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Private Protected Areas: A Preliminary Study of Initiatives to Conserve Biodiversity in Selected African Countries

Prepared by the

World Conservation Monitoring Centre

C.W. Watkins, A.M. Barrett, R. Smith and J.R. Paine

December 1996



A/N 21663

WMC Reports 96

EXECUTIVE SUMMARY

A major gap in the available information on the world's protected areas concerns private initiatives in protecting biodiversity. In order to begin to address this gap, a preliminary survey of private protected areas was carried out in some East and Southern African countries. This pilot study demonstrates the significant contribution of private initiatives to national protected area systems and underlines the importance of extending this survey to entire regions, as part of a global review of the role private protected areas.

ACKNOWLEDGEMENTS

The study was generously supported by the Dulverton Trust of St. James Place, London, established in 1949 to support conservation, youth, education, and general welfare.

Many agencies and individuals contributed their time and effort to this pilot study. We are most grateful for the help received from Kamau Wakanene of the Centre for Biodiversity at the National Museums of Kenya, Jonathan Barnes of the Ministry of the Environment and Tourism, Namibia assisted by Immanuel Nghishoongele, Henry Mwima of the National Parks and Wildlife Service, Zambia and Godfrey Kamukala of the National Environment Management Council, Tanzania.

We communicated with many organisations and individuals, including Judy Oglethorpe, IUCN Mozambique and Peter Caroe of Knight Frank, International Estate Agents, who provided material on Mkwaja Ranch in Tanzania.

Within WCMC, we particularly wish to thank Gillian Bunting for producing the maps, Laura Battlebury and Victoria Freeman for secretarial assistance, and Michael Green for reviewing an earlier version of this report.

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PART 1
Report on the Preliminary Study

1.1 Introduction

The World Conservation Monitoring Centre maintains a database of the world's protected areas, an initiative which was begun in 1981 by the IUCN Commission on National Parks and Protected Areas (now WCPA, the World Commission on Protected Areas) when it established a unit specifically to manage information on protected areas. This database, for example, provides the basis of the *United Nations List of Protected Areas* which is regularly produced by WCMC and WCPA.

Within the database, protected areas are classified according to their management objectives, based on the internationally recognised system developed and refined by IUCN over many decades. Under the present management categories system (IUCN, 1994a), a protected area is defined as:

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

While unambiguous in terms of the remit of protected areas to conserve biological diversity, the definition is suitably broad with respect to the means of achieving this through a range of different public and private approaches to stewardship.

Sound, comprehensive data on the world's protected areas is essential for purposes of planning, policy development and monitoring progress in biodiversity conservation. Over the years, WCMC has built a fairly comprehensive dataset of protected areas within the wildlife sector, such as national parks, nature reserves and wildlife sanctuaries administered by national protected area agencies.

In the case of tropical countries, in particular, coverage has since been extended to the forestry sector as a contribution to the *FAO Forest Resources Assessment 1990*. The results of that study demonstrated vividly a major gap in information on the world's protected areas. Protected areas within the forestry sector, many of them forest reserves allocated to conservation or watershed protection, accounted for 4.5% of total land area within the tropics, compared to 7.8% for protected areas in the wildlife sector (WCMC Protected Areas Database).

There remain other gaps in the available information on the world's protected areas, the most significant of which probably relates to privately owned or managed reserves. Some of the world's oldest protected areas were originally established through private initiatives, very often by nobility for purposes of sport hunting. An early example is the New Forest in Southern England which was declared a Royal hunting preserve in 1079 by King William II. Private initiatives, through ownership or lease of land by private individuals or conservation bodies, are playing an increasingly important role in biodiversity conservation: witness the *Nature Conservancy* in the USA, which owns land throughout the world, and the *National Trust* which is the second largest landholder in England. In the tropics, particularly in Africa and Latin America, there has been a steady rise in the number of private protected areas since the 1960s (Alderman, 1992). But information on the number, extent and location of private protected areas, as well as the biodiversity which they safeguard, is either unavailable or scattered throughout the literature.

In order to begin to address this information gap, WCMC decided to undertake a preliminary survey of private protected areas in some African countries in order to establish whether or not a comprehensive study was warranted. The objectives of this preliminary study were:

- to review the scope of private initiatives underway in a selection of African countries;
- to assess the contribution of the private sector to biodiversity conservation in a selection of African countries; and
- to provide a basis for developing proposals to carry out a series of regional studies of private initiatives.

The results of the preliminary survey are presented in this report. The methodology is outlined in Section 1.2 and a summary of the results in Section 1.3. More detailed accounts of the selected countries are presented in Part 2.

1.2 Methods

Scope

The study was confined to selected countries in East and Southern Africa, in the knowledge that they feature well-established and extensive privately managed protected areas. Initially the countries selected were Kenya, Malawi, Mozambique, Namibia, Tanzania, Uganda and Zambia. However, in order to gain a more representative sample of the private sector the survey was extended to include the Republic of South Africa and Zimbabwe; time and resources permitted only the collation of summary statistics for these two additional countries.

A principal difficulty with the term "private protected area" lies in the word *private*, which may be interpreted differently according to the national or local legislation, culture and language. During the course of the study and as a result of discussions with collaborators from study countries, a working definition for "private protected areas" was agreed as follows:

Sites owned freehold or formally leased by individuals, corporations and other private bodies in which wildlife conservation is a primary activity and the responsibility of such owners or leaseholders.

Laws may sometimes place restrictions and obligations on the owners or leaseholders, but these do not diminish the private nature of such sites.

This definition of a private protected area, in which wildlife conservation is a primary activity, is weaker than the IUCN definition of a protected area, which is especially dedicated to the protection and maintenance of biodiversity (Section 1.1). It is likely, therefore, that not all private protected areas considered in this preliminary study would qualify as a protected area *sensu* IUCN.

Data gathering

Information on private protected areas was solicited by means of a questionnaire (Annex 1) sent to a range of contacts within the selected countries. In many cases, individuals were commissioned to gather such information from within their country of residence. In the case of the Republic of South Africa and Zimbabwe, WWF Southern Africa arranged for a consultant (David Grossman) to provide summary data on the extent of private protected areas.

Responses to the questionnaire varied. Contacts in Uganda, Malawi and Mozambique were unable to find the resources to undertake the work involved. The Tanzanian authorities provided details of the only significant private protected area in the country, Mkwaja Ranch and this was supplemented by other information from Knight Frank International, Estate Agents, who have been marketing the ranch. The National Parks and Wildlife Services of Zambia provided a list of their privately-owned sites, as did the Ministry of Environment and Tourism, Namibia. The Centre for Biodiversity, National Museums of Kenya holds information on many of Kenya's private protected areas and was able to complete questionnaires for the majority of such sites.

Information compilation

Data from the questionnaires were entered into the WCMC Protected Areas Database. Where available, mapped information was digitised and incorporated with the WCMC Biodiversity Map Library, a geographic information system which is linked to the Protected Areas Database. These information management systems were used to generate summary statistics, lists and maps of private protected areas for each of the country studies. The lists and maps are presented in Part 2, together with some case studies of individual private protected areas, describing *inter alia* their biodiversity and management regimes.

1.3 Overview of Private Protected Areas in East and Southern Africa

Results

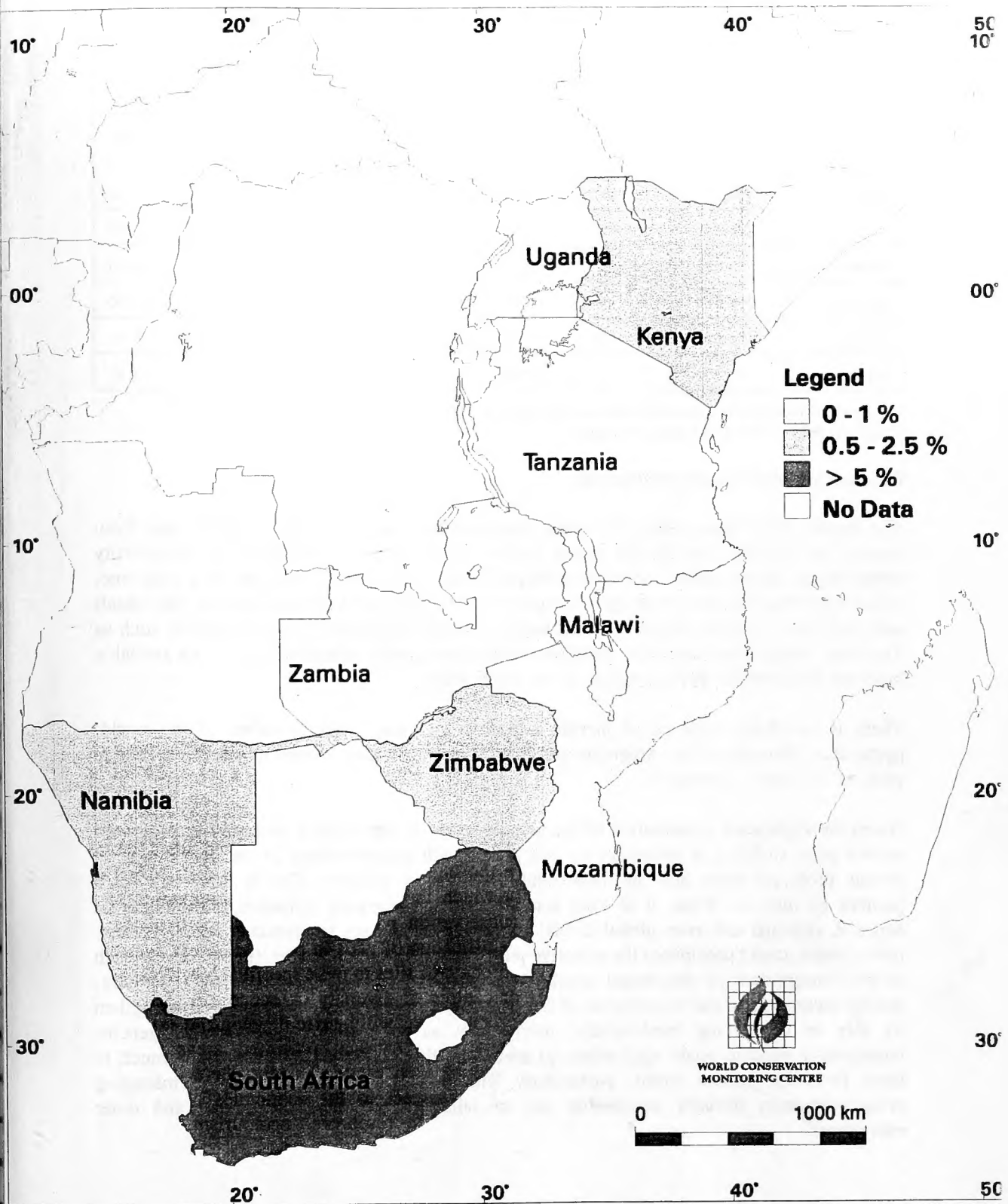
The results of this preliminary survey summarised in Figure 1 and in Table 1 are compared with the extent of legally designated protected areas under the jurisdiction of government agencies. Although they cover only a selection of countries in East and Southern Africa, they demonstrate the extensiveness of private protected areas in several of these countries.

In the Republic of South Africa, private protected areas (i.e. game ranches registered with the authorities) are much more numerous and more extensive in area than legally designated sites. In Kenya, Namibia and Zimbabwe, the extent of private protected areas is also significant, both in terms of total land area (1% or more) and in comparison with the legally designated protected areas system. Only in Tanzania, with just one site, and in Zambia do private protected areas represent a negligible proportion of the entire protected areas system.

Private protected areas provide a variety of important conservation and other services. These include providing safe havens, the breeding of endangered species in the wild for subsequent re-introduction, ecological tourism and sustainable use of wildlife. The conservation role of private protected areas is sometimes crucial. For example, Ol Ari Nyiro Ranch holds 10%

Figure 1

The Role of Private Initiatives in Site Conservation



of Kenya's remaining 500 black rhinos *Diceros bicornis*. Further details and examples are provided in Part 2.

Table 1 Extent of private and legally designated protected areas (IUCN Management Categories I-V) in a selection of East and Southern African countries.

Country	Total Area (sq. km)	Private Protected Areas ¹			Legally Designated Protected Areas ²		
		No.	Area (sq. km)	% total area	No.	Area (sq. km)	% total area
Kenya	580,370	50	12,211	2.10	36	34,702	5.98
Namibia	824,290	148	7,642	0.93	11	103,706	12.58
South Africa	1,184,825	4,035	80,932	6.85	235	74,134	6.26
Tanzania	945,090	1	465	0.05	28	130,000	13.76
Zambia	752,610	12	219	0.03	20	63,609	8.45
Zimbabwe	390,310	3	6,500	1.67	25	30,678	7.86

¹ Compiled from returned questionnaires and personal communications.

² Source: WCMC Protected Areas Database

Conclusions and Recommendations

The results from this preliminary study demonstrate that, although practices vary from country to country, the private sector makes an invaluable contribution to biodiversity conservation. In the region, countries which have had free-market economies for a long time, and in which the purchase of freehold property is permitted, have attracted private individuals and corporate bodies to invest in conservation-oriented initiatives. Those countries, such as Tanzania, which have been more socialist in style and in which freehold land is not available have not attracted the private sector in the same way.

There is anecdotal evidence of private initiatives in many other countries of the world, particularly throughout the Americas and in Europe. They also feature to a lesser extent in parts of Asia and Australasia.

Given the significant contribution of the private sector to the world's protected areas, based on this pilot study, it is necessary to gain a thorough understanding of the distribution of private protected areas and the biodiversity which they support. This is important for a number of reasons. First, it is vital for conservation planning purposes, particularly at national, regional and even global levels. Identification of gaps in protected areas systems, for example, could precipitate the selective purchase of sites to meet specific objectives, such as the conservation of threatened species or centres of diversity or endemism. Secondly, greater awareness of the contribution of the private sector will help to develop and strengthen its role in conserving biodiversity, particularly as national protected areas agencies increasingly explore novel approaches to managing their estate. Thirdly, there is much to learn from the private sector, particularly with respect to the economics of managing protecting areas through sustainable use of wildlife resources, ecotourism and other enterprises.

Based on these preliminary findings, it is recommended that the survey be extended to other countries in Africa and that a similar study be commissioned for Latin America. The feasibility of carrying out such a survey in North America and Europe should be assessed, prior to undertaking a global review of private protected areas.




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PART 2

Country Case Studies

Legend for Country Maps






Protected Areas

-  Private Reserves
-  Areas represented by proportional circles
-  Legally Designated Protected Areas - IUCN Categories I-V

Topographic Information

-  Major Roads
-  Railways
-  Rivers

Elevations in Country Maps

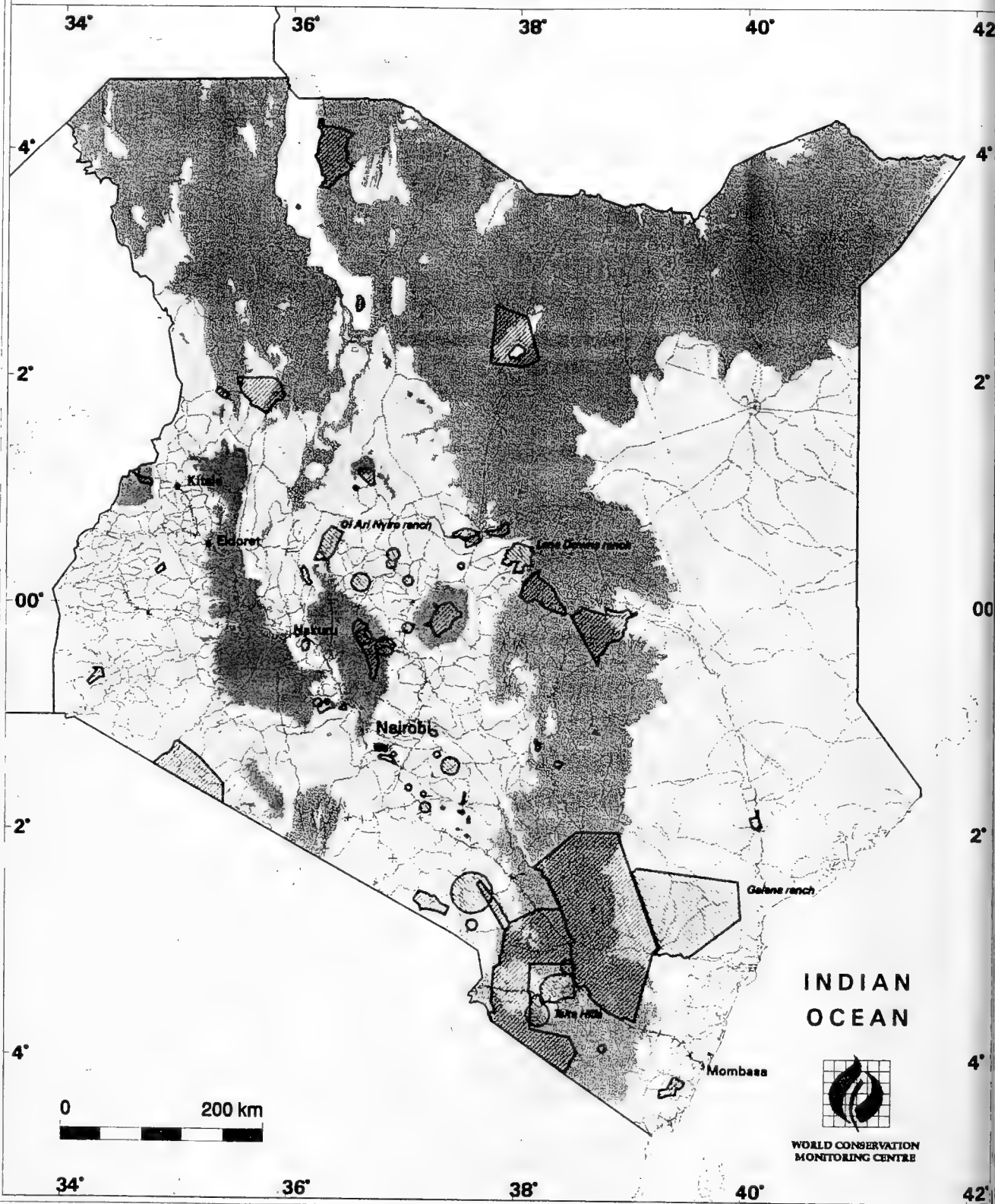
-  0 - 1000 feet above mean sea level
-  1000 - 3000 feet above mean sea level
-  3000 - 7000 feet above mean sea level
-  7000 - 11000 feet above mean sea level
-  11000 feet and above



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Figure 2

Private Protected Areas in Kenya



2.1 Kenya

2.1.1 Summary

Kenya has some 50 private protected areas (Table 2). Most of them are in the southern half of the country; there are none in the Northern Province. They range from a few hundred hectares in extent to over 600,000 ha in the case of the Galana Ranch. There is considerable diversity of wildlife to be found in these private protected areas, with much of Kenya's habitats and vertebrate fauna represented. Some examples of threatened species are listed in Table 3. Information on the flora represented in Kenya's private protected areas is virtually non-existent (K. Wakanene, in litt., 1995).

Three sites, Segera Ranch, Colcheccio Limited and the Kuku Group, protect three species classified as *Endangered* in the *IUCN Red List of Threatened Animals*: African elephant *Loxodonta africana*; wild dog *Lycaon pictus* and Grevy's zebra *Equus africanus*. Several of the sites support threatened species including black rhino *Diceros bicornis* and cheetah *Acinonyx jubatus*. Whilst a number of Kenya's National Parks and other legally designated protected areas are sanctuaries for black rhino, two private ranches in particular, Ngare Sergio and Ol Ari Nyiro, have made the conservation of this species their principal objective. Furthermore, the Kenya Wildlife Service reports that of 65 white rhino *Ceratotherium simum* imported from the Republic of South Africa, all but one are located on private land, and that it will continue to encourage the efforts of private land owners to breed and protect this and other species (KWS, 1991).

2.1.2 Examples

Descriptions of some of Kenya's private protected areas are provided in Boxes 4.1.1-4.1.3.

Table 2 List of private protected areas in Kenya

Name	Location	Size (ha)	Year established
ADC Mutura Ranch	0°11'N/36°37'E	?	?
B and T Malinda Ranch	??	2,023	?
Boabab Farm	3°57'S/39°43'E	400	?
Braemar Farm	1°20'S/36°55'E	1,281	?
Choke 1 Ranch	??	2,539	1993
Chololo Ranch	0°53'S/36°15'E	5950	?
Colcheccio Ltd	0°23'S/36°50'E	26,305	?
Dawida Ranch	3°55'S/38°46'E	4,452	1987
Drumvale\Hill view co-operative Society	??	9,966	?
East African Portland	??	6,475	1978
Enganani Ranch	0°52'S/36°20'E	2,104	?
Galana Ranch	2°13'S/38°11'E	647,484	?
Imbirikani Group Ranch	2°33'S/37°37'E	128,485	?
Jessel Ranching Ltd	??	3,982	?
Katheka Kai Co-operative Ranch	??	4,189	1924
Kendong Ranch	??	32,375	?
Kikopay community	??	16,187	?
Kisima Farm Rumuruti	0°18'S/36°39'E	17,806	?
Konza Ranching and farming Co-operative	1°42'S/37°11'E	?	?
Kuku Group Ranch	2°50'S/37°37'E	?	1988
Lakipi Rhinoceros Sanctuary	??	?	?
Leserdo Maendeleo Ranch	1°01'N/36°34'E	1,619	?
Lewa Downs	??	16,600	1975
Lisa Ranch	1°41'S/37°11'E	2,223	?
Lualenyi Ranch Co. Ltd	3°37'S/38°12'E	43,096	1993

Lukenya Co-operative Ranch	1°26'S/37°25'E	24,686	?
Maanzoni Ltd	1°37'S/37°03'E	3,356	?
Male Ranch	0°13'S/37°02'E	7,924	?
Malili Ranch	1°48'S/37°12'E	9,230	?
Manyangalo Ltd	??	2,833	1994
Mbulia Group Ranch	3°12'S/38°28'E	15,783	1993
Mitaboni Katani Co Ltd	1°20'S/37°18'E	3,430	1994
Mpala Ranch	??	19,627	?
Mundui Estate Ltd	??	20,733	?
Ngata Taik Ranch	2°15'S/36°55'E	?	?
Oi Ari Nyiro Ranch	0°43'N/36°15'E	41,115	1974
Oi Doinyo Lamboro	0°21'N/36°53'E	7,264	?
Oi Jogi Ranch and Rhinoceros Sanctuary	0°12'N/37°02'E	27,517	?
Oi Maisot Ranch	0°26'N/36°54'E	12,019	?
Oi Pajeta	??	36,735	?
Oi Pejeta Rhinoceros Sanctuary	??	9,300	?
Segera Ranch	??	19,749	?
Snake and Crocodile Paradise	3°11'S/40°04'E	?	?
Sorio Rhinoceros Sanctuary	0°15'S/36°58'E	?	?
Stanley & Son Ltd	??	2,020	?
Sweetwater Game Reserve	0°13'S/37°02'E	8,903	?
Taita Hills	3°30'S/38°12'E	11,340	1973
Tarda Emali Ranch	2°03'S/37°34'E	?	?

Table 3 List of selected species found in private protected areas in Kenya

Common Name	Latin Name	IUCN Category
cheetah	<i>Acinonyx jubatus</i>	VU
wild dog	<i>Lycaon pictus</i>	EN
Jackson's mongoose	<i>Bdelogale jacksoni</i>	VU
African elephant	<i>Loxodonta africana</i>	EN
dugong	<i>Dugong dugon</i>	VU
Grevy's zebra	<i>Equus grevyi</i>	EN
white rhinoceros	<i>Cerathotherium simum</i>	*1
black rhinoceros	<i>Diceros bicornis</i>	CR
aders duiker	<i>Cephalophus adersi</i>	EN
Soemmerring's gazelle	<i>Gazella soemmerringii</i>	VU
spotted ground thrush	<i>Zoothera guttata</i>	EN
pancake tortoise	<i>Malacochersus tornieri</i>	VU
green turtle	<i>Chelonia mydas</i>	EN
Thomas's dwarf galago	<i>Galagoides thomasi</i>	*2
lesser kestrel	<i>Falco naumanni</i>	VU

*1 Lower Risk: Conservation Dependent

*2 Taxa removed from *The IUCN 1996 Red List of Threatened Animals* (listed in 1994 Red List, now Lower Risk: least concern)

Box 4.1.1 TAITA HILLS GAME SANCTUARY

Equivalent IUCN Management Category: IV (Managed Nature Reserve)

Biogeographical Province 3.14.07 (Somalian)

Geographical Location Situated astride the main Voi-Taveta road in south-east Kenya; linked by a game corridor to Tsavo West National Park. 3°30'S, 38°12'E.

Date and History of Establishment 1973

Size 11,340 ha

Land Tenure Hilton International

Altitude Up to 914m

Physical Features Consists partly of plains and partly of *Commiphora* woodland. The Bura River runs through the area attracting animals from Tsavo National Park. Despite its name, this area is not within the Taita Hills (Cheffings, 1983).

Climate No information

Vegetation Savanna plains and *Commiphora* woodland.

Fauna Grazing animals attracted to the water in the dry season include: zebra *Equus burchelli*, buffalo *Syncerus caffer*, African elephant *Loxodonta africana* (EN), impala *Aepyceros melampus*, Grants gazelle *Gazella granti*, eland *Taurotragus oryx*, waterbuck *Kobus ellipsiprymnus*, reedbuck *Redunca arundinum*, and giraffe *Giraffa camelopardalis*. Other animals include vervet monkey *Cercopithecus aethiops*, lion *Panthera leo*, and black-backed jackal *Canis mesomelas*. The prolific avifauna includes ostrich *Struthio camelus*, Bateleur eagle *Terathopius ecaudatus*, Pangani longclaws *Macronyx aurantiigula*, purple heron *Ardea purpurea*, hornbills (Bucerotidae), rollers (Coraciidae), and weavers (Ploceidae) (Cheffings, 1983).

Cultural Heritage No information

Local Human Population No information

Visitors and Visitor Facilities The whole complex of the Game Sanctuary and two tourist lodges (Taita Hills and Salt Lick) are run as a tourist concern by Hilton International.

Scientific Research and Facilities No information

Conservation Value No information

Conservation Management The area south of the Voi-Taveta road has been well developed with game viewing tracks. Controlled seasonal burning of old grasses is carried out on a rotational basis in the southern sector to maintain and improve grazing (Cheffings, 1983).

Management Constraints No information

Staff No information

Budget No information

Local Addresses Hilton International, Nairobi

Box 4.1.2 LEWA DOWNS RANCH

Equivalent IUCN Management Category No equivalent category

Biogeographical Province 3.21.12 (East African Highlands)

Geographical Location Situated below Ngare Ndare escarpment about ten kilometres South West of Isiolo. 0°20' N, 37°30' E.

Date and History of Establishment 1984

Area 16,000 ha

Land Tenure Private

Physical Features No information

Climate No information

Vegetation The ranch has a variety of habitats including riverine vegetation, acacia woodland and grass plains.

Fauna There is a high diversity of species within the ranch including African elephant *Loxodonta africana* (EN), giraffe *Giraffe camelopardalis*, eland *Taurotragus oryx*, zebra *Equus burchelli*, oryx *Scimitar oryx*, buffalo *Syncerus caffer*, leopard *Panthera pardus* and lion *Panthera leo*. Black rhinoceros *Diceros bicornis* (CR) have been relocated to the sanctuary (Wakanene, 1995).

Cultural Heritage No information

Local Human Population No information

Visitor and Visitor Facilities No information

Scientific Research and Facilities An ongoing project in the sanctuary is to build up a herd of black rhino which can be used to re-stock wildlife reserves designated by the Kenyan Wildlife Service.

Conservation Value The population of black rhinoceros in Kenya has declined dramatically from an estimated 20,000 in 1970 to about 500 in 1983. As a result this ranch is of the highest conservation value, (KWS, 1991).

Conservation Management 3,000 hectares of the 16,000 hectare ranch has been set aside as a rhinoceros sanctuary and enclosed with a solar powered electric fence.

Management Constraints Insufficient Information

Staff No information

Budget No information

Local Addresses Ngare Sergoi Rhino Sanctuary, Lewa Downs Ltd, Private Bag, Isiolo, Kenya.

Box 4.1.3 OL ARI NYIRO RANCH

Equivalent IUCN Management Category No equivalent category

Biogeographical Province 3.21.12 (East African Highlands)

Geographical Location A cattle ranch in Laikipia, Kenya occupies an area of the semi-arid northern ranching lands of the country. 0°43'N/36°15'E.

Date and History of Establishment 1974

Area 41,115 ha

Land Tenure Private

Physical Features The terrain consists of thickly bushed undulating land on the eastern side, graduating into high rocky hills and ridges interspersed by deep cleft gorges on the western side, descending to the base of the valley. The altitude varies between 1,800 and 2,200 metres above sea level.

Climate Semi-arid

Vegetation Varies from unimproved grazing land to tropical seasonal woodlands and grasslands. Most of the ranch is covered in medium to dense bush.

Fauna Many species can be found on the ranch including black rhino *Diceros bicornis* (CR), African elephant *Loxodonta africana* (EN), greater kudu *Tragelaphus strepsiceros*, eland *Tragelaphus oryx*, lion *Panthera leo* and leopard *Panthera pardus*, and buffalo *Synceros caffer*, (Wakanene, 1995).

Cultural Heritage No information.

Local Human Population No information

Visitor and Visitor

Facilities No information

Scientific Research and Facilities No information

Conservation Value Due to the decreasing numbers of black rhinoceros in Kenya the survival of this species in this sanctuary is very important: the ranch holds almost ten per cent of the total black rhinoceros population for the country, (WWF, 1991).

Conservation Management It is the policy of the ranch to allow the wild and domestic stock to coexist together with the exception of the southern part where a paddock system has been introduced in order to keep larger mammals out. The management of the ranch have taken major steps to conserve the black rhino *Diceros bicornis*. Due to minimal poaching and lack of any translocations, these rhinos form one of the last undisturbed populations in Kenya (WWF, 1991).

Management Constraints The erection of stone walls and electric fences will be considered along two major boundaries in order to prevent the dispersal of black rhinoceros to neighbouring areas where there is a risk of poaching. On the south west boundary, problems have developed between farmers and elephants. The elephants seek refuge on the ranch by day and raid crops on the adjacent agricultural lands by night (WWF, 1991).

Staff Ranch manager and 41 anti-poaching staff.

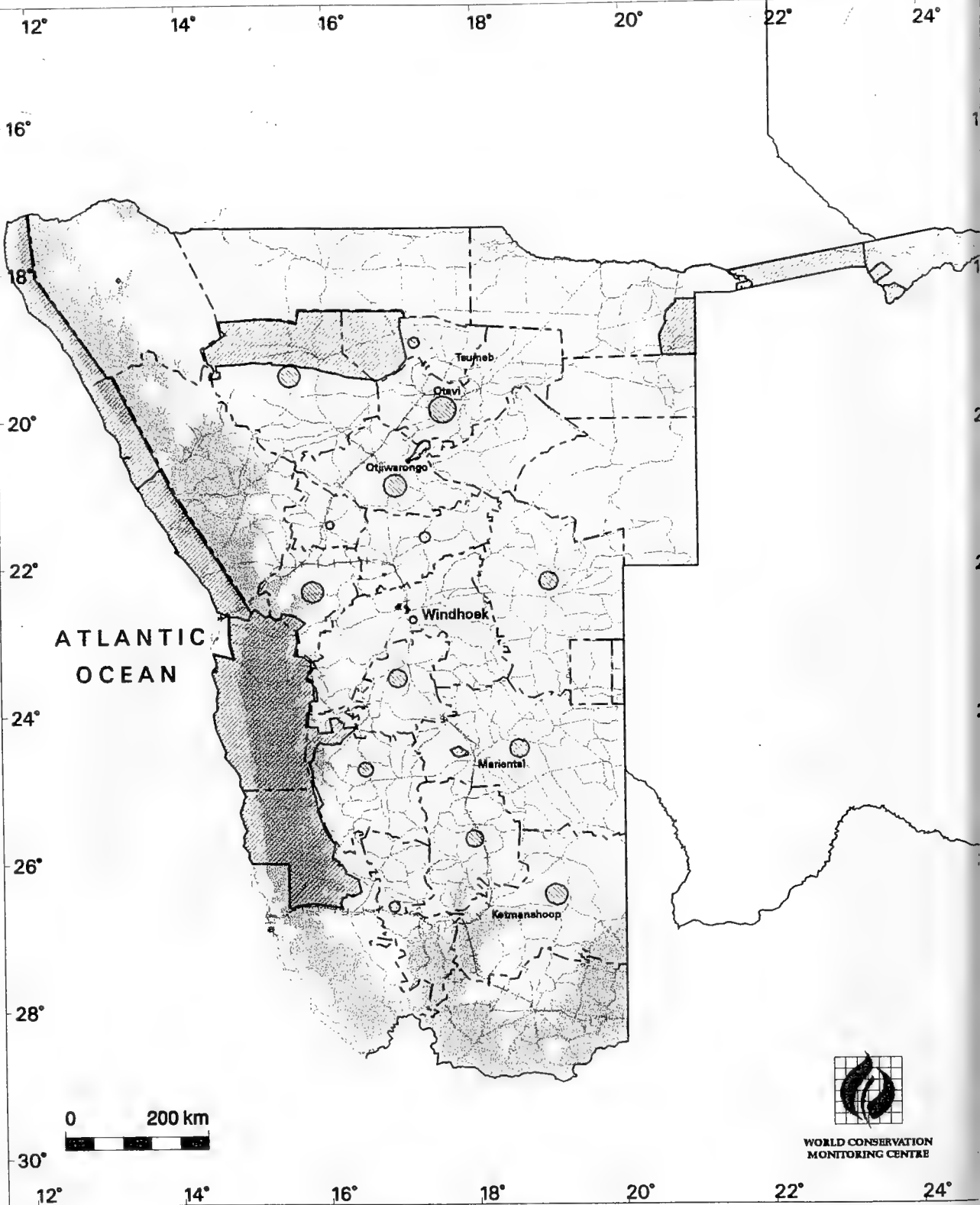
Budget No information

Local Addresses Gallman Memorial Foundation, P.O. Box 45593, Nairobi, Kenya. Tel- 00 2542 52 00 48.

Figure 3

Private Protected Areas in Namibia

Proportional Circles to show Representative Area within each District ○



ATLANTIC OCEAN

0 200 km



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2.2 Namibia

2.2.1 Summary

It is estimated that some 3,000 'landholders' conserve and/or utilise wildlife on farms or ranches primarily to supplement livestock production. The Namibian register of 'Private Game Reserves' is being revised, but 148 sites are registered by the Directorate of Resource Management (Barnes, *in litt.* 1995). These are summarised in Table 4.

A list of private game reserves has been provided by the Ministry of Environment and Tourism giving the site name, the administrative district in which the site is located and the size in hectares (Table 5). Specific locations are not available and the map (Figure 3) indicates the total aggregated area of private protected areas within each district. The positions of the red-hatched circles on the map is of no significance, but their sizes are proportional to the total area of private protected areas. The breakdown of Private Game Reserves is shown in Figure 3 and Table 4.

Table 4 Summary, by district, of private protected areas in Namibia

District	No. of sites	Total Area (ha)	District	No. of Sites	Total Area (ha)
Outjo	18	78,131	Maltahohe	8	56,976
Tsumeb	4	20,907	Marienthal	7	35,553
Grootfontein	24	117,543	Gibeon	6	56,846
Otjiwarongo	16	84,025	Keetmanshoop	5	47,360
Omaruru	4	11,475	Karasburg	1	19,543
Okahandja	8	20,233	Windhoek	14	74,217
Gobabis	18	75,163	Walvisbaai	1	72
Bethanie	2	9,178	Otavi	4	17,342
Karibib	7	57,567	Rehoboth	1	3,230

Table 5 List of private protected areas in Namibia. Locations and dates of establishment are not available, except for Tsaobis Leopard National Park.

Name	Size (ha)	Name	Size (ha)
Altyo Somer	5,057	Christell	5,244
Amolinda	6,855	Clara	5,400
Anti Dorcas	8,678	Dagbreek	3,900
Atta	51	Dameron	5,251
Aubures	500	DaviB-Oos	7,838
Bambi	6,732	Denarius	5,300
Beaumontig	4,787	Dordabis	21,356
Bergveid	4,463	Driefontein	5,847
Biermann	2,141	Driehoek	1,000
Biesiepan	6,700	Drimiopsis	300
Binsenheim	15,400	E.Raath	5,980
Bismarck	1,285	Eilsenhohe	5,587
Boskop	5,076	Elandspan	7,437
Brack	2,813	Erla	1,500
Bulhoek	5,231	Ernst Meyer	2,000
Canyon	2,616	Etaneno	5,078
Chadeni	1,000	Eureka	4,985
Charlotte	12,235	Excelsior	6,145

Name	Size (ha)	Name	Size (ha)
Fohlenhof	3,039	Okahandja	1,072
Friedenau	6,050	Okarapiko	2,410
Gemsbok	3,523	Okatjorute	1,716
Gisela	8,234	Okawayo	7,041
Goheganans	7,314	Okombahe	1,207
Goedgedacht	3,812	Omapyu	4,995
Gorongosa	8,668	Omarassa	5,026
Gross-Otavi	2,857	Omupara	2,000
Gross-Ozombuto	5,145	Orambani	3,350
Happy Valley	7,328	Oranje	6,975
Heidehof	4,864	Oryx	7,500
Heimat	2,000	Otjiwarongo	12,781
Heimwee	6,256	Otjompaue	5,000
Hochland	4,682	Outjo-Dorp	9,695
Horabe	5,235	Pamela	4,842
Houmoed	3,200	Pantherbake	1,000
Imkerhof	1,497	Persephone	5,832
Japie Barnard	7,000	Philadelphia	2,332
Jonkersgrab	7,575	Poortje-Noord	2,600
Kalahari	10,215	Proforma	200
Kameelhaar	17,000	Regenstein	450
Karin	5,904	Rehdestal	4,958
Keetmanshoop	10,000	Rentes	10,000
Klein hutte	3,600	Rimini	7,710
Koedoe kraal	249	Rooiklip	3,600
Kohler	2,287	Rotstein	4,708
Kommetjie	7,300	Rus-en-Vrede	7,367
Kouk	5,250	Rusoord	1,076
Kwanseb	6,500	Salztal	10,533
Kwessiegat	15,286	Schonwalde	5,103
Lahn	228	St. Blaize	4,200
Langfontein	19,543	Stang	2,557
Last Post	1,000	Steinfeld	4,692
Leicester	5,003	Stilte	5,278
Lekkerwater	8,973	Strydfontein	3,000
Leonora	1,200	Sukses	7,305
Lida	3,856	Tokat	9,736
Loerkop	1,500	Touristo	1,000
Lorencia	708	Traneda	5,085
Luckenwalde	1,687	Tsaobis Leopard NR	35,000
Mababa	3,077	Tsintsabis	1,862
Malta	6,400	Ugab Park	150
Manina	1,600	Uitkomst	4,589
Marie	3,000	Uitsig	5,394
Maroelaboem	2,264	Verdun	2,986
Maxwell	4,775	Victory	5,500
Metgeselle	11,000	Voelpark	11
Meyerton	5,300	Voorspoed	2,454
Mon Repos	3,230	Vreemdeling	5,795
Moraria	781	Wagnog	6,997
Namib	5,288	Waltershagen	5,166
Narnbees	12,306	Walvisbaai	72
Neu-Onis	10,500	Welkom	5,158
Nevada	5,046	Wildacher	2,248
Nie-te-Na	6,444	Wildheim	9,829
Nungubais-Noord	2,800		
Ohiwa	5,071		

2.2.2 Examples

A description of Tsaobis Leopard Nature Park is provided in Box 4.2.1.

Box 4.2.1 TSAOBIS LEOPARD NATURE PARK

Comparable IUCN Management Category Unassigned

Biographical Location 3.6.4 (Congo Woodland)

Geographical Location Located in the Chous Mountains 60 kilometres south of Karibib and approximately 100 kilometres west of Windhoek. 22°34' S, 15°52' E.

Date and History of Establishment This private park was set up in 1969 as a sanctuary for leopards by a Swiss conservationist Dr August Juchli, (Readers Digest, 1983).

Area 35,000 hectares

Land Tenure Private

Altitude 500-1,500 metres above sea level

Physical Features The park mostly consists of rugged mountainous country with arid areas (Stuart & Stuart, 1989).

Climate Summer days are hot and nights are mild. Winter days are mild and nights are cold. Low rainfall all year round with most rain falling between October and April.

Vegetation No site specific information

Fauna As the name suggests the park is a sanctuary for leopards with a population of approximately 30 animals. Other animals include giraffe *Giraffa camelopardalis* (Lower Risk: Conservation dependent), greater kudu *Tragelaphus strepsiceros* (Lower Risk: Conservation Dependent), blue wildebeest *Connochaeta taurinus taurinus* (LR), red hartebeest *Alcelaphus buselaphus caama* (LR) and springbok *Aepyceros marsupialis*, (Reader's Digest, 1983). The bird life is interesting and includes a number of species endemic to arid areas (Stuart & Stuart, 1989).

Cultural Heritage No information

Local Human Population No information

Visitors and Visitor The park has ten fully equipped bungalows, a swimming pool,

Facilities game viewing drives and paths for unaccompanied walks (Stuart & Stuart, 1989). Four-wheel drive vehicles also are used for viewing game. Nocturnal drives are provided. Horses can be hired for riding (Readers Digest, 1983).

Scientific Research and Facilities The ranch was established to study and breed leopard. The park today has a viable population of leopards (Reader's Digest, 1983).

Conservation Value Due to the rich diversity of bird and animal species this site is one of the most important private ranches in Namibia.

Conservation Management No private vehicles are allowed on the ranch (Stuart & Stuart, 1989).

Management Constraints No information

Staff No information

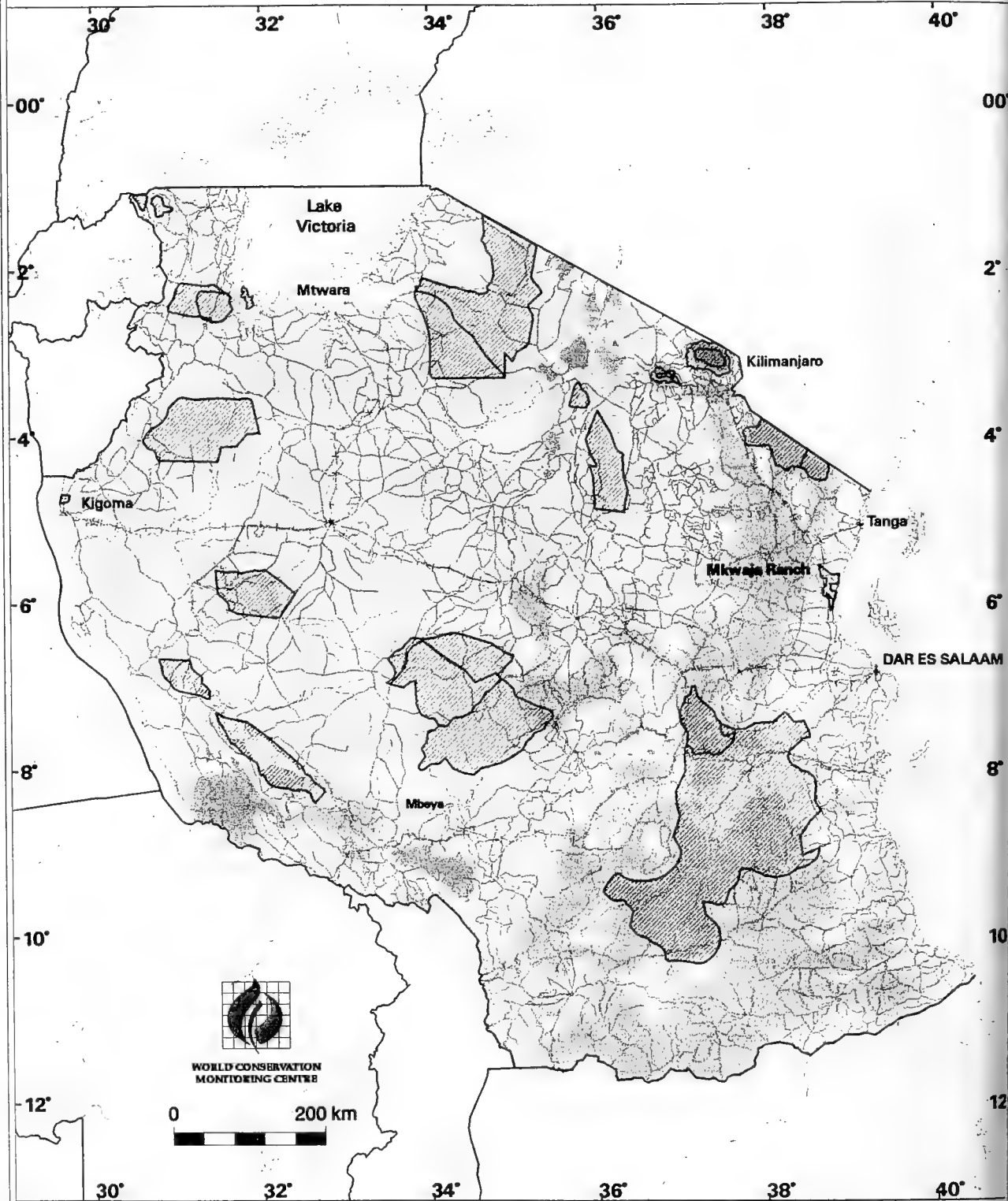
Budget No information

Local Addresses Tsaobis-Leopard Nature Reserve, P.O Box 143, Karibib 9000, SWA/Namibia. Tel 062252 ext 1304.

Date July 1996

Figure 4

Private Protected Areas in Tanzania



2.3 Tanzania

2.3.1 Summary

The only major private protected area in Tanzania is Mkwaja Ranch which is 46,500 ha in size (Figure 4). The ranch was established in 1987 and a variety of terrestrial and marine vertebrate, including a very rare subspecies of sable antelope (Rossevelt). Some of these species are listed in Table 6. It is understood that the Tanzanian Government is about to acquire the southern part of the ranch, kept as a wildlife reserve, and link it to the adjoining Saadani Game Reserve.

Table 6 List of selected species found in Mkwaja Ranch, Tanzania

Common Name	Latin Name	IUCN Category
African elephant	<i>Loxodonta africana</i>	EN
okapi	<i>Okapia johnstoni</i>	*1
giraffe	<i>Giraffe camelopardalis</i>	*2
buffalo	<i>Syncerus caffer</i>	*2
hippopotamus	<i>Hippopotamus amphibus</i>	-
lion	<i>Panthera leo</i>	VU
waterbuck	<i>Kobus ellipsiprymnus</i>	*2
hyena	<i>Proteles cristatus</i>	DD
warthog	<i>Phacochoerus aethiopicus</i>	-
leopard	<i>Panthera pardus</i>	-
baboon	<i>Papio anubis</i>	-
vervet monkey	<i>Cercopithecus tantalus</i>	-
sable antelope	<i>Hippotragus niger</i>	*1
green turtle	<i>Chelonia mydas</i>	EN

*1 Lower Risk: Near Threatened

*2 Lower Risk: Conservation Dependent

2.3.2 Example

A description of Mkwaja Ranch is provided in Box 4.3.1.

Box 4.3.1 MKWAJA RANCH

Comparable IUCN Management Category IV

Biogeographical Province 3.14.7 (Somalian)

Geographical Location Approximately 60 miles south of Tanga and 190 miles north of Dar es Salaam. 5°47'S, 38°50'E.

Date and History of Establishment 1987

Area 46,500 ha

Land Tenure Private management

Physical Features No information

Climate Coastal Savanna Climate (rainfall about 1,000 mm per annum), mean annual temperature 25° - 30°C.

Vegetation No information

Fauna A diverse species range including: African elephant *Loxodonta africana* (EN), giraffe *Giraffe camelopardalis* (Lower Risk: Conservation dependent) okapia *Okapia johnstoni* (Lower Risk: Near threatened), buffalo *Syncerus caffer* (Lower Risk: Conservation dependent), hippopotamus *Hippopotamus amphibius*, lion *Panthera leo* (VU), waterbuck *Kobus ellipsiprymnus* (Lower Risk: Conservation dependent), hyena *Proteles cristatus* (DD), warthog *Phacochoerus aethiopicus*, leopard *Panthera pardus*, baboon *Papio anubis*, vervet monkey *Cercopithecus tantalus*, sable antelope *Hippotragus niger*, and green turtle *Chelonia mydas* (EN).

Cultural Heritage No information

Local Human Population There are no settlements within the ranch other than for ranch employees.

Visitor and Visitor Facilities There are two guest houses.

Scientific Research and Facilities Tsetse fly and tick control programme pioneered by the estate.

Conservation Value A highly successful conservation programme in relation to globally threatened green turtle nesting on beach of the estate.

Conservation Management Hunting is presently prohibited, except for vermin control.

Management Constraints No information.

Staff Approximately 300.

Budget No information.

Local Addresses No information

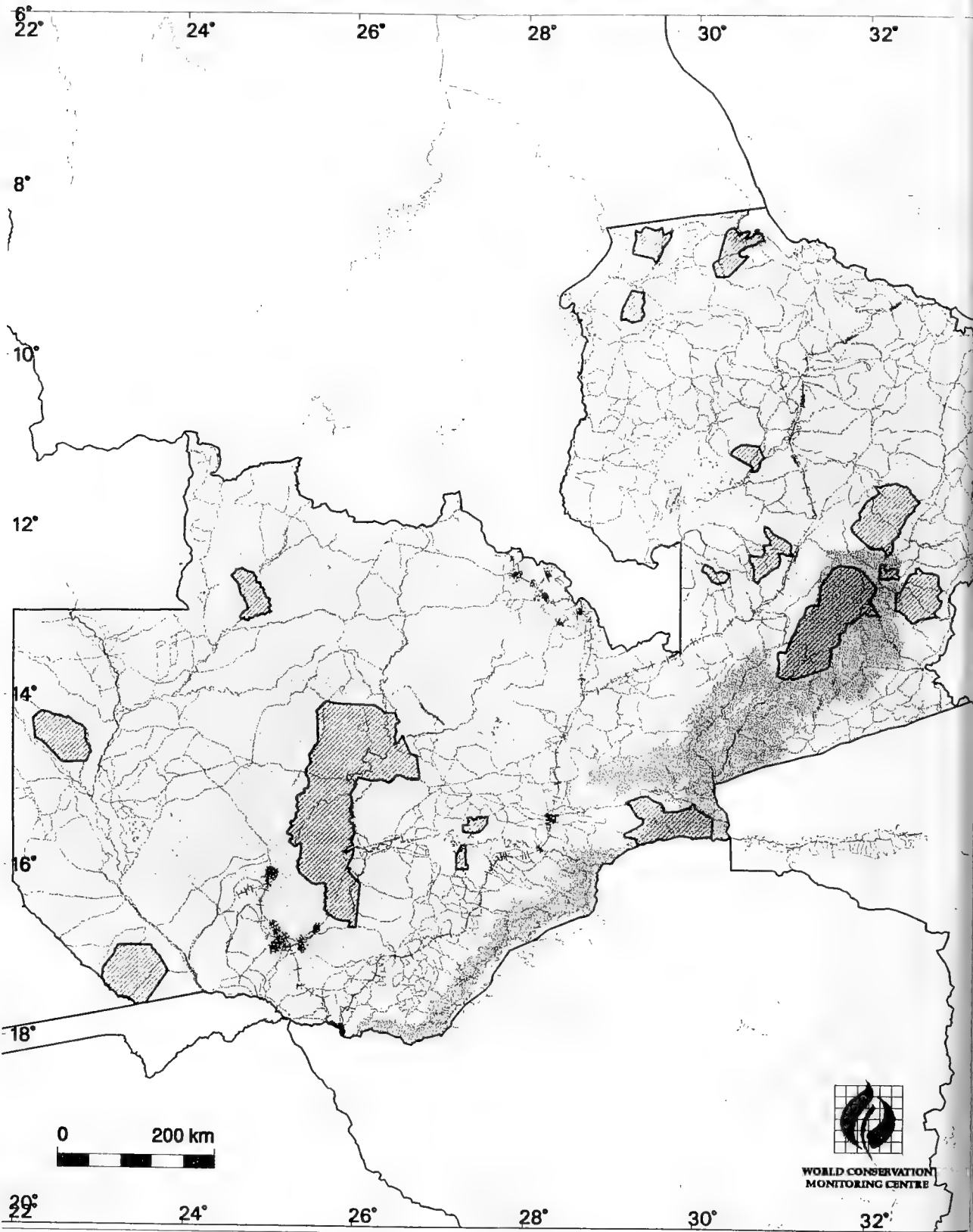
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Figure 5

Private Protected Areas in Zambia

Proportional Circles to show Representative Area within Zambia ○



2.4 Zambia

2.4.1 Summary

There are twelve private protected areas recorded for Zambia (Table 7). Unfortunately, geographic coordinates are not available for these sites but the size of each has been given. As shown in Table 8, a variety of large mammals are found in these private protected areas. The species found in these reserves are diverse. With the exception of commercial farming, there has been very little real private investment in Zambia due to the economic policies of the former government which favoured state ownership. This may change as a result of the new privatization policy of the current government, which proposes to sell many parastatal organisations to private interests. Many commercial farmers have diversified into game ranching and more privately-owned 'protected areas' are likely to be established (MacPherson, 1992).

Table 7 List of private protected areas in Zambia

Name	Size (ha)	Year established
Bruce Miller\Nansai Game Ranch	4,500	1989
Chikupi Game Ranch	1,821	1991
CMR Game ranch	1,000	1992
Hillwood Farms	2,000	1994
Kachenye Game Ranch	800	1991
Kakue Fisheries Game Ranch	790	1988
Kaposhi Farm	3,500	1980
Kembe Estates	350	1990
Lilayi	600	1989
Magula Farms Game Ranch	1,000	1990
Middletone Game Ranch	4,452	1989
Mtendere Game Ranch	1,100	1990

Table 8 List of selected species found in private protected areas in Zambia

Common Name	Latin Name	IUCN Category
common eland	<i>Tragelaphus oryx</i>	*1
sable antelope	<i>Hippotragus niger</i>	*2
waterbuck	<i>Kobus defassa</i>	-
warthog	<i>Phacochoerus aethiophilus</i>	-
oribi	<i>Ourebia ourebi</i>	*1
southern reedbuck	<i>Redunca arundinum</i>	*1
blue wildebeest	<i>Connochaetes taurinus</i>	*1
sitatunga	<i>Tragelaphus spekii</i>	*2
cheetah	<i>Acinonyx jubatus</i>	VU
ostrich	<i>Struthio camelus</i>	-
tsessebi	<i>Damaliscus lunatus lunatus</i>	LR
lion	<i>Panthera leo</i>	VU
spotted hyaena	<i>Crocuta crocuta</i>	*1
Lichtenstein's hartebeest	<i>Alcelaphus lichtensteinii</i>	*1
greater kudu	<i>Tragelaphus strepsiceros</i>	*1
lesser kudu	<i>Tragelaphus imberbis</i>	*1
bushbuck	<i>Tragelaphus scriptus</i>	-
zebra	<i>Equus burchelli</i>	-
impala	<i>Aepyceros melampus</i>	*1
oribi	<i>Ourebia ourebia</i>	*1
lechwe	<i>Kobus leche</i>	*1
puku	<i>Kobus vardoni</i>	*1
Sharpe's grysbok	<i>Raphiceros melanotis</i>	*1

*1 Lower Risk: Conservation Dependent

*2 Lower Risk: Near Threatened

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Annex 1

PRIVATE INITIATIVES IN SITE CONSERVATION

Please complete this questionnaire and return it by **1 July 1995**, with a map of your site and other documentation to:

Colin Watkins, World Conservation Monitoring Centre, 219 Huntingdon Road, Cambridge CB3 0DL, UK
[Fax: +44 1223 277136; email: colin.watkins@wcmc.ork.uk]

Thank you

1. DETAILS OF COMPILER

Name:

Position:

Organisation:

Address: Tel:

..... Fax:

..... Telex:

..... email:

2. SITE DETAILS

Country:

Site name:

Site Address: Tel:

..... Fax:

..... Telex:

..... email:

Designation:

(e.g. wilderness area, wilderness/ranch, former ranch, etc.)

Administration:

(e.g. Freehold/Leasehold/Tenancy/Other)

Size (hectares or km²)

Please indicate the closest description of the management regime¹ from the list below:

- managed mainly for: science or wilderness protection
- ecosystem protection and recreation
- conservation of specific natural features
- conservation through active habitat management interaction
- landscape conservation and recreation
- sustainable use of natural ecosystems
- commercial production

Specific aims and objectives for the site:
.....
.....
.....
.....
.....

Year conservation started:

Detailed location: Latitude / / Longitude / /

Altitude (m): Min: Max: Mean:

Major habitat types:
.....
.....
.....
.....
.....

Is a detailed map available (please enclose map): yes/no

Is public access permitted? yes/no

Note: ¹ The management regimes, above, are based on the IUCN Protected Areas Management Categories

Major **plant** species of conservation importance (continued):

COMMON NAME		SCIENTIFIC NAME
Local	English	
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Any special comments on the above species:

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Any other comments:

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PRIVATE PROTECTED AREAS:

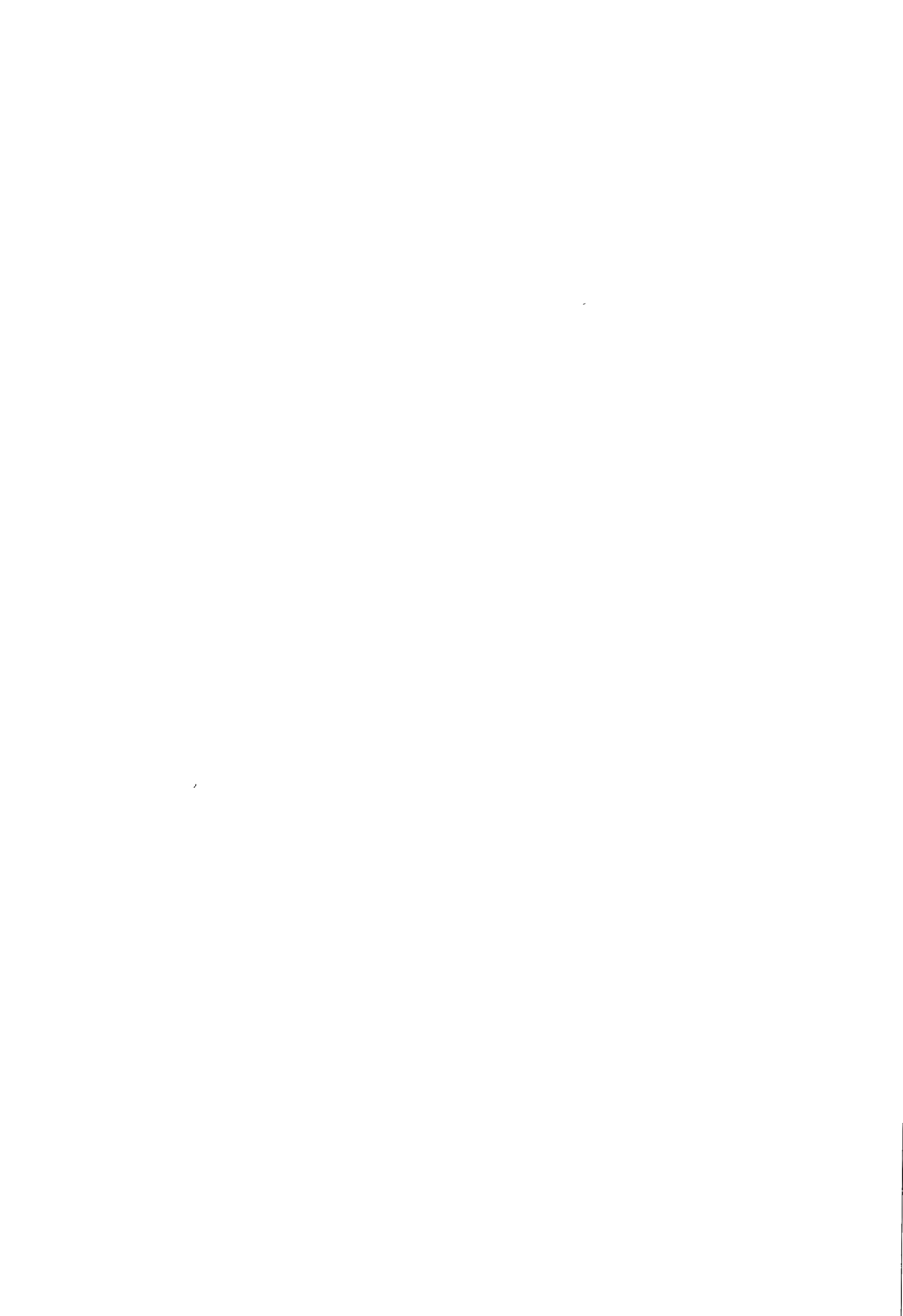
A Preliminary Study of Private Initiatives to Conserve Biodiversity in Selected African Countries

Prepared by the

World Conservation Monitoring Centre

C.W. Watkins, A.M. Barrett, R. Smith and J.R. Paine

December 1996



EXECUTIVE SUMMARY

A major gap in the available information on the world's protected areas concerns private initiatives in protecting biodiversity. In order to begin to address this gap, a preliminary survey of private protected areas was carried out in some East and Southern African countries. This pilot study demonstrates the significant contribution of private initiatives to national protected area systems and underlines the importance of extending this survey to entire regions, as part of a global review of the role private protected areas.

ACKNOWLEDGEMENTS

The study was generously supported by the Dulverton Trust of St. James Place, London, established in 1949 to support conservation, youth, education, and general welfare.

Many agencies and individuals contributed their time and effort to this pilot study. We are most grateful for the help received from Kamau Wakanene of the Centre for Biodiversity at the National Museums of Kenya, Jonathan Barnes of the Ministry of the Environment and Tourism, Namibia assisted by Immanuel Nghishoonge, Henry Mwima of the National Parks and Wildlife Service, Zambia and Godfrey Kamukala of the National Environment Management Council, Tanzania.

We communicated with many organisations and individuals, including Judy Oglethorpe, IUCN Mozambique and Peter Caroe of Knight Frank, International Estate Agents, who provided material on Mkwaja Ranch in Tanzania.

Within WCMC, we particularly wish to thank Gillian Bunting for producing the maps, Laura Battlebury and Victoria Freeman for secretarial assistance, and Michael Green for reviewing an earlier version of this report.

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ANNEX 1 Questionnaire	
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PART 1
Report on the Preliminary Study

1.1 Introduction

The World Conservation Monitoring Centre maintains a database of the world's protected areas, an initiative which was begun in 1981 by the IUCN Commission on National Parks and Protected Areas (now WCPA, the World Commission on Protected Areas) when it established a unit specifically to manage information on protected areas. This database, for example, provides the basis of the *United Nations List of Protected Areas* which is regularly produced by WCMC and WCPA.

Within the database, protected areas are classified according to their management objectives, based on the internationally recognised system developed and refined by IUCN over many decades. Under the present management categories system (IUCN, 1994a), a protected area is defined as:

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

While unambiguous in terms of the remit of protected areas to conserve biological diversity, the definition is suitably broad with respect to the means of achieving this through a range of different public and private approaches to stewardship.

Sound, comprehensive data on the world's protected areas is essential for purposes of planning, policy development and monitoring progress in biodiversity conservation. Over the years, WCMC has built a fairly comprehensive dataset of protected areas within the wildlife sector, such as national parks, nature reserves and wildlife sanctuaries administered by national protected area agencies.

In the case of tropical countries, in particular, coverage has since been extended to the forestry sector as a contribution to the *FAO Forest Resources Assessment 1990*. The results of that study demonstrated vividly a major gap in information on the world's protected areas. Protected areas within the forestry sector, many of them forest reserves allocated to conservation or watershed protection, accounted for 4.5% of total land area within the tropics, compared to 7.8% for protected areas in the wildlife sector (WCMC Protected Areas Database).

There remain other gaps in the available information on the world's protected areas, the most significant of which probably relates to privately owned or managed reserves. Some of the world's oldest protected areas were originally established through private initiatives, very often by nobility for purposes of sport hunting. An early example is the New Forest in Southern England which was declared a Royal hunting preserve in 1079 by King William II. Private initiatives, through ownership or lease of land by private individuals or conservation bodies, are playing an increasing important role in biodiversity conservation: witness the *Nature Conservancy* in the USA, which owns land throughout the world, and the *National Trust* which is the second largest landholder in England. In the tropics, particularly in Africa and Latin America, there has been a steady rise in the number of private protected areas since the 1960s (Alderman, 1992). But information on the number, extent and location of private protected areas, as well as the biodiversity which they safeguard, is either unavailable or scattered throughout the literature.

In order to begin to address this information gap, WCMC decided to undertake a preliminary survey of private protected areas in some African countries in order to establish whether or not a comprehensive study was warranted. The objectives of this preliminary study were:

- to review the scope of private initiatives underway in a selection of African countries;
- to assess the contribution of the private sector to biodiversity conservation in a selection of African countries; and
- to provide a basis for developing proposals to carry out a series of regional studies of private initiatives.

The results of the preliminary survey are presented in this report. The methodology is outlined in Section 1.2 and a summary of the results in Section 1.3. More detailed accounts of the selected countries are presented in Part 2.

1.2 Methods

Scope

The study was confined to selected countries in East and Southern Africa, in the knowledge that they feature well-established and extensive privately managed protected areas. Initially the countries selected were Kenya, Malawi, Mozambique, Namibia, Tanzania, Uganda and Zambia. However, in order to gain a more representative sample of the private sector the survey was extended to include the Republic of South Africa and Zimbabwe; time and resources permitted only the collation of summary statistics for these two additional countries.

A principal difficulty with the term "private protected area" lies in the word *private*, which may be interpreted differently according to the national or local legislation, culture and language. During the course of the study and as a result of discussions with collaborators from study countries, a working definition for "private protected areas" was agreed as follows:

Sites owned freehold or formally leased by individuals, corporations and other private bodies in which wildlife conservation is a primary activity and the responsibility of such owners or leaseholders.

Laws may sometimes place restrictions and obligations on the owners or leaseholders, but these do not diminish the private nature of such sites.

This definition of a private protected area, in which wildlife conservation is a primary activity, is weaker than the IUCN definition of a protected area, which is especially dedicated to the protection and maintenance of biodiversity (Section 1.1). It is likely, therefore, that not all private protected areas considered in this preliminary study would qualify as a protected area *sensu* IUCN.

Data gathering

Information on private protected areas was solicited by means of a questionnaire (Annex 1) sent to a range of contacts within the selected countries. In many cases, individuals were commissioned to gather such information from within their country of residence. In the case of the Republic of South Africa and Zimbabwe, WWF Southern Africa arranged for a consultant (David Grossman) to provide summary data on the extent of private protected areas.

Responses to the questionnaire varied. Contacts in Uganda, Malawi and Mozambique were unable to find the resources to undertake the work involved. The Tanzanian authorities provided details of the only significant private protected area in the country, Mkwaja Ranch and this was supplemented by other information from Knight Frank International, Estate Agents, who have been marketing the ranch. The National Parks and Wildlife Services of Zambia provided a list of their privately-owned sites, as did the Ministry of Environment and Tourism, Namibia. The Centre for Biodiversity, National Museums of Kenya holds information on many of Kenya's private protected areas and was able to complete questionnaires for the majority of such sites.

Information compilation

Data from the questionnaires were entered into the WCMC Protected Areas Database. Where available, mapped information was digitised and incorporated with the WCMC Biodiversity Map Library, a geographic information system which is linked to the Protected Areas Database. These information management systems were used to generate summary statistics, lists and maps of private protected areas for each of the country studies. The lists and maps are presented in Part 2, together with some case studies of individual private protected areas, describing *inter alia* their biodiversity and management regimes.

1.3 Overview of Private Protected Areas in East and Southern Africa

Results

The results of this preliminary survey summarised in Figure 1 and in Table 1 are compared with the extent of legally designated protected areas under the jurisdiction of government agencies. Although they cover only a selection of countries in East and Southern Africa, they demonstrate the extensiveness of private protected areas in several of these countries.

In the Republic of South Africa, private protected areas (i.e. game ranches registered with the authorities) are much more numerous and more extensive in area than legally designated sites. In Kenya, Namibia and Zimbabwe, the extent of private protected areas is also significant, both in terms of total land area (1% or more) and in comparison with the legally designated protected areas system. Only in Tanzania, with just one site, and in Zambia do private protected areas represent a negligible proportion of the entire protected areas system.

Private protected areas provide a variety of important conservation and other services. These include providing safe havens, the breeding of endangered species in the wild for subsequent re-introduction, ecological tourism and sustainable use of wildlife. The conservation role of private protected areas is sometimes crucial. For example, Ol Ari Nyiro Ranch holds 10%

Figure 1 The extent of private protected areas in East and Southern Africa, expressed as a percentage of the total area of each country

of Kenya's remaining 500 black rhinos *Diceros bicornis*. Further details and examples are provided in Part 2.

Table 1 Extent of private and legally designated protected areas (IUCN Management Categories I-V) in a selection of East and Southern African countries.

Country	Total Area (sq. km)	Private Protected Areas ¹			Legally Designated Protected Areas ²		
		No.	Area (sq. km)	% total area	No.	Area (sq. km)	% total area
Kenya	580,370	50	12,211	2.10	36	34,702	5.98
Namibia	824,290	148	7,642	0.93	11	103,706	12.58
South Africa	1,184,825	4,035	80,932	6.85	235	74,134	6.26
Tanzania	945,090	1	465	0.05	28	130,000	13.76
Zambia	752,610	12	219	0.03	20	63,609	8.45
Zimbabwe	390,310	3	6,500	1.67	25	30,678	7.86

¹ Compiled from returned questionnaires and personal communications.

² Source: WCMC Protected Areas Database

Conclusions and Recommendations

The results from this preliminary study demonstrate that, although practices vary from country to country, the private sector makes an invaluable contribution to biodiversity conservation. In the region, countries which have had free-market economies for a long time, and in which the purchase of freehold property is permitted, have attracted private individuals and corporate bodies to invest in conservation-oriented initiatives. Those countries, such as Tanzania, which have been more socialist in style and in which freehold land is not available have not attracted the private sector in the same way.

There is anecdotal evidence of private initiatives in many other countries of the world, particularly throughout the Americas and in Europe. They also feature to a lesser extent in parts of Asia and Australasia.

Given the significant contribution of the private sector to the world's protected areas, based on this pilot study, it is necessary to gain a thorough understanding of the distribution of private protected areas and the biodiversity which they support. This is important for a number of reasons. First, it is vital for conservation planning purposes, particularly at national, regional and even global levels. Identification of gaps in protected areas systems, for example, could precipitate the selective purchase of sites to meet specific objectives, such as the conservation of threatened species or centres of diversity or endemism. Secondly, greater awareness of the contribution of the private sector will help to develop and strengthen its role in conserving biodiversity, particularly as national protected areas agencies increasingly explore novel approaches to managing their estate. Thirdly, there is much to learn from the private sector, particularly with respect to the economics of managing protecting areas through sustainable use of wildlife resources, ecotourism and other enterprises.

Based on these preliminary findings, it is recommended that the survey be extended to other countries in Africa and that a similar study be commissioned for Latin America. The feasibility of carrying out such a survey in North America and Europe should be assessed, prior to undertaking a global review of private protected areas.

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PART 2

Country Case Studies

Legend for Country Maps

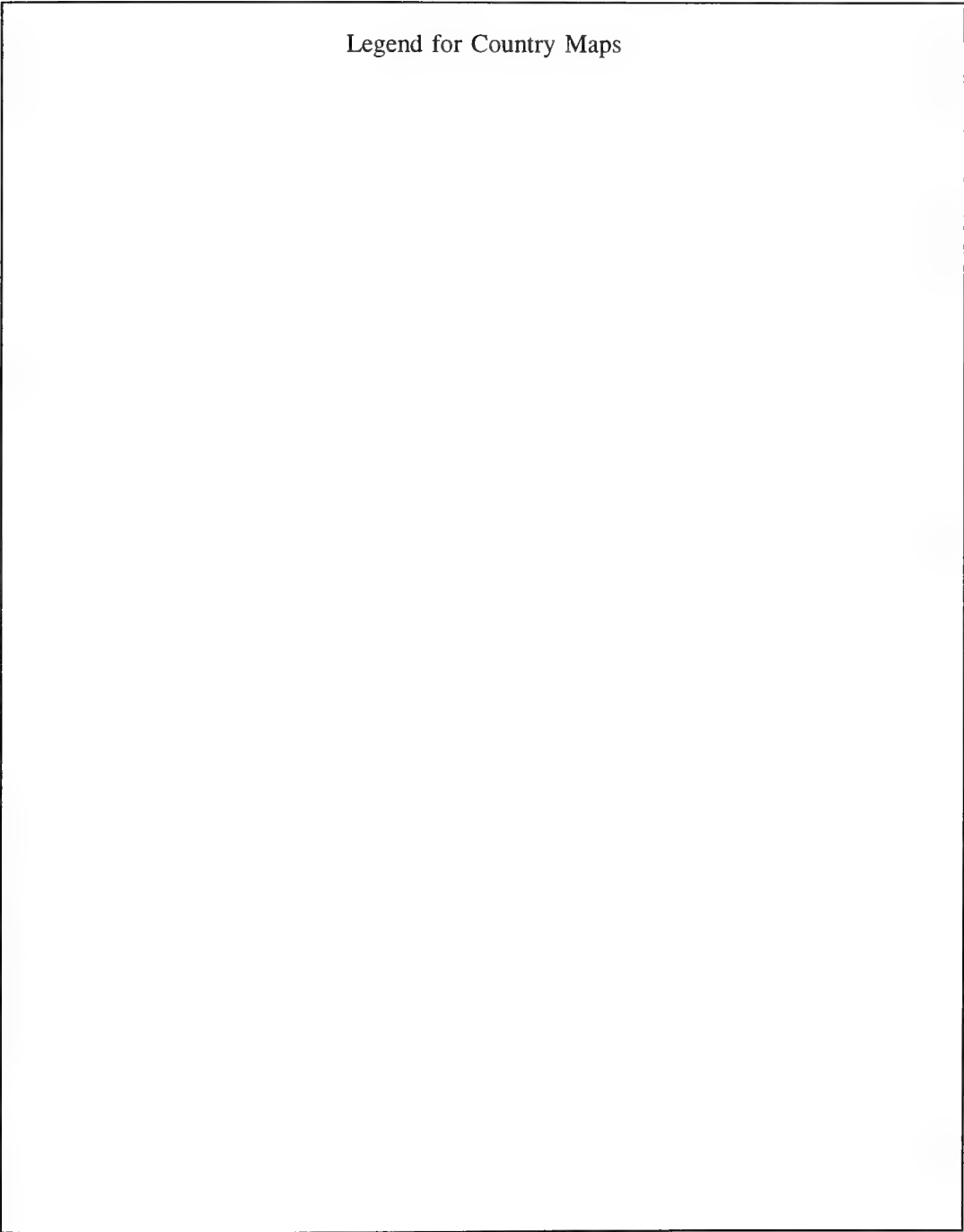


Figure 2 Private Protected Areas in Kenya

2.1 Kenya

2.1.1 Summary

Kenya has some 50 private protected areas (Table 2). Most of them are in the southern half of the country; there are none in the Northern Province. They range from a few hundred hectares in extent to over 600,000 ha in the case of the Galana Ranch. There is considerable diversity of wildlife to be found in these private protected areas, with much of Kenya's habitats and vertebrate fauna represented. Some examples of threatened species are listed in Table 3. Information on the flora represented in Kenya's private protected areas is virtually non-existent (K. Wakanene, in litt., 1995).

Three sites, Segera Ranch, Colcheccio Limited and the Kuku Group, protect three species classified as *Endangered* in the *IUCN Red List of Threatened Animals*: African elephant *Loxodonta africana*; wild dog *Lycaon pictus* and Grevy's zebra *Equus africanus*. Several of the sites support threatened species including black rhino *Diceros bicornis* and cheetah *Acinonyx jubatus*. Whilst a number of Kenya's National Parks and other legally designated protected areas are sanctuaries for black rhino, two private ranches in particular, Ngare Sergio and Ol Ari Nyiro, have made the conservation of this species their principal objective. Furthermore, the Kenya Wildlife Service reports that of 65 white rhino *Ceratotherium simum* imported from the Republic of South Africa, all but one are located on private land, and that it will continue to encourage the efforts of private land owners to breed and protect this and other species (KWS, 1991).

2.1.2 Examples

Descriptions of some of Kenya's private protected areas are provided in Boxes 4.1.1-4.1.3.

Table 2 List of private protected areas in Kenya

Name	Location	Size (ha)	Year established
ADC Mutura Ranch	0°11'N/36°37'E	?	?
B and T Malinda Ranch	???	2,023	?
Boabab Farm	3°57'S/39°43'E	400	?
Braemar Farm	1°20'S/36°55'E	1,281	?
Choke 1 Ranch	???	2,539	1993
Chololo Ranch	0°53'S/36°15'E	5950	?
Colcheccio Ltd	0°23'S/36°50'E	26,305	?
Dawida Ranch	3°55'S/38°46'E	4,452	1987
Drumvale\Hill view co-operative Society	???	9,966	?
East African Portland	???	6,475	1978
Enganani Ranch	0°52'S/36°20'E	2,104	?
Galana Ranch	2°13'S/38°11'E	647,484	?
Imbirikani Group Ranch	2°33'S/37°37'E	128,485	?
Jessel Ranching Ltd	???	3,982	?
Katheka Kai Co-operative Ranch	???	4,189	1924
Kendong Ranch	???	32,375	?
Kikopay community	???	16,187	?
Kisima Farm Rumuruti	0°18'S/36°39'E	17,806	?
Konza Ranching and farming Co-operative	1°42'S/37°11'E	?	?
Kuku Group Ranch	2°50'S/37°37'E	?	1988
Lakipi Rhinoceros Sanctuary	???	?	?
Leserdo Maendeleo Ranch	1°01'N/36°34'E	1,619	?
Lewa Downs	???	16,600	1975
Lisa Ranch	1°41'S/37°11'E	2,223	?
Lualenyi Ranch Co. Ltd	3°37'S/38°12'E	43,096	1993

Lukenya Co-operative Ranch	1°26'S/37°25'E	24,686	?
Maanzoni Ltd	1°37'S/37°03'E	3,356	?
Male Ranch	0°13'S/37°02'E	7,924	?
Malili Ranch	1°48'S/37°12'E	9,230	?
Manyangalo Ltd	??	2,833	1994
Mbulia Group Ranch	3°12'S/38°28'E	15,783	1993
Mitaboni Katani Co ltd	1°20'S/37°18'E	3,430	1994
Mpala Ranch	??	19,627	?
Mundui Estate Ltd	??	20,733	?
Ngata Taik Ranch	2°15'S/36°55'E	?	?
Ol Ari Nyiro Ranch	0°43'N/36°15'E	41,115	1974
Ol Doinyo Lamboro	0°21'N/36°53'E	7,264	?
Ol Jogi Ranch and Rhinoceros Sanctuary	0°12'N/37°02'E	27,517	?
Ol Maisot Ranch	0°26'N/36°54'E	12,019	?
Ol Pajeta	??	36,735	?
Ol Pejeta Rhinoceros Sanctuary	??	9,300	?
Segera Ranch	??	19,749	?
Snake and Crocodile Paradise	3°11'S/40°04'E	?	?
Sorio Rhinoceros Sanctuary	0°15'S/36°58'E	?	?
Stanley & Son Ltd	??	2,020	?
Sweetwater Game Reserve	0°13'S/37°02'E	8,903	?
Taita Hills	3°30'S/38°12'E	11,340	1973
Tarda Emali Ranch	2°03'S/37°34'E	?	?

Table 3 List of selected species found in private protected areas in Kenya

Common Name	Latin Name	IUCN Category
cheetah	<i>Acinonyx jubatus</i>	VU
wild dog	<i>Lycaon pictus</i>	EN
Jackson's mongoose	<i>Bdelogale jacksoni</i>	VU
African elephant	<i>Loxodonta africana</i>	EN
dugong	<i>Dugong dugon</i>	VU
Grevy's zebra	<i>Equus grevyi</i>	EN
white rhinoceros	<i>Ceratotherium simum</i>	*1
black rhinoceros	<i>Diceros bicornis</i>	CR
aders duiker	<i>Cephalophus adersi</i>	EN
Soemmerring's gazelle	<i>Gazella soemmerringii</i>	VU
spotted ground thrush	<i>Zoothera guttata</i>	EN
pancake tortoise	<i>Malacochersus tornieri</i>	VU
green turtle	<i>Chelonia mydas</i>	EN
Thomas's dwarf galago	<i>Galagoides thomasi</i>	*2
lesser kestrel	<i>Falco naumanni</i>	VU

*1 Lower Risk: Conservation Dependent

*2 Taxa removed from *The IUCN 1996 Red List of Threatened Animals* (listed in 1994 Red List, now Lower Risk: least concern)

Box 4.1.1 TAITA HILLS GAME SANCTUARY

Equivalent IUCN Management Category: IV (Managed Nature Reserve)

Biogeographical Province 3.14.07 (Somalian)

Geographical Location Situated astride the main Voi-Taveta road in south-east Kenya; linked by a game corridor to Tsavo West National Park. 3°30'S, 38°12'E.

Date and History of Establishment 1973

Size 11,340 ha

Land Tenure Hilton International

Altitude Up to 914m

Physical Features Consists partly of plains and partly of *Commiphora* woodland. The Bura River runs through the area attracting animals from Tsavo National Park. Despite its name, this area is not within the Taita Hills (Cheffings, 1983).

Climate No information

Vegetation Savanna plains and *Commiphora* woodland.

Fauna Grazing animals attracted to the water in the dry season include: zebra *Equus burchelli*, buffalo *Syncerus caffer*, African elephant *Loxodonta africana* (EN), impala *Aepyceros melampus*, Grants gazelle *Gazella granti*, eland *Taurotragus oryx*, waterbuck *Kobus ellipsiprymnus*, reedbuck *Redunca arundinum*, and giraffe *Giraffa camelopardalis*. Other animals include vervet monkey *Cercopithecus aethiops*, lion *Panthera leo*, and black-backed jackal *Canis mesomelas*. The prolific avifauna includes ostrich *Struthio camelus*, Bateleur eagle *Terathopius ecaudatus*, Pangani longclaws *Macronyx aurantiigula*, purple heron *Ardea purpurea*, hornbills (Bucerotidae), rollers (Coraciidae), and weavers (Ploceidae) (Cheffings, 1983).

Cultural Heritage No information

Local Human Population No information

Visitors and Visitor Facilities The whole complex of the Game Sanctuary and two tourist lodges (Taita Hills and Salt Lick) are run as a tourist concern by Hilton International.

Scientific Research and Facilities No information

Conservation Value No information

Conservation Management The area south of the Voi-Taveta road has been well developed with game viewing tracks. Controlled seasonal burning of old grasses is carried out on a rotational basis in the southern sector to maintain and improve grazing (Cheffings, 1983).

Management Constraints No information

Staff No information

Budget No information

Local Addresses Hilton International, Nairobi

Box 4.1.2 LEWA DOWNS RANCH

Equivalent IUCN Management Category No equivalent category

Biogeographical Province 3.21.12 (East African Highlands)

Geographical Location Situated below Ngare Ndare escarpment about ten kilometres South West of Isiolo. 0°20' N, 37°30' E.

Date and History of Establishment 1984

Area 16,000 ha

Land Tenure Private

Physical Features No information

Climate No information

Vegetation The ranch has a variety of habitats including riverine vegetation, acacia woodland and grass plains.

Fauna There is a high diversity of species within the ranch including African elephant *Loxodonta africana* (EN), giraffe *Giraffe camelopardalis*, eland *Taurotragus oryx*, zebra *Equus burchelli*, oryx *Scimitar oryx*, buffalo *Syncerus caffer*, leopard *Panthera pardus* and lion *Panthera leo*. Black rhinoceros *Diceros bicornis* (CR) have been relocated to the sanctuary (Wakanene, 1995).

Cultural Heritage No information

Local Human Population No information

Visitor and Visitor Facilities No information

Scientific Research and Facilities An ongoing project in the sanctuary is to build up a herd of black rhino which can be used to re-stock wildlife reserves designated by the Kenyan Wildlife Service.

Conservation Value The population of black rhinoceros in Kenya has declined dramatically from an estimated 20,000 in 1970 to about 500 in 1983. As a result this ranch is of the highest conservation value, (KWS, 1991).

Conservation Management 3,000 hectares of the 16,000 hectare ranch has been set aside as a rhinoceros sanctuary and enclosed with a solar powered electric fence.

Management Constraints Insufficient Information

Staff No information

Budget No information

Local Addresses Ngare Sergoi Rhino Sanctuary, Lewa Downs Ltd, Private Bag, Isiolo, Kenya.

Box 4.1.3 OL ARI NYIRO RANCH

Equivalent IUCN Management Category No equivalent category

Biogeographical Province 3.21.12 (East African Highlands)

Geographical Location A cattle ranch in Laikipia, Kenya occupies an area of the semi-arid northern ranching lands of the country. 0°43'N/36°15'E.

Date and History of Establishment 1974

Area 41,115 ha

Land Tenure Private

Physical Features The terrain consists of thickly bushed undulating land on the eastern side, graduating into high rocky hills and ridges interspersed by deep cleft gorges on the western side, descending to the base of the valley. The altitude varies between 1,800 and 2,200 metres above sea level.

Climate Semi-arid

Vegetation Varies from unimproved grazing land to tropical seasonal woodlands and grasslands. Most of the ranch is covered in medium to dense bush.

Fauna Many species can be found on the ranch including black rhino *Diceros bicornis* (CR), African elephant *Loxodonta africana* (EN), greater kudu *Tragelaphus strepsiceros*, eland *Tragelaphus oryx*, lion *Panthera leo* and leopard *Panthera pardus*, and buffalo *Synceros caffer*, (Wakanene, 1995).

Cultural Heritage No information.

Local Human Population No information

Visitor and Visitor

Facilities No information

Scientific Research and Facilities No information

Conservation Value Due to the decreasing numbers of black rhinoceros in Kenya the survival of this species in this sanctuary is very important: the ranch holds almost ten per cent of the total black rhinoceros population for the country, (WWF, 1991).

Conservation Management It is the policy of the ranch to allow the wild and domestic stock to coexist together with the exception of the southern part where a paddock system has been introduced in order to keep larger mammals out. The management of the ranch have taken major steps to conserve the black rhino *Diceros bicornis*. Due to minimal poaching and lack of any translocations, these rhinos form one of the last undisturbed populations in Kenya (WWF, 1991).

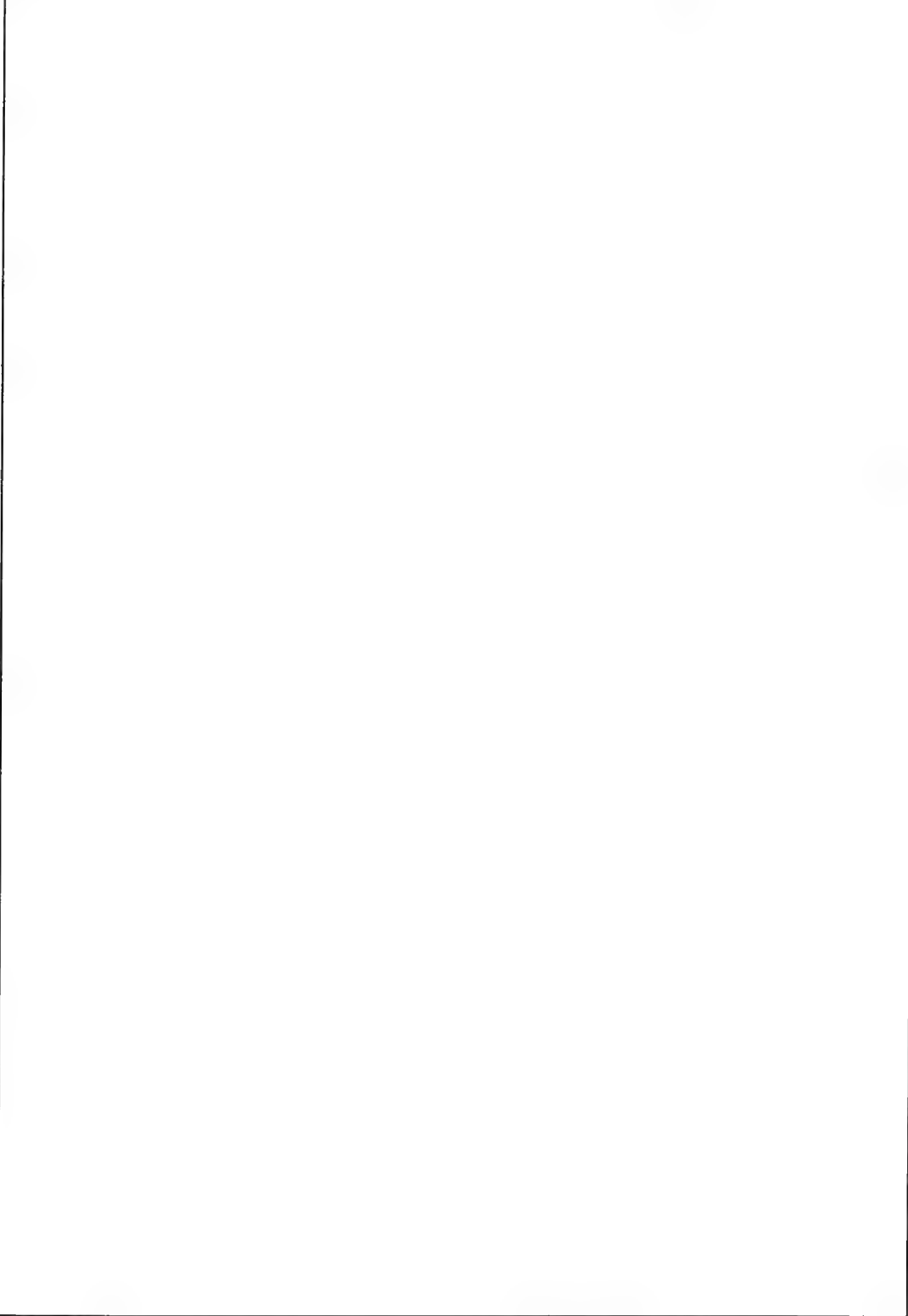
Management Constraints The erection of stone walls and electric fences will be considered along two major boundaries in order to prevent the dispersal of black rhinoceros to neighbouring areas where there is a risk of poaching. On the south west boundary, problems have developed between farmers and elephants. The elephants seek refuge on the ranch by day and raid crops on the adjacent agricultural lands by night (WWF, 1991).

Staff Ranch manager and 41 anti-poaching staff.

Budget No information

Local Addresses Gallman Memorial Foundation, P.O. Box 45593, Nairobi, Kenya. Tel- 00 2542 52 00 48.

Figure 3 Private Protected Areas in Namibia
Proportional Circles show Representative Area within each District



2.2 Namibia

2.2.1 Summary

It is estimated that some 3,000 'landholders' conserve and/or utilise wildlife on farms or ranches primarily to supplement livestock production. The Namibian register of 'Private Game Reserves' is being revised, but 148 sites are registered by the Directorate of Resource Management (Barnes, *in litt.* 1995). These are summarised in Table 4.

A list of private game reserves has been provided by the Ministry of Environment and Tourism giving the site name, the administrative district in which the site is located and the size in hectares (Table 5). Specific locations are not available and the map (Figure 3) indicates the total aggregated area of private protected areas within each district. The positions of the red-hatched circles on the map is of no significance, but their sizes are proportional to the total area of private protected areas. The breakdown of Private Game Reserves is shown in Figure 3 and Table 4.

Table 4 Summary, by district, of private protected areas in Namibia

District	No. of sites	Total Area (ha)	District	No. of Sites	Total Area (ha)
Outjo	18	78,131	Maltahohe	8	56,976
Tsumeb	4	20,907	Marienthal	7	35,553
Grootfontein	24	117,543	Gibeon	6	56,846
Otjiwarongo	16	84,025	Keetmanshoop	5	47,360
Omaruru	4	11,475	Karasburg	1	19,543
Okahandja	8	20,233	Windhoek	14	74,217
Gobabis	18	75,163	Walvisbaai	1	72
Bethanie	2	9,178	Otavi	4	17,342
Karibib	7	57,567	Rehoboth	1	3,230

Table 5 List of private protected areas in Namibia. Locations and dates of establishment are not available, except for Tsaobis Leopard National Park.

Name	Size (ha)	Name	Size (ha)
Altyo Somer	5,057	Christell	5,244
Amolinda	6,855	Clara	5,400
Anti Dorcas	8,678	Dagbreek	3,900
Atta	51	Dameron	5,251
Aubures	500	DaviB-Oos	7,838
Bambi	6,732	Denarius	5,300
Beaumontig	4,787	Dordabis	21,356
Bergveid	4,463	Driefontein	5,847
Biermann	2,141	Driehoek	1,000
Biesiepan	6,700	Drimiopsis	300
Binsenheim	15,400	E.Raath	5,980
Bismarck	1,285	Eilsenhohe	5,587
Boskop	5,076	Elandspan	7,437
Brack	2,813	Erla	1,500
Bulhoek	5,231	Ernst Meyer	2,000
Canyon	2,616	Etaneno	5,078
Chadani	1,000	Eureka	4,985
Charlotte	12,235	Excelsior	6,145

Name	Size (ha)	Name	Size (ha)
Fohlenhof	3,039	Okahandja	1,072
Friedenau	6,050	Okarapiko	2,410
Gemsbok	3,523	Okatjorute	1,716
Gisela	8,234	Okawayo	7,041
Goheganas	7,314	Okombahe	1,207
Goedgedacht	3,812	Omaphyu	4,995
Gorongosa	8,668	Omarassa	5,026
Gross-Otavi	2,857	Omupara	2,000
Gross-Ozombuto	5,145	Orambani	3,350
Happy Valley	7,328	Oranje	6,975
Heidehof	4,864	Oryx	7,500
Heimat	2,000	Otjiwarongo	12,781
Heimwee	6,256	Otjompau	5,000
Hochland	4,682	Outjo-Dorp	9,695
Horabe	5,235	Pamela	4,842
Houmoed	3,200	Pantherbake	1,000
Imkerhof	1,497	Persephone	5,832
Japie Barnard	7,000	Philadelphia	2,332
Jonkersgrab	7,575	Poortje-Noord	2,600
Kalahari	10,215	Proforma	200
Kameelhaar	17,000	Regenstein	450
Karin	5,904	Rehdestal	4,958
Keetmanshoop	10,000	Rentes	10,000
Kleinlutte	3,600	Rimini	7,710
Koedoekraal	249	Rooiklip	3,600
Kohler	2,287	Rotstein	4,708
Kommetjie	7,300	Rus-en-Vrede	7,367
Kouk	5,250	Rusoord	1,076
Kwanseb	6,500	Salztal	10,533
Kwessiegat	15,286	Schonwalde	5,103
Lahn	228	St. Blaize	4,200
Langfontein	19,543	Stang	2,557
Last Post	1,000	Steinfeld	4,692
Leicester	5,003	Stilte	5,278
Lekkerwater	8,973	Strydfontein	3,000
Leonora	1,200	Sukses	7,305
Lida	3,856	Tokat	9,736
Loerkop	1,500	Touristo	1,000
Lorencia	708	Traneda	5,085
Luckenwalde	1,687	Tsaobis Leopard NR	35,000
Mababa	3,077	Tsintsabis	1,862
Malta	6,400	Ugab Park	150
Manina	1,600	Uitkomst	4,589
Marie	3,000	Uitsig	5,394
Maroelaboem	2,264	Verdun	2,986
Maxwell	4,775	Victory	5,500
Metgeselle	11,000	Voelpark	11
Meyerton	5,300	Voorspoed	2,454
Mon Repos	3,230	Vreemdeling	5,795
Moraria	781	Wagnog	6,997
Namib	5,288	Waltershagen	5,166
Narnbees	12,306	Walvisbaai	72
Neu-Onis	10,500	Welkom	5,158
Nevada	5,046	Wildacher	2,248
Nie-te-Na	6,444	Wildheim	9,829
Nungubais-Noord	2,800		
Ohiwa	5,071		

2.2.2 Examples

A description of Tsaobis Leopard Nature Park is provided in Box 4.2.1.

Box 4.2.1 TSAOBIS LEOPARD NATURE PARK

Comparable IUCN Management Category Unassigned

Biographical Location 3.6.4 (Congo Woodland)

Geographical Location Located in the Chous Mountains 60 kilometres south of Karibib and approximately 100 kilometres west of Windhoek. 22°34' S, 15°52' E.

Date and History of Establishment This private park was set up in 1969 as a sanctuary for leopards by a Swiss conservationist Dr August Juchli, (Readers Digest, 1983).

Area 35,000 hectares

Land Tenure Private

Altitude 500-1,500 metres above sea level

Physical Features The park mostly consists of rugged mountainous country with arid areas (Stuart & Stuart, 1989).

Climate Summer days are hot and nights are mild. Winter days are mild and nights are cold. Low rainfall all year round with most rain falling between October and April.

Vegetation No site specific information

Fauna As the name suggests the park is a sanctuary for leopards with a population of approximately 30 animals. Other animals include giraffe *Giraffa camelopardalis* (Lower Risk: Conservation dependent), greater kudu *Tragelaphus strepsiceros* (Lower Risk: Conservation Dependent), blue wildebeest *Connochaetas taurinus taurinus* (LR), red hartebeest *Alcelaphus buselaphus caama* (LR) and springbok *Aepyceros marsupialis*, (Reader's Digest, 1983). The bird life is interesting and includes a number of species endemic to arid areas (Stuart & Stuart, 1989).

Cultural Heritage No information

Local Human Population No information

Visitors and Visitor The park has ten fully equipped bungalows, a swimming pool,

Facilities game viewing drives and paths for unaccompanied walks (Stuart & Stuart, 1989). Four-wheel drive vehicles also are used for viewing game. Nocturnal drives are provided. Horses can be hired for riding (Readers Digest, 1983).

Scientific Research and Facilities The ranch was established to study and breed leopard. The park today has a viable population of leopards (Reader's Digest, 1983).

Conservation Value Due to the rich diversity of bird and animal species this site is one of the most important private ranches in Namibia.

Conservation Management No private vehicles are allowed on the ranch (Stuart & Stuart, 1989).

Management Constraints No information

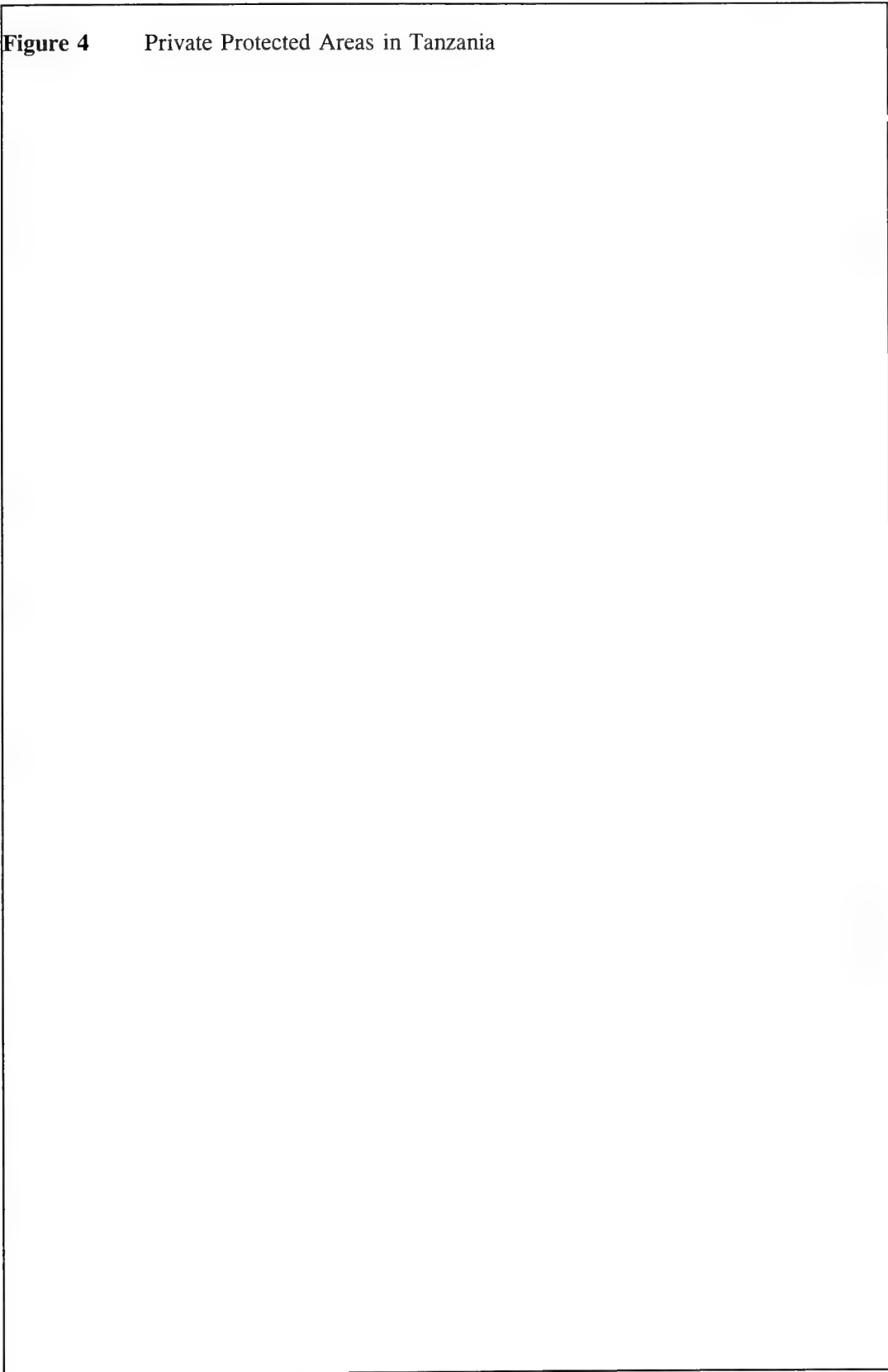
Staff No information

Budget No information

Local Addresses Tsaobis-Leopard Nature Reserve, P.O Box 143, Karibib 9000, SWA/Namibia. Tel 062252 ext 1304.

Date July 1996

Figure 4 Private Protected Areas in Tanzania



2.3 Tanzania

2.3.1 Summary

The only major private protected area in Tanzania is Mkwaja Ranch which is 46,500 ha in size (Figure 4). The ranch was established in 1987 and a variety of terrestrial and marine vertebrate, including a very rare subspecies of sable antelope (Rossevelt). Some of these species are listed in Table 6. It is understood that the Tanzanian Government is about to acquire the southern part of the ranch, kept as a wildlife reserve, and link it to the adjoining Saadani Game Reserve.

Table 6 List of selected species found in Mkwaja Ranch, Tanzania

Common Name	Latin Name	IUCN Category
African elephant	<i>Loxodonta africana</i>	EN
okapi	<i>Okapia johnstoni</i>	*1
giraffe	<i>Giraffe camelopardalis</i>	*2
buffalo	<i>Syncerus caffer</i>	*2
hippopotamus	<i>Hippopotamus amphibus</i>	-
lion	<i>Panthera leo</i>	VU
waterbuck	<i>Kobus ellipsiprymnus</i>	*2
hyena	<i>Proteles cristatus</i>	DD
warthog	<i>Phacochoerus aethiopicus</i>	-
leopard	<i>Panthera pardus</i>	-
baboon	<i>Papio anubis</i>	-
vervet monkey	<i>Cercopithecus tantalus</i>	-
sable antelope	<i>Hippotragus niger</i>	*1
green turtle	<i>Chelonia mydas</i>	EN

*1 Lower Risk: Near Threatened

*2 Lower Risk: Conservation Dependent

2.3.2 Example

A description of Mkwaja Ranch is provided in Box 4.3.1.

Box 4.3.1 MKWAJA RANCH

Comparable IUCN Management Category IV

Biogeographical Province 3.14.7 (Somalian)

Geographical Location Approximately 60 miles south of Tanga and 190 miles north of Dar es Salaam. 5°47'S, 38°50'E.

Date and History of Establishment 1987

Area 46,500 ha

Land Tenure Private management

Physical Features No information

Climate Coastal Savanna Climate (rainfall about 1,000 mm per annum), mean annual temperature 25° - 30°C.

Vegetation No information

Fauna A diverse species range including: African elephant *Loxodonta africana* (EN), giraffe *Giraffe camelopardalis* (Lower Risk: Conservation dependent) okapia *Okapia johnstoni* (Lower Risk: Near threatened), buffalo *Syncerus caffer* (Lower Risk: Conservation dependent), hippopotamus *Hippopotamus amphibius*, lion *Panthera leo* (VU), waterbuck *Kobus ellipsiprymnus* (Lower Risk: Conservation dependent), hyena *Proteles cristatus* (DD), warthog *Phacochoerus aethiopicus*, leopard *Panthera pardus*, baboon *Papio anubis*, vervet monkey *Cercopithecus tantalus*, sable antelope *Hippotragus niger*, and green turtle *Chelonia mydas* (EN).

Cultural Heritage No information

Local Human Population There are no settlements within the ranch other than for ranch employees.

Visitor and Visitor Facilities There are two guest houses.

Scientific Research and Facilities Tsetse fly and tick control programme pioneered by the estate.

Conservation Value A highly successful conservation programme in relation to globally threatened green turtle nesting on beach of the estate.

Conservation Management Hunting is presently prohibited, except for vermin control.

Management Constraints No information.

Staff Approximately 300.

Budget No information.

Local Addresses No information

Date May 1996

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Figure 5 Private Protected Areas in Zambia
Locations unknown

2.4 Zambia

2.4.1 Summary

There are twelve private protected areas recorded for Zambia (Table 7). Unfortunately, geographic coordinates are not available for these sites but the size of each has been given. As shown in Table 8, a variety of large mammals are found in these private protected areas. The species found in these reserves are diverse. With the exception of commercial farming, there has been very little real private investment in Zambia due to the economic policies of the former government which favoured state ownership. This may change as a result of the new privatization policy of the current government, which proposes to sell many parastatal organisations to private interests. Many commercial farmers have diversified into game ranching and more privately-owned 'protected areas' are likely to be established (MacPherson, 1992).

Table 7 List of private protected areas in Zambia

Name	Size (ha)	Year established
Bruce Miller\Nansai Game Ranch	4,500	1989
Chikupi Game Ranch	1,821	1991
CMR Game ranch	1,000	1992
Hillwood Farms	2,000	1994
Kachenye Game Ranch	800	1991
Kakue Fisheries Game Ranch	790	1988
Kaposhi Farm	3,500	1980
Kembe Estates	350	1990
Lilayi	600	1989
Magula Farms Game Ranch	1,000	1990
Middletone Game Ranch	4,452	1989
Mtendere Game Ranch	1,100	1990

Table 8 List of selected species found in private protected areas in Zambia

Common Name	Latin Name	IUCN Category
common eland	<i>Tragelaphus oryx</i>	*1
sable antelope	<i>Hippotragus niger</i>	*2
waterbuck	<i>Kobus defassa</i>	-
warthog	<i>Phacochoerus aethiopicus</i>	-
oribi	<i>Ourebia ourebi</i>	*1
southern reedbuck	<i>Redunca arundinum</i>	*1
blue wildebeest	<i>Connochaetes taurinus</i>	*1
sitatunga	<i>Tragelaphus spekii</i>	*2
cheetah	<i>Acinonyx jubatus</i>	VU
ostrich	<i>Struthio camelus</i>	-
tsessebi	<i>Damaliscus lunatus lunatus</i>	LR
lion	<i>Panthera leo</i>	VU
spotted hyaena	<i>Crocuta crocuta</i>	*1
Lichtenstein's hartebeest	<i>Alcelaphus lichtensteinii</i>	*1
greater kudu	<i>Tragelaphus strepsiceros</i>	*1
lesser kudu	<i>Tragelaphus imberbis</i>	*1
bushbuck	<i>Tragelaphus scriptus</i>	-
zebra	<i>Equus burchelli</i>	-
impala	<i>Aepyceros melampus</i>	*1
oribi	<i>Ourebia ourebia</i>	*1
lechwe	<i>Kobus leche</i>	*1
puku	<i>Kobus vardoni</i>	*1
Sharpe's grysbok	<i>Raphiceros melanotis</i>	*1

*1 Lower Risk: Conservation Dependent

*2 Lower Risk: Near Threatened

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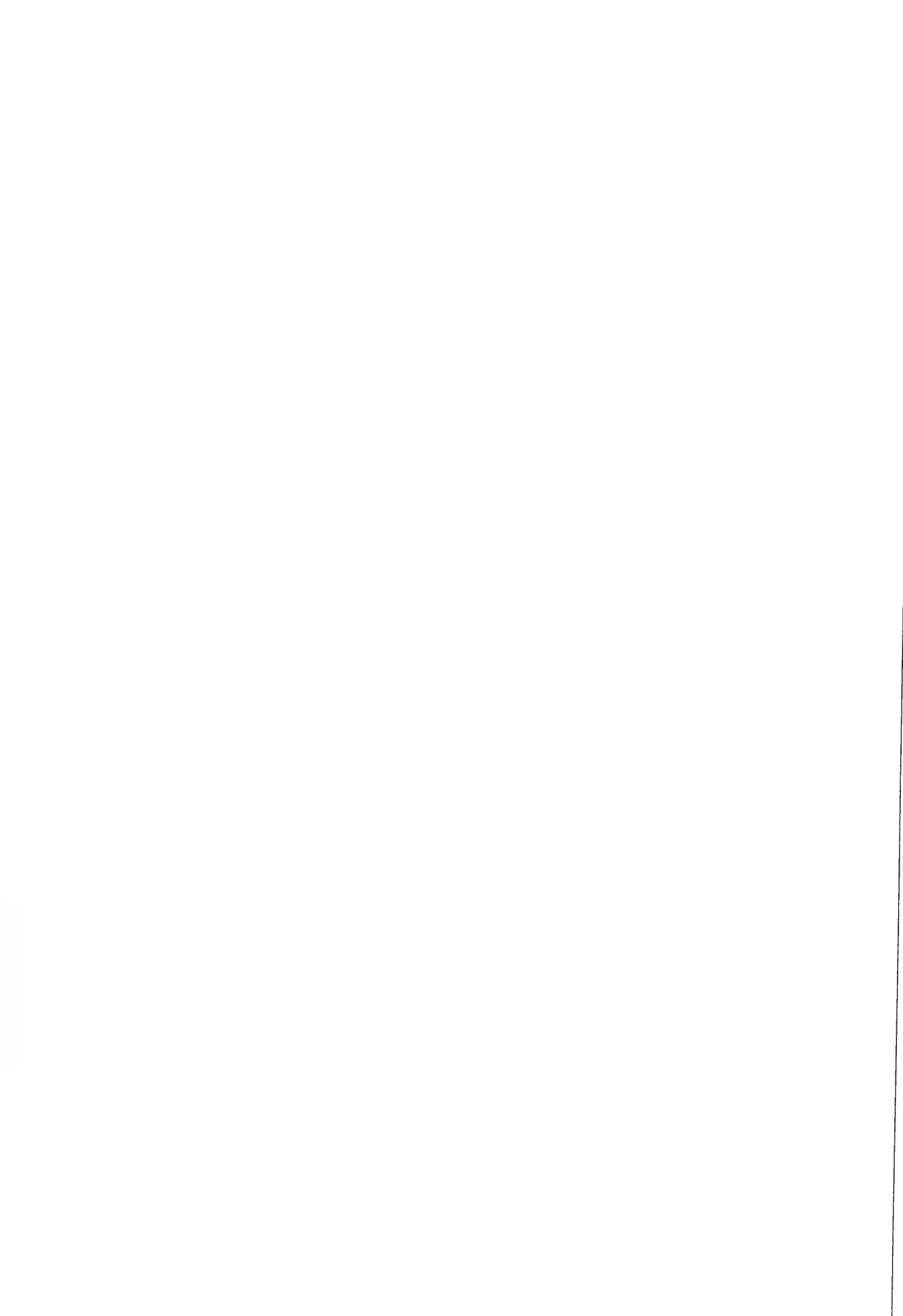
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Annex 1

PRIVATE INITIATIVES IN SITE CONSERVATION

Please complete this questionnaire and return it by **1 July 1995**, with a map of your site and other documentation to:

Colin Watkins, World Conservation Monitoring Centre, 219 Huntingdon Road, Cambridge CB3 0DL, UK
[Fax: +44 1223 277136; email: colin.watkins@wcmc.ork.uk]

Thank you

1. DETAILS OF COMPILER

Name:

Position:

Organisation:

Address:

Tel:

Fax:

Telex:

email:

2. SITE DETAILS

Country:

Site name:

Site Address:

Tel:

Fax:

Telex:

email:

Designation:

(e.g. wilderness area, wilderness/ranch, former ranch, etc.)

Administration:

(e.g. Freehold/Leasehold/Tenancy/Other)

Size (hectares or km²)

Please indicate the closest description of the management regime¹ from the list below:

- managed mainly for: science or wilderness protection
- ecosystem protection and recreation
- conservation of specific natural features
- conservation through active habitat management interaction
- landscape conservation and recreation
- sustainable use of natural ecosystems
- commercial production

Specific aims and objectives for the site:

.....

.....

.....

.....

.....

Year conservation started:

Detailed location: Latitude / / Longitude / /

Altitude (m): Min: Max: Mean:

Major habitat types:

.....

.....

.....

.....

.....

Is a detailed map available (please enclose map): yes/no

Is public access permitted? yes/no

Note: ¹ The management regimes, above, are based on the IUCN Protected Areas Management Categories

Major **plant** species of conservation importance (continued):

COMMON NAME		SCIENTIFIC NAME
Local	English	
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Any special comments on the above species:

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Any other comments:

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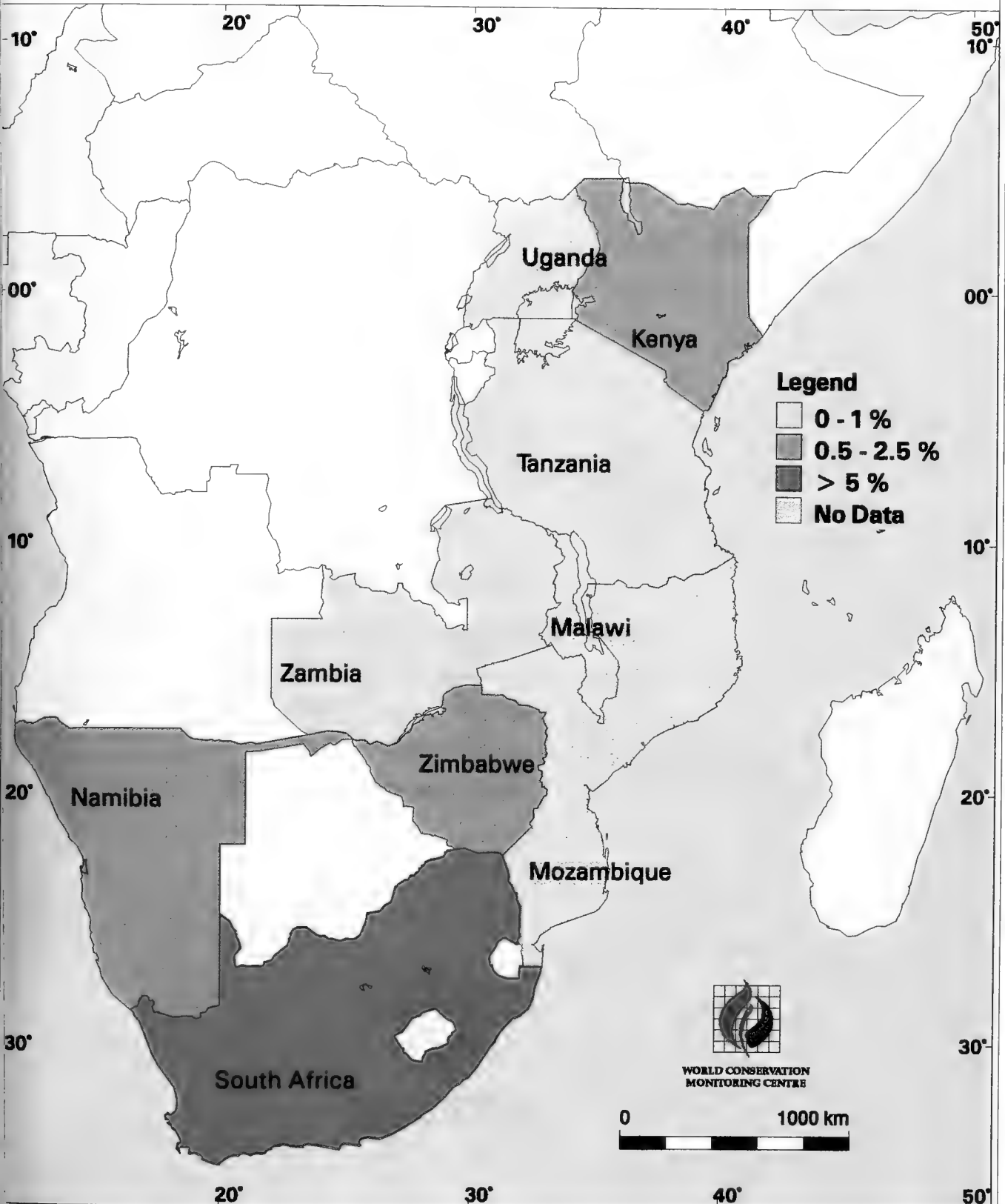
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Figure 1

The Role of Private Initiatives in Site Conservation



Legend

- 0 - 1 %
- 0.5 - 2.5 %
- > 5 %
- No Data



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0 1000 km

PART 2




Country Case Studies

Legend for Country Maps






Protected Areas

-  Private Reserves
-  Areas represented by proportional circles
-  Legally Designated Protected Areas - IUCN Categories I-V

Topographic Information

-  Major Roads
-  Railways
-  Rivers

Elevations in Country Maps

-  0 - 1000 feet above mean sea level
-  1000 - 3000 feet above mean sea level
-  3000 - 7000 feet above mean sea level
-  7000 - 11000 feet above mean sea level
-  11000 feet and above



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Figure 2

Private Protected Areas in Kenya

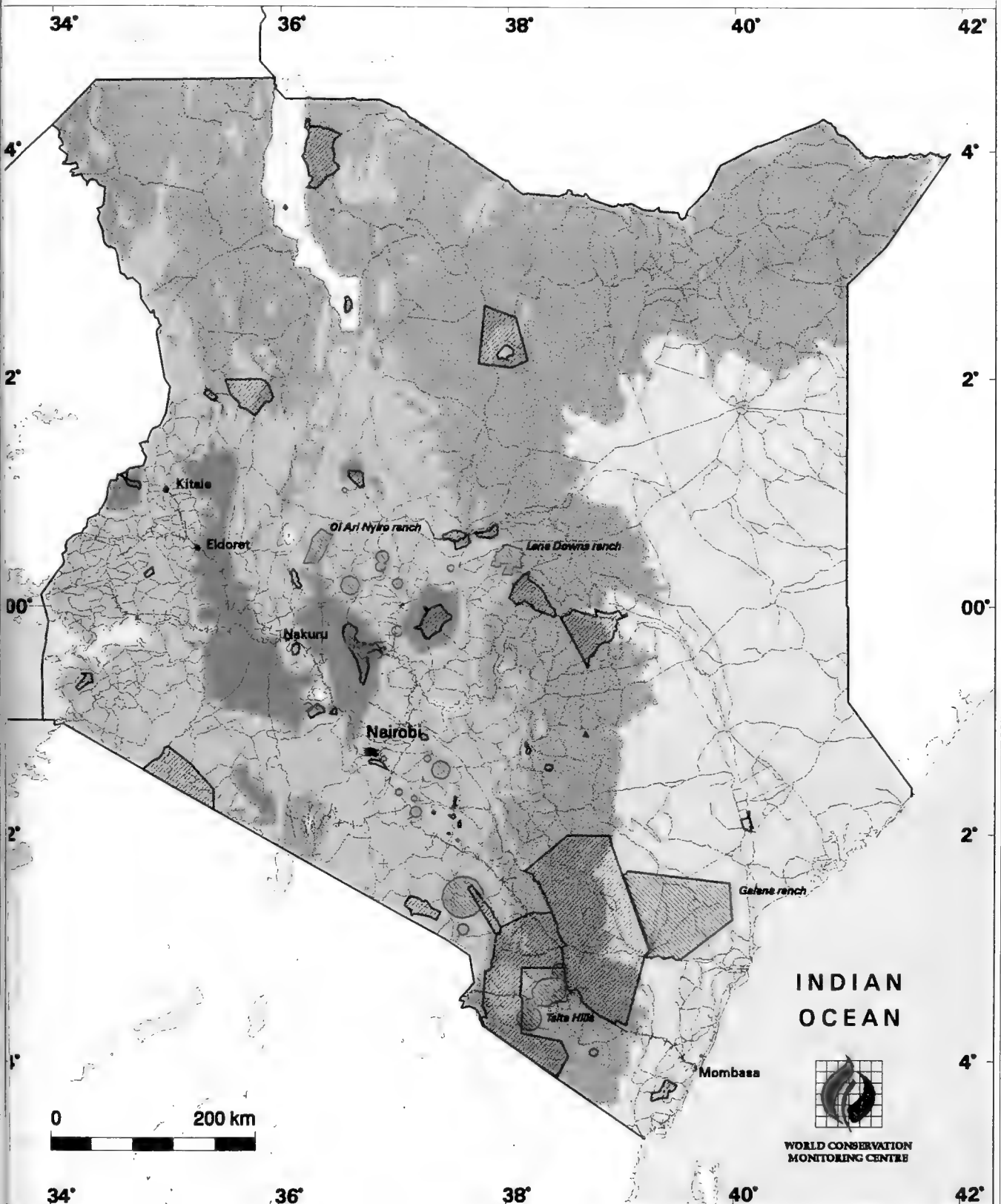




Figure 3

Private Protected Areas in Namibia

Proportional Circles to show Representative Area within each District ○

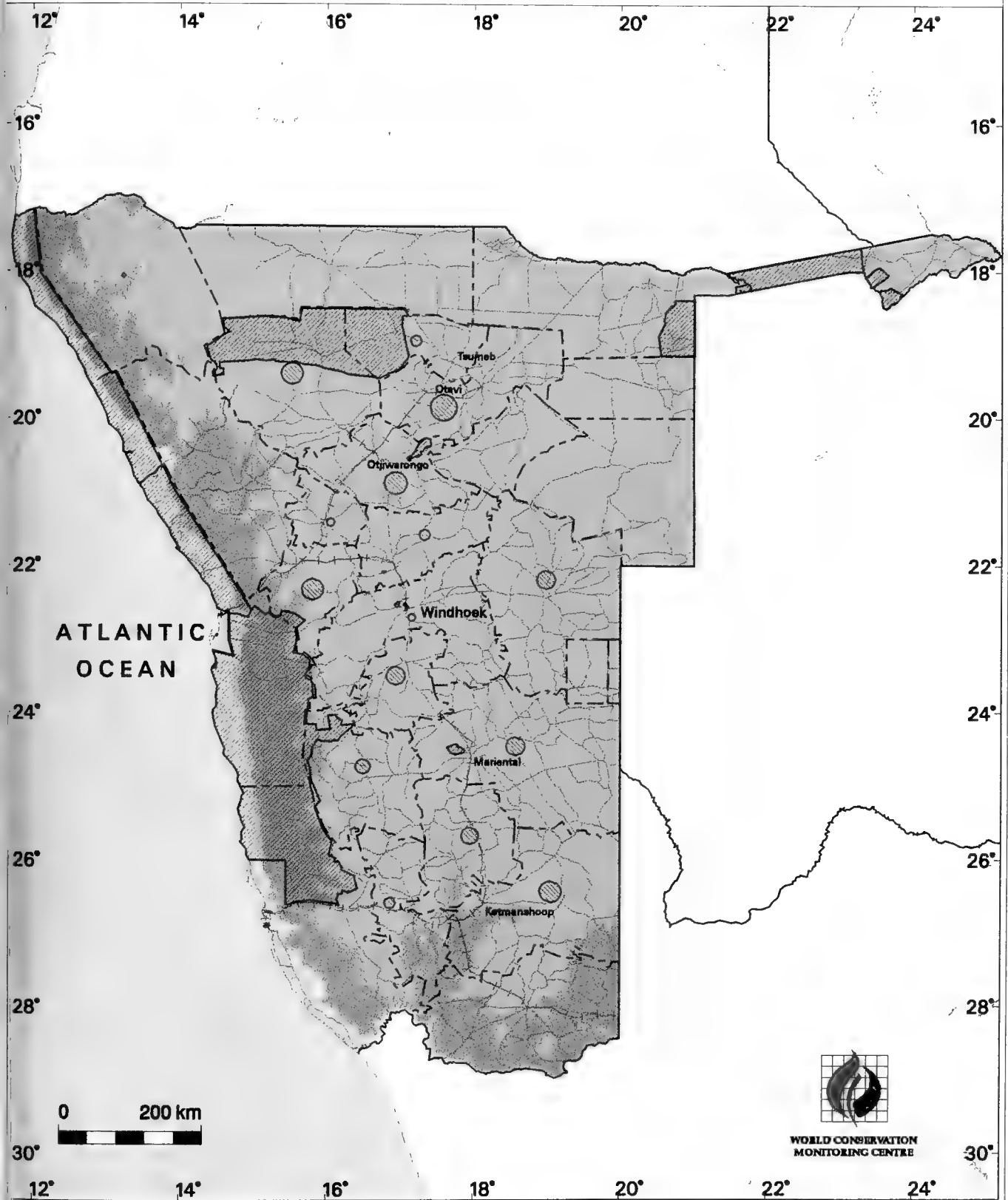




Fig. 5

Private Protected Areas in Tanzania

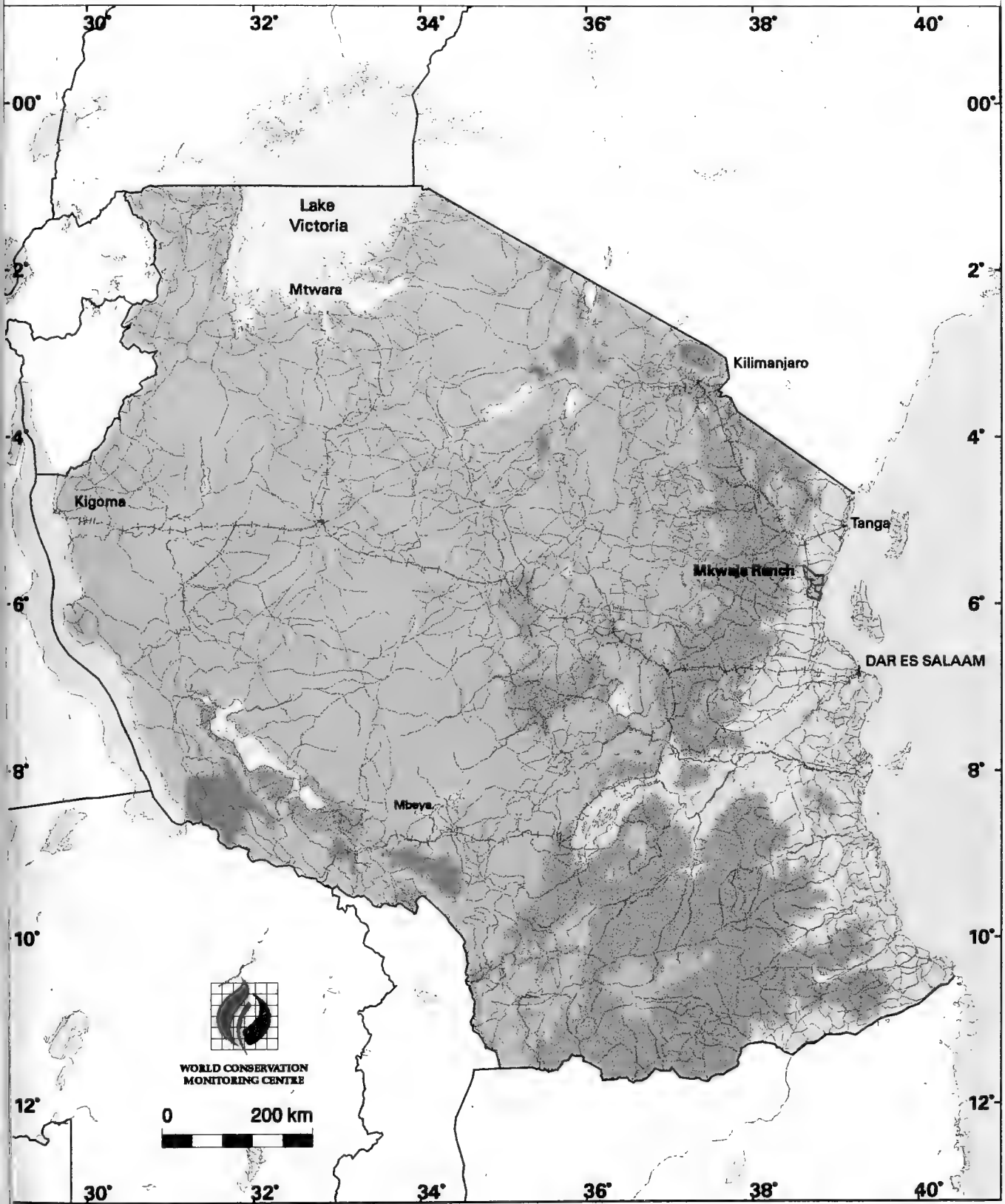




Figure 5

Private Protected Areas in Zambia

Proportional Circles to show Representative Area within Zambia ○

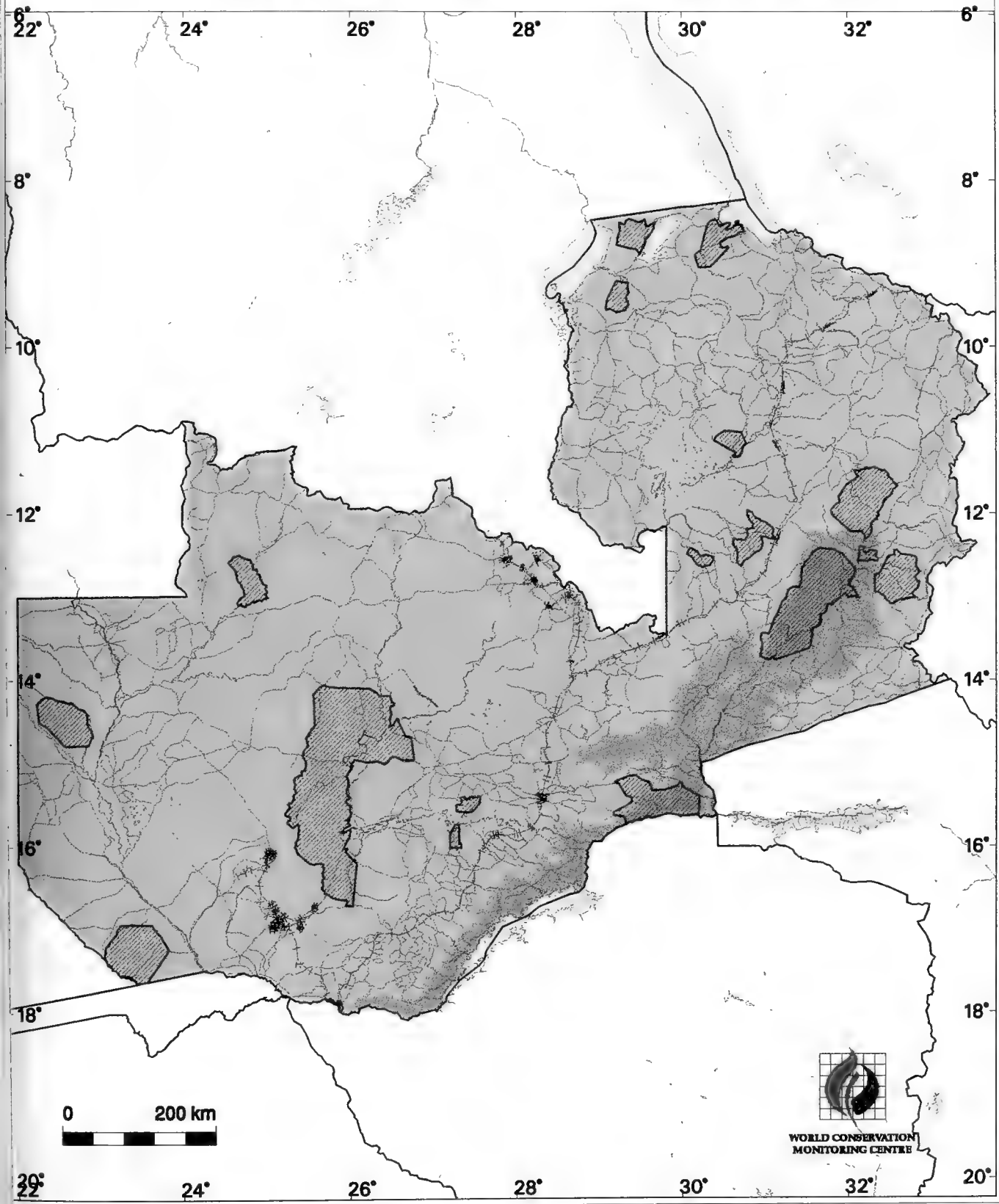
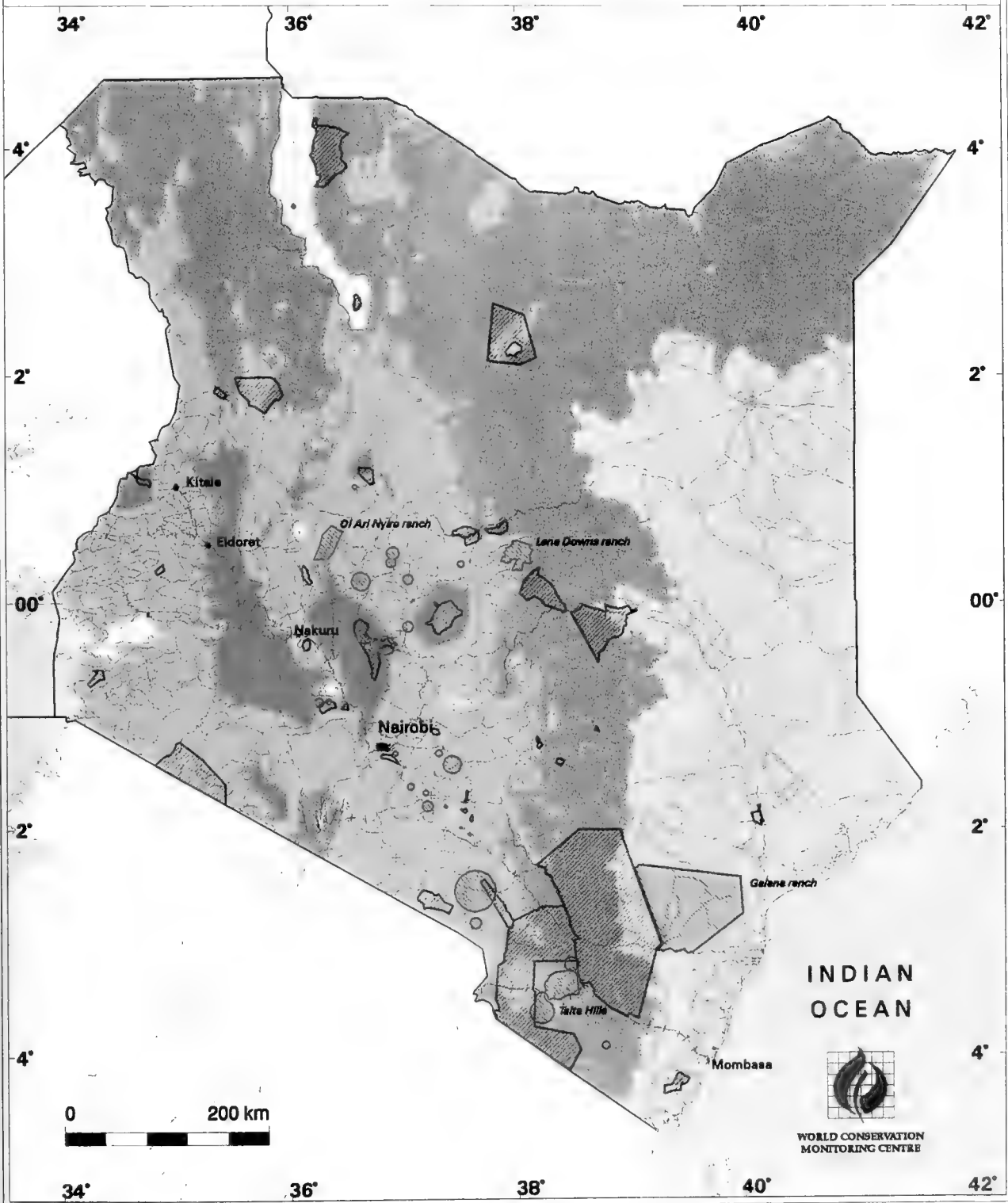


Figure 2

Private Protected Areas in Kenya



PART 2

Country Case Studies

Legend for Country Maps






Protected Areas

-  Private Reserves
-  Areas represented by proportional circles
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Topographic Information

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-  Rivers

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-  3000 - 7000 feet above mean sea level
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-  11000 feet and above



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Figure 4

Private Protected Areas in Tanzania

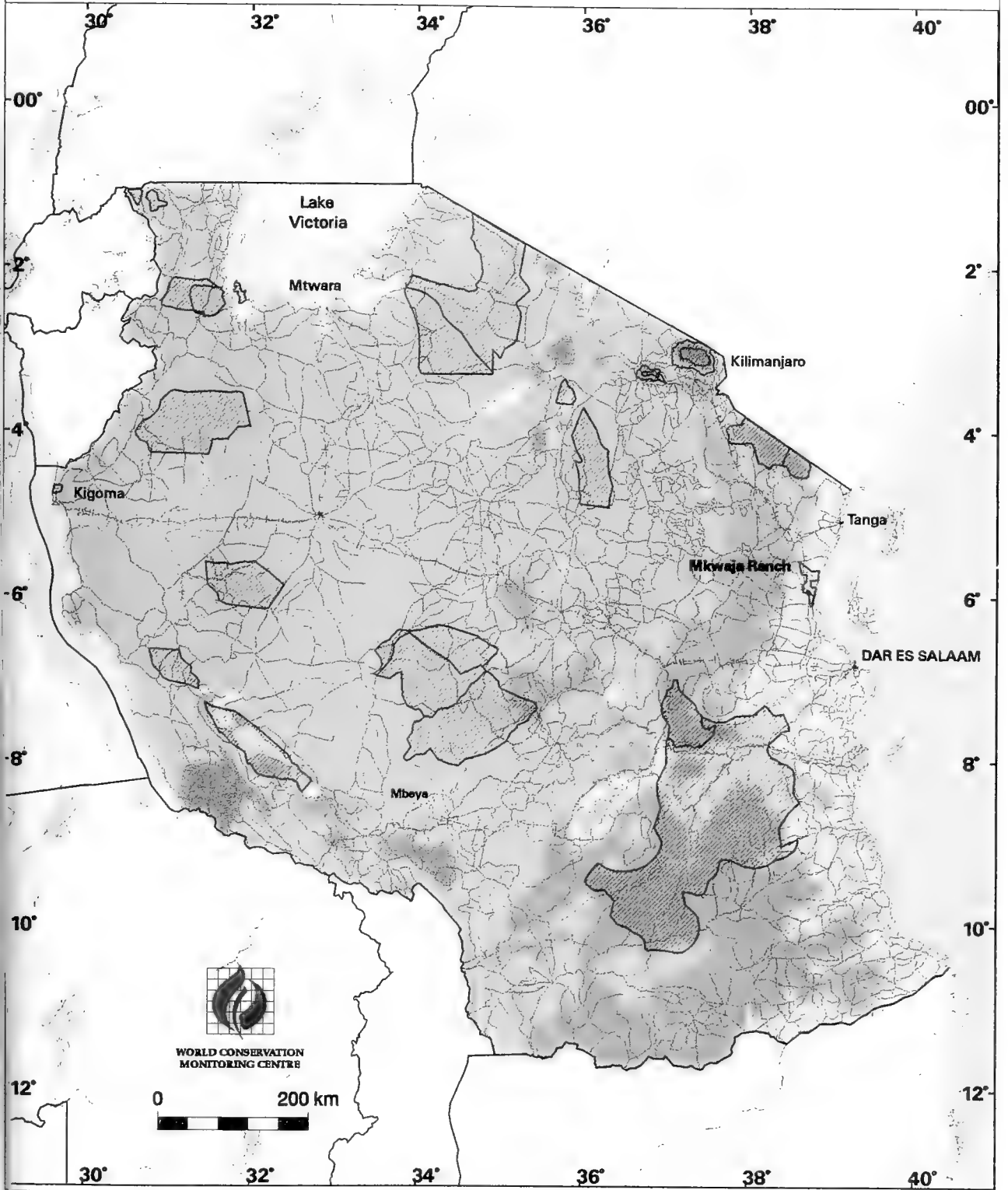


Figure 4

Private Protected Areas in Tanzania

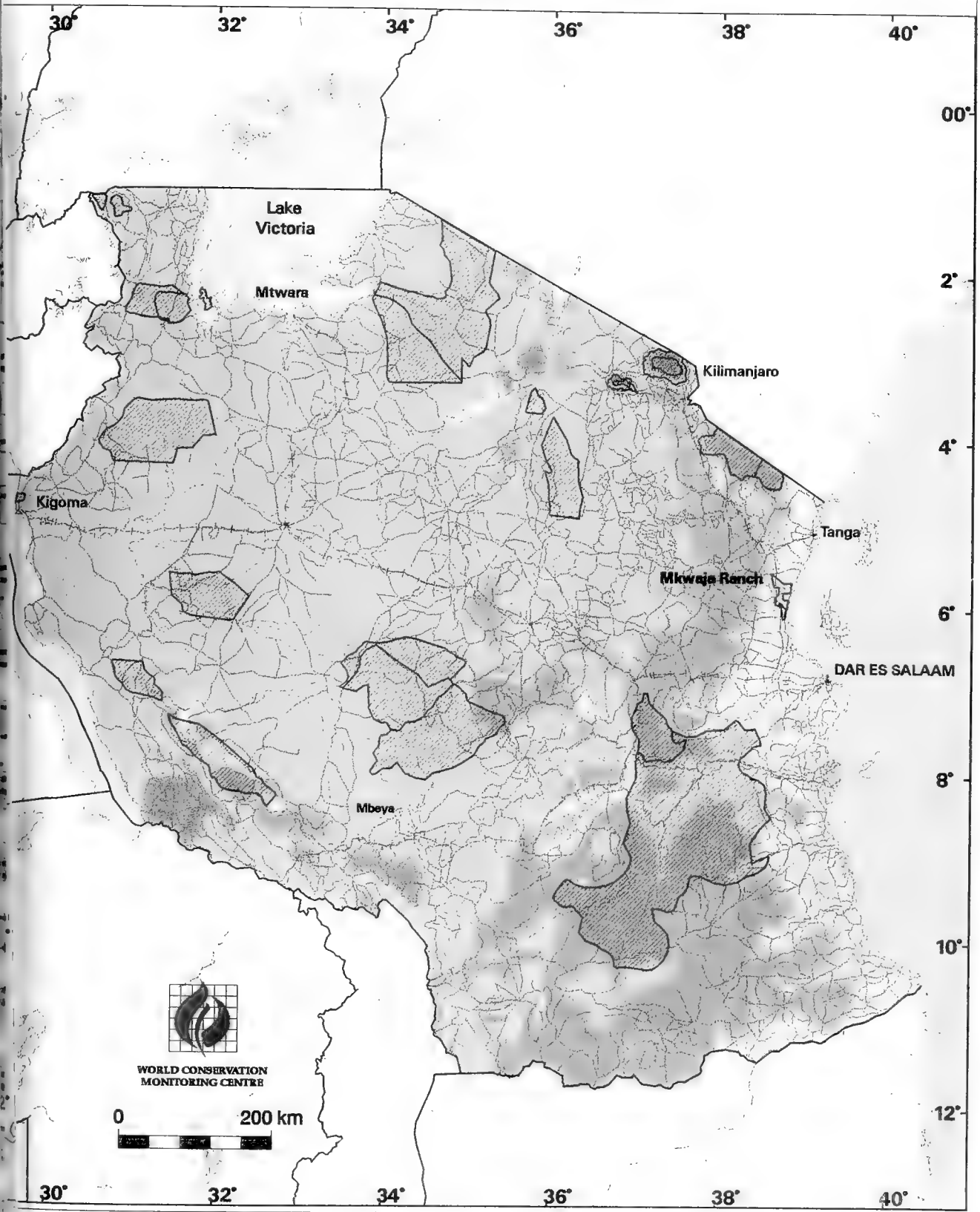


Figure 4

Private Protected Areas in Tanzania

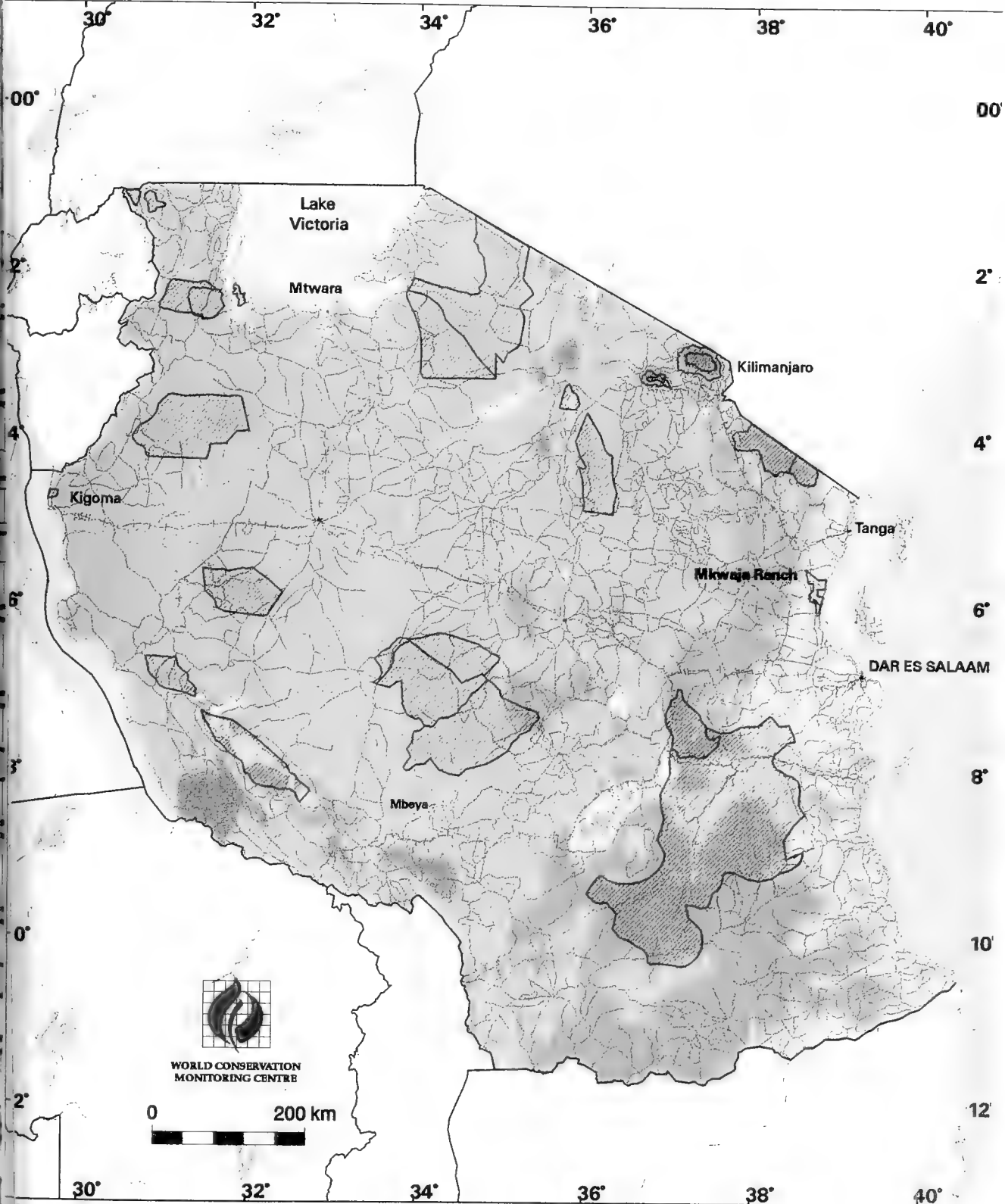




Figure 4

Private Protected Areas in Tanzania

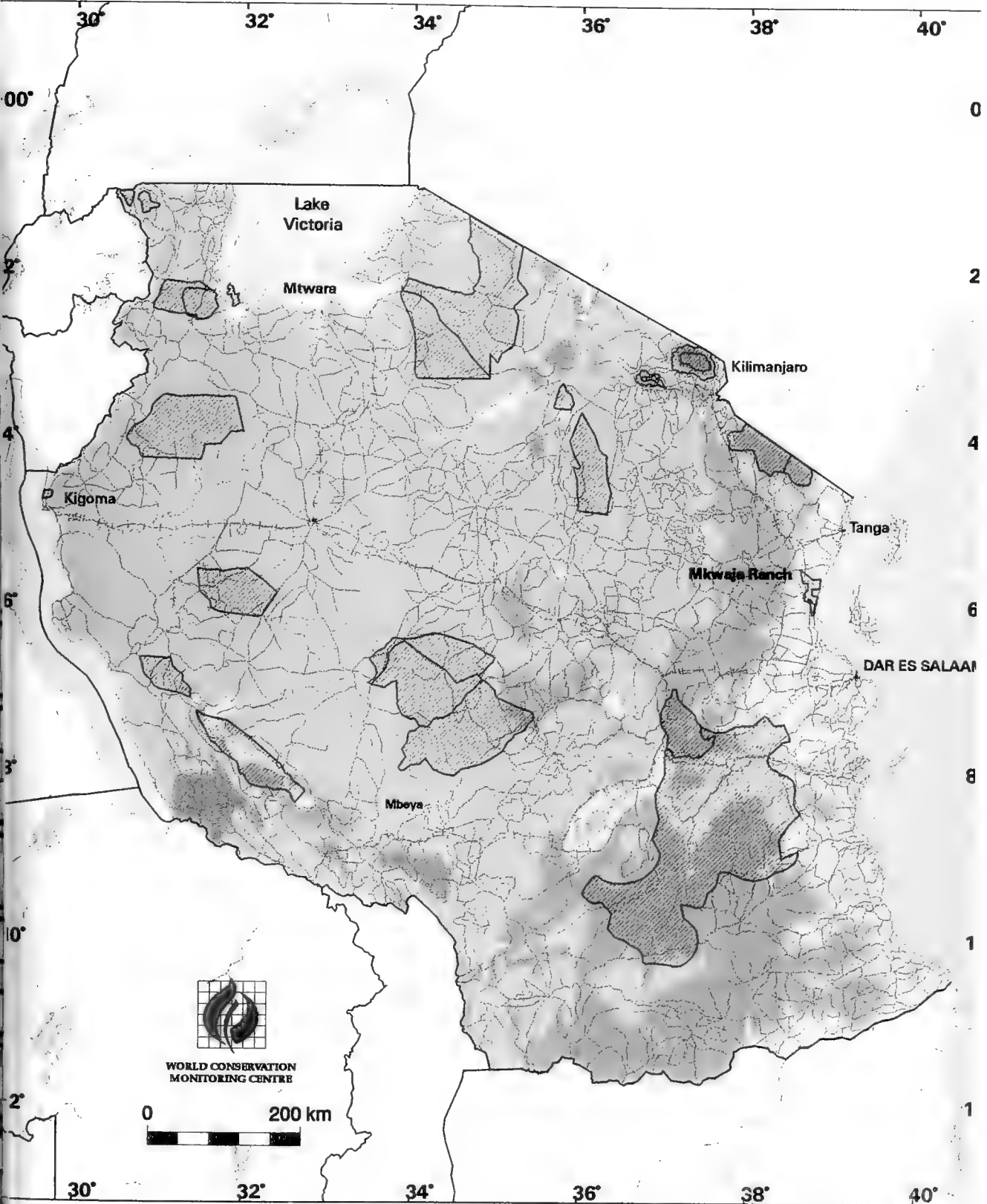
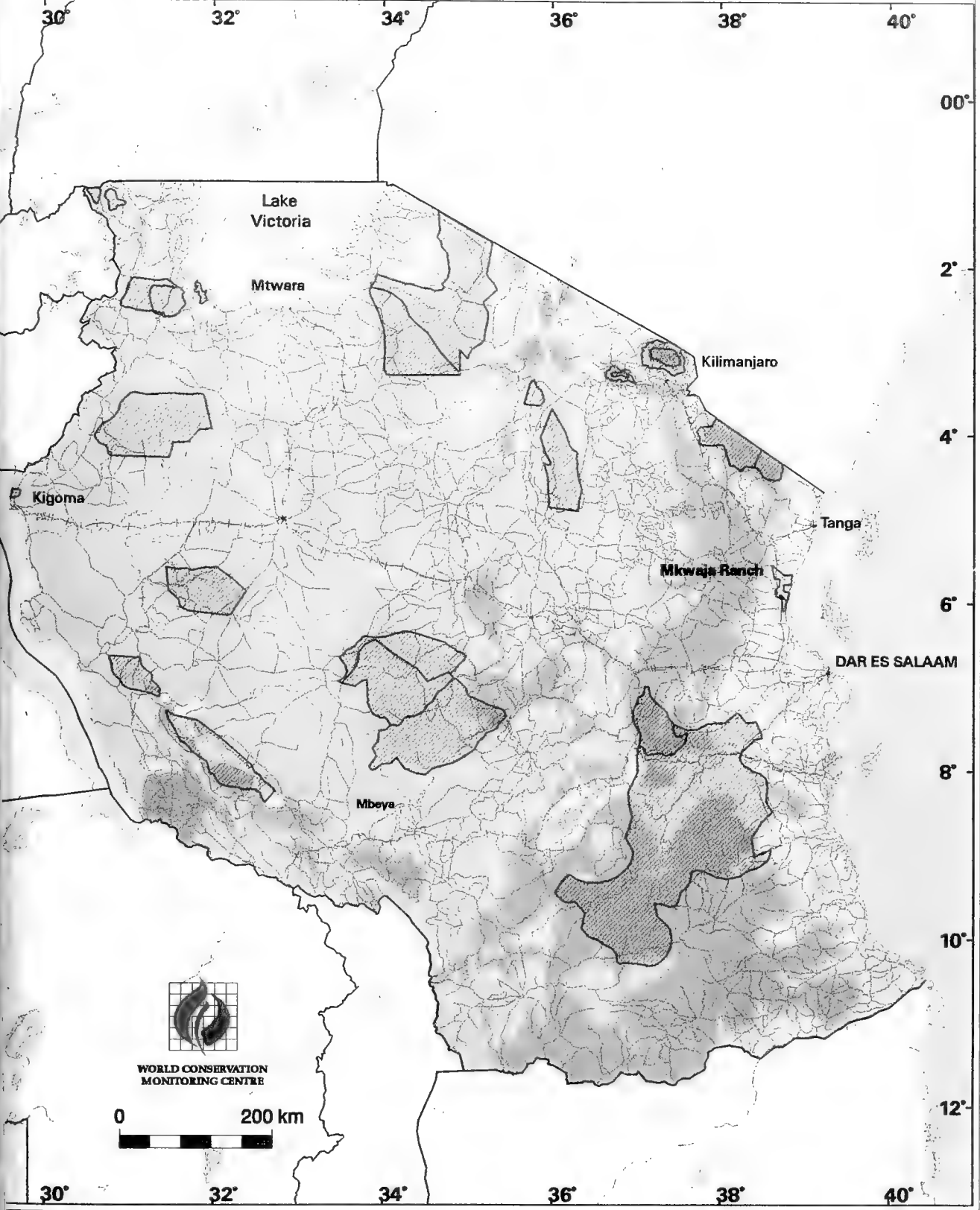


fig. 5

Private Protected Areas in Tanzania



PRIVATE PROTECTED AREAS:

a brief study

on

**Private Initiatives to Conserve Biodiversity
in Some African Countries**

Prepared by the

World Conservation Monitoring Centre

C.W. Watkins, A.M. Barrett, R. Smith and J.R. Paine

DRAFT

September 1996



**WORLD CONSERVATION
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PRIVATE INITIATIVES IN SITE CONSERVATION

BACKGROUND

IUCN — The World Conservation Union provides guidance on protected areas throughout the world through its Commission on National Parks and Protected Areas (CNPPA). A protected area is defined as '*an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, managed through legal or other effective means*' (IUCN 1994).

The World Conservation Monitoring Centre (WCMC), in collaboration with CNPPA gathers, compiles and disseminates information on protected areas. Over the years WCMC has established a database on the world's protected areas and compiles *Protected Areas of the World*, a review of national systems in four volumes and a wide range of other associated documents. However, the emphasis has been on protected areas legally designated by governments. Information on private initiatives to conserve species and habitats has not been similarly collated, although there is a growing awareness that the scale and contribution of private initiatives is significant.

PROJECT RATIONAL

In 1995 a project was commissioned to pilot an assessment of the contribution to the conservation of wildlife brought about by private initiatives. Funding was provided by the Dulverton Trust. Countries of East and Southern Africa were chosen as the target area for the study, as it was known that there were well-established and extensive privately-owned areas in the region dedicated to the protection of wildlife.

OBJECTIVE

The project objective was to establish whether or not further research in to the activities of the private sector was justified.

METHOD

The project has been executed as follows:

- * criteria for the project were formulated and '*Private Protected Area — PPA*' was defined;
- * a questionnaire was prepared for circulation, a copy of which is attached to this report;
- * in-country contacts were identified and the questionnaires were circulated to them;
- * analysis of the returned questionnaires and correspondence would form the basis of a report.

INFORMATION GATHERING

The response the questionnaires varied. Contacts in Uganda, Malawi and Mozambique were not able to find the resources to undertake the work involved. The Tanzanian authorities provided details for the single significant PPA in that country, the Mkwaja Ranch and this was supplemented by information from Knight Frank International, Estate Agents, who have been marketing the ranch. The National Parks and Wildlife Services of Zambia provided information in the form of a site list of their privately owned sites, as did the Ministry of Environment and Tourism, Namibia. Kenya was able to complete questionnaires for the great majority of PPAs in that country as much of the information was held by the Centre for Biodiversity at the National Museums of Kenya.

ISSUES IDENTIFIED

The principal difficulty was caused by the word 'private' in the phrase 'private protected area'. Interpretations differed for legal, historical, cultural, and linguistic reasons. It was agreed with the correspondents that PPAs were *'sites owned freehold or on a formal lease by individuals, corporations and other bodies in which the 'owners', not being government authorities, had the responsibility for conceiving and managing wildlife conservation measures, a primary activity on the land involved'*. Local laws did, of course, sometimes place restrictions and obligations on owners but these did not diminish the 'privateness' of the sites involved.

It was also noted when returned questionnaires and information was analyzed that a more balanced picture for the region would have been arrived at if the study had included Zimbabwe and the Republic of South Africa. Accordingly, contact has been made with WWF South Africa and WWF Zimbabwe who arranged for a consultant (David Grossman) to provide figures for PPAs which confirmed the extensive involvement of the private sector in those countries.

ANALYSIS OF RESULTS

A break down by country comparing the legally designated areas (IUCN Protected Area Categories I to V) with PPAs is shown in Figure 1.

It will be noted that PPAs in Kenya add a third to that countries protected area system and in Namibia a tenth. In Tanzania and Zambia the PPAs represent a tiny proportion of the protected area system. In Zimbabwe significant PPAs added a quarter to that countries protected area network. In the Republic of South Africa PPAs (game ranches registered with the authorities) covered slightly more land than the legally designated areas.

The contribution to conservation of these private initiatives in the countries reviewed is significant, ranging from breeding endangered species, re-introductions of animals, straight forward protection and nurturing of wildlife, ecological tourism and sustainable use, as indicated in the country reports and examples of PPAs which support this report.

SUMMARY OF PRIVATE INITIATIVES IN SITE CONSERVATION

Country	Area (sq.km)	Private Protected Areas (1)			Legally Designated Areas (2)		
		No	Area (sq.km)	% of land	No	Area (sq.km)	% of land
Kenya	580,370	50	12,211	2.10	36	34,702	5.98
Tanzania	945,090	1	465	0.05	28	130,000	13.76
Zambia	752,610	12	219	0.03	20	63,609	8.45
Namibia	824,290	148	7,642	0.93	11	103,706	12.58
Zimbabwe	390,310	3	6,500	1.67	25	30,678	7.86
R.S.A	1,184,825	4,035	80,932	6.85	235	74,134	6.26

(1) Compiled from returned questionnaires and communications

(2) From IUCN (1994). *Protecting Nature: Regional Reviews of Protected Areas*

Compiled by the World Conservation Monitoring Centre from various sources.

CONCLUSIONS

The results from this limited study demonstrate that although practices vary from country to country an invaluable contribution to conservation is made by the private sector. Countries which have and have had free market economies for extended periods, and in which the purchase of freehold property is permitted, have attracted individual and corporate conservationists. Those countries which have been more socialist in style and in which freehold land is not available, Tanzania is a good example, have not attracted the private sector.

There is evidence to show that the same situation exists in many other countries of the world particularly in other countries elsewhere in Africa, throughout Americas and in Europe. To a lesser degree there are known to be other privately owned sites in Asia, Thailand and Australasia.

There is a clear need to acquire more information and to incorporate it into databases relating to protected area systems. In the longer term a better understanding of the overall picture could permit proactive conservation by selective purchasing of sites in order to meet specific requirements such as the preservation of endangered species or centres of plant diversity.

RECOMMENDATIONS

It is recommended that:

- * funding is sought to complete this pilot project for all the countries listed and Zimbabwe, Botswana, and the Republic of South Africa;
- * similar studies are initiated for selected countries in Latin America and for one or more countries in Europe — the United Kingdom and Spain would be ideal;
- * based on the results of the above studies a full global review is commissioned;

Fig. 2
The Role of Private Initiatives in Site Conservation



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