

Elephants and Rhinos in Africa

A Time for Decision

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This document presents the findings and recommendations of the African Elephant and Rhino Specialist Groups of the Species Survival Commission of the International Union for Conservation of Nature and Natural Resources (IUCN) following extensive surveys and consultations with individuals involved with the management of elephants and rhinos in Africa.

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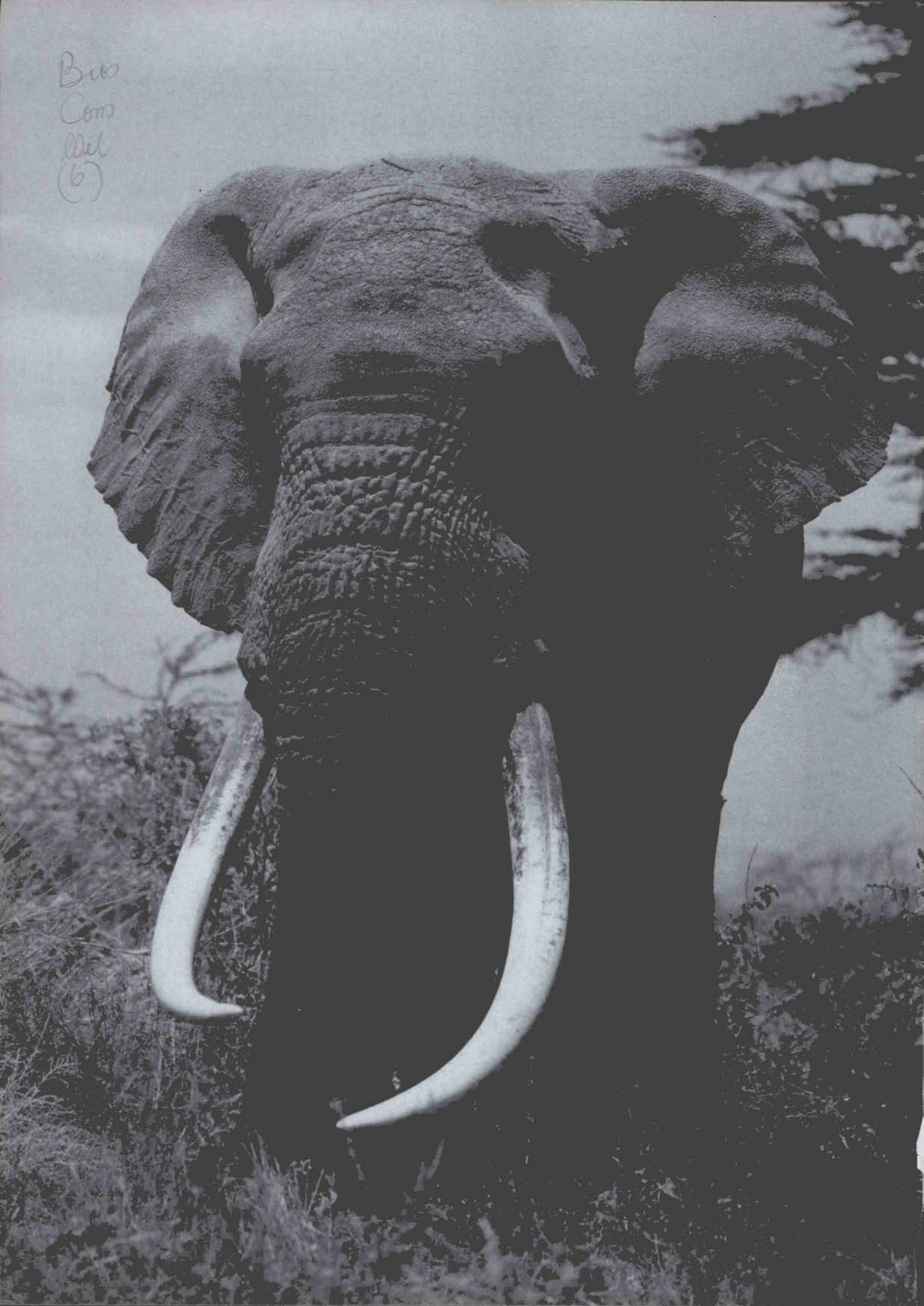
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EXECUTIVE SUMMARY

ELEPHANTS AND RHINOS IN AFRICA

A Time for Decision

International concern about the status and future of elephants and rhinos was aroused in the early 1970s when heavy poaching became apparent in some areas, particularly East Africa. The International Union for Conservation of Nature and Natural Resources (IUCN), the World Wildlife Fund (WWF), and the New York Zoological Society (NYZS) therefore launched surveys to establish the facts and to make recommendations for the management of the species to ensure their conservation as part of a healthy and productive natural environment for humans. The recommendations conform to the World Conservation Strategy for the management of natural resources, which was launched in 1980 by the United Nations Environment Programme (UNEP), IUCN and WWF.

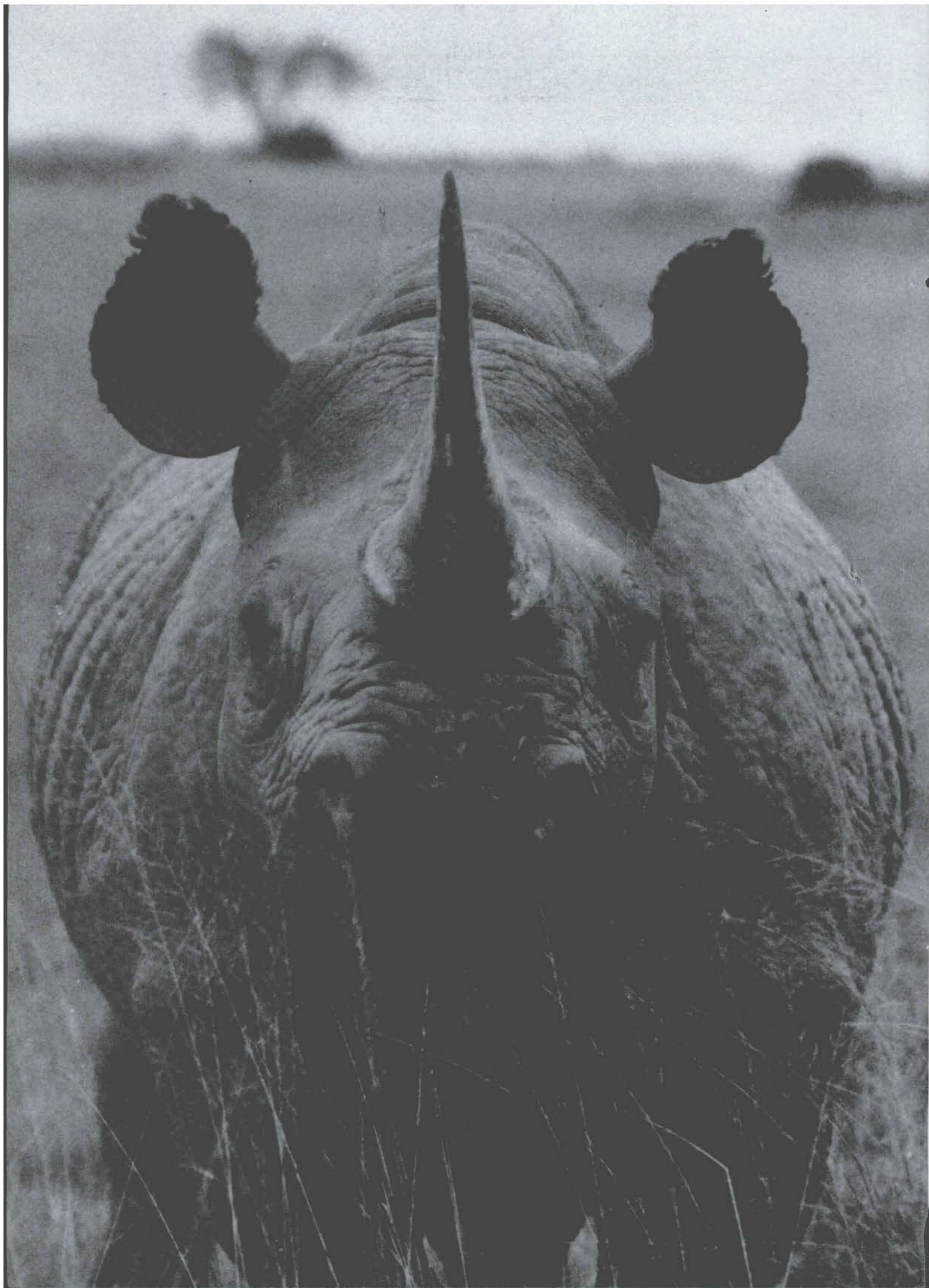
Elephant and rhino specialists from IUCN's Species Survival Commission, and wildlife managers from African and other countries reviewed the surveys and recommendations at a meeting convened in August 1981 by IUCN/WWF and the Government of Zimbabwe. It was concluded that the African elephant is not at present endangered as a species, but it is declining in numbers over large areas of its range because of poaching and loss of habitat, and some local populations are threatened. Meanwhile conflict between elephants and human activities is growing as settlement and exploitation of elephant habitat expands. For this reason African governments need to decide now their long-term policy for elephants so that management measures to preserve viable populations can be undertaken without delay.

The status of African rhinos was considered a matter of grave concern because of the devastatingly high level of poaching for horn. Only about 700 northern white rhinos survive, almost all in northern Zaire and southern Sudan. Black rhinos number between 10,000 and 15,000 in 18 countries, but they are declining fast almost everywhere. It is estimated that Kenya lost 90 per cent of its black rhinos in the decade of the 1970s and poaching has spread to hitherto untouched areas.

Only the southern white rhino is considered safe at present. It was thought to be extinct at the end of the last century, but a few found in Natal flourished as a result of a determined conservation programme and now there are nearly 3,000 in eight countries of southern Africa, where their populations are stable or increasing. The example of the southern white rhino illustrates what can be achieved by sound management.

Studies of the trade in elephant and rhino products show the dramatic increase in prices and the flow of ivory and horn out of Africa in the last decade. Recommendations have been prepared to improve control of the ivory trade and to try to extinguish the demand for rhino horn, which is the only serious threat to the species. At the heart of the recommendations lies the importance of universal adherence to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and cooperative implementation of its provisions.

Africa today faces great challenges because of the increase and spread of the human population and the necessity to improve living standards. African governments are urged to take political decisions now on conservation of elephants and rhinos in the light of the prevailing socio-economic situation and future development plans before their options are closed.



INTRODUCTION

ELEPHANTS AND RHINOS IN AFRICA

The elephant is the most prominent wild animal in Africa and is a symbol of the continent. This largest of land mammals ranges from the savannas to the equatorial forests; from swamps to deserts; and from seashores to high in the mountains. The elephant's range includes that of most of Africa's large wild animals and the impact of elephants on habitat has profound effects on all other creatures.

A sudden dramatic decline in the early 1970s in the number of elephants in areas such as Kenya, and the resurgence of the world ivory trade led to international concern. In the absence of adequate data on elephant distribution and abundance throughout Africa, the International Union for Conservation of Nature and Natural Resources (IUCN), the World Wildlife Fund (WWF) and the New York Zoological Society (NYZS) sponsored the first continental survey, which began in 1976. In the course of the survey it became clear that rhinos, which share elephant habitat in many areas, were declining so sharply that they could be heading for extinction. A separate rhino survey was therefore undertaken.

Dr Iain Douglas-Hamilton, a wildlife consultant known for his long-term study of elephants in Tanzania's Lake Manyara National Park and Chairmann of the African Elephant Specialists' Group of IUCN's Species Survival Commission, was in charge of the elephant survey, while Dr Kes Hillman, Chairman of the African Rhino Specialists Group, led the rhino project. The United States Fish and Wildlife Service sponsored a study of the ivory trade by Mr Ian Parker, whose experience of management of East Africa's wildlife includes first-hand knowledge of the trade. An enquiry into the trade in rhino products was carried out by Dr Esmond Bradley Martin, a geographer who has carried out studies of Africa's trade with other parts of the world.

The results of these studies were reviewed by elephant and rhino specialists of IUCN's Species Survival Commission, and representatives of African governmental wildlife management agencies in August 1981 at a meeting, sponsored by IUCN/WWF and the Government of Zimbabwe, which

recommended priorities and long-term measures for conservation.

The importance of nature conservation for economic development was stressed at the Zimbabwe meeting by the Minister for Natural Resources and Water Development, the Hon. Joseph Msika. Human welfare depends on a healthy natural environment to provide the basic resources which support life. Wild animals and vegetation are essential components of the natural environment, playing important roles in converting the sun's energy into food and oxygen, and maintaining the continual re-cycling of nutrients which are essential to life on earth. This is why conservation of the natural environment is fundamental to improving the lot of human beings all over the world.

In 1980 the World Conservation Strategy was launched as a practical guide to management of natural resources. Produced by IUCN with the cooperation and financial assistance of the United Nations Environment Programme (UNEP) and WWF, the strategy advocates conservation of living resources for three basic reasons: to maintain essential ecological processes and life-support systems; to preserve genetic diversity; and to ensure the sustainable utilisation of species and ecosystems, which support millions of rural communities as well as major industries.

Africa today faces great challenges. In every country the human population is rising rapidly. People require more land for settlement and for food and other necessities, but this can affect the wildlife, which forms an integral part of ecological processes supporting all life, and is itself of economic importance. This is the dilemma which must be resolved in the interests of long-term sustainable development.

This document presents the findings and recommendations of the best available expertise on conservation of elephants and rhinos in Africa, and outlines the measures required to ensure that they may continue to play their age-old roles in the life, culture and economy of the continent.

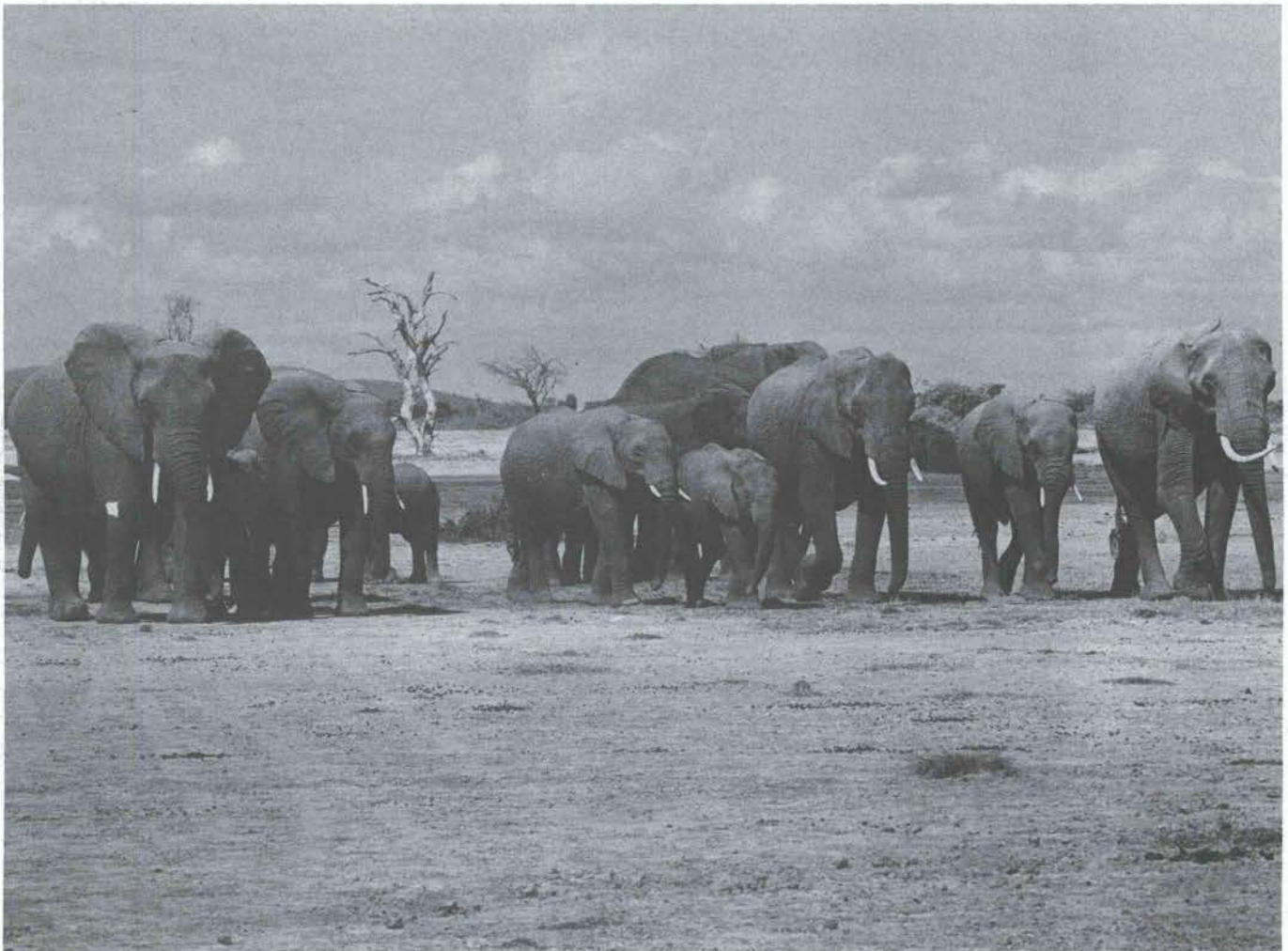
THE AFRICAN ELEPHANT

Elephants occur in 34 countries in Africa south of the Sahara and their range, although diminishing, still covers more than 7,000,000 square kilometres, an area more than three times the size of Zaire. Detailed surveys were carried out between 1975 and 1980. In the savannas of eastern and southern Africa they accounted for a population of 600,000 elephants. Other areas, which have only been sampled or remain unsurveyed, including the equatorial forest covering more than one-third of elephant habitat, were estimated to contain at least another 500,000 elephants, and possibly as many as 3,000,000. Thus there were at least 1,100,000 elephants in Africa, and there may be many more. Precise figures must await the development of techniques to census elephants in forest areas.

The surveys have shown that, despite the apparently healthy overall numbers, elephants appear to be declining in number in almost every country where comparative data is available. In the few countries where elephant numbers are known to be stable or increasing the numbers involved are very small compared to the continental population.

Zaire was estimated to have the largest elephant population, approaching 400,000, and may be found to have many more when satisfactory forest surveys are carried out. Tanzania was estimated to have over 200,000 elephants, Zambia about 160,000 and Sudan over 130,000.

Surveys indicated substantial elephant populations in Kenya (65,000), Zimbabwe (47,000), and Botswana (20,000). There may also be large numbers in Mozambique (?55,000), Central African Republic (?31,000), and Somalia (?25,000).



STATUS



THE AFRICAN RHINOS

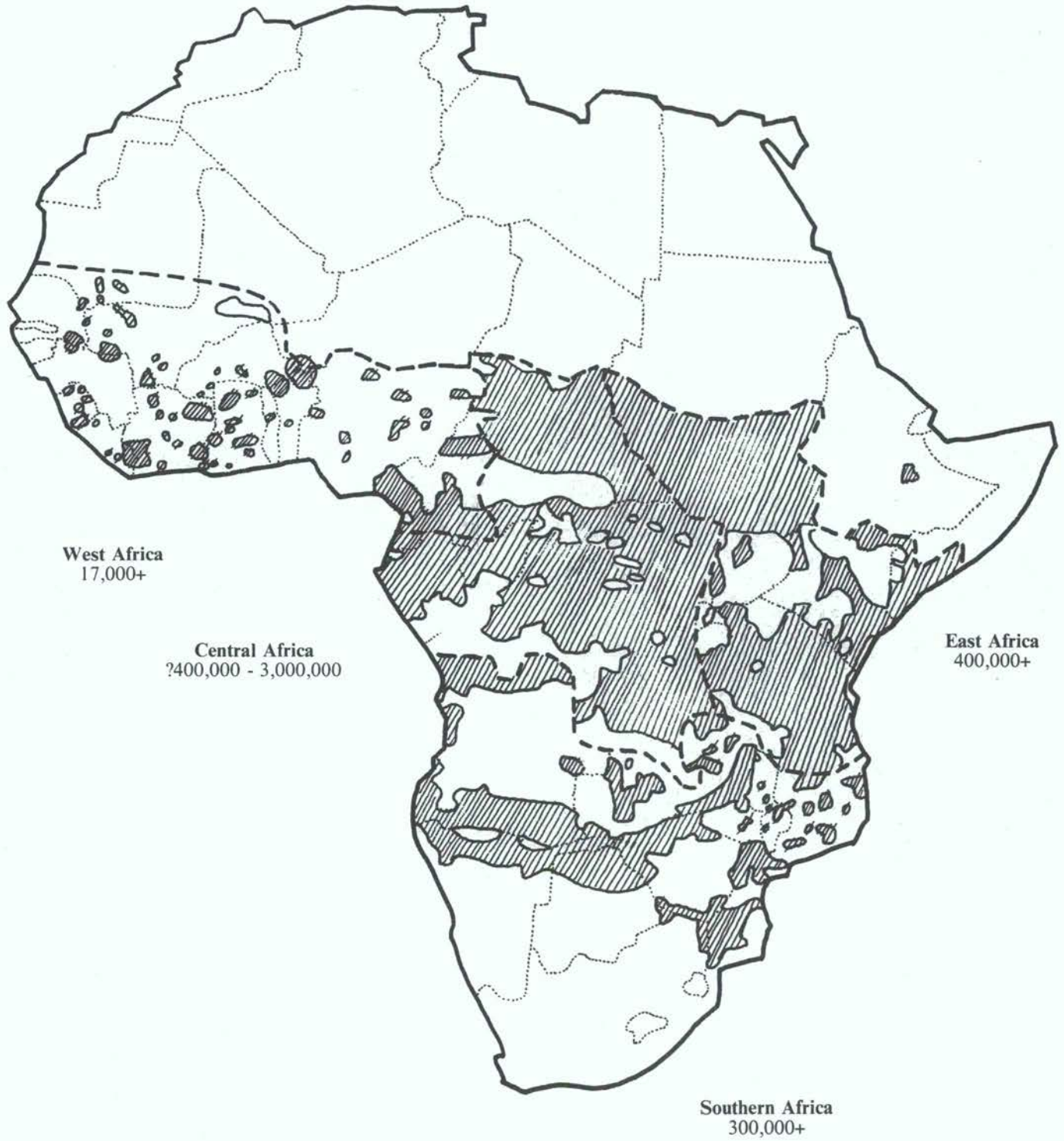
The black rhino (*Diceros bicornis*) is the most numerous and widespread of Africa's rhinos, but in the past decade there has been a massive onslaught of poaching to supply horn to make dagger handles in the Yemen Arab Republic and for medicinal use in eastern Asia. Kenya is believed to have lost 90 per cent of its black rhinos, leaving only about 1,500 today, and numbers have declined almost everywhere else. It is estimated that only 10,000 to 15,000 black rhinos survive in scattered populations in 18 African countries, with the largest

numbers in Tanzania (3,000-4,000), Zambia (2,500-3,000) and Central African Republic (1,000-3,000).

The northern white rhino *Ceratotherium simum cottoni* is one of the most seriously threatened large mammals in the world. Only about 700 survive, almost all of them in southern Sudan and in the Garamba National Park in Zaire, where they are still threatened by poachers.

The southern white rhino *C. s. simum* numbers nearly 3,000 and is not in danger as it is confined to well-protected areas. About 2,500 are in South Africa, 300 in other countries in the region, and over 600 have been sent to zoos in other parts of the world.

DISTRIBUTION OF ELEPHANTS IN AFRICA (1979)



NUMERICAL STATUS AND TREND OF AFRICAN ELEPHANT : REGIONAL AND COUNTRY SUMMARY

Region	Country	Numbers*				Trends ¹ (% of total numbers)											
		A	B	C	Total	A			B			C					
						up	stable	down	up	stable	down	up	stable	down			
Southern	Angola	-	-	12 400	12 400												100
	Botswana	18 600	1 400	-	20 000												
	Malawi	1 000	3 500	-	4 500				30		70						
	Mozambique	-	130	54 670	54 800												
	Namibia	1 300	-	1 000	2 300	55											37
	South Africa	8 000	-	-	8 000	6	94										
	Zambia	33 500	126 500	-	160 000												
	Zimbabwe	47 000	-	-	47 000	87				12	24	43					
	Total	109 400	131 530	68 070	309 000												
Eastern	Ethiopia	?	?	?	?												
	Kenya	54 626	-	10 430	65 056												
	Rwanda	25	50	75	150												
	Somalia	13 386	-	10 937	24 323												
	Sudan	133 700	-	72	133 772												
	Tanzania	191 603	1 197	11 100	203 900			<1									99
	Uganda	1 750	-	570	2 320												25
	Total	395 090	1 247	33 184	429 521												
Central	Central African Rep.	-	-	31 000	31 000												100
	Cameroon	1 000	-	4 000	5 000	20											80
	Congo	-	-	10 800	10 800												100
	Gabon	-	-	13 400	13 400											100	
	Zaire	29 500	3 500	343 000	376 000											100	
	Total	30 500	3 500	402 200	436 200												
West	Benin	1 200	-	50	1 250												?
	Ghana	370	-	600	970												96
	Guinea	-	-	800	800												?
	Ivory Coast	2 580	800	1 420	4 800			28		26							46
	Liberia	-	-	2 000	2 000												100
	Mali	-	780	-	780												
	Mauritania	-	40	-	40												100
	Niger	700	-	100	800												88
	Nigeria	1 150	390	280	1 820	63	12										25
	Senegal	170	-	30	200						82						18
	Sierra Leone	-	450	50	500												100
	Togo	-	-	150	150												100
	Upper Volta	2 690	-	810	3 500						8						
	Total	8 860	2 460	6 290	17 610												
	Total	543 850	138 737	509 744	1 192 331												



* Numbers : A. Sample surveys + Total counts
 B. Reconnaissance surveys
 C. Informed guesses and extrapolations

¹ Trends : A. Based on results of successive surveys
 B. Based on reconnaissance and/or trade data
 C. Unconfirmed reports and speculation



DISTRIBUTION OF RHINOS IN AFRICA (1980)



-  Black (*diceros bicornis*)
-  White (*Ceratotherium simum*)

NUMERICAL STATUS AND TREND OF AFRICAN RHINOS : REGIONAL AND COUNTRY SUMMARY

A. Black Rhino

Region	Country	Numbers *				Trends ¹ (% of total numbers)											
		A	B	C	Total	A			B			C					
						up	stable	down	up	stable	down	up	stable	down			
Southern	Angola	-	-	110	110+												100
	Botswana	-	-	10's	10's												100
	Malawi	-	40	-	40		100										
	Mozambique	-	-	150	150												
	Namibia	345	-	-	345												
	South Africa	625	-	-	625	86			14								
	Zambia	-	3 000	-	3 000	100					42	16	48				
	Zimbabwe	-	100	1 300	1 400							58					
Total		970	3 140	1 570	5 680												
Eastern	Ethiopia	-	-	15	15												
	Kenya	47	840	141	1 028				2		13						84
	Rwanda	-	30	-	30												?
	Somalia	-	-	<400	<400												?
	Sudan	-	-	<300	<300												100
	Tanzania	3 665	-	130	3 795												99
	Uganda	-	<5	-	<5							100					
Total		3 712	875	986	5 573												
Central	C.A.R.	-	1 500 ± 10 ³	-	1 500 ± 10 ³												
	Cameroon	-	-	-	>100												
	Chad	-	-	?	?												
Total		-	1 500 ± 10 ³	-	1 500 ± 10 ³												
Total		4 682	5 515	2 556	12 753												

B. Northern White Rhino

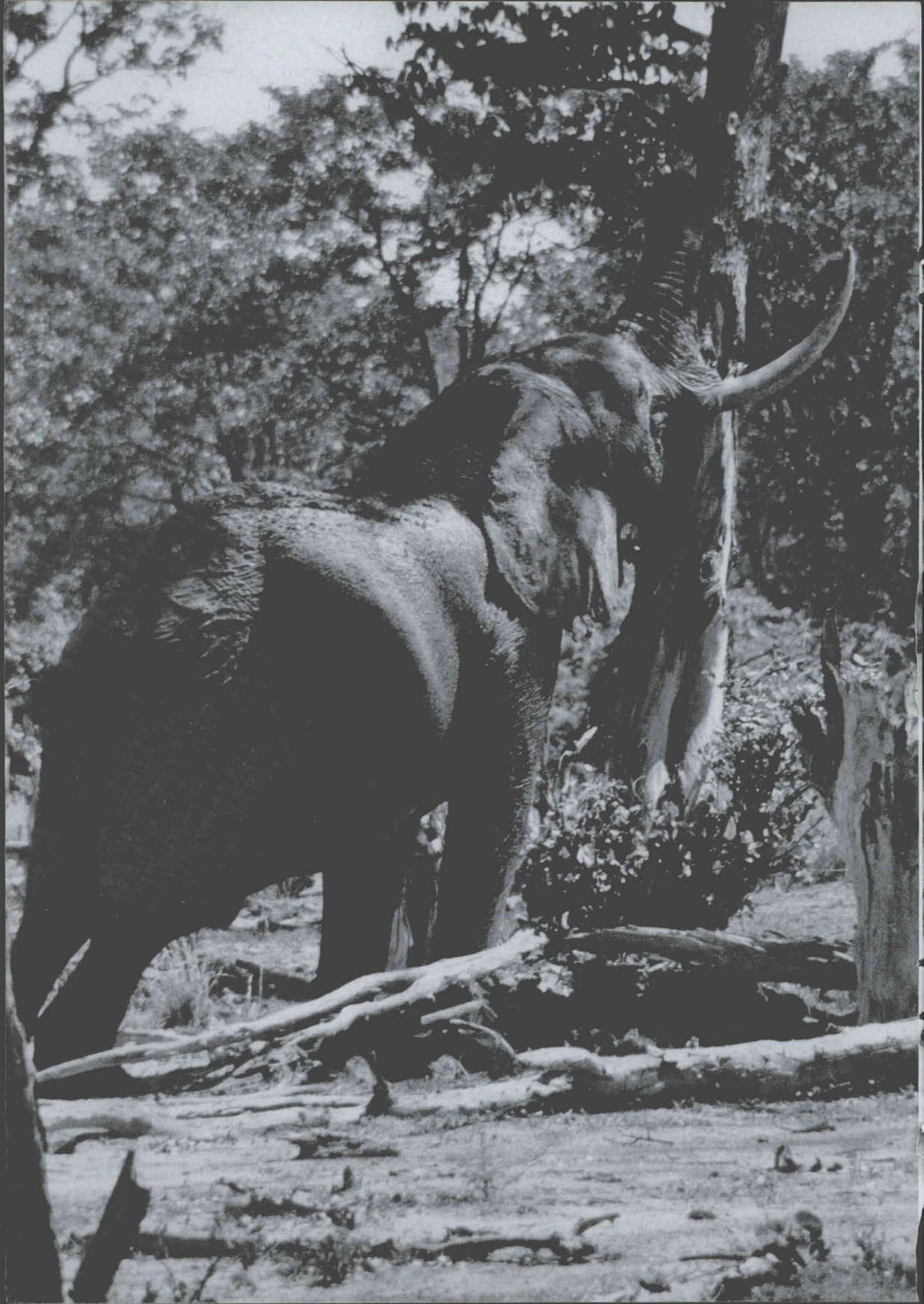
Eastern + Central	C.A.R.	-	-	?	?												
	Sudan	-	-	<400	<400												
	Zaire	-	-	<300	<300												100
	Total		-	-	<700	<700											100

C. Southern White Rhino

Southern	Botswana	60+	-	-	60+	100											
	Mozambique	-	-	40	40												
	Namibia	-	15	-	15	100											
	South Africa	2 500	-	-	2 500	100											
	Swaziland	60+	-	-	60+	100											
	Zambia	6	-	-	6	100											
	Zimbabwe	70	110	-	180	52	100			42							
Total	2696	125	40	2 861													

* Numbers : A. Sample surveys and total counts
 B. Reconnaissance surveys
 C. Informed guesses and extrapolations

¹ Trends : A. Based on results of successive surveys
 B. Based on reconnaissance and/or trade data
 C. Unconfirmed reports and speculation



HISTORY

THE HISTORY OF ELEPHANTS AND RHINOS IN AFRICA

Elephants and rhinos have been part of the African scene since prehistoric times. Those living today are the survivors of a large variety of similar animals which were found also in Eurasia and the Americas. Most of them are extinct, possibly because climatic changes, including successive glaciations, created conditions to which they could not adapt. There is also evidence suggesting that prehistoric man may have contributed to some extinctions by over-hunting.

Remains of the earliest known ancestor of elephants were found at Lake Moeris, near El Fayyum in Egypt. *Moeritherium*, as it was named, lived over 25 million years ago and was about the same size as a large pig. Several evolutionary lines became extinct, and modern elephants, which appear to have evolved some five million years ago along with mammoths, are the only survivors. Less than a million years ago mammoths still existed and early man depicted them in cave drawings. Today there are only two species of elephants, the African *Loxodonta africana*, and the Asian *Elephas maximus*.

African elephants are the largest land mammals living today, with a shoulder height of 3-4 metres and a weight of 5,000-6,000 kg. They once lived all over the African continent. There were elephants in North Africa and down both the Red Sea and Atlantic coasts, and from deep in what is now the central Sahara to the continent's southern tip. Two sub-species are recognised - the savanna elephant, *Loxodonta a. africana* and the forest elephant *L. a. cyclotis*. The forest elephant, which lives in the equatorial forests of the central African basin and West Africa is smaller than the savanna elephant and has slender tusks, which are generally straight or only slightly curved. The tusks point downwards rather than forward as in the savanna elephant. Where forests and savannas merge elephants bearing characteristics of both sub-species are found, some of them carrying very heavy ivory.

Elephants have a complex social system with strong maternal bonds based on breeding groups of females and young. Males, which may live singly or in small groups, have no permanent ties with the females, but may associate with them while feeding as well as when breeding.

The area over which herds move is dependent on the availability of food and water. Where both are plentiful throughout the year elephants may move over relatively small distances, but elsewhere they may migrate hundreds of kilometres in an annual cycle to find nourishment.

For the past 2,000 years, at least, the fate of the African elephant has been interwoven with man's desire for ivory. Like gold, ivory has always been prized for its beauty and because it can be fashioned into attractive and useful artifacts.



Both ivory and gold have been treated as commodities which could be traded as currency equivalents or used as wealth stores.

By the early Middle Ages ivory hunting, combined with deforestation and desiccation, eliminated elephants north of the Sahara. In South Africa hunting was largely responsible for bringing elephants to the brink of extinction in the 18th and 19th centuries. Hunters were permitted to take as much ivory as they could, and no laws were established until elephants had already disappeared from all but a few isolated areas.

In West Africa an unrestricted rush for ivory, which peaked in the late 19th and early 20th centuries, eliminated elephants from most of their former range, leaving fragmented and beleaguered populations.

Elephants in these regions were accessible because they lived in savanna country and transport of ivory was relatively easy.

Much of West African ivory was taken down rivers to seaports. Slaves were used to carry tusks from the interior to the coast in east and west Africa, whence both slaves and ivory were exported. Ivory often sold for more than the slaves who had carried it.

In South Africa ox wagons were used to transport ivory, while in the north Hausa traders took it across the Sahara by camel. Ivory movement accelerated as better road, rail and water transport systems developed in the 19th and early 20th centuries.

In all areas where elephants were exterminated there were no conservation laws. It was only around the end of the last century that laws were drafted to protect the few survivors in southern Africa and to prevent similar destruction in East Africa. The laws were only partially successful and were evaded by African hunters, who had traditionally killed elephants. But they did eliminate, for the most part, the commercial European ivory hunters with their effective firearms, and consequently prevented the continued wholesale destruction of elephants.

A review of the ivory trade shows that the flow of ivory from Africa increased from about 100-200 tonnes in the 16th and 17th centuries to over 800 tonnes a year between 1900 and 1914. Between the two world wars and immediately afterwards the demand for ivory slackened. In the early 1970s the trade revived in response to world financial instability and, with demand and prices soaring, the amount of ivory leaving Africa rose again to pre-1914 levels. Statistics show that minimum world imports rose from less than 100 tonnes a year in the early 1950s to nearly 1,000 tonnes in 1976. Current levels are about 700 tonnes a year.

Some ivory comes from elephants which have died naturally, but it is believed that less than a quarter of the amount thus available is actually recovered. The rest comes from elephants which have been killed for various reasons, including control of populations to protect habitat; prevention of damage to crops; sport hunting; and poaching, which has been a major source of ivory where law and order have broken down and elephants are easily accessible. About half the ivory in world trade is estimated to come from natural deaths of elephants and licenced shooting, and the rest from poaching.

It is only possible to give an approximate figure for the number of elephants represented by the current level of trade. Examination of tusks recently in trade in Hong Kong and Japan, which ultimately import 83 per cent of raw ivory from Africa, indicated an average weight of 9.65 kg. From this it has been calculated that trade in the 1970s involved the deaths of between 40,000 and 60,000 elephants a year but that the number fell below 40,000 by 1979 and 1980. Some authorities suggest that the total may be higher because of the unknown quantity of ivory that may remain in Africa, and they point out that a large sample of ivory in the Dar-es-Salaam ivory room gave an average tusk weight of only 4,8 kg.

While demand for ivory has depleted some elephant populations, loss of habitat to human occupation is another major factor and one which is most threatening to elephants in the long term. Africa's human population, like that of many parts of the world, is increasing rapidly so that more land is required for human use. Co-existence with elephants is seldom possible today, and in densely-populated Rwanda the Government ordered the elimination of the last non-forest



elephants in 1975 because settlement and agriculture left no room for them. One expert estimates that elephants have been losing habitat at a rate of two per cent a year since 1950. This alone could account for a reduction of 20 per cent in elephant numbers in the past 30 years. If habitat loss continues at the same rate it could result in the elimination of over 20,000 elephants a year at least.

To review the present status of elephants in Africa it is convenient to examine trends in four regions - east, west, south and central Africa.

East Africa

Trends in elephant numbers are clearest in East Africa because a great deal of census work has been done. Two surveys, one by an IUCN team and another by the Kenya Rangeland Ecological Monitoring Unit (KREMU) have estimated that between 1970 and 1977 Kenya lost more than half its elephants because of poaching and a severe drought. The decline appears to have continued, for later surveys by KREMU suggest that there was a further decrease in 1977 and 1978. Since March 1979 the law in Kenya has become much stricter. All private trading in game trophies has been banned and anti-poaching operations stepped up. Contraband ivory has been seized at Nairobi airport and from consignments which arrived in Germany. The export of ivory, which was of the order of 400 tonnes in 1976, has been considerably reduced. The present elephant population in Kenya is about 65,000.

Tanzania was estimated to have more than 200,000 elephants, but there has been abnormally heavy mortality attributable to poaching in the north. Southern Tanzania escaped up to the end of 1979 but, as poachers searched for new supplies of ivory, elephants there too have been threatened.

In Uganda a catastrophic decline in elephant numbers took place during former President Idi Amin's regime and its overthrow by Tanzanian forces. In 1966 the Kabalega Falls National Park contained about 15,000 elephants, but in 1980 only 1,200 were left. Similar massive killing was recorded in the Rwenzori National Park. Widespread poaching has been facilitated by the large numbers of firearms in the country. Today only about 2,000 elephants survive in the whole of Uganda compared with about 20,000 ten years ago.

More than 130,000 elephants are believed to live in southern Sudan. Despite poor communications and transportation facilities, poaching in some areas is said to be intense and the overall number of elephants appears to be declining.

West Africa

No successive censuses of elephant numbers in West Africa are available, but official statistics show a rapid increase in ivory exports from 1890 to 1909 from French-speaking West Africa (Benin, Guinea, Ivory Coast, Mali, Niger, Senegal and Upper Volta) coinciding with colonial expansion and exploitation. Exports fell off before 1914 and later dwindled to virtually nothing, apart from a brief spurt in the late 1940s and early 1950s.



This long decline can be attributed to destruction of the elephant population and its habitat. Commercial hunting was permitted until 1936 and allowed entrepreneurs to give guns to African hunters and pay them to hunt for trophies and meat. This caused a rapid decrease in elephants. Rhinos were exterminated.

By 1979 all of West Africa's elephants together numbered about 17,000 and accounted for only about one per cent of the minimum continental total. They have in some cases been reduced to such small and isolated populations that it is uneconomic for poachers to mount expeditions to obtain ivory. The great threat to the survival of elephants in West Africa is elimination of their habitat by expanding human settlement and land use.

Central Africa

Central Africa, including Cameroon, Central African Republic, Chad, Congo, Gabon and Zaire, is roughly estimated to hold more than 400,000 elephants at least, which is over one-third of the minimum continental total. Much of the ivory from this region is from the forest elephant, which is easily distinguished from savanna elephant ivory. Records show that Central Africa has been the world's major producer of ivory for the last 100 years, and about 60 per cent of the ivory examined recently in Hong Kong was from forest elephants.



As in West Africa these countries show a surge in ivory exports coinciding with the opening up of the interior. This peaked in 1905 and then swiftly declined before 1914. It is most probable that easily-accessible elephant populations were wiped out, and locally-hoarded ivory was marketed, with the result that ivory became harder to find. Only Zaire (then the Belgian Congo) seems to have maintained a high level of ivory export right up to 1914.

Between the two world wars export of ivory was low and only recently has it begun to climb again.

Southern Africa

Elephants in Botswana, Namibia, South Africa and Zimbabwe are estimated to number about 77,000, which is about seven per cent of the minimum continental population. Aerial censuses indicate that numbers are now generally stable and increases are checked by culling in Zimbabwe and in the Kruger National Park in South Africa. However, there are declines in parts of Botswana and Namibia because of poaching.

Zambia is believed to have the third largest elephant population in Africa, numbering about 160,000. Censuses in the Luangwa Valley, however, show a decline in numbers between 1972 and 1980, apparently because of poaching.

Towards the end of Portuguese rule in Angola and Mozambique heavy killing of elephants for ivory was reported and large amounts were taken out of the country by Portuguese refugees. In Angola ivory has been traded for arms by both the FNLA and UNITA. Overall censuses have not been carried out in either country, but elephant populations have been roughly estimated at 12,000 in Angola and 55,000 in Mozambique.

Rhinos and the Demand for Horn

There are two species of rhino in Africa, the black rhino *Diceros bicornis*, which once ranged through most of the savanna lands, and the white rhino *Ceratotherium simum*, with one sub-species confined to southern Africa and another to a belt north of the equatorial forests.

Despite their names, both rhinos are grey. The name "white" is believed to have arisen from mistranslation of the Boer word "wijde" for wide, referring to the broad square lips of the species. While the black rhino is generally solitary, the white rhino, which is second in size to the elephant among land mammals, is social and rather placid.

Early European visitors to Africa described plains teeming with game, and one traveller reported that he saw 100 to 150 rhinos, both black and white, in one day's travel in southern Africa in the 1830s. This was also an era of intensive hunting for meat and sport. Two hunters killed 89 rhinos in a short trip in the 1840s. Frederick Selous, a big game hunter whose name is commemorated by a reserve in Tanzania, reported

that the white rhino was abundant in what is now Zimbabwe in 1872, but 15 years later almost every one between Salisbury (now Harare) and the Zambesi had been killed.

Hunting went on too in east, central and west Africa so that by the early part of this century rhinos had been exterminated from many parts of Chad, Cameroon and the Central Africa Republic and their range considerably reduced.

Rhino populations in East Africa declined more slowly and they benefited from game laws that protected most wild animals. Even so they were poached and lost habitat to settlement, so that by the early 1960s rhinos were to be found in only half of Kenya and calls were made for their conservation.

Rhinos have been killed to some extent for meat and hide, but there has been a continuous whittling away of rhino populations to provide horn for use in Chinese and allied medical systems. This demand was responsible for almost wiping out the three Asian species of rhino, and, as a result of their decline, demand for African rhino horn grew.

The dramatic escalation of the demand for rhino horn in the past decade is due to a new factor. In the Yemen Arab Republic most men wear a traditional type of dagger known as a *jambia*. Rhino horn has been used for many years for the handle of the more expensive *jambias*, which few could afford. But in the early 1970s demand for rhino horn *jambias* rose rapidly as Yemeni men began to earn high wages in Saudi Arabia and other oil-rich states. Per capita income in the Arab Yemen Republic rose from \$80 in 1970 to \$700 in 1979. Yemen's imports of rhino horn between 1969 and 1977 totalled 22,645 kg., which has been estimated to represent the death of about 8,000 rhinos.

The price of horn soared, with an increase of 21 times between 1970 and late 1979 alone. Rhino horn dealers in eastern Asia were forced to pay the new rates and inevitably there has been stockpiling for speculation and to ensure future medical supplies.

The result of the onslaught on Africa's rhinos, due primarily to Yemeni demand, was the killing of 90 per cent of the black rhinos in Kenya, Uganda and northern Tanzania, where the largest concentration had existed. Poaching has spread to other rhino countries - Angola, Mozambique, Sudan, Uganda and Zambia. Black rhinos still survive in 18 countries and are estimated to number between 10,000 and 15,000, but poaching continues.

Only about 700 northern white rhinoceros survive, most of them in northern Zaire and southern Sudan, with possibly a few left in the Central African Republic and Uganda.

The southern white rhino was the first of the African rhinos to come under heavy attack. Its meat was held in high esteem by early European settlers and its hump was rendered into valuable fat. By 1892 it was considered extinct. However, a few years later some were found in the Umfolozi-Hluhluwe region in Natal and given protection. There are now 2,500 in Natal, while over 300 have been taken from there for re-introduction in Bophuthatswana, Botswana, Mozambique, Namibia, Swaziland, Zambia and Zimbabwe. The recovery of the southern white rhino illustrates what can be achieved through a determined conservation programme.

THE PRICE INDEX OF IVORY : 1914 = 100

Derived from East African export values for years 1925-1951 ; all other indices from a combination of overseas importers

Year	Index	Year	Index	Year	Index
1873	74	1906	108	1946	114
74	47	07	133	47	115
1875	82	08	112	48	100
76	95	09	109	49	105
77	87	1910	104	1950	75
78	86	11	115	51	87
79	82	12	114	52	85
1880	90	13	111	53	92
81	88	14	100	54	104
82	91	1915		1955	106
83	102	to	n/d	56	113
84	102	1924		57	115
1885	102	1925	200	58	117
86	102	26	171	59	105
87	108	27	167	1960	95
88	108	28	160	61	120
89	123	29	145	62	115
1890	112	1930	115	63	118
91	102	31	66	64	116
92	98	32	62	1965	136
93	82	33	58	66	142
94	78	34	74	67	127
1895	78	1935	79	68	119
96	89	36	69	69	129
97	89	37	83	1970	166
98	92	38	70	71	128
99	108	39	55	72	229
1900	88	1940	61	73	519
01	88	41	58	74	579
02	87	42	70	1975	612
03	86	43	92	76	690
04	95	44	91	77	758
1905	108	1945	97	78	1561

MINIMUM WORLD IMPORTS OF RAW IVORY

(By Japan, Hong Kong, Germany, U.K., Belgium, Switzerland, U.S.A., France, Spain, Italy and Singapore)

Year	Total Kg	Total \$	\$ per Kg	Year	Total Kg	Total \$	\$ per Kg
1950	28,725	82,597.29	2.88	1965	440,247	2,676,728.58	6.08
51	86,573	350,793.50	4.05	66	449,656	2,867,967.85	6.38
52	182,894	699,632.01	3.83	67	537,079	3,058,358.15	5.69
53	266,046	1,089,927.86	4.10	68	621,964	3,313,367.13	5.33
54	201,015	940,021.95	4.68	69	647,816	3,738,951.05	5.77
1955	211,861	1,008,547.26	4.76	1970	630,719	4,690,839.26	7.44
56	263,233	1,332,958.86	5.06	71	492,940	5,028,552.73	10.20
57	242,685	1,254,133.25	5.17	72	689,607	10,171,507.67	14.75
58	260,725	1,371,553.38	5.26	73	1,236,163	34,308,115.06	27.75
59	334,415	1,569,347.17	4.69	74	922,917	28,098,112.41	30.44
1960	391,678	1,667,644.84	4.26	1975	922,718	29,413,380.17	31.88
61	235,979	1,266,426.01	5.37	76	991,000	-	-
62	350,002	1,804,867.62	5.16	77	827,000	-	-
63	288,420	1,525,432.73	5.29	78	816,000	-	-
64	484,771	2,523,628.91	5.21	79	681,000	-	-
				1980	680,000	-	-

THE PRICE OF IVORY 1880-1978

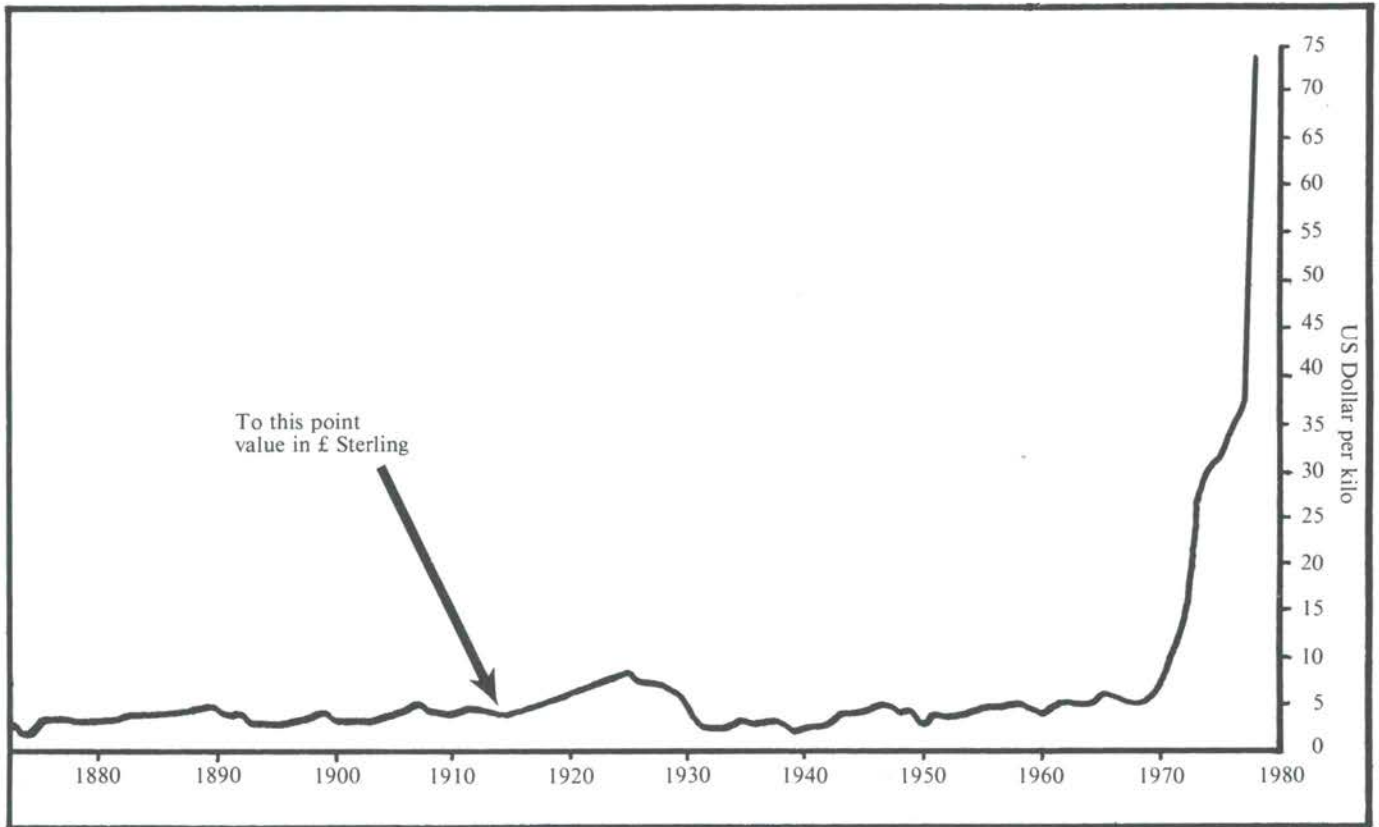
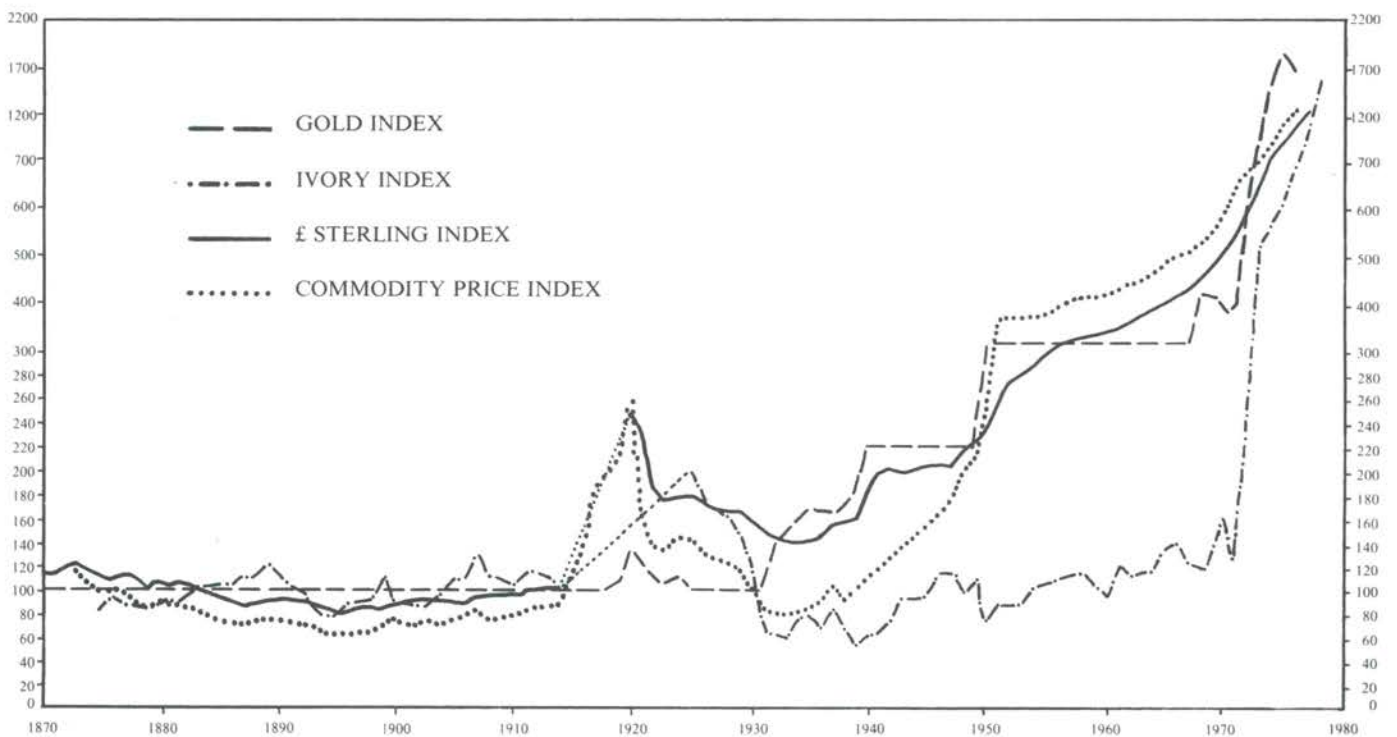


ILLUSTRATION OF TRENDS IN 4 INDICES





**MINIMUM ESTIMATES OF RHINO HORN IMPORTS
INTO MAIN CONSUMER COUNTRIES PER YEAR
FROM 1972 to 1978**

Country	Weight (kilos)	
North Yemen (1971/2 to 1976/7) (20% has been deducted from gross imports as this amount is re-exported in the form of chippings to Hong Kong and China)	2,972	roughly, 3 tonnes
Taiwan	943	} roughly, 2 tonnes
Japan	792	
South Korea	223	
China		
Chippings imported from North Yemen and Hong Kong	750	} 1.75 tonnes
Other imports	1,000	
Others (Hong Kong, Singapore, India, Nepal, Malaysia, Burma, Thailand, Indonesia, Macao, Western Europe, the Americas, etc.)	1,000	1 tonne
Total :		7.75 tonnes

N.B. Entrepots, such as Hong Kong and Singapore, consume relatively small amounts of rhino horn; in this table the estimates refer to their own consumption, only.

Sources : Official Import Statistics for North Yemen, Taiwan, Japan and South Korea. Information from dealers, government officers; Correlations of various import export figures; and government auction figures.

**MINIMUM ESTIMATED AMOUNTS OF HORN PRODUCED
FROM THE DEATHS OF RHINOS IN VARIOUS COUNTRIES
AND GEOGRAPHICAL AREAS, ON AVERAGE PER YEAR
BETWEEN 1972 AND 1978**

Country (or Area)	No. of Deaths per year	Kilos per year
Kenya	1,500	4,320
Tanzania	690	2,000
Uganda and Central Africa (Sudan, C.A.R., Zaire, Zambia, and Rhodesia)	200 *	900
Republic of South Africa	100	350
Others in Southern Africa (Angola, Southwest Africa, Botswana, Malawi, Rhodesia and Mozambique)	90	300
Asia	80 (?)	100 (?)
Totals :	2,660	7,970 (or 8 tonnes)

* This figure is adjusted to indicate only the deaths of those rhinos whose horn reached the international market.

PROBLEMS

THE PROBLEM OF SAVING ELEPHANTS AND RHINOS

Elephants and rhinos compete with man for living space, and as human population expands there is less room for them. Where elephants are in proximity to agriculture and other human activities they are likely to become pests.

The attacks of ivory poachers and crop defenders may drive elephants to take refuge in areas where they feel safe, such as national parks and reserves, a movement that can create the local impression that elephant numbers are increasing, when they are, in fact, declining overall. Their populations may become compressed and they may destroy trees faster than regeneration can take place. This problem has been tackled either by shooting what are judged to be excess elephants, or by "letting nature take its course". In Tsavo, Kenya, thousands of elephants starved to death because they destroyed habitat on which they depended, while drought and man-made fires exacerbated the situation.

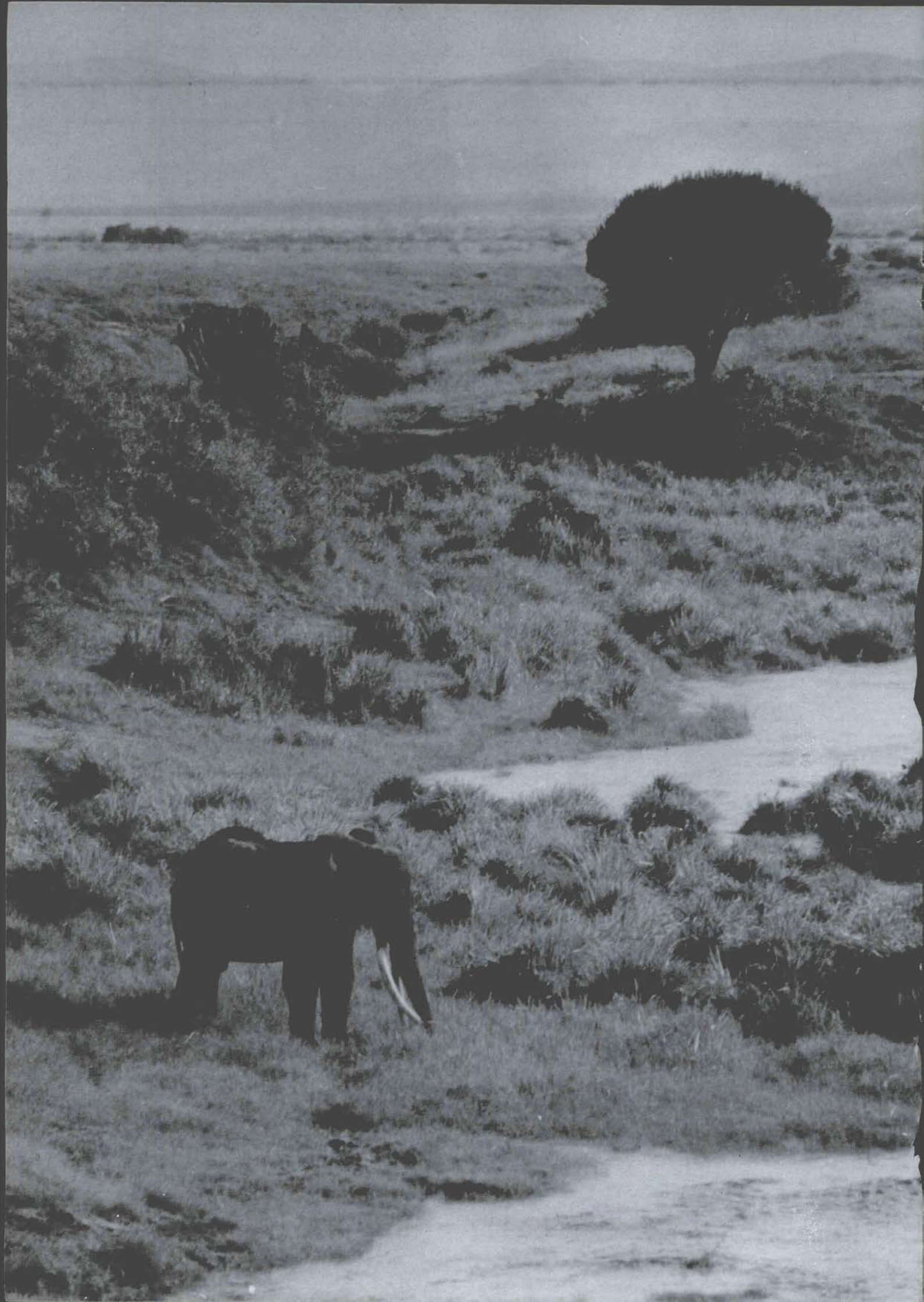
In some places, notably Zimbabwe and northern Botswana, there is evidence that elephant populations have been expanding during the past century and they are now coming into increasing conflict with the burgeoning human population.

Today elephant numbers are controlled by culling in South Africa and Zimbabwe. But elsewhere, especially in East Africa, numbers have been reduced by poaching.

Although rhinos may pose problems in agricultural areas, they are less of a menace to crops and are far fewer in number than elephants. Poaching has eliminated a high proportion of the rhinos outside protected areas, and the toll has been high in reserves too.

The surveys carried out of the status of elephants and rhinos have shown that poaching has usually been highest where law enforcement has been lax or where law and order have broken down in the face of political upheavals and war. Wildlife concentrated in protected areas where good roads have been developed for tourists (for example, in Uganda) has been particularly vulnerable in such situations, and in many countries, including Chad, Congo, Sudan and Zaire, soldiers have also killed elephants for meat, ivory or just for sport. Today the widespread availability in Africa of automatic weapons increases the threat to wild animals, including elephants and rhinos.





ACTION

WHAT CAN BE DONE?

Governments with elephant and rhino populations in their countries have to formulate conservation policies in the light of prevailing socio-economic conditions and their development plans. But since conservation is of world-wide importance, as well as of national benefit, the international community has a responsibility to provide assistance, which may be in the form of funds, equipment or technical collaboration, as well as cooperating in controlling international trade in elephant and rhino products.

Conservation of elephant and rhino populations involves action in several spheres:

- protection and management of the species and their habitats;
- regulation of the utilisation of the species and their products;
- research and monitoring to ensure that management decisions are based on the best available scientific data;
- education at all levels of society on the place and value of the species in relation to the human environment.

Protection and Management of Elephants and Rhinos and Their Habitats

Management of elephants and rhinos and their habitats is of primary importance. This includes protection of the species from poaching and the habitat from degradation. To a large extent effective management will depend on the existence of an adequate system of national parks and reserves. Elephant range usually encompasses that of rhinos and other wildlife, and good elephant management normally benefits other species.

Most countries have systems of national parks and reserves, but all governments should review whether they are adequate, and, if necessary, establish new protected areas. It is very important that protected areas have sufficient well-trained staff and equipment to control poaching and any illegal activities which degrade the habitat.

Management may be necessary to ensure the continued suitability of elephant and rhino habitat. This may involve construction of dams and watering points, firebreaks, and barriers to separate elephants from agriculture. In every case action must have a sound ecological basis e.g. new watering



points should not create new foci of elephant damage, and should shift elephants away from possible conflicts with humans.

Management of elephants may involve decisions to limit or reduce their numbers in certain defined areas. This may be done by culling, which is purely a method of control. Disposal of the products of culling should be strictly controlled.

Where it has been clearly established that a defined population is biologically capable of sustaining the offtake, elephants may be utilised to obtain ivory, meat, hide and other products. In management terms this is cropping, and it should never be permitted in national parks, but should be limited to other protected and well-managed areas, which may include buffer zones to national parks. The same rule should apply to safari hunting, which is also a form of elephant utilisation.

Legislation for protection of elephants and rhinos should be reviewed to ensure that it is effective. It should include clear descriptions of the circumstances in which licences may be issued to kill animals that threaten life, property or agriculture. Wildlife laws should be publicised in clear terms, and offences should be treated seriously by police and courts.

Regulation of the Utilisation of Elephants and Rhinos and Their Products

Elephants and rhinos have sustainable economic value. They generate revenue from visitors who travel from all over the world to see them in their natural habitat; from hunters who pay large fees and employ local experts to obtain trophies; from sale of their products, such as ivory, hide and meat; and from use of their products to meet the needs of people on whose land they live outside national parks.

However, utilisation needs to be regulated.

Tourism should be controlled so that it does not result in degradation of habitat and harassment of the species;

Hunting should be regulated, and disposal of trophies controlled so that there is no adverse effect on elephant and rhino populations;

Hunting of rhinos should only be permitted where its controlled use serves to promote conservation of a particular population. No hunting of the critically-endangered northern white rhino should be allowed.

Trade in elephant and rhino products should be controlled, both internally and internationally. All countries should become parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which is of critical importance in controlling international trade, and thereby supports national conservation efforts. Several countries involved in the trade in elephant and rhino products, including those, such as Burundi, which are used for transshipment, have yet to join CITES. Furthermore, many countries which are parties to the Convention have not so far enforced supporting legislation.

Governments should improve their implementation of CITES and, in particular, should:

1. adopt the recommended standardised international permit together with the newly-devised "security" stamp;
2. mark all tusks with the agreed international coding;
3. appoint specialised officers to be responsible for coordination of enforcement and implementation of CITES;
4. ensure close liaison between the various enforcement agencies, such as Wildlife Departments, Customs and Police;
5. increase their ability to cooperate internationally in enforcement action, particularly by setting up telex links between CITES authorities.

Research and Monitoring to Ensure Sound Management Decisions

Research and monitoring are required to assist in planning conservation programmes and to ensure that they are working effectively. Research should aim at establishing the status of elephant and rhino populations and their habitat in each country. The results should be considered in relation to future land-use requirements so that long-term conservation policies can be established.

Monitoring of the species, their habitat, and trade in their products should be continuous in order to have early notice of trends which may require new or revised management policies.

Studies of the trade in ivory and rhino horn should be aimed at monitoring the effectiveness of controls so that improvements can be introduced as necessary.

Education and Public Awareness

People at all levels of society need to be made aware that human life is part of, and reliant upon the natural world, and that conservation of nature and natural resources is an essential factor in improving the standard of life for everyone. Decisions by political leaders and planners need to be based upon understanding of the ecology of the human environment.

Every country should make environmental and conservation education part of school curricula and promote wildlife clubs to encourage the interest of young people in conservation and bring them into contact with wildlife.

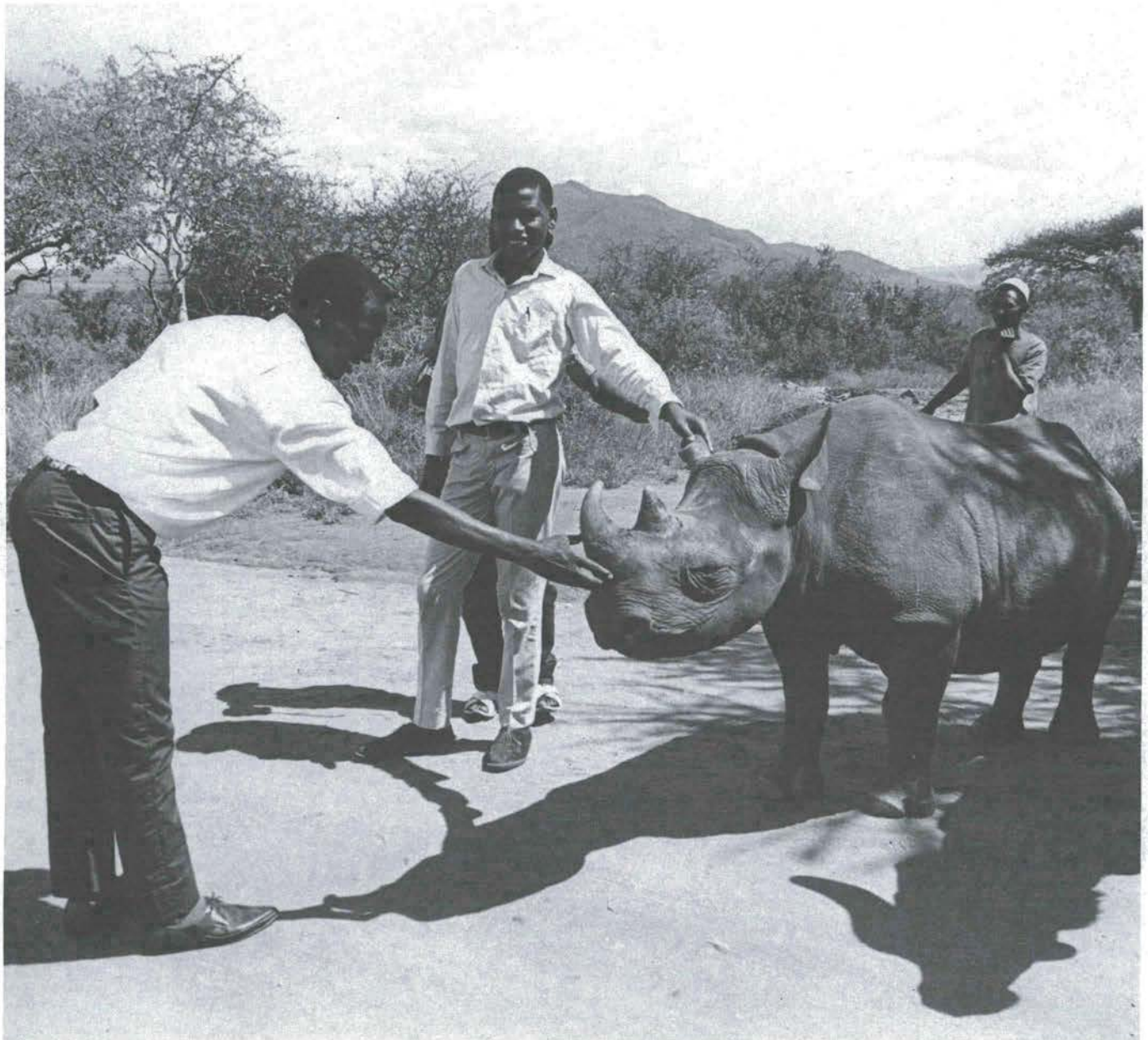
Zoos and natural history museums should be encouraged to organise educational programmes that explain man's place in

the living world in association with elephants, rhinos and other wildlife.

Specialist societies should explain critical conservation issues to the public and lobby political leaders to ensure that policies have a sound ecological base.

It is particularly important to gain the support of people living close to protected areas and with wildlife on their land,

many of whom may suffer some deprivation as a result of conservation measures. They should be provided with tangible benefits from the resources, such as opportunities for employment; sharing of royalties from tourism and licensed hunting; and meat and other products arising from management operations. Establishment of cottage industries based on rational exploitation of local wildlife resources should be promoted. The objective should be to give local value to wildlife, which might otherwise be treated as a pest.





PRIORITIES

ACTION PRIORITIES FOR ELEPHANT AND RHINO CONSERVATION

Scientists and other specialists of IUCN's Species Survival Commission involved with the conservation of elephants and rhinos, and representatives of African wildlife departments, met at Wankie, Zimbabwe, in July-August 1981 and decided on the most urgent measures that need to be undertaken. Priorities were examined within three major categories of equal importance:

1. Political and government action
2. Action on trade
3. Field action

Priorities were determined in terms of particular species or sub-species; the ecosystems they inhabit; and the cost effectiveness and chances of changing a low conservation status to a high conservation status. Emphasis was also placed on maintaining high conservation status of key species populations.

The agreed priority ranking for species and regional populations was:

1. Northern white rhino
2. Black rhino
3. Southern white rhino
4. Kaokoland elephants in Namibia
5. West African forest elephants
6. West African savanna elephants
7. Central and East African elephants.

POLITICAL AND GOVERNMENT ACTION

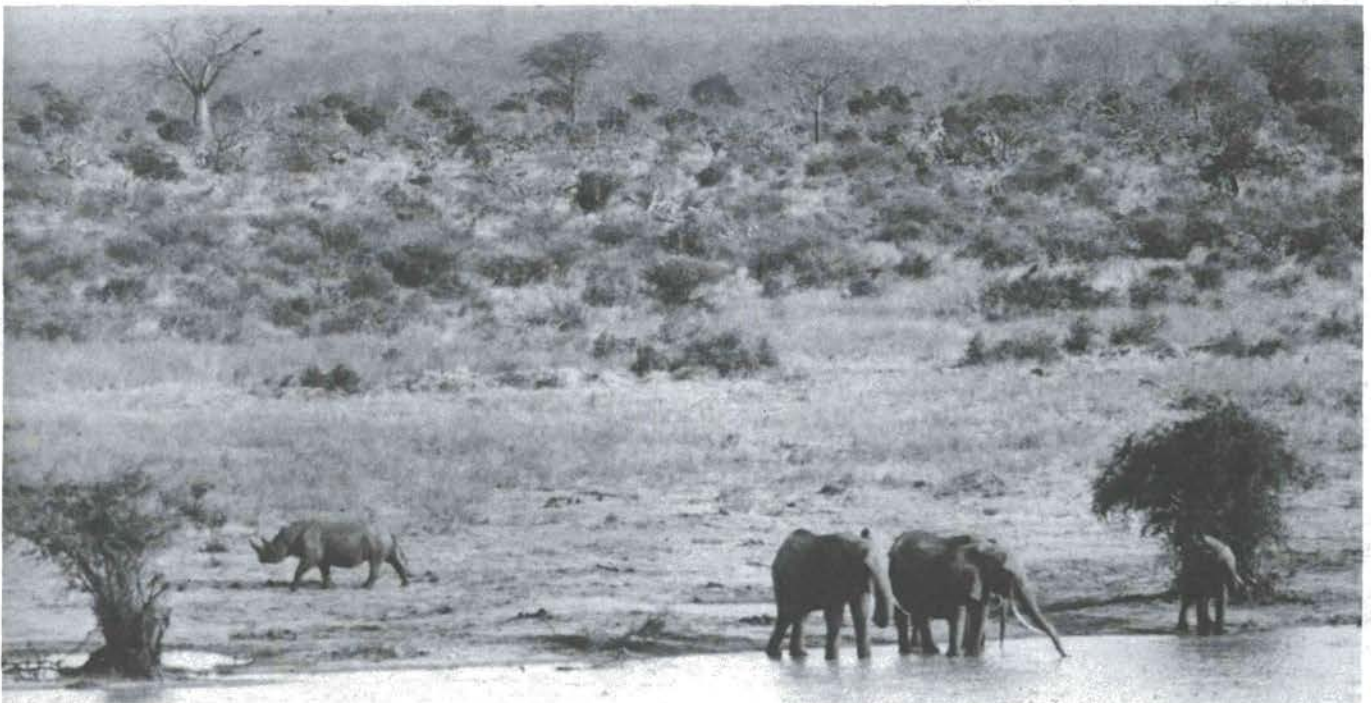
Top level approaches by the Director General of IUCN are considered to be the most appropriate action in the following cases:

Kaokoland/Damaraland elephants and rhinos - Namibia

The remnant desert populations of Kaokoland elephants and rhinos, both uniquely adapted to the arid environment, are threatened by both legal and illegal hunting. Since the authorities may not be aware of the importance of these populations an approach from IUCN could probably bring about a change in policy and secure the safety of the population.

Park "W" Elephant - Benin, Niger and Upper Volta

The elephant population of the park moves across the international boundaries of three countries and there is a grave need to coordinate policy and anti-poaching measures and to examine a possible threat from plans to mine phosphate in the Park.





Desert elephant, Gourma area - Mali

This population of 500 or less desert elephants, which roams about the southern region of Mali, is in need of protection. The resources for conservation are meagre and it is clear that the survival of this population would rest most securely on a political commitment to their conservation by the leaders of Mali.

Trade in animal products

There is a need for producer countries to coordinate their trading activities, particularly in ivory and pricing structures for safari operations. Such coordination would enhance the value of wildlife as a form of land use and hence encourage sustained utilization and conservation.

African Convention on Conservation of Nature and Natural Resources

Diplomatic action is now required to bring the Convention to the forefront of African conservation action, to increase the number of signatory states and to update the various schedules to the convention if this has not been done.

Regional cooperation in anti-poaching

Regional cooperative anti-poaching measures should be promoted.

ACTION ON TRADE

Rhino horn trade and approaches to governments of consumer countries

The CITES Secretariat should give the highest priority to top level approaches to the Government of North Yemen and to governments in East Asia - particularly those who are not signatories of CITES. A primary purpose of these approaches should be to apprise these governments of the precarious and rapidly declining populations of rhino in Africa and Asia, and to urge them to take measures to arrest the trade in rhino horn. The influence of rulers in reducing the demand for rhino horn could be substantial if not decisive.

Rhino horn trade and approaches to traders in consumer countries

Contact should be made with traders in rhino horn to explain the precarious status of rhino and the role of the trade in the demise of these animals. Such an approach would be linked to a request to the traders to examine acceptable alternative products and substitutes with a view to phasing out the trade in rhino horn. The two key projects are an approach to the traders in North Yemen, and an approach to traders in East Asia.

Monitoring of the ivory trade

The CITES Secretariat should increase its capability to monitor trade in raw ivory and rhino horn with the assistance of the IUCN Conservation Monitoring Centre.

Licensing legitimate international traders in raw ivory

All international traders in raw ivory should be licensed to conduct such trade.

Implementation of CITES

Technical assistance to African countries in their efforts to implement CITES is of high priority.

FIELD ACTION

RHINOS

Northern white rhino

(Ceratotherium simum cottoni)

The northern white rhino is in an extremely precarious position and the following projects in order of priority are recommended for immediate action:

1. The captive herd of northern white rhino should be strengthened by centralising the animals presently held in captivity into a single viable and productive breeding unit.
2. A few animals from the wild should be added to the captive breeding herd. Such animals would be on loan from the countries where they might be captured.
3. The white rhino population of Garamba National Park, Zaire, is considered to have the greatest biological and conservation value and to be the most viable. Since this population also resides in a long-established National Park, the greatest effort should be devoted to securing the safety of the white rhino in Garamba. Garamba is also a priority in the conservation of elephants.
4. Apart from Garamba National Park the southern Sudan is the only other country in which wild northern white rhino still survive. Given their rapidly declining numbers and uncertain status in protected areas or planned protected areas in the Sudan, direct and cost-effective action should be taken to achieve the primary goal of securing the preservation of at least one viable population unit in the southern Sudan. The proper protection of a limited area into which additional or outlying animals may be translocated may be more successful in the preservation of white rhino than costly attempts to establish new and large protected areas.

Southern white rhino

(C. simum simum)

There is a surplus of white rhino in some southern African National Parks and funds are needed to translocate large numbers of these animals to suitable National Parks within the former range of the species. Priority areas (i.e. areas of high conservation and biological status in which good populations of white rhino could be established) are Wankie National Park, the Kazuma Pan N.P. - Matetsi - Zambesi N.P. (formerly Victoria Falls N.P.) complex, the Chobe National Park and possibly those National Parks in the middle Zambesi valley.

Black rhino (*Diceros bicornis*)

A rider to all consideration of priorities within the black rhino projects is the uncertainty about the taxonomic status of various populations examined. A study of the taxonomy of *D. bicornis* is important. Meanwhile, the priority ranking for conservation of sub-species (or regional populations) within the species is: 1. *Diceros bicornis longipes*, 2. *D. b. ladoensis*, 3. *D. b. michaeli*, 4. *D. b. minor*.

Cameroon: (*D. b. longipes*)

The effectiveness of anti-poaching measures carried out by trained and motivated staff can be greatly increased by the injection of key items of equipment which should serve to secure the protection of small but viable populations of *D. b. longipes* in Benoué and Bouba Njida National Parks and the Reserve du Faro.

Central African Republic: (*D. b. longipes*)

The rhino populations in the CAR are considered a priority because of their high numbers in areas of conservation interest.

Kenya: (*D. b. ladoensis*)

The Kerio protected area contains the only protected population of *D. b. ladoensis*. There is a need to strengthen existing protection measures and to make provision for the translocation of animals from surrounding unprotected areas.

Kenya: (*D. b. michaeli*)

The Aberdares National Park provides an established key area for the protection of *D. b. michaeli*. Protection measures should be maintained at the highest level by supply of appropriate equipment and man-power training.

Translocation and protection of *D. b. michaeli* in Meru and Tsavo merits continuing support, but care should be taken regarding the density at which black rhino can be stocked since mortality from territorial rivalry can be high in this species.

Tanzania: (*D. b. minor*)

The Selous Game Reserve holds the most valuable population of *D. b. minor*. Existing protection measures should be maintained and reinforced to counteract, in particular, incursions by motorised poachers. The Selous is also a priority area for elephant.

Zambia: (*D. b. minor*)

The high biological and conservation status of the Luangwa valley population of *D. b. minor* should be maintained and reinforced.

Southern Africa

The status of a number of black rhino populations which occupy well-protected areas could be enhanced by translocations from populations which have reached their stocking capacity. There are several such projects which merit support, particularly in Malawi and Bophuthatswana.

ELEPHANTS

West Africa

The West African elephants are considered to be the highest elephant priority because their numbers are low, their range is now fragmented and they occupy habitats of high conservation value in the context of ecosystem conservation in Africa. This factor is a particularly important consideration in the conservation of the West African forest elephants.

Ivory Coast

Tai Forest is the largest protected area of forest which includes elephants west of the Dahomey gap. The forest includes numerous endemic West African plants and mammals. The major present need is to complete the demarcation of the park boundary and to establish the buffer zone around it.

Liberia

Sappo is the second largest undisturbed forest area with viable elephant populations in West Africa. The area is similar to the Tai forest but has a lower conservation status.

Sierra Leone

Gola Lofei contains what is probably the third largest forest elephant population in the region and it is the only undisturbed rainforest in Sierra Leone. The area includes the pigmy hippo and endemic duikers. Conservation action is required in respect of the Lofei River Union (the regional management authority), which plans to develop a hydro-electric scheme in the area. Action proposed by Sierra Leone aims at surveying the area and at involving the Lofei River Union in an examination of the conservation issues in the region.

Ghana

Bia and Ankari National Parks contain small elephant populations which need to be maintained by ensuring that the trained and motivated staff manning these areas are properly equipped for effective anti-poaching work.

Senegal

Niokolo Koba National Park carries the most westerly population of savanna elephant. The Park has a high biological value and a high conservation status. The elephant population is threatened by poaching. There is a need to ensure the survival of the elephant herd which is now considered to number about 200.

Benin, Niger, Upper Volta

Park "W" contains the most important population of savanna elephant in West Africa. The population may be as high as 4000 elephants. Because the Park straddles three countries the base line information on the population is confusing and there is primary need for a coordinated survey to establish numbers and the extent of reported declines in the population.

Tanzania

Selous Game Reserve scores high both on biological value and on conservation status. It is important that this status is maintained so as to secure the largest and most valuable savanna elephant population in Eastern and southern Africa. The Selous is also a priority area for black rhino.

Zaire

Garamba National Park has a high biological value and a small injection of appropriate assistance should improve the present conservation status to a higher level. The Garamba N.P. is the first priority for anti-poaching measures to save the northern white rhino.

Virunga National Park has very high biological value. Its presently moderate conservation status and an elephant population declining through poaching combine to make this a priority for conservation action. The presence of an endangered mountain gorilla population reinforces the need for support and for strengthening the anti-poaching capability of the Park staff.

Cameroon

Bouba Njida National Park has a small but valuable herd of elephant as well as black rhino. The effectiveness of anti-poaching operation by trained and motivated staff will be increased by the provision of key items of equipment.

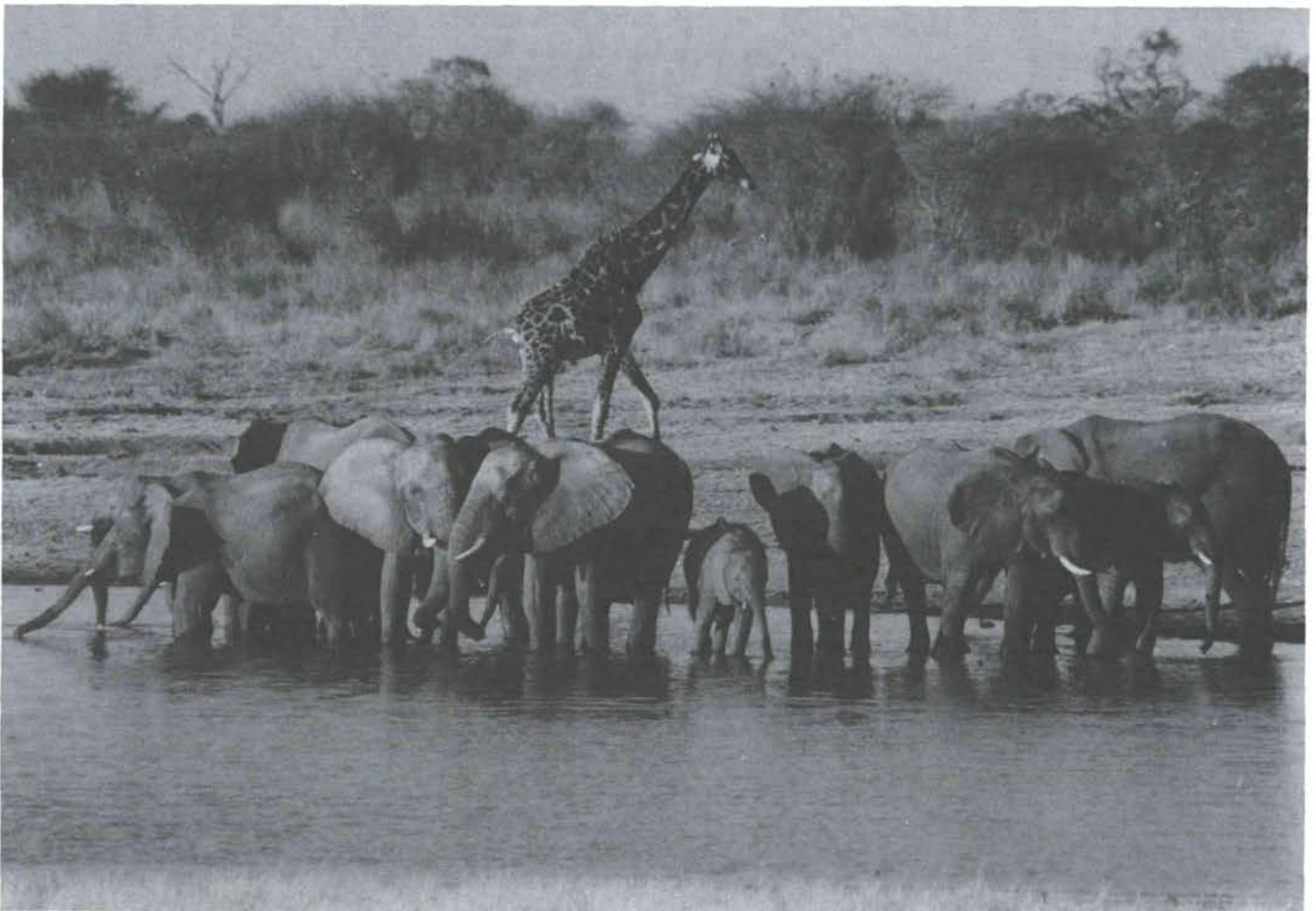
Central African Republic

The conservation status of Bamingi Bangoran National Park needs to be improved. The status of elephant in the Reserve de Zemongo is uncertain and there is a clear need for a survey of this area.

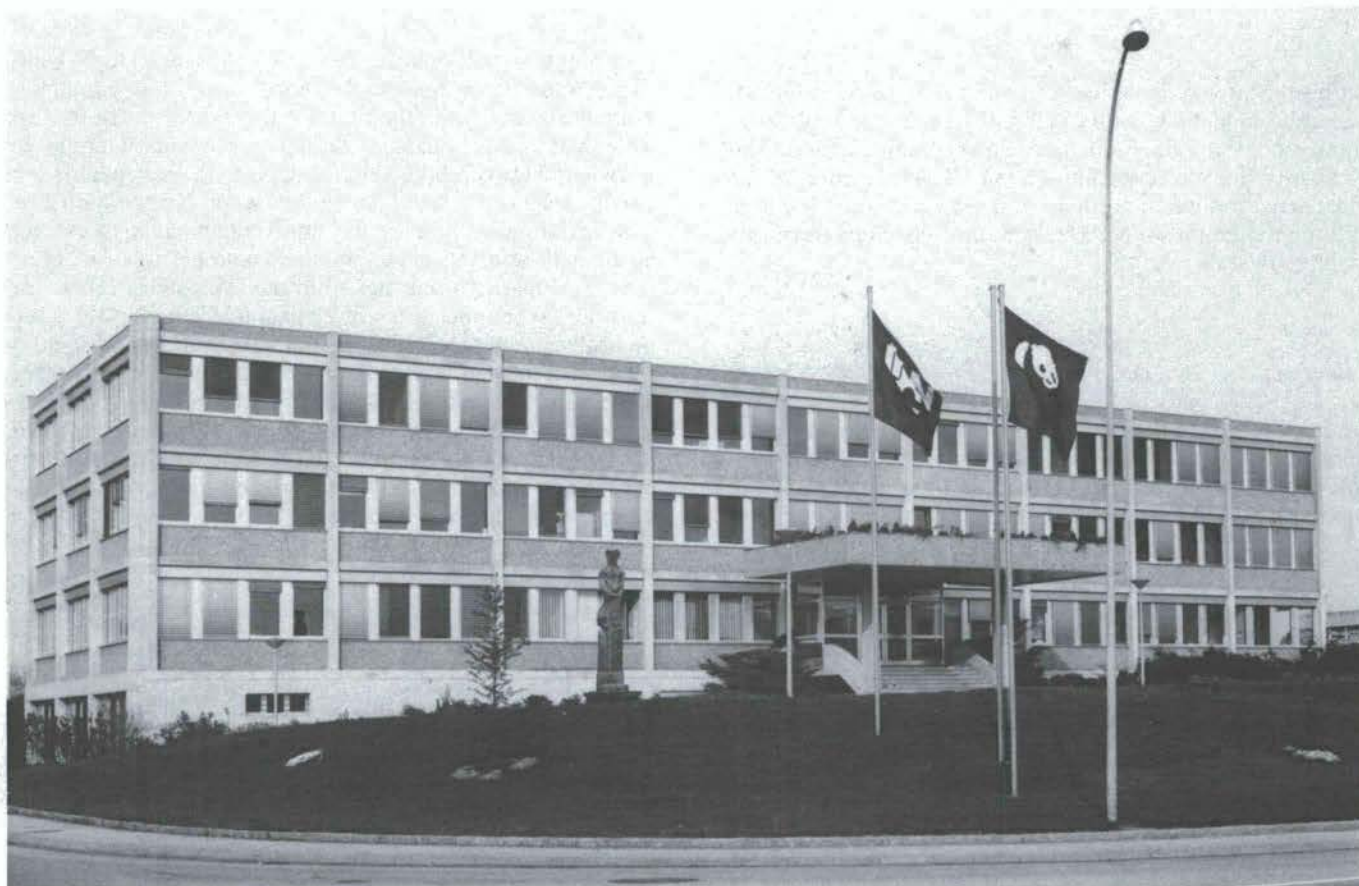
Central and East Africa

Congo River Basin

The largest populations of African elephant reputedly occupy the lowland forest and forest savanna ecotypes of the Congo river basin. The countries included in this zone are: Central African Republic, Cameroon, Congo, Gabon and Zaire. Only two population estimates amounting to some 30,000 elephants are considered to be good data. The remaining estimates which bring the total for the region to 412,000 are little better than guesses. The true population could be anywhere between 300,000 and three million elephants and in consequence the trend of the population is not established. The taxonomic status of the forest elephant has not been adequately resolved. Since the majority of African ivory on the world market originates from the Congo basin it is vital that the taxonomic status of elephants occupying this zone be resolved and that their distribution, numbers and trend in relation to the major ecosystems or communities in the region are established. Without this information sensible conservation priorities cannot be established, much less implemented, in the region. Appropriate taxonomic study, ecological survey and census should be undertaken by experienced and competent scientists without delay.



IUCN/WWF ACTION



The World Conservation Centre : Headquarters of IUCN/WWF

In order to promote international collaboration in conservation of elephants and rhinos IUCN/WWF are taking action in a number of directions:

- WWF has raised large sums of money and roused international consciousness of the seriousness of the situation. The funds are being channelled under IUCN guidance and management into field projects and related conservation activities, which include strengthening national park systems; equipping park rangers and anti-poaching units; training wildlife staff; and conservation education of African youth through Wildlife Clubs and other means;
- IUCN/WWF are making joint representations to countries where there are elephants and rhinos, and to those that consume and trade in their products, so as to achieve universal acceptance and effective implementation of the

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

- Consumers and traders in elephant and rhino products are also being approached to win their cooperation in conserving the species. In the case of rhinos this involves an attempt to halt all trade and exploitation in view of the grave threat to their future. For elephants it means efficient regulation of the trade in ivory and hide within sustainable limits on a national as well as international scale;
- Production of standard forgery-proof trade documents and indelible marking of exported raw ivory are some of the practical measures already receiving detailed attention;
- Governments of developed countries are being approached to offer technical assistance to African countries so that they can establish effective management and scientific authorities to regulate wildlife trade.

CONCLUSION

A Time for Decision

Elephants and rhinos have been a prominent part of Africa's life through the ages, providing cultural inspiration as well as food and other products. Many countries in the world have destroyed their wildlife, but in several countries in Africa it is still abundant and many African leaders have shown their commitment to conservation by the establishment of extensive national parks and reserves.

Substantial numbers of elephants exist today in Africa and, although their numbers are likely to decline because of loss of habitat to human expansion, they are not in danger as a species, provided they are managed wisely. But numbers alone are no safeguard and it should be borne in mind that in the United States tens of millions of bison were reduced to a few hundreds by indiscriminate killing in less than 50 years in the 19th century, thus depriving the American Indians of one of their principal natural resources.

Elephants play a dominant role in natural ecosystems and can have a severe impact on agriculture. These factors make careful management necessary. Once it has been decided how many elephants a country can retain in the long term in the light of the needs of its human population, reserves large enough to meet their food and water requirements need to be set aside and adequate provision made for good management and protection. Some countries have already allocated substantial areas for conservation of elephants and other wildlife, but it is strongly recommended that all governments should consider whether present provisions are adequate and should take any necessary decisions while they still have a choice of options.

Ivory and elephant products are part of each nation's wealth and the revenue derived from them should be used for the public benefit. Poaching and uncontrolled trade at present divert much of the revenue to private individuals and groups. The situation can be brought under control by universal acceptance and enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). To be fully effective this Convention requires supporting national legislation and international cooperation.

Wildlife generally, including rhinos, will benefit from successful conservation of elephants. But rhinos are a special case. The most serious threat to their existence is the strong demand for horn from outside Africa, which leads to evasion of protective measures. The international community has a duty to help African governments save their rhinos by intensive efforts to divert users of rhino horn to other products which do not threaten wildlife.

The developed nations of the world have acknowledged their responsibility to help developing nations. This responsibility extends to the provision of financial and expert assistance to conserve natural resources, which are essential to human well-being. IUCN/WWF are pledged to play a leading role in this task.

APPENDIX

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)

(R) Ratification
(A) Accession
(Ap) Approval
(Ac) Acceptance

Argentina	08.01.1981 (R)	Malawi	05.02.1982 (A)
Australia	29.07.1976 (R)	Malaysia	20.10.1977 (A)
Austria	27.01.1982 (A)	Mauritius	28.04.1975 (R)
Bahamas	20.06.1979 (A)	Monaco	19.04.1978 (A)
Bangladesh	20.11.1981 (R)	Morocco	16.10.1975 (R)
Bolivia	06.07.1979 (R)	Mozambique	25.03.1981 (A)
Botswana	14.11.1977 (A)	Nepal	18.06.1975 (A)
Brazil	06.08.1975 (R)	Nicaragua	06.08.1977 (A)
Cameroon, United Republic of	05.06.1981 (A)	Niger	08.09.1975 (R)
Canada	10.04.1975 (R)	Nigeria	09.05.1974 (R)
Central African Republic	27.08.1980 (A)	Norway	27.07.1976 (R)
Chile	14.02.1975 (R)	Pakistan	20.04.1976 (A)
China	08.01.1981 (A)	Panama	17.08.1978 (R)
Colombia	31.08.1981 (R)	Papua New Guinea	12.12.1975 (A)
Costa Rica	30.06.1975 (R)	Paraguay	15.11.1976 (R)
Cyprus	18.10.1974 (R)	Peru	27.06.1975 (R)
Denmark	26.07.1977 (R)	Philippines	18.08.1981 (R)
Ecuador	11.02.1975 (R)	Portugal	11.12.1980 (R)
Egypt	04.01.1978 (A)	Rwanda	20.10.1980 (A)
Finland	10.05.1976 (A)	Senegal	05.08.1977 (A)
France	11.05.1978 (Ap)	Seychelles	08.02.1977 (A)
Gambia	26.08.1977 (A)	South Africa	15.07.1975 (R)
German Democratic Republic	09.10.1975 (A)	Sri Lanka	04.05.1979 (A)
Germany, Federal Republic of	22.03.1976 (R)	Suriname	17.11.1980 (A)
Ghana	14.11.1975 (R)	Sweden	20.08.1974 (R)
Guatemala	07.11.1979 (R)	Switzerland	09.07.1974 (R)
Guinea	21.09.1981 (A)	Tanzania, United Republic of	29.11.1979 (R)
Guyana	27.05.1977 (A)	Togo	23.10.1978 (R)
India	20.07.1976 (R)	Tunisia	10.07.1974 (R)
Indonesia	28.12.1978 (A)	Union of Soviet Socialist Republics	09.09.1976 (R)
Iran	03.08.1976 (R)	United Arab Emirates	20.11.1974 (A)
Israel	18.12.1979 (R)	United Kingdom of Great Britain and Northern Ireland	02.08.1976 (R)
Italy	02.10.1979 (R)	United States of America	14.01.1974 (R)
Japan	06.08.1980 (Ac)	Uruguay	02.04.1975 (R)
Jordan	14.12.1978 (A)	Venezuela	24.10.1977 (R)
Kenya	13.12.1978 (R)	Zaire	20.07.1976 (A)
Liberia	11.03.1981 (A)	Zambia	24.11.1980 (A)
Liechtenstein	30.11.1979 (A)	Zimbabwe	19.05.1981 (A)
Madagascar	20.08.1975 (R)		



The International Union for Conservation of Nature and Natural Resources (IUCN), founded in 1948, is the leading international non-governmental organisation concerned with conservation. It is a network of governments, non-governmental organisations, scientists and other conservation experts dedicated to the protection and sustainable use of living resources.

IUCN has 496 member organizations in 111 countries; members include 57 States, 118 government agencies and virtually all major national and international non-governmental conservation organizations.

IUCN's six Commissions consist of some 1500 experts in ecology; environmental education; environmental planning; environmental policy, law and administration; national parks and protected areas; and the survival of species. They provide a unique resource for WWF.

The IUCN Secretariat conducts or facilitates IUCN's major functions: monitoring the status of conservation, developing plans for dealing with conservation problems (such as the World Conservation Strategy); promoting action on these plans by governments or organisations as appropriate, and providing advice and assistance to implement conservation. The Secretariat coordinates the development, selection and management of WWF's conservation projects around the world. IUCN also manages, for UNEP, the CITES Secretariat which regulates the world-wide trade in endangered species of animals and plants.



WWF (World Wildlife Fund) is an international conservation foundation, based in Switzerland and with 25 affiliates on five continents.

Its scope is the conservation of nature and the natural environment in all its forms: fauna, flora, landscapes, soils, water, air and other natural resources.

WWF aims to create awareness of threats to the environment and to generate and attract on a world-wide basis the strongest possible moral and financial support for safeguarding the living world and to convert such support into action based on scientific priorities.

WWF ensures that its programme has a sound scientific basis by close collaboration with IUCN, with whom it shares a joint world headquarters.

Since its founding in 1961, WWF has channelled over US\$6.5 million into more than 3,000 projects in some 130 countries which have saved animals and plants from extinction and helped to conserve natural areas all over the world. It has served as a catalyst for conservation action, brought its influence to bear on critical conservation situations, and provided a link between conservation needs, the scientific resources necessary to meet them, and the governments and other authorities whose action is needed.

