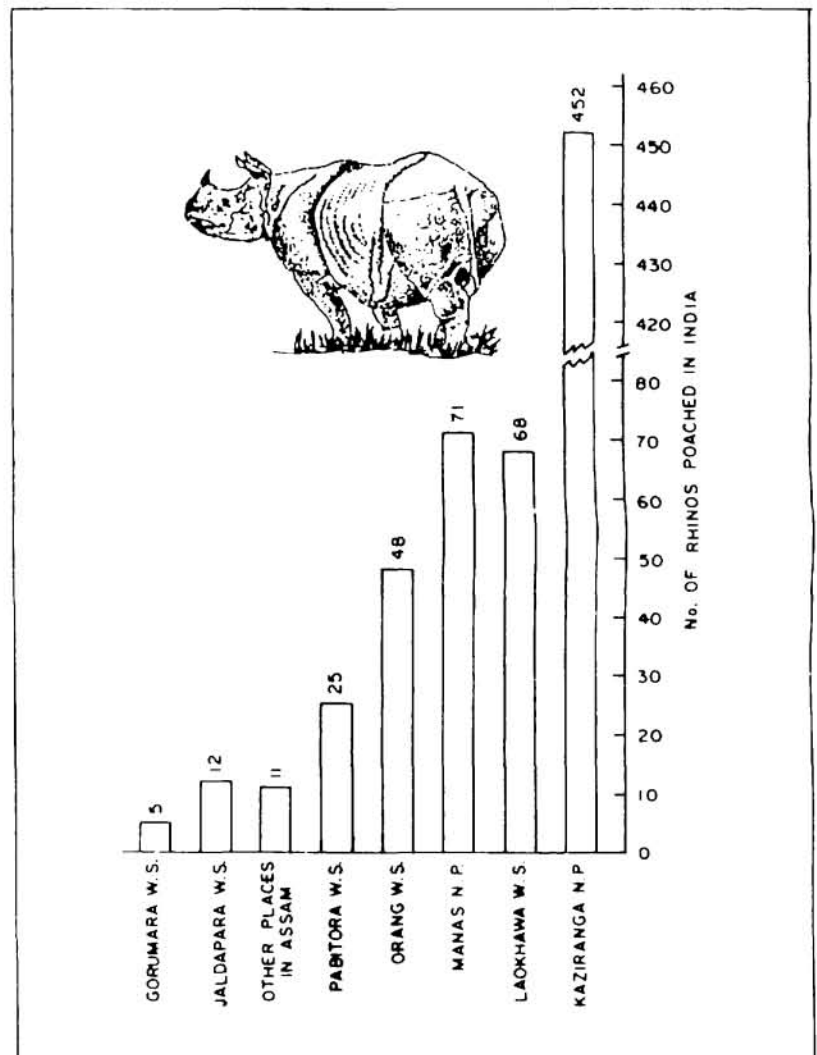
However, India continues to be a supplier of rhino horn to the Oriental medicine trade in an illegal and covert fashion. Although between 1965 and 1979, the State of Assam put up rhino horns for legal sale, the practice was stopped and from then on the trade has been completely covert. Unlike parts of south-east Asia, rhino horns, derivatives or products are neither openly available nor even shown to a potential customer unless enough trust is established.

The Trade-routes

A rhino poacher is not normally a tribal. Although wealthy Nagas are known to be financiers, the main traders and dealers are still Marwari businessmen operating from the

*About
1,300 rhinos
live in the
Terai forests
of north-east
India*

*Number of Rhinos
pouched in Protected
Areas in India between
1980 and 1993*



SOME IMPORTANT RHINO HORN TRADE-ROUTES

1. Poaching centre in lower Assam/West Bengal:	<i>Siliguri Bazaar-Siliguri-Jaigaon-Paro (Bhutan)-South East Asia</i>
2. Poaching centre in lower Assam/West Bengal:	<i>Siliguri-Nepalgaon-Kathmandu (Nepal)-South East Asia</i>
3. Poaching centre in lower Assam:	<i>Bangaigaon-Hatisar-Galeghug (Bhutan)</i>
4. Poaching centre in central Assam:	<i>Karbi Anglong hills-Dimapaur-Myanmar</i>
5. Poaching centre in central Assam:	<i>Naogaon/Tezpur-Guwahati (storage at Siliguri or Calcutta)</i>
6. Poaching centre in central Assam:	<i>Guwahati-Silchar-Bangladesh-South East Asia</i>
7. Towns where Direct purchase is made by South East Asian Nationals:	<i>Guwahati, Siliguri, Dimapur</i>

Prices of Rhino Horn

The phenomenal price of Asian rhino horn fuels rhino poaching. During 1977-78, the Government of Assam sold rhino horns at Rs 16,000 (US\$ 440) a kilo while at the same time the price in Taiwan was reportedly US\$4,600 per kilo. In 1987, a poacher was getting as little as Rs. 14,000 for an average horn in lower Assam while his contemporary in central Assam was getting about Rs. 30,000. Today, the Indian middleman especially at the final stage sells at Rs. 3,00,000 - 5,00,000 per kg in India. In Taiwan, however, the price could shoot up to Rs. 12,00,000 per kg although it is to be remembered that this is an extrapolation of horn that is sold in very minute quantities.

Fake Rhino Horns in the Market

Another important phenomenon in the rhino horn trade to be kept in mind by enforcement agencies is the large number of fakes in the market. Although adulteration is common at retail points, substitution is practised at primary level. This is mainly because until the horn reaches the retailer it is normally kept as a whole horn or in recognisable parts.

Of the various kinds of fakes encountered in the market, the use of domestic cattle or buffalo horn coated suitably with a fake base seems to be a favourite. The same has also been documented in Africa. The use of even stone and moulded plastic to create horns was also noted although it is important to realise that this is very easily detectable if there is

some familiarity with the real horn. The most convincing fakes seem to be made of buffalo horn or even bamboo root. A certain bamboo root if carved in the form of a rhino horn, treated with oil and sun-dried takes on the appearance of a rhino horn to good effect.

The most important part in distinguishing a real rhino horn is its pock-marked or canalliculi-ridden base. All synthetic materials can of course be easily distinguished by chipping a part off and burning it. While any organic matter will give off a characteristic smell of burning, plastics and the likes have their own smell. The best imitations of rhino horn are made by using organic material. Substances such as buffalo horn or bamboo make good imitations. Only well-experienced eyes can distinguish such fakes.

Although it is the least threatened of the three species of Asian rhino, the one-horned rhino is still endangered. Because of its distribution it is particularly susceptible to waves of poaching. The rhino can only be conserved if appropriate and strong enforcement measures are taken. For this all departments of the Government, wildlife and non-wildlife that deals with enforcement as well as the specialised non-Government bodies and individuals who possess expertise in the field must make a concerted effort to work together. The millennia-old species is otherwise facing an imminent and real danger of extinction.

□ Vivek Menon specialises in monitoring wildlife trade in India. He is currently working on the ivory trade in India.

A large number of fake rhino horns have also entered the trade

Inauguration of CBI Academy

Inaugurating the Central Bureau of Investigation Academy at Ghaziabad on January 10, 1996 the Prime Minister Shri P.V. Narasimha Rao, sounded a note of caution against indiscriminate decentralisation of power, the demand for which is much in vogue among political parties of all hues. The Prime Minister said that diffusion of powers to the lower levels and rapid changes ushered in by the process of reform and globalisation would pose new challenges to the resourcefulness and organisational skills of the administration. The Prime Minister indicated his disenchantment with lower levels of administration by pointing out the excessive reliance of State Governments on Central Forces to tackle law and order problems. The flood of demands for handing over more cases to the Central Bureau of Investigation, for instance, did not reflect well on the image of State and local forces in the public mind. While these demands were an endorsement of the "efficiency, impartiality, objectivity and training" of the Central agencies, they were also an admission that local police forces were unable to deal with situations in their areas.

The Prime Minister opined that ideas and perspectives should emerge from institutions like the CBI Academy. With crime becoming increasingly complex and internationalised, the criminals have to be matched both in wits and weapons. The thinking

process ought to be encouraged both at the training process and the investigative level.

Speaking on the occasion, the Minister of State for Personnel and Pensions, Smt. Margaret Alva, described the CBI as 'an organisation which had come to be respected from one which was feared'. Dilating on the weaknesses of the premier investigating agency and explaining why the Academy was a priority, she said the CBI was hamstrung by lack of infrastructure and staff shortage. Human resource development, including recruitment, training and career planning were not given adequate importance in the past, ignoring the fact that it is the quality of personnel that ultimately sustains and enhances the reputation of an organisation. In order to draw the best available talent, it is necessary to provide attractive career prospects. This implied training and career planning at all levels. And yet, the agency did not have a training centre of its own to train staff, even at the entry level, Smt. Alva explained.

Prominent among those who attended the function were the Governor of U.P. Shri Motilal Vora, the Cabinet Secretary Shri Surendra Singh, the Home Secretary Shri K. Padmanabhaiah, the Secretary, Personnel Shri P.C. Hota and the CBI Director Shri K. Vijaya Rama Rao.

Courtesy : 'Civil Services News', February 1996



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