TRANSFER OF THE POPULATIONS OF Loxodonta africana OCCURRING IN BOTSWANA, MALAWI, NAMIBIA, ZAMBIA AND ZIMBABWE FROM APPENDIX I TO APPENDIX II.

NAMIBIAN SUPPLEMENT TO THE SUPPORTING STATEMENT

BIOLOGICAL DATA

1. Distribution

1.1 Historical distribution

Elephants formerly occurred throughout Namibia except in the southwestern karroid region and parts of the coastal desert zone. Surface water in Namibia is limited to a few perennial rivers mostly on the borders of the country, scattered springs and temporary impoundments in pans and seasonal rivers. Elephant distribution before 1900 would have been limited to focal watering points in the interior and the perennial rivers, with expansion to other parts during the rainy season. The main concentrations of elephants before 1900 seem to have occurred in the Kaokoveld region of the northern Namib Desert and adjacent regions, and in northeastern Namibia (Shortridge 1934, De Villiers & Kok 1984). Elephants were, however, eradicated from large parts of their historical range already by 1900, largely due to hunting for ivory by pioneer settlers and traders. Vital watering points supporting large concentrations of elephants became the nuclei of settlements and elephants were either hunted to extinction or displaced by people and livestock from such places (Dryden 1903, De Villiers & Kok 1984, Viljoen 1987).

1.2 Current distribution

Figure 1 illustrates the approximate distribution of elephants from national surveys in 1975 (Joubert & Mostert 1975, excluding

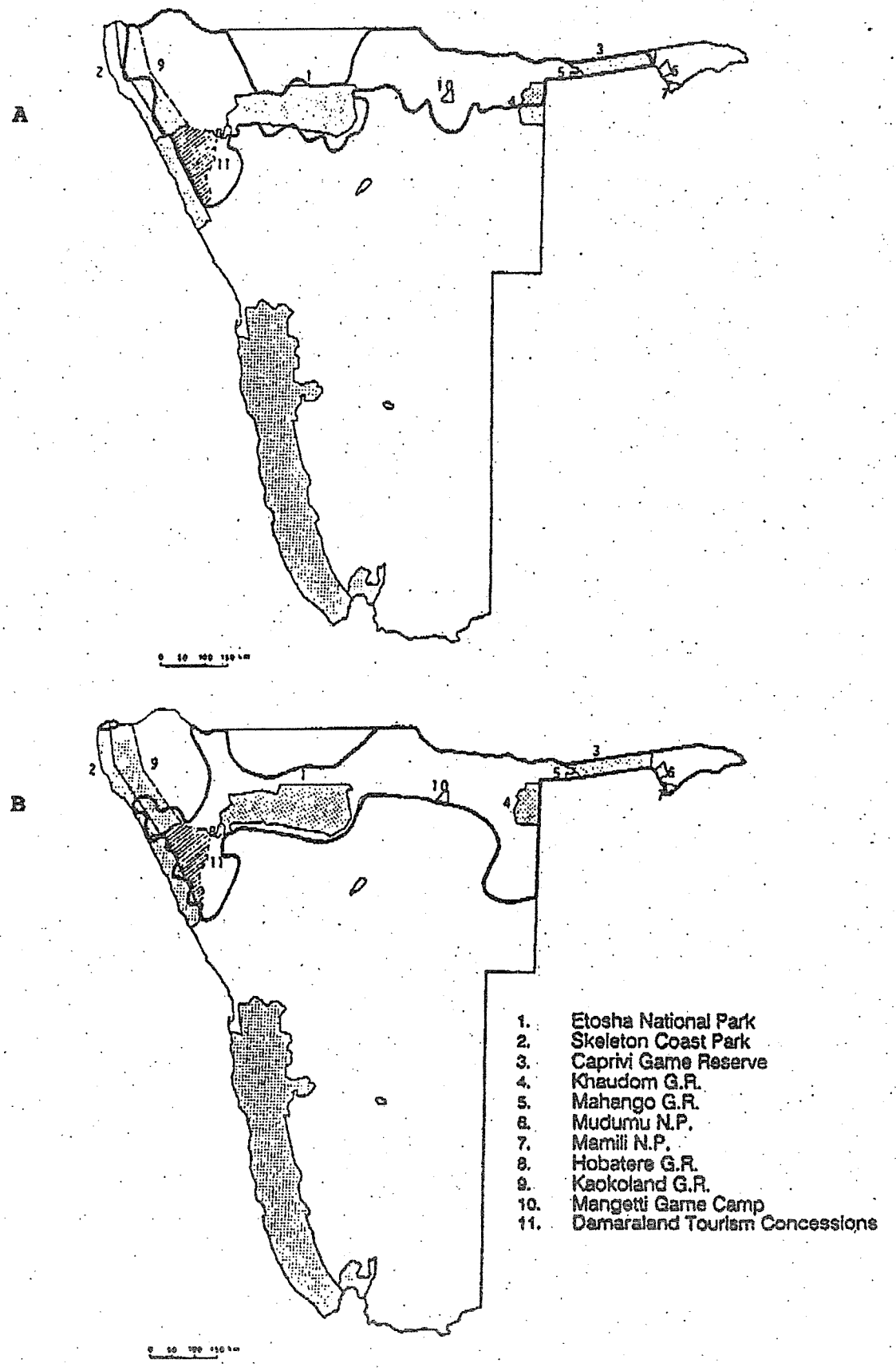

Figure 1. Elephant range in Namibia in 1975 (A) and 1990-1991 (B). The estimated elephant range in 1975 except the eastern Caprivi was c. 163 000km^2, and c. 144 000km^2 in 1991.

the eastern Caprivi region) and 1990-1991 (Lindeque, unpublished data). The distribution of elephants has changed considerably in recent times (although much of the earlier information is of an incidental nature) due to the following factors:

- Drought and politics

Northern Namibia went through a very severe drought from 1979 to 1983 (in the west from 1976 to 1981) during which surface water became very limited. People occupied springs formerly shared with wildlife, resulting in extensive range loss in the Kaokoveld in particular. Many boreholes were established at the time, leading to radical changes in human distribution. Northern Namibia was under South African military administration during this period, and substantial illegal hunting occurred in the Kaokoveld (Viljoen 1987). Etosha National Park showed an influx by elephants during the drought, mostly from the Kaokoveld. Elephant range in the Kaokoveld was as a consequence of these events reduced to the present extent. There is some indication of a reverse process following improved rainfall in the region, as small numbers of elephants have settled in parts of former vacated range.

- Range expansion

Elephants have probably colonized parts of northeastern Namibia since 1975, particularly the region south of the Khaudom Game Reserve in Bushmanland. Little information was available on this region until recently, but it seems that the former seasonal presence of only a few elephants in the region has been supplemented by an influx from adjacent areas. Other localities in northeastern Namibia also showed a change from a seasonal/ sporadic/ sparse elephant presence in the past to more regular visits, longer periods of residence and greater abundance. This could be partly due to the increasing availability of water in some protected areas, but could also represent overflow from the high density and growing population in Botswana and military disturbance in the Angolan elephant range.

1.3 Elephant range in Namibia

Elephants and their range in Namibia form the one end of a cline from east to west in southern Africa. Elephants seem to become increasingly nomadic/ migratory from east to west, following a cline in rainfall, vegetation biomass and availability of surface water. Elephant range in Namibia needs further qualification, as vast parts are only sporadically or temporarily used, depending to a large extent on regional rainfall patterns. The extent of elephant range in Namibia has furthermore been misrepresented in several documents due to the geographical nomenclature used for various parts of the range which did not correspond with actual range. The current understanding of the elephant range is described in Table 1 and illustrated in Figure 2.

Three categories of range are recognized with further subdivisions:

1.3.1 Primary range: Land used by elephants throughout the year, but densities could be extremely low and variable (Table 1). About 29 000 km^2 (58%) of the primary range is included in National Parks and Game Reserves or equivalents, and a further 11 820 km^2 (24%) have de facto protected status (= land not proclaimed as protected areas but essentially managed as such). Parts of the primary range act as migration corridors in some years. The proclamation of c. 14 000km^2 including 4 000km^2 of primary elephant range in the Kaokoveld as a Game Reserve is expected to be finalized in 1992. Submissions to the same effect have been made regarding the 320km^2 Hobatere "Game Park" and the 480km^2 Mangetti "Game Camp", being primary and secondary elephant range respectively. Land use and land tenure in Namibia is presently under official investigation, but further attempts at proclaiming reserves in elephant range are likely to be restricted to upgrading the status of tourism concession areas which have de facto protected status at present, and possibly the Huab catchment in the Kaokoveld (communally farmed state land).

Table 1. Primary elephant range in Namibia

Unit (Status)*	Area (km^2)	km^2 of elephant range**	approx. % primary elephant range
Etosha (NP)	23 175	18 600	37.2
Hobatere (C)	320	320	0.6
Skeleton Coast (GR)	20 000	2 000	4.0
Kaokoland (S)	14 000	4 000	8.0
NW Damaraland (C)	7 500	7 500	15.0
Huab (U)	-	4 800	9.6
Ehomba (U)	-	1 000	2.0
Khaudom (GR)	3 840	3 840	7.7
E. Bushmanland (U)	-	2 000	4.0
Mahango (GR)	250	250	0.5
Caprivi (GR)	5 300	3 000	6.0
Mamili (NP)	410	410	0.8
Mudumu (NP)	900	900	1.8
Quando R. (U)	-	400	0.8
Linyanti R. (U)	-	600	1.2
Zambezi R. (U)	-	400	0.8
Total	75 695	50 020	

* NP= National Park, GR= Game Reserve, C= Tourism Concession area / de facto protected area, S= State land as de facto protected areas, U= Unprotected range

** Actual areas of some units are much larger, but the balance consists of hyper-arid land or settled land.

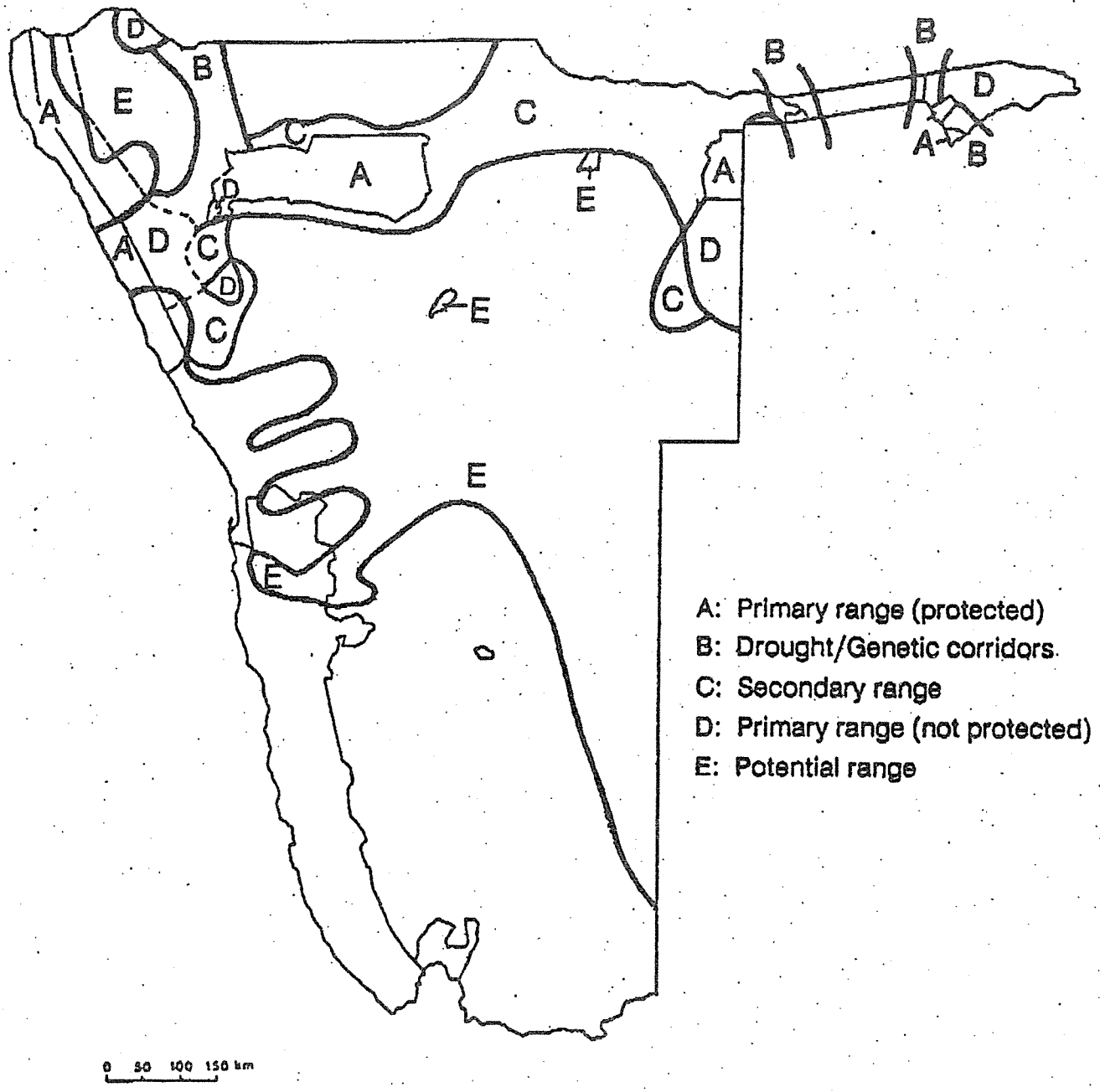

Figure 2. A classification of the elephant range in Namibia.

1.3.2 Secondary range: Land used by elephants primarily during the annual wet season; the exact limits of dispersal change from year to year depending on the duration of the wet season and the availability of surface water. Parts of the secondary range act in some years as migration corridors. Secondary elephant range in Namibia has varied from c. 36 000km^2 to c. 94 000km^2 over the past 10 years, although the extent of the range has not been measured in each year. The only range loss in Namibia since Independence in 1990 occurred in the Caprivi Game Park through resettlement of people in what has probably been secondary elephant range. This park was under military administration for the last decade, and people have been settled there during this time as well. A land use plan proposed for the Caprivi Game Park includes strict protection of the primary elephant range in this park through zonation.

1.3.3 Potential range: Elephants formerly occurred throughout Namibia except in the southwestern Karroid region and parts of the coastal desert. Two protected areas fall within the historical distribution of elephants, and are considered as potential elephant range. The bulk of the land in the potential range category is under private ownership, and the reintroduction of elephants on such land depends on private initiative.

2. Population (estimates and trends)

Table 2 presents elephant population estimates based on censuses over the past two decades. Five census zones are used in Table 2 as discrete populations cannot be defined precisely in Namibia. The estimates for the Caprivi region (including Mahango G.R., Mamili N.P., Mudumu N.P. and the Caprivi G.R.) should be used cautiously as elephant densities fluctuate considerably within a given year due to cross-border movements. Censuses in this region are done when woodland phenological status allows optimal visibility and thus not necessarily at the time of peak elephant densities. It has been possible to census

Table 2. Population estimates of elephants based on censuses in Namibia from 1973 to 1990 in five census zones. Estimates in parenthesis are derived from incomplete censuses and ground estimates.

Year	Etosha Hobatere complex a	Kaoko complex b	Khaudom-Bushmanland c	W.Caprivi complex d	E. Caprivi complex e	Total
1973[1]	1 293					
1974[3]	835					
1975[1,2]	1 293	350-500				
1976[3]	1 170					
1977[2,3]	836	250-500				
1978[3]	1 298					
1979[3]	1 876					
1980[4]					1 696	
1982[3,4]	2 202				2 405	
1983[2,4]	2 800	357			2 575	
1984[3,4]	2 464	(300)	395	395	2 015	(5 569)
1985[3,4]	1 244				1 754	
1986[3,4]	(1 600)				869	
1987[4]	2 021	(250)	528	1 037	1 559	5 395
1988[4]	(2 000)	(300)	(1 000)	(1 000)	1 388	(5 688)
1989[4]	(1 500)	(300)	(800)	(800)	1 141	(4 541)
1990[4]	1 556	288	1 125	966	1 388	5 323

a. Etosha N.P. and Hobatere Game Park; b. Entire elephant range is censussed, except Ehomba area and isolated parts of SE Kaokoland; c. Khaudom G.R. and approx. 2 000km^2 of eastern Bushmanland; d. Mahango G.R. and approx. 2 000km^2 of the Caprivi G.R.; e. Mudumu N.P., Mamili N.P. and approx. 1 000km^2 of the floodplains of the Quando and Linyanti Rivers.

1. Joubert & Mostert (1975), 2. Viljoen (1987), 3. Lindeque (1988), 4. Unpublished data, Min. of Wildl., Cons. & Tourism.

virtually the entire primary range only once within one year. The 1990 population estimate (5 323) is thus regarded as the best estimate to date. This estimate was based on a combination of total counts and intensive (30%) random sample counts in different parts of the elephant range. Some counting procedures might not be strictly valid in statistical terms due to extremely low densities and clumping of elephants which confounds adequate sampling, but the same problems apply to many other parts of the elephant range in Africa (Lindeque 1988, in prep.; Lindeque & Lindeque in prep. a,b).A more realistic estimate of the Namibian elephant population size in view of the limited value of instantaneous counts and the variances associated with census estimates is a range of 4 500 - 6 500 elephants for the country at present.

The only other useful estimates of the national elephant population are those based predominantly on aerial surveys as in 1984 (5 569) and 1987 (5 395). These three estimates indicate that the national population might have declined slightly from 1984 to 1990 (5 569 - 5 395 - 5 323), but the estimates are not directly comparable. Some census zones show considerable fluctuation in elephant numbers (Table 2) which underlines the migratory-nomadic character of elephant accumulations in Namibia. Cross-border movements compromise the utility of instantaneous census estimates. Namibia and Botswana will in future coordinate censuses to limit the effects of cross-border movements in the Caprivi region (if logistically possible), and Namibia would ultimately like to reach similar agreements with Angola. Resources for elephant monitoring are severely restricted, and aerial censuses are done at the expense of other priority work.

3. Elephant management objectives

The national conservation objectives as enshrined in the Constitution of the Republic of Namibia are the maintenance of biotic diversity and the sustainable utilization of renewable natural resources. Elephant management objectives are consequently designed to achieve the national conservation objectives, using

management approaches appropriate to different land categories. Elephants are nevertheless classed as a specially protected species throughout the entire country, regardless of the status of a given part of their range. This is the highest legal category of protection afforded in Namibia.

3.1. Protected areas

The maintenance of long-term viable elephant populations applies to all protected areas within the elephant range, however, some units are too small to maintain isolated populations. Elephants cannot be confined to protected areas and management policies are directed towards the maintenance of protected areas as dry season refugia or core areas of protection for the bulk of the national population of elephants. Elephant numbers within a protected area are allowed to fluctuate within limits. Upper limits are defined as the elephant density at which woodlands decline due to elephant utilization or other species are threatened. Lower limits are defined as elephant densities below genetic viability thresholds. Interventive management may be applied when limits are approached or exceeded, and may include population reduction, disease control, habitat manipulation or genetic exchange. It is presently unrealistic to define ecological rather than arbitrary unit populations in most parts of the elephant range due to sporadic migrations and annual drift in distribution due to rainfall. Management intervention and the setting of limits therefore have to be based on regional elephant trends rather than temporal conditions within a particular protected area.

Population reduction for ecological reasons is not regarded as a form of utilization, but may involve financial benefits. Population reduction is thus referred to as culling and not harvesting. The most appropriate form of utilization in protected areas is tourism, and probably future translocation of individuals to other protected areas or other land.

3.2. Unprotected elephant range (predominantly state land for communal use)

The maintenance of viable elephant populations in this category of land has thus far depended on legal protection of elephants, law enforcement, anti-poaching campaigns, and small but expanding programmes of environmental education, community conservation, conflict resolution and problem elephant control. The threat nevertheless remains that elephants can disappear over most of the range outside protected areas within a short period. Elephants can easily and rapidly be displaced by people and livestock in Namibia by regulating access by elephants to water during the c. 9 month dry season each year. It is questionable whether current elephant densities can be maintained in protected areas in Namibia if all elephants end up restricted to these units. The secondary range in Namibia is absolutely vital, both to allow dry season range to recover when elephants disperse, and for the maintenance of an ecological process of regional importance and impact.

Substantial loss of range will occur unless elephants are seen as an asset to rural people. Unless the economic benefits from wildlife exceed the returns from competing forms of land use, elephants will ultimately disappear from all of Namibia except the larger protected areas with established tourism enterprises and the capacity to maintain isolated elephant populations. The management objective for elephants on unprotected land is thus the sustainable utilization of elephants to the benefit of local communities and the state. Administrative reform in post-independence in Namibia is still in progress and it is not yet possible to channel revenue from a state owned entity such as elephants directly to local communities. There is nevertheless a good prospect that this would be possible once relevant legislation has been amended, but this prospect would be jeopardized by current international attempts to restrict the utilization of elephants.

Tourism is not a viable form of sustainable utilization in large parts of communally farmed state land, but is nevertheless encouraged by the State as far as possible. The appropriate form of sustainable elephant utilization in several areas is trophy hunting, periodic harvesting and culling. Culling would be done

when elephant densities exceed thresholds set by the intensity of elephant-human conflicts and the dominant form of land use of a given region, eg. timber harvesting, subsistence cropping etc.

Land use and land tenure systems are in an evolutionary phase in Namibia. Large parts of Namibia have little prospects for development other than through wildlife utilization. Elephants are in several cases the most valuable or the only valuable natural resource available to people. Unless their full value can be realized, increasing proportions of the elephant range will be converted to subsistence agriculture to support the growing Namibian population. Even a government sensitive to environmental concerns would not be able to prevent people from converting elephant and other wildlife range for subsistence agriculture if no alternatives can be found.

In the present transitional phase, direct utilization of elephants is the only viable form of utilization, even in areas where tourism could ultimately be developed if sufficient demands exist and adequate investment is available. Current potential for significant returns from non-consumptive wildlife utilization without major investment is limited, and rapid conversion to a predominantly wildlife-based economy is unlikely in most cases. Multiple land use systems are thus appropriate in the interim, with elephants being the most economically viable part of the wildlife component.

3.3. Privately owned land

Almost all privately owned land falls outside the recent elephant range in Namibia. Landowners are encouraged to introduce elephants on suitable land in the historical distribution range of elephants. Such units have to be fenced but the State encourages the use of elephants from Namibian origin for reintroduction. Other than setting certain requirements and maintaining control of hunting through permits, the management of elephants in private ownership is up to the owner. Units of private land periodically have problems with elephants dispersing from adjacent primary

range. Problem elephants are destroyed by the State, and will in future be made available to the trophy hunting industry where practical.

4. Ivory production and current stockpile

All ivory produced in Namibia is owned by the State except ivory produced from privately owned elephants, trophy hunting concessions on state land (where the ivory belongs to the hunter) and possibly in future some local communities which might be given the right to utilize elephants as part of community conservation schemes. Future sources of ivory in State ownership and thus theoretically available for trade are :

4.1. Natural mortality. At mortality rates of 1 - 5% per annum, the national population will produce some 20 - 100 tusks per thousand elephants, or approximately 100 - 500 tusks per year. The c. 1 500 elephants in Etosha N.P. produce on average 108 tusks recovered per year, suggesting a crude minimum mortality rate of about 4% per year for this population.

4.2. Problem elephant control. Over the past 10 years some 20 elephants per year have been destroyed for farm protection, but recent averages are down to c. 10 elephants per year. This figure would probably increase due to the recent expansion of farming enterprises in parts of the elephant range and attempts to enhance food production on existing fields. Some problem elephants may be hunted by trophy hunters in future.

4.3. Culling in protected areas. Culling has only been done twice in Namibia, and will in future probably be done on the periphery of protected areas as far as possible, also to aid the transfer of benefits from wildlife to local communities. Etosha N.P. has experienced a prolonged dry phase for 13 years and limited culling will be considered if some woodlands do not show significant regeneration during the wet spell expected to follow. The only other unit where elephants are close to, or have exceeded permissable limits, is the small Mahango G.R. where the last

remnant of Okavango riverine forest in Namibia is threatened. Culling in this reserve might be done by trophy hunters as virtually the entire population of c. 200 elephants are males. Other units with riverine forest might be equally threatened in future, particularly if the accumulation of elephants in the riverine areas of northern Botswana and the Caprivi continues and present high densities are maintained. The elephant population of the Khaudom Game Reserve and eastern Bushmanland complex has increased rapidly from 395 in 1984 to 1 125 in 1990 which must have been due to immigration, and could threaten protected habitat in future. Table 3 presents possible culling quotas over the next few years, although it must be stressed that these figures as well as the listing of specific areas are speculative.

4.4. Harvesting and culling in unprotected areas. No plans exist to harvest or cull elephants on such land in the near future, but culling might have to be done if other attempts at resolving elephant-human conflicts fail. Parts of the Caprivi region and the Huab catchment in the Kaokoveld might qualify for culling and/or harvesting. Culling in these instances would be aimed at reducing elephant densities and elephant-related conflicts while generating benefits to local communities in order to maintain elephants in those areas. Harvesting could be implemented to produce a sustainable income from wildlife in areas where other resources are limited, or alternative forms of land use would be to the detriment of all wildlife. Table 3 presents probable culling quotas over the next few years, with the same provisos as in point 4.3.

4.5. Confiscated ivory. Illegal ivory confiscated in Namibia is forfeited to the state, and has been sold on auction in the past. Namibia is a signatory to the SACIM agreement which poses specific requirements regarding possible future selling of confiscated ivory. Ivory confiscated in Namibia of known Namibian origin would be treated as State property and would theoretically be available to future trade. Table 4 presents the volume of ivory confiscated in Namibia since 1983. An average of 253 tusks have been confiscated per year since 1983, but the number estimated to be of Namibian origin is probably never more than 40 per year.

Table 3. Probable annual production of ivory in Namibia (1992-1997).

Origin/Cause	Approx. pop. size	No. of elephants dying	No.* of tusks produced	Est.** ave. tusk mass (kg)	Total ivory (kg)
Natural mortality***					
Etosha N.P.	1 500	45	86	6.7	576
Kaokoveld	300	3	6	(8.0)	48
Khaudom-Bushmanl.	1 100	11	21	(8.0)	168
W. Caprivi	1 000	10	19	(7.5)	143
E. Caprivi	1 400	14	27	(7.0)	189
			159		1 124
Problem elephants					
Destroyed by State		10	19	(10.0)	190
Trophy hunted		10	19	(12.0)	228
			38		418
Culling in protected areas****					
Etosha N.P.		40 (max.)	76	3.5	266
Mahango G.R.		20 (max.)	38	(15.0)	570
			114		836
Culling/ harvesting in unprotected areas****					
Huab catchment		10 (max.)	19	(4.0)	76
E. Caprivi		50	95	(3.7)	352
W. Caprivi		20	38	(3.8)	144
			152		572
Ivory confiscated (only of Namibian origin)		-	40	(5.0)	200
Trophy hunting					
Khaudom-Bushmanland		6	12	28.0	336
Mahango-W. Caprivi		10	20	(15.0)	300
E. Caprivi		10	20	10.5	210
			52		846
Total		269	555		3 996

* assuming that 1.9 tusks are produced per elephant, except elephants from the primary trophy hunting operations where elephants with two tusks are selected.

** average tusk masses from unpublished data, or estimated and indicated by parenthesis.

*** assuming a 3% mortality rate in Etosha N.P. and a 1% rate elsewhere which are lower than the estimated 4% and 2% mortality rates respectively, to compensate for tusks not recovered.

**** Note: There are no definite plans to cull elephants anywhere in Namibia in the near future, much will depend on rainfall in the next few years and land use planning in the elephant range. Estimates quoted here are speculative, and are given as an average quota per year, while culling is likely to be done only once in several years.

Table 4. Volumes of ivory confiscated in Namibia since 1983.

Year	No. of tusks confiscated (approx. mass kg)* NE Namibia	Rest	Total
1983	141 [705]	0	141 [705]
1984	71 [438]	6 [30]	77 [468]
1985	56 [305]	0	56 [305]
1986	170 [1 098]	0	170 [1 098]
1987	200 [1 131]	2 [10]	202 [1 141]
1988	216 [1 185]	0	216 [1 185]
1989	1 076**(7 327)	16 (131)	1 092 (7 458)
1990	206 [1 517]	3 (12)	209 [1 529]
1991	108 (857)	6 (38)	114 (895)
Total	2 244 [14 563]	33 [221]	2 277 [14 784]

* [ ] indicates that totals include a minority of tusks of unknown mass (data unavailable at present), for the purposes of this analysis estimated arbitrarily at 5 kg per tusk.

** including one batch of 973 tusks from Angola

4.6 Private ownership. The future source of ivory in private ownership will be predominantly through trophy hunting on state land. Most hunters are likely to be foreigners, and the trophies will consequently leave Namibia. Trophy hunting quotas have ranged from 30 elephants per year from 1988-1990, 26 in 1991 and 18 (plus provision for hunting up to 10 problem elephants) recommended for 1992. Trophy hunting offtakes range from 0.5-0.6% of the national elephant population. Ivory can legally be transfered from one owner to another within Namibia, as subject to permit control. In practice, most such transfers result from bequests and not trade.

Table 3 summarizes possible future production of ivory over the next five years. Though speculative, some 555 tusks or c. 4 000kg of ivory could be produced sustainably. Of this total, some 90 tusks or 1 400kg of ivory could be produced through trophy hunting and will thus not be available for future trade in Namibia.

The current Namibian Government stockpile of ivory consists of 4 313 tusks, or approximately 24 500kg. A lack of working and storage space in the only available strongroom has prevented adequate auditing of the stockpile in recent years. The management authority (Ministry of Wildlife, Conservation & Tourism) inherited the ivory stocks and an antiquated system of internal control after Independence, but a process of improved audit and stock control has been initiated. The entire ivory stock and documentation will be computerized in 1992. Tables 5 & 6 present preliminary analyses of the current stockpile which mostly represents ivory accumulated since 1984. It is presently impossible to separate ivory resulting from problem elephant control and natural mortalities. The most problematic issue is the distinction between confiscated ivory from Namibian versus foreign origin, which will have to be done by chemical isotopic or alternative analytical technique. The data in Tables 5 & 6 are subject to review following computerization of records and stock audit, and implied precision is a consequence of projections using 5kg as the mass for tusks where actual mass is unavailable at present. Additional stocks not included in the tables consist of several hundred ivory fragments collected at waterholes in protected areas. The total mass of this sample is

Table 5. A preliminary analysis of current ivory stocks in Namibia.

Year obtained	Source*	No. of tusks	Mass (kg)**
1984	ENP	66	399
1985	ENP	63	516
	ENP cull	552	1 087
	Conf.	56	305
1986	ENP	53	359
	Conf.	170	(1 098)
1987	ENP	122	876
	Conf.	202	(1 141)
1988	ENP	25	170
	Conf.	216	(1 185)
1989	ENP	160	927
	Conf.	1 092	7 458
1990	ENP	164	801
	Conf.	209	(1 529)
1991	ENP	125	1 107
	Conf.	114	895
Total		3 389***	19 853***

* ENP= Etosha N.P. natural mortalities and problem elephant control on land adjacent to the park, Conf.= Ivory confiscated in Namibia including ivory from foreign origin.

** Parenthesis indicate that tusks of unknown mass (records unavailable) were assumed to weigh 5 kg

*** A further 924 tusks of unknown mass (records unavailable at present) have accrued from natural mortalities and problem elephant control elsewhere in Namibia, but the year of collection is not known and this sample cannot be broken down further. If an average mass of 5kg is assumed for this sample, the total mass of ivory in the stockpile is estimated at 19 853 + (924 x 5) = 24 473kg.

Table 6. Summary of current ivory stockpile.

Source	No. of tusks (% of total)	Approx. mass in kg (% of total)
Natural mortalities & problem elephant control	1 702 (39.5)	9 775 (39.9)
Culling	552 (12.8)	1 087 (4.4)
Confiscated ivory of Namibian & foreign origin	2 059 (47.7)	13 611 (55.6)
Total	4 313	24 473*

* approximate

unknown but estimated at less than 100kg. Much of the collection is badly weathered.

5. Elephant translocations

a. Private land. Private landowners are encouraged to introduce elephants on suitable land. One farm has been successfully stocked with 9 juvenile elephants captured during the 1985 culling in Etosha N.P. As no culling occurred after 1985, a further two farms have been stocked with elephants originating from Kruger N.P., South Africa. The importation of elephants into Namibia will be discouraged in future in order to use the relatively small number of suitable units of privately owned land for translocating elephants of Namibian origin. Elephant calves captured during culling in Namibia will in future only be available for export to to zoos conforming to AAZPA standards.

b. Protected areas. One de facto protected area (Mangetti Game Camp, 480km^2) in the Kavango region falls within the present elephant range but has no resident elephants. This unit is fenced and will be considered for restocking with elephants from northeastern Namibia once its status has been resolved. Two protected areas (Namib-Naukluft Park, c. 2 000km^2 of potentially suitable habitat; Waterberg Plateau Park, c. 330km^2 of potentially suitable elephant range) fall within the historic elephant range in Namibia. These units will be considered for restocking pending feasibility studies in 1992. Recent progress has been made in translocating adult problem elephants over short distances, which could resolve some conflicts in future without having to destroy an individual.

6. Law enforcement

6.1 Legal protection. Elephants are classed as specially protected species in Namibia and the hunting, ownership, possession, trade, import, export and re-export of elephants or elephant products are subject to permit controls (Ordinance 4, 1975; Proclamation AG 42). Any contravention of the above is

subject to a fine of not exceeding R200 000 (approx. US$ 71 500) and or imprisonment not exceeding 20 years (Nature Conservation General Amendment Act, 1990). In practise, a large portion of offenders are given smaller sentences, provided that no prior offences or suspended sentences are at stake.

6.2 Criminal cases. A small fraction of the ivory confiscated in Namibia is believed to be of Namibian origin, but is presently indistinguishable from ivory of foreign origin. Table 7 presents the incidence of criminal cases relating to illegal possession of or trade in ivory, or illegal hunting of elephants investigated per year since 1983. The overwhelming majority of the cases in Table 7 relates to unlawful possession and trade in ivory, and not illegal hunting.

6.2 Illegal hunting. Records for every region and every year are not available but an average of 10 elephants appear to have been hunted illegally over the past five years. Namibia has not been subjected to massive organized poaching, probably in part due to the relatively low density of elephants and the quality of typical Namibian ivory (relatively small tusks which are almost always broken or cracked).

6.3 Resources available for law enforcement. The Directorate of Wildlife, Conservation & Research (DWCR) of the Ministry of Wildlife, Conservation and Tourism is the primary wildlife protection and law enforcement agency in Namibia, but close cooperation exists with the Namibian Police (particularly the Diamond and Narcotics Branch which plays an equivalent role in Namibia to the Endangered Species Protection Unit of the South African Police). Non-governmental conservation organizations cooperate with DWCR in wildlife protection through the management of auxiliary game guards and community game scouts (Integral Rural Development and Nature Conservation and Save the Rhino Trust are the most prominent ones). Fledgling ties exist with the recently established Namibian Defence Force and Customs and Excise Branch.

Table 7. Trends in the incidence of criminal cases involving illegal possession and trade in ivory and illegal hunting of elephants in Namibia.

Year	No. of cases per region of probable origin of ivory or entry into Namibia		
	NE Namibia & foreign ivory	Rest	Total
1983	9	0	9
1984	9	2	11
1985	11	1	12
1986	15	0	15
1987	22	1	23
1988	9	0	9
1989	16	4	20
1990	34	3	37
1991	15	2	17
Total	140 (91.5%)	13 (8.5%)	153

DWCR staffing levels amount to 784 rangers/ scouts/ guards (and higher ranks), including a wildlife protection unit (anti-poaching unit) comprising 90 officials. The DWCR Management section budget amounted to R 12 million (c. US$ 4.3 million) in 1991, of which some 60-70% is spent on law enforcement (or an average of c. $ 15/ km^2). Approximately 150 suitable vehicles are available for law enforcement as well as two fixed-wing aircraft and a helicopter (available on charter to DWCR).

The Namibian Police and DWCR share a network of informers (funded by DWCR) which has been responsible for most of the success in crime prevention and law enforcement. New programmes aim at promoting community involvement in wildlife protection in the elephant range, thus expanding the well-established and functional community protection scheme of the Kaokoveld. These programmes as well as the Wildlife Protection Unit which operates primarily outside protected areas and the informer network form the backbone of the wildlife protection efforts in Namibia.

Note: This report contains data re-analyzed and updated after presentation in the draft National Elephant Management Plan for Namibia. Where this report differs from the original Supporting Statement submitted on behalf of Namibia by the Zimbabwean Management Authority, the views and data in this Supplementary Report should be upheld.

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