The Tanzania populations of *D. b. michaeli* and *D. b. minor* constitute the respective southern and northern limits of the range of these two sub-species in Eastern Africa. Any further decline in their numbers will increasingly separate members of both sub-species, and might ultimately reduce the southern limit of the range of *D. b. michaeli* and the northern limit of the range of *D. b. minor* to the extent that the black rhino becomes extinct in Tanzania.

The Draft Policy and Plan document for Rhino conservation currently operating in Tanzania stipulates that, rhino management in any one of the potential rhino sites must adopt one of the following strategies.

Status-Quo Management. With the exception of the Kidai rhinos, that receive a greater degree of surveillance and security from external financial support, all other sub-populations receive about 10 days of general surveillance and security per month. Financial and manpower restrictions do not allow for a greater commitment by the Wildlife Division.

Metapopulation Management. With donor support, establish a specifically trained, fully equipped, highly mobile and motivated team responsible for the full-time surveillance, monitoring and security of all rhino sub-populations within the Selous.

IPZ Management. With donor support, select one or more viable sub-populations for intensive management, leaving the remaining animals to be protected as at present.

As is advocated by other African rhino range states, whatever form of management is decided upon, it must be accompanied by an effective external detection and deterrent system and the co-operation of the local communities.

The Wildlife Division as part of the management of the national wildlife sector appeals to the international community to assist with funding for protecting this valuable flagship species in the Selous Game Reserve.

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3.11.9 Zambia (W. J. Banda and C. Siachibuye)

The black rhino (*Diceros bicornis minor*) was once distributed naturally throughout Zambia, except portions of Luapula, Western and North Western Provinces. Zambia

had the highest densities of black rhino in Africa, with Luangwa Valley having the highest estimates of numbers ranging from 4,000 to 12,000 (Tembo, 1992). Although the black rhino is said to still exist in some parts of Zambia, there have been no reliable sightings to confirm their current status, in terms of numbers and distribution. However, there are indications that there might be some remnant individuals in the South Luangwa National Park, Lupande Game Management, Lower Zambezi and Kafue National Park. There is need for a more intensive research surveys to confirm the existence of the black rhino in Zambia, since no comprehensive field surveys have been undertaken to confirm the numbers and distribution of the black rhino in the wild.

On the other hand, the white rhino (*Ceratotherium simum*) is not endemic to Zambia but is found in Mosi-oa-Tunya National Park where it was first introduced in the early 1960s from Umfolozi Game Reserve, Zululand, South Africa (Mwima, 1996). The white rhinos that were introduced to this park consisted of two bulls and two pregnant cows. The animals increased to 13 and later some were poached while others died naturally, so this population died-out. In February 1994 white rhino from Sable Ranch in South Africa were re-introduced in Mosi-oa-Tunya National Park for the second time. These comprised of four cows and two bulls. They were immediately dehorned before being released into the park. In August 1994 (or 1995?), one cow gave birth to calf bringing the number of rhinos to seven (four cows and three bulls). In November 1994, one rhino cow drowned in the Zambezi River and this reduced the number to six animals. There was a further loss of one cow which was put down when it failed to recover after a second dehorning exercise, leaving the number of animals to date at five (two cows and three bulls).

The establishment of sanctuaries is an effective conservation and management strategy for the rhino, but in Zambia it has not been implemented due to lack of funds. However, in Mosi-oa-Tunya National Park, after the six white rhinos were released into a semi-wild situation, more than ZK20 million was spent on electrical fencing of a 9km stretch.

As indicated in a project proposal prepared for the African Rhino Specialist Group, suitable areas will have to be identified which will be managed for the protection of black rhino. In order to reduce human interference on these areas, the areas will have to be fenced.

The Zambia Wildlife Act. No. 12 of 1998 provides for the protection of the Rhino and other endangered and threatened species and restricts trading in products thereof in conformity with CITES. For instance any person contravening the Act in offences involving rhino or elephant suffers the following penalties:

for a first offence; to a term of imprisonment not less than five years but not exceeding twenty years without the option of fine;

for a second or subsequent offence, to a term of imprisonment of not less than seven years but not exceeding twenty five years without the option of a fine.

Zambia Wildlife Authority (ZAWA) took over the responsibilities of the former National Parks and Wildlife Service (NPWS) on 1 January 2000. The ZAWA is mandated by the Government of the Republic of Zambia to preserve the biodiversity, on which continued human adaptability depends, to manage National Parks, and to promote and develop wildlife as a productive, profitable and environmentally sound land-use option of particular significance to rural land holders.

Anti-poaching operations will continue to be the most important function in the ZAWA in protecting rhino, while on the other hand the Intelligence and Investigations Unit will continue to investigate offences related to poaching of rhino and other endangered species and illegal trafficking of rhino and elephant products.

There has been no specific research undertaken on black and white rhino to date. However, some interesting observation has been made especially on the behaviour of the white rhino which will form the basis of the future research work.

Community participation in the Administrative Management Design for Game Management (ADMADE) was introduced to serve as a vehicle to solicit local community support in wildlife management through community based programmes. The communities are benefiting from wildlife utilisation by receiving a share of the revenue earned from the use of wildlife in their areas.

Zambia Wildlife Authority through the government is working towards putting into place a Rhino Management Policy, which will guide rhino management activities in Zambia.

Some of major considerations of ZAWA for effectively managing the black and white rhino in the range areas are as follows:

- Research, carrying out intensive field surveys to determine existence of the black rhino in the identified operational areas;
- Identification and recruitment/attachment of relevant personnel and training in rhino management;
- Acquisition of the equipment and materials for use in the project, i.e. radio telemetry, cameras, computers, vehicles, fencing material, etc.
- Provision of adequate and effective protection of white rhino and individual animals by providing 24-hour guard, tightening security at entry gates and the rest of the park.
- Proper arming and equipping the scouts guarding the white rhino in the Mosi-oa-Tunya National Park.

3.11.10 Zimbabwe (*F. Msipa)*

Ms Msipa referred participants to the 1999 IUCN African Rhino Status Survey and Conservation Action Plan (pp. 58-60) which contains an overview of the Zimbabwe situation. She provided an update on national population totals, saying that Zimbabwe currently holds about 464 black rhinos (*D.b.minor* subspecies) and about 180 white rhinos. Of the black rhinos, about 300 are on private land and 160 on stateland, and of the white rhinos 78 are on private land and 102 on stateland.

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