
Rhino Poaching in Namibia from 1980 to 1990 and the Illegal Trade in the Horn

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INTRODUCTION

The black rhino population in Namibia has been increasing since the early 1980s from around 400 to about 560, one of only two countries in Africa where there has been a notable success in black rhino conservation during this period (see Table 1). In the late 1970s, however, there was serious black rhino poaching, especially in northwest Namibia (also called the Kaokoveld), to meet the demand for the horn in Asia.

This paper will chronicle the anti-poaching efforts in the main regions for rhinos: Etosha National Park, Waterberg Plateau Park and the Kaokoveld; give numbers of rhinos poached in Namibia from 1980 to 1990; state how they were killed; give information on the trade routes for the horn through and out of Namibia; and record prices the poachers and middlemen received for the horn. Most importantly, the paper will examine how the non-government organizations and government authorities in Namibia severely reduced poaching by implementing new policies in the late 1980s.

These successful conservation strategies should be examined in detail by other wildlife departments in Africa to see whether they are appropriate in reducing rhino poaching elsewhere. Also, suggestions are made on how Namibia can raise more money to protect its rhinos which are likely to become further threatened by poachers in the near future.

THE BLACK RHINOS OF ETOSHA NATIONAL PARK

The largest number of black rhinos in Namibia are in Etosha National Park. (There are no white rhinos in this Park). From 1980 to June 1991 its rhino population grew from an estimated 275-350 to between 400 and 450 animals (see Table I). These are net figures, however, as some rhinos were translocated out to other parts of Namibia or exported, and poaching reduced the population by a minimum of 48 animals in that period.

The first recent serious poaching of Etosha's black rhinos occurred in 1984. Herero people armed with .303 rifles shot at least 15 animals during the day time and removed only the horns. This poaching occurred in the west of the Park, where most of the rhinos are to be found and because many Hereros live just outside. Also, a road gives access to the region. Unfortunately, little patrolling was done away from the main roads, there was insufficient staff in the area to act as a poaching deterrent, and no arrests were made (Allan Cilliers, Chief Conservation Official - Management - Etosha, pers. comm.).

No poaching was recorded in 1985 or 1986, but in 1987, poaching flared up once again. A Herero businessman from the Kaokoveld supplied .303 and G3 rifles to a gang of Hereros. The men stayed in the Park for about a day and killed seven rhinos, again on the western side. The middleman offered the poachers 200 rands (\$98) for a pair of horns which weighed 3.5 to 4 kilos. This contact man in turn may have sold the pair of horns for up to 2,000 rands (\$980) to middlemen in Kamanjab and Otjiwarongo towns just south of Etosha. From there, the horn may have gone to Windhoek and Lisbon. Two middlemen and several poachers were arrested (A. Cilliers, pers. comm.).

In 1989, 23 rhinos were known to have been killed in the northwest of the Park by Ovambo and Herero poachers. Their contact men, Hereros and Ovambos, lived at Opuwa in the Kaokoveld and Oshakati in Ovamboland; they supplied food, guns, ammunition and transport. They offered 200 rands (\$76) for a pair of horns. About five small gangs, usually consisting of only two people, spent between one and three days in the Park. They shot the animals during the day; and as well as the horns, for the first time in recent years, they also took some skin (A. Cilliers, pers. comm.) The contact men hoped to sell a pair of horns to Portuguese and Angolans in Windhoek for 2,000 to 4,000 rands (\$760 to S 1,520). Most of the poachers and contacts were caught, however. Their sentences varied from six months to eight years in prison.

Table 1: Estimated Number of Black Rhinos in Namibia from 1980 to 1991.

Year	North-west	Etosha	Waterburg	Other	Total
1980	100 ¹	275 ²	0		c.375
1980	100 ¹	350 ¹	0		450 ¹
1982	66 ³		0		
1983	65 ¹		0		
1984	66-76 ⁴	>300 ⁵	0		400 ⁶
1985		440 ¹	0		
1986	90-108 ⁷	350 ⁷	0		440-458 ⁷
1986	90-95 ¹	340 ⁵	0		430-435
1991	109 ⁴	400-450 ⁵	23 ⁸	5 ⁹	537587

Sources:

- 1 Garth Owen-Smith, pers. comm.
- 2 Allan Cilliers, pers. comm. and IUCN, WWF, NYZS "African Rhino Group Action Plan for the Conservation of African Rhinos" (December 1981), unpublished, no page number.
- 3 Rudi Loutit, pers. comm.
- 4 Blythe Loutit, pers. comm.
- 5 Allan Cilliers, pers. comm..
- 6 David Western and Lucy Vigne, "The Deteriorating Status of Africa's Rhinos", Oryx, Vol. XIX (October 1985), p.216.
- 7 D.H.M. Cumming, R. F. Du Toit and S.N. Stuart, African Elephants and Rhinos: Status Survey and Conservation Action Plan, IUCN (1990), p.9.
- 8 Peter Erb, pers. comm.
- 9 Martin Britz, Chief Ranger, Hardap Game Reserve, pers. comm.

Note:

Most wildlife officials who have worked with rhinos in Namibia, many of whom read this paper in draft form, believe that there were approximately 275 black rhinos in Etosha National Park in 1980. However, one person, Garth Owen-Smith, who carried out extensive field work on rhinos in the 1980s and is definitely a leading authority on the subject, believes that there were at least an additional 75 black rhinos in Etosha at that time. This figure is based on a census carried out by Ian Hoffmeyr and Garth Owen-Smith between May and November 1980. The result of this census was a minimum of 350 black rhinos with about half occurring to the west of the power-lines crossing the Park (between Okaukuejo and Otjovassandu). However, senior officials of the Directorate of Nature Conservation later cast doubts on this figure (G. Owen-Smith, pers. comm.).

Whatever number is correct, the black rhino population in Namibia has been expanding at least from the middle 1980s until today.



Desert rhinos of Damaraland near Uniab riverbed.

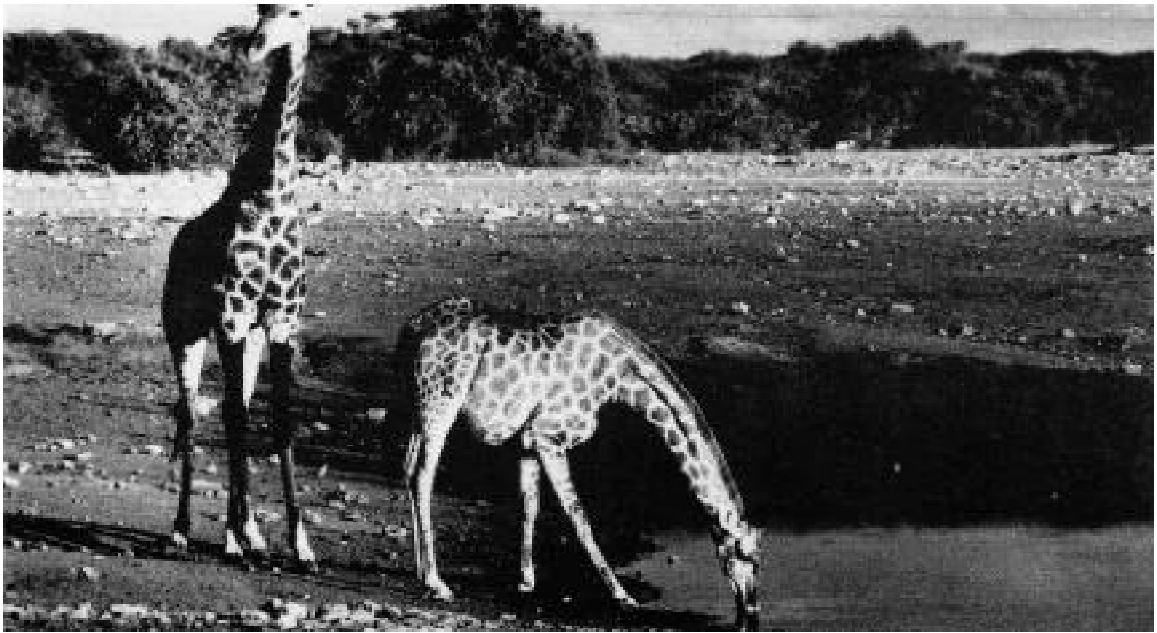
The following year, only two animals were poached, one in the west and one in the east. In the west, a .303 rifle was used by Herero or Ovambo hunters. In the east, a businessman in Oshakati supported the hunters. In both cases, the horn was most likely sent to Portuguese traders in Windhoek (A. Cilliers, pers. comm.).

This sharp decline in rhino poaching in 1990 was due to new policies implemented by Etosha Park's senior staff. Up until 1989, the worst year for rhino poaching in Namibia as a whole, Etosha had had no special anti-poaching unit nor a formal intelligence gathering network. In 1989, anti-poaching staff was recruited which by 1991 consisted of 23 well-trained men. Half of these men are armed and they travel on foot, on horses or in vehicles. This unit spends 50% of its time patrolling outside the Park, mostly in the north and west, obtaining information from informants in the villages. So far, the unit has been a success. This can be attributed to their honesty, motivation, discipline and good training. The officer in charge carefully chose these 23 men from 120 individuals to make up this elite anti-poaching corps. They are given certain bonuses including an extra allowance, and men working away from home are offered more benefits. Such a person thus earned in 1991 1,080 rands a month (\$382), considerably more than the average scout.

Along with the new anti-poaching unit, a more formal intelligence gathering system was set up in Etosha. Relatively large sums of money were made available to pay for information. Data leading to a conviction can earn an informer up to 6,000 rands (\$2,143).

In order to increase the efficiency of the Park staff who handle the illegal activities within the Park, some have been sent for further training to the Po-lice Academy, to learn how to identify empty cartridge cases, fill out dockets, etc. Thus both in-house and external training of Etosha's staff has been greatly increased in order to combat poaching of rhinos, and also other animals such as giraffe, springbok, zebra and ostrich.

The Etosha authorities, especially Allan Cilliers, greatly increased their efforts in identifying individual rhinos in the Park. Although Allan Cilliers started to monitor rhinos in 1986, he expanded this work in 1989 after the severe poaching, by attempting to photograph each rhino in the Park. He used a flash camera with black and white film to photograph each rhino as it came to the waterholes at night to drink. This is only effective a few days before and after the full moon. Although, the photographers are on foot, incredibly, the black rhinos do not attack at night. It would be impossible to get so close to them during the day. Allan Cilliers has trained six people to carry out this photographic identification system. By July 1992, he had recognized 372 individual



A waterhole in Etosha National Park near Namutoni.

rhinos. He estimates that the Park holds 400 to 450 black rhinos and that they have been increasing at 5.6% per annum since 1986.

THE BLACK AND WHITE RHINOS OF WATERBERG PLATEAU PARK

Unlike Etosha which was proclaimed a game reserve in 1907, Waterberg Plateau Park is relatively new, having been created in 1972. It is only 40,500 hectares in size and consists mainly of a plateau. Most of the Park is covered with a nutrient-deficient Kalahari sand which supports a deciduous broad-leafed woodland.

The average rainfall is 450 mm a year, significantly higher than western Etosha. There were no black rhinos in the Park, however, until 1989, when 17 were brought in from Etosha and 10 from Damaraland. Unfortunately five died in the same year. One cow fell off a cliff, another female died in a boma following recapture after escaping from the Park, two young males perished from fight injuries, and one male died from stress after only a month in the Park. Further difficulties arose in February 1991 when the first black rhino was poached. A Herero, who earlier had broken into the tourist camp restaurant and had stolen various items, reentered Waterberg and shot an adult female with one bullet from a 9 mm pistol. Ten days later, he returned to

the Park and took the horns, before the Park authorities had found the carcass. The police were called in and about two weeks later the criminal was arrested (Peter Erb, Researcher, Waterberg Plateau Park, pers. comm.).

In order to prevent more rhino poaching, the Park authorities have increased foot patrols within Waterberg. Several ex-soldiers were transferred to the Park to improve the rhino monitoring. They usually go out for five-day foot patrols. The Park also now employs six trackers who work on foot or on horseback to monitor the movements of the rhinos. They carry radios, but not firearms. Often a ranger will accompany them. Informant money is available for intelligence gathering outside the Park as well, and contacts with the surrounding farmers are being improved.

During 1975 and 1976, 15 white rhinos were moved in from Umfolozi in Natal and in 1990, six more came from Kruger. Although, so far none of these has been poached, some died after translocation. The Kruger rhinos were not put into bomas after being caught, but were sent directly on a 37-hour journey to Waterberg. Four died soon afterwards, probably from stress (P. Erb, pers. comm.). The initial animals from Natal have done well. By July 1991, there were 40 in total.

THE BLACK RHINOS OF THE KAOKOVELD (NORTH WEST REGION)

The dry regions of Damaraland and Kaokoland together referred to as the Kaokoveld in northwest Namibia are home to the desert black rhinos. Because of the aridity of the area and therefore the general lack of browse, they move long distances for food and water, probably more than any other rhino population in Africa.

In 1970 there were at least 250 and possibly 350 black rhinos in the Kaokoveld, but by the end of the decade, most of them had been killed by poachers (Garth Owen-Smith, presently Director of Integrated Rural Development and Nature Conservation, pers. comm.). From 1975 to 1981, Hereros and Himbas used mainly .303 rifles to kill these animals. The buyers, who paid from 50 to 200 rands (\$63 to \$250) for a pair of horns, were farmers in the Kamanjab district, garage owners in the town of Outjo, as well as civil servants and businessmen in Okahandja, Swakopmund and Windhoek (Rudi Loutit, Senior Conservation Officer for Nature Conservation, North West region, pers. comm.). From Namibia, the horns were sent mostly to South Africa, especially to Krugersdorp and Pretoria. From there, the horns were exported to eastern Asia, especially to Hong Kong, China and Taiwan.

This intensive poaching of the desert rhinos, and to a lesser extent drought, greatly reduced their numbers so that by 1982, only 66 remained. The population, in recent times, had never before been so low. In that year, Garth Owen-Smith, who had previously been working in Etosha, was appointed by the Namibia Wildlife Trust to be the Senior Field Officer for Kaokoland and Damaraland. His main duties were to encourage the Damaras and Hereros to participate in wildlife conservation and to assist the greatly understaffed Nature Conservation Department with their anti-poaching activities. At the time of his appointment, there was only one government Nature Conservator (Chris Eyre) who was based at Khorixas and his Herero assistant (with no one stationed in Kaokoland) to patrol the whole Kaokoveld, an area of nine million hectares, four times larger than Kruger National Park. It was a scandalous state of negligence by the government authorities. No wonder that so many rhinos had been killed illegally. Soon after Garth Owen-Smith joined, the Namibia Wildlife Trust employed a full-time staff of four. The Trust spent most of its effort on setting up a community game guard system which actively involved the local community in nature conservation,

and on patrolling in the western Kaokoland and Damaraland, the main locations for the rhino. From 1982 to early 1984 with assistance from the Trust, the Nature Conservation Department convicted 35 people in 16 cases of poaching or illegal possession of rhino horn and ivory (G. Owen-Smith, "Namibia's Most Valuable Resource", *Quagga*, no. 7, Spring 1984, pp. 10-11).

In 1982 one dealer, the owner of a garage, was arrested by the police with 68 rhino horns. He was, however, only fined effectively 2,000 rands, a fraction of the value of the horns. This middleman was found in possession also of uncut diamonds and for this he was sentenced to two years imprisonment. It was -unfortunate that the judges did not also take poaching of the highly endangered desert rhino seriously (G. Owen-Smith, p. 11).

At this time, Garth Owen-Smith also developed a scheme of obtaining co-operation from the local people of the area, which has proved to be very effective and is being studied by conservationists in many parts of Africa. Specifically, his activities focused on involving the local population and thereby stopping them from poaching, as well as using their expertise such as tracking skills and local knowledge, to discourage or catch poachers coming in from the outside (G. Owen-Smith, pers. comm.). In 1983, headmen of regions with rhino poaching were asked to appoint their own game guards who were to patrol regularly the waterholes and check for any unusual activities. This worked very well. By early 1984 six auxiliary game guards were operating in northern Damaraland and western Kaokoland (G. Owen-Smith, p. 11).

After the introduction of these anti-poaching efforts, poaching of desert rhinos decreased sharply. In 1982 only two fresh carcasses were found (a cow and a calf which had been illegally killed) (G. Owen-Smith, pers. comm.). The following year several Hereros from Sesfontein shot three rhinos with .303 rifles. They sold the horns to middlemen for about 150 to 200 rands (\$140 to \$188) a pair. The middlemen probably sent some of the horns to Swakopmund and then to adjoining Walvis Bay for sale to eastern Asia. In 1984 only one rhino was poached and this was by a Damara who was a farmer and a local government employee (R. Loutit, pers. comm.).

In the early 1980s, two men, a farmer and a garage owner, were the main buyers of these horns. The garage

owner, as mentioned above, was caught dealing in diamonds and rhino horn, and was jailed. He reportedly ground up some of the horn inside his garage and exported the powder to Hong Kong (Tommy Hall, Principal Nature Conservation Officer, Damaraland, pers. comm.). The farmer was never caught, however, and could still be trading horn.

Between 1985 and 1988 only two black rhinos were poached in the Kaokoveld. This success was due to several factors. The number of auxiliary game guards was increased (the Endangered Wildlife Trust was supporting ten of these men in 1988). These guards regularly liaised with Garth Owen-Smith, Blythe Loutit (Director of Save the Rhino Trust), and officials of the Directorate of Nature Conservation in anti-poaching work and in obtaining information about poachers and traders. Senior officers of the Nature Conservation Department, especially Rudi Loutit and Tommy Hall also worked closely with everybody involved in protecting the desert black rhinos.

In 1989, poaching increased once again in the northwest of Namibia when seven animals were slaughtered. One of the reasons for this was the massive unemployment in the area, exacerbated by the return to the country of thousands of political refugees, plus the partial redundancy of many men formerly employed by the South West African Territory Force. Also, many more firearms became available. In the early 1980s between 1,500 and 3,000 .303 rifles were distributed to local headmen by the South African Defence Force and many were used for illegal hunting (G. Owen-Smith, pers. comm.). In addition, in 1987 and 1988 around 1,000 G3 rifles were handed out to people in Kaokoland by the government as part of their counter-insurgency strategy. But probably most importantly, in 1989 middlemen realized the high value of rhino horn in South Africa and eastern Asia and thus offered poachers over three times more for rhino horn than in 1982 (500 to 800 rands for a pair of black rhino horns or \$460 to \$740) (R. Loutit, pers. comm.).

One man in particular responded to this increased financial incentive and killed five of the seven poached animals in the Kaokoveld in 1989. He was a 25-year-old farmer originally from Rehoboth, over 800 kms away, but his father often took him to Damaraland so he was familiar with the area. This farmer employed several Damaras who spent a fortnight looking for rhinos. When they were found, the farmer himself shot five of them with a G3 rifle, as well as nine to 14

elephants, in the Klip River and Otjihavera areas. Some of the horn may have been sold to traders in Okhandja. Soon afterwards, this poacher was arrested, convicted and sentenced to nine years or a 15,000 rand fine plus five years community service (R. Loutit and T. Hall, pers. comm.).

The other two black rhinos killed in northwest Namibia were shot in separate areas, one near Etosha by Hereros and the other by two young Hereros from Sesfontein who sold the horns to an official in Sesfontein. This man in turn sold the horns to a person in Opuwa, the capital of Kaokoland. Both poachers from this latter incident were caught and convicted.

On account of this alarming upsurge in poaching in the Kaokoveld in 1989, Blythe Loutit and her husband Rudi Loutit decided a new strategy was needed. They proposed that some of the rhinos in Damaraland should have their horns removed so that the poachers would have no reason to kill them. They convinced the Nature Conservation officials of this controversial plan and then in mid-1989 chose a group of rhinos which were close to the main road (and thus more vulnerable to poachers), and which were actually known by a gang (R. Loutit, pers. comm.). Twelve of these rhinos were dehorned in an efficient operation in which not a single animal died. The exact number of rhinos dehorned was at first kept secret from the press in order to give the impression to potential poachers that most rhinos in the area had been dehorned; this was a wise decision.

Immediately after the dehorning, the Namibian authorities were severely criticized, especially by South Africans. They complained that the rhinos need their horns for a variety of purposes including self-defence and feeding, and by removing them, social behaviour such as mating might be adversely affected. Since most rhinos did have horns, how would one without them defend itself? Others argued that as the horn grows back, the process would have to be repeated continuously throughout the life of the animals. It is expensive to dehorn, and some said the money could have been better spent by employing more guards to protect the rhinos and by improving the intelligence system.

Those who supported the exercise noted that unlike most other parts of Africa, there were extremely few natural predators in the region which could threaten calves, such as hyenas or lions, so that mothers did not really need their horns to protect their young. Furthermore in the vast open spaces of Damaraland which is unlike the



A desert rhino finds shade under a bush near Wereldsend in Damaraland.

thick brush usually inhabited by black rhinos elsewhere in Africa, poachers could easily see whether a rhino had its horns. They dismissed the possibility that poachers would kill them from spite, although this did later happen in Hwange National Park in Zimbabwe in early 1992, as the vindictive poachers were so furious, having tracked two white rhinos, to find them with their horns removed.

So far, the 1989 dehorning exercise in Damaraland has been successful. Indeed, according to information from Tommy Hall, two attempts were made in 1989 and 1990 to kill two rhinos, but once they saw the rhinos had no horns, the poachers left them alone. In 1991, the dehorning was repeated: at least eight rhinos had their horns sawn off by government officials in southern Damaraland, near a mine which had just closed down, putting several thousand people out of work. In fact, the officials had learned just before the dehorning that some men were looking for rhinos in the area to shoot. The second dehorning project also passed without a single fatality. The 1989 dehorning project was the first ever to be carried out in the world for a wild population of black rhinos. In the same year, the Namibian authorities undertook another unique, highly controversial new policy for rhino conservation. They sold some of their rhino horns as part of a regional investigation into the illegal trade in rhino products. Approximately 60 choice horns weighing 135 kilos belonging to what was then the South West African government were sold for 150,000 rands (\$57,000) and sent to South Africa. Since South West Africa was politically controlled by South Africa and was therefore

not a member of CITES, the movement of horns was probably legal. These horns were used to catch traders from all over southern Africa, including Namibia. Several arrests resulted from this undercover operation (confidential sources in Namibia and South Africa).

Partly because of these new official policies carried out in 1989, the number of black rhinos poached the following year declined to only two. The first poachers were two young Damaras from Khorixas (one of whom was a senior employee of Save the Rhino Trust) who went by vehicle searching for rhinos. When they found a male, they shot him and attempted to blow off his horns with pellets from a 12 gauge shotgun. They took the horns to Swakopmund to sell (Sharon Montgomery of Save the Rhino Trust and R. Loutit, pers. comm.).

The second in 1990 was the most pathetic poaching incident for many years. Two Damara farmers went up to a mother and calf near Twyfelfontein. They picked up some stones and threw them at the six-month-old calf, eventually killing it, while the mother stood by watching this appalling sight. The men then cut off some pieces of flesh from the neck and shoulder to eat. In Namibia, eating rhino meat is virtually unheard of. The baby rhino of course had no horns. The poachers were quickly caught and sentenced to 30 months each with half of the term suspended which meant an effective imprisonment of only 15 months. Garth Owen-Smith believes that the punishment was appropriate as no commercial motive was established (G. Owen-Smith, pers. comm.). The editors of *The Windhoek Advertiser*, a local newspaper, were so incensed by this insignificant punishment, however, that they published a leader in the 13 April 1991 issue stating: "...when one looks at the sentences meted out this week in respect of two grown men who stoned to death a black rhino calf, one's senses are outraged. At the risk of committing contempt of court, we state today that a magistrate handing down a sentence like that should be removed from the bench!"

WILDLIFE LAW ENFORCEMENT IN NAMIBIA

Namibia is unique in that of all the countries in the world with serious rhino poaching, Namibia is the only one where most of the illegal hunters and traders are caught and sentenced to prison or fined. This has not happened in Asian countries where there are rhino populations, for example, India, Nepal, Malaysia and Indonesia, nor elsewhere in Africa such as Tanzania, Central African Republic, Sudan, Zambia, Zimbabwe

Table 2. Court Cases in Namibia on Controlled Game Products from 1983 to 1990.

Year	Total cases	Total people accused for rhino and ivory tusk violations	Number of rhino horns involved	Weight of horns in kg	Total number of elephant tusks involved	Total weight of elephant tusks in kg
1983	9	7	0	0	142	
1984	12	8	4		77	193.2
1985	11	0	10	4.4	40	113
1986	18	17	6	7.2	170	1062.9
1987	23	35	11	27.85	198	841.1
1988	12	16	6	19.55	216	1154.9
1989	34	33	25	46.4	1139	7901.8
1990	47	78	53	78.6	200	1375.
Total	166	194	115	184	2182	12642.2

Source: Government of Namibia (unpublished)

and Mozambique, where there has been heavy poaching over the past ten years. What are the reasons for Namibia's unique success in law enforcement?

Firstly, in the main areas where there are black rhinos - Etosha, Kaokoveld and Waterberg Plateau -there is sufficient money officially available to pay for information on potential poachers and middlemen. For example, in 1990 and 1991 the police paid a minimum of 500,000 rands (\$175,000) a year to informers on rhino horn and ivory cases. In some instances, informers were paid more by the police than they could earn by selling rhino horn. In addition, some of the non-government organizations such as Save the Rhino Trust also pay out rewards for information. One senior police officer told me that informers have been responsible for the arrest of 60% of the poachers and middlemen in Namibia from 1987 to 1991. Garth Owen-Smith believes that the reward system is accountable for over 80% of the arrests, as the local people in Damaraland and Kaokoland are now involved with the wildlife management of the area and thus give information to the authorities quite freely (G. Owen-Smith, pers. comm.).

A second reason is that most of the investigations, especially of middlemen, are carried out by the Diamond and Gold Branch of the Police, an extremely well trained unit. These officers have their own special method of investigation, including entrapment, and

special ways of handling information.

Another explanation is that there is a lot of close co-operation between the Nature Conservation Department and the Police. All important cases of poaching and trading in rhino horn involve not only Nature Conservation officials but also the Diamond and Gold Branch of the Namibian Police. In 1991, the Commanding Officer had 40 policemen, including administrative personnel, working for him.

Fourthly, Namibia has been successful because the police also have close co-operation with the customs personnel at the country's main airports and international border posts. With the co-operation of the various government departments, the police know many of the main dealers in Windhoek and elsewhere. In the late 1980s and early 1990s, the middlemen buying rhino horn in Windhoek were Namibians, and also Portuguese who had left Angola and were dealers in elephant tusks and diamonds as well.

Not all the rhino horns traded in Namibia come from locally killed animals. Some originate from Angola, Zambia and Zimbabwe. Traders in Namibia buy these horns to move to South Africa for sale. Few horns have come in from Angola recently, but horns have come through the Caprivi from Zambia and Zimbabwe. At the time of my visit to Namibia in July and August 1991, I was told by a senior Nature

Conservation officer that one trader in Swakopmund had 13 horns for sale and one man in Arandis, just east of Swakopmund, possessed three black rhino horns. From 1983 to 29 July 1991 the Namibian government authorities confiscated 150 rhino horns weighing 262 kilos (see Table 2 for the years 1983-90), including some originating outside the country. As in many other countries, theft has occurred from government stores. In 1990 the Windhoek storehouse was broken into by a former employee of the Nature Conservation Department, who stole five rhino horns to sell; he was arrested and pleaded guilty to the theft. The official stores in Khorixas were also invaded and rhino horns were illegally taken.

THE NAMIBIA - SOUTH AFRICA - TAIWAN CONNECTION

After the horns leave Namibia, almost all of them are sent to traders in South Africa, although small quantities are transported directly to Taiwan (Republic of China) and perhaps Hong Kong. South Africa is not only an entrepot for horns from Namibia, but also from Zambia, Zimbabwe, Angola, Mozambique and Swaziland. The two main reasons for this are that the rand is a stronger and a more convertible currency than others in southern Africa, and there are many Taiwanese living in the country who are willing to buy the horn to export to Taiwan. Another advantage is that South Africa is part of a Customs Union and therefore, if the horn is smuggled into one of the other countries in the Union (Namibia, Botswana, Swaziland and Lesotho), it can be moved to Johannesburg without the parcel being inspected by customs or other government authorities. In fact, most officials in the police and the parks and reserves dealing in anti-poaching claim that the sealed containers which are continually moving in and out of South Africa are the greatest boon to the wildlife traders; less than 1% are ever inspected.

In 1990 and 1991 Taiwanese and other buyers in South Africa were purchasing horns for 1,200 to 2,500 rands (\$435 to \$900) a kilo. Most of them were then sold for export to Taiwanese, mostly businessmen, government officials and sailors, in order to supplement their incomes. It appears that many Taiwanese seamen are aware of the value of rhino horn. An interesting incident confirms this. In 1991, a Taiwanese ship docked in Port Elizabeth and four of the crew hired a taxi to drive to Addo National Park 70 kilometres north. As far as was known by the Park officials, these were the first Taiwanese to visit for several years. All they were

interested in were two rhino horns on public display in the Park's tourist shop. They attempted to buy the horns, but were refused repeatedly by the shop's manager.

In addition to the use of sealed containers in South Africa, rhino horns are sometimes put into small parcels and posted to Taiwan or carried by Taiwanese on aeroplanes and ships to Taipei and Kaohsiung. There is no evidence that South Africans are taking the horns to Taiwan. On reaching Taipei and Kaohsiung, many of the sailors involved go around to the main wholesalers and managers of the pharmacies and sell to whomever offers the highest prices. In 1990, someone who smuggled the horn into Taiwan could expect to receive about \$2,000 a kilo, a considerable sum compared to what the person would have paid for it in South Africa. Although the trade was illegal in the late 1980s, Taiwan was then the largest importer of African horn in the world. This was partly because dealers there paid some of the highest prices. For instance, they offered twice as much as traders in Yemen. In Taiwan, the African horns were either consumed locally for medicine, especially to lower high fevers, or they were re-exported, mainly for the Chinese market.

PROSPECTS FOR NAMIBIA'S RHINOS

From 1980 to 1990 a minimum of 64 black rhinos (see Table 3) and a few white rhinos were illegally killed in Namibia. Compared with most other countries in Africa with large rhino populations, Namibia's losses were very small indeed. For example, Zimbabwe lost from poaching over 800 black rhinos during the same period, and the large rhino populations in Mozambique, Zambia, Angola, Tanzania, Kenya and the Central African Republic were reduced to very low numbers during the last decade. To some extent, Namibia's low human population has been advantageous to rhino conservation. In addition, the presence of the South African Defence Force made it more difficult for foreign poachers and middlemen to operate in the country. A further deterrent was that in 1990 the national government passed very tough legislation against rhino poaching: the maximum penalty was a 200,000 rands (\$73,500) fine and or 20 years imprisonment. This is one of the severest penalties in the world for rhino poaching.

In the early 1980s, most rhino poaching occurred in central and eastern Africa, especially the Central

African Republic, Sudan, Kenya and Tanzania. With most of the animals hunted out by 1985, poaching gradually moved south, especially into Zimbabwe. By the early 1990s, poaching was becoming significant in South Africa where previously there had been hardly any rhino poaching at all: in 1991, ten rhinos (all whites) were killed and in 1992 at least 13, again all white rhinos. (Also, from 1990 to 1992 Swaziland lost 60% of its white rhinos, about 50 animals, to poachers.) By 1992, the countries still with the largest black rhino populations were South Africa (819), Namibia (560) and Zimbabwe (425) - all in southern Africa. The most northerly of these populations, that of Zimbabwe, is being heavily poached, especially by Zambians, with at least 200 animals killed in 1991. With the price of African rhino horn remaining high in Asia, it can be expected that poaching efforts in the near future may intensify in Namibia. The authorities must now prepare themselves for this likelihood.

In the financial year 1990/91, the Namibian government could not significantly increase the amount of money for wildlife protection. In fact, some budget cuts had to be introduced. This unfortunate cost-cutting continued in the 1991/92 appropriations. One of the first items affected was informant money. This should have the highest priority as it is by far the most cost-

effective method of catching poachers and traders. It is absolutely essential that the intelligence gathering network be expanded, not decreased. The Nature Conservation Department should also expand the training of officers involved with law enforcement. This is especially so since the Diamond and Gold Branch of the Police, who have over the past few years successfully investigated most of the major cases of poaching and trade in wildlife products, may not be able in the future to allocate so much time to this, as drugs and diamonds are of a higher priority to the government. Some anti-poaching units have also been recently cut which has had the added effect of lowering the morale of senior officers. Some men have left government service altogether, due to the relatively poor terms given, especially salaries.

It is unlikely that the budget of the Nature Conservation Department will increase significantly in the near future. Thus, Nature Conservation must look at ways of increasing its own revenue. The government does encourage wildlife utilization by allowing sales of wild animals and large mammal trophy hunting mostly by foreign tourists. Also, there is general sport hunting, cropping operations mainly for gemsbok and springbok for meat sales in South Africa, export of skins, and ostrich and crocodile farms. But more needs to be done on government land.

Table 3. Minimum Number of Black Rhinos Poached in Namibia from 1975 to 1990.

Year	Northwest	Etosha	Waterberg	Total
1975—1981	39		-	
1980			-	
1981		1	-	
1982			-	
1982	4			
1983	1	0	-	1
1984	0	15	-	15
1985	2	0	-	2
1986	0	0	-	0
1987	0	7	-	7
1988	0	0	-	0
1989	7	23	0	30
1990	2	2	0	4

Sources: Garth Owen-Smith, Rudi Loutit, Peter Erb, Allan Cilliers and Tommy Hall, pers. comm.

Table 4: Estimated Number of White Rhinos in Namibia from 1981 to 1992.

Year	Number
1981	70
1984	70
1986	63
1991	80
1992	91

Sources: IUCN, WWF, NYZS, "African Rhino Group Action Plan for the Conservation of African Rhinos" (December 1981), unpublished, no page number; David Western and Lucy Vigne, "The Deteriorating Status of African Rhinos", *Oryx*, Vol. XIX (October 1985), p. 216; D.H.M. Cumming, R.F. Du Toit and S.N. Stuart, African Elephants and Rhinos: Status Survey and Conservation Action Plan, IUCN (1990), p. 9; Eugene Joubert as mentioned in the unpublished IUCN paper compiled by Martin Brooks, "Population Estimates for Black Rhinoceros *Diceros bicornis* and White Rhinoceros *Ceratotherium simum* in Africa in 1991, and trends since 1987" (8 August 1991); and Martin Brooks, "Chairman's Report African Rhino Specialist Group", *Pachyderm*, No. 16 (1993), p.3.

Table 5: Number of White Rhinos Legally Hunted in Namibia from 1986 to 1990.

Year	Number
1988	1
1987	2
1988	0
1989	2
1990	1

N.B. All white rhinos were hunted on private land Source: Ministry of Wildlife, Conservation and Tourism (unpublished).

White rhinos, which numbered 91 in Namibia in 1992 (see Table 4), are allowed to be shot on private land, and on average, one a year is hunted by wealthy foreign clients (see Table 5). The government might think of raising revenue by permitting darting safaris for white rhinos on public land, and possibly black rhinos as well. In 1991 on the Botsalano Game Reserve in Bophutatswana, an American paid \$8,000 to tranquilize a white rhino. The fee for such a darting safari for a black rhino would be many times greater; it has not been yet tried anywhere in Africa.

In order to reduce the amount of money required to look after over 550 black rhinos on government land, Nature Conservation is seriously thinking of allowing some black rhinos to be translocated onto privately-owned ranches which are willing to spend the appropriate funds required to look after the animals. In both Kenya and Zimbabwe, this policy has proved to be very successful and has permitted the wildlife departments to concentrate their anti-poaching efforts and limited funds on fewer rhinos on public land. In addition, on some of the ranches which have black rhinos, foreign tourism has increased, earning more money for the country.



This is typical rhino habitat in Damaraland.

At the moment, the funds raised by Nature Conservation go directly into the coffers of Namibia's central government, so there is no great incentive to increase revenue. In order to change this situation, Nature Conservation should consider becoming a parastatal which would be permitted to raise and keep funds, such as those from government donors, non-government organizations and park entrance fees. Recently, this change in status has occurred successfully in Kenya. The government has allowed the newly-formed Kenya Wildlife Service to raise large sums of money directly from foreign donors including the World Bank; \$112,000,000 has been allocated for the 1992-1996 period. In Tanzania, the parks can keep a considerable portion of the entrance fees, which are paid in hard convertible currency, for their own use. The South African Parks Board can retain all the money the Board raises through entrance fees, hotel accommodation and other revenue earners. Thus a major incentive is given to the staff to earn as much money as is possible to invest into the parks.

The easiest method for Namibia's Nature Conservation Department to raise revenue is to increase park entrance fees for both citizens and foreign visitors. The fees are now very low. Almost all the tourists who visit the parks arrive in vehicles or aeroplanes and they certainly can

afford to pay more than the 1991 fee of four rands (\$1.40) for a local person and five rands (\$1.75) for a non-resident. In comparison, the entrance fees for Kruger National Park in the same year were 14 rands per person per trip and 12 rands for a car - and these charges also are too low. In Botswana, a non-resident pays 50 pulas (about \$22) to enter the main parks. In Tanzania in 1991 foreign visitors paid \$15 per day in the parks in hard currency plus significant vehicle charges. In Kenya, non-residents must pay 450 shillings a day (about \$15) plus vehicle fees. It is unfortunate from an economic point of view for the government of Namibia to undercharge for the use of a government resource to such an extent as Etosha National Park, one of the finest protected areas on the African continent. At the moment, the Namibian government is losing large sums of money because it is not charging the true market value for non-residents to enter the parks.

In conclusion, during the 1980s, the Namibians did a very good job in conserving their black and white rhinos, especially compared with other parts of Africa where most of them were massacred. Now, in the early 1990s with severe poaching in Zimbabwe and Swaziland, there will probably be greater pressure put on the rhino populations of Namibia, which include the unique desert rhinos. This means that Namibia will have to find new



Desert Elephants in Damaraland.

sources of money to combat this threat. The most likely source is from the tourist industry. Namibia can offer some of the most spectacular scenery and wildlife in Africa. With proper management, high-priced safaris could be greatly expanded. This is especially so as Namibia already has an excellent infrastructure of airports, roads and accommodation. Most foreign tourists would not object to paying increased park charges if they knew that the money was going towards the protection of the wildlife, especially to anti-poaching efforts to conserve the rare black rhinoceros.

ACKNOWLEDGEMENTS

I am very grateful to WWF-International for the financial support which enabled me to carry out field work in Namibia during 1991. I also wish to thank the following people who were so generous with their time, advice and help to me: Hennie Brink, Martin Britz, Allan Cilliers, Peter Erb, Tommy Hall, Eugene Joubert, Blythe Loutit, Rudi Loutit, Sharon Montgomery, Dieter Morsbach, Garth Owen-Smith and Leon van Rooyen.