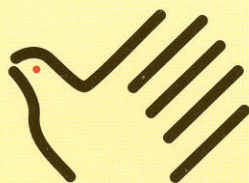


# SADC REGIONAL PROGRAMME FOR RHINO CONSERVATION

**Towards Principles for Rhino Re-introduction  
and Conservation in Mozambique**

**Summary of Issues**

**SADC Regional Programme for Rhino Conservation**



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### ***ABOUT the SADC Regional Programme for Rhino Conservation:***

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The Programme is funded by the Italian Ministry of Foreign Affairs, Directorate General for Development Cooperation (Project AID 5064).

The Programme is contracted to CESVI and implemented through a regional consortium which comprises:

- The Secretariat of the Southern Africa Development Community (SADC)
- IUCN-ROSA (The World Conservation Union - Regional Office for Southern Africa)
- The IUCN African Rhino Specialist Group
- WWF-SARPO - (World Wide Fund for Nature - Southern Africa Regional Programme Office)
- CESVI (Cooperazione e Sviluppo)

The ***Programme goal*** is to contribute to maintain viable and well distributed metapopulations of Southern African rhino taxa as flagship species for biodiversity conservation within the SADC region.

The ***Programme objective*** is to implement a pragmatic regional rhino strategy within the SADC region following the acquisition of sound information on, firstly, the constraints and opportunities for rhino conservation within each range state and secondly, the constraints and opportunities for rhino metapopulation management at the regional level.

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### ***DISCLAIMER***

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# **Towards principles for rhino re-introduction and conservation in Mozambique**

## **Summary of issues SADC Regional Programme for Rhino Conservation May 2004**

The following is a set of issues that are suggested for consideration by the relevant authorities within Mozambique as options arise for the re-establishment of rhino populations. It is premature to develop a full rhino conservation strategy for Mozambique because some broader policy aspects, related to the issues that are identified below, first require clarification.

This outline of issues was developed at a workshop that was held in Maputo on 30 March, 2004, under the auspices of the SADC Regional Programme for Rhino Conservation (SADC-RPRC). The workshop was attended by senior officials of DNFFB and DNAC, as well as NGO representatives, academics, SADC-RPRC technical advisers, etc., (see attached attendance list).

In addition to providing technical input at this workshop, the SADC-RPRC also undertook an appraisal of Limpopo National Park as a re-introduction area for both black (*Diceros bicornis*) and white (*Ceratotherium simum*) rhinos. The white rhino population of Kruger National Park is already extending its distribution into Limpopo National Park as the fencing between these adjacent parks is being removed, to create the Great Limpopo Transfrontier Conservation Area.

While a strategy is being developed for the re-introduction of rhinos to other reserves in Mozambique, it is logical that rhino conservation effort remains concentrated at Limpopo National Park. The more endangered black rhinos can also be re-established in this park once experience is gained with white rhino conservation and after security measures are implemented. In due course, provided a national rhino conservation strategy has been elaborated, the rhino management experience that is gained at Limpopo National Park can be transferred to other potential sites for rhino re-introductions in Mozambique.

Key questions for the elaboration of a national rhino conservation strategy for Mozambique are as follows.

### **1. Why give special attention to rhino conservation?**

#### **1.1 Issues to be considered**

Rhinos of both southern African species have been regarded as "flagship species" for biodiversity conservation. This is because the measures that are required for their conservation, over the large areas that are needed for viable, free-ranging rhino populations, help to conserve a range of other wildlife species. Also, rhinos are tourist attractions and could become valuable trophy animals for the safari hunting industry in future, once they reach large enough population sizes. These potential economic values mean that rhinos can play an important role in tourism-based rural development. However, rhinos are expensive species to restock and to look after, and on their own these animals will not attract tourists. There have to be additional drawcards for each reserve to gain a tourism reputation, and it may take some time before earnings from tourism can compensate for the costs of re-introducing, managing and protecting the rhinos. There may be a risk that the illegal value of their

horns could stimulate poaching networks, that might then increase poaching pressures on other species. Any failure in re-introducing rhinos (whether because of poaching, inadequate biological management, bad choice of release areas, or other factors) would create a poor international perception of Mozambique's conservation efforts.

## **1.2 Policy determination**

The investment of finances, human resources, equipment and other inputs required for successful rhino re-introductions to specific areas must be weighed up, by the relevant authorities within Mozambique, against the potential benefits. The serious consideration that must be given to decisions on rhino re-introductions will have to be expressed through the development of an overall strategy for rhino conservation in Mozambique (dealing with all the issues outlined below). In addition, an action plan will have to be developed to put the policy into practice for each re-introduction site. Without these planning efforts, the international conservation community will not be in a position to assist with the goal of rebuilding the populations of rhinos in Mozambique.

## **2. Which sub-species of rhinos should be conserved?**

### **2.1 Issues to be considered**

This issue is closely related to the following one (where to re-introduce rhinos?). The historical range for black rhinos of the sub-species *Diceros bicornis minor* included most of the country (apart from some areas lacking suitable woody browse). The very small number of black rhinos that survive in Niassa Game Reserve are believed to be of this sub-species and could therefore be mixed with black rhinos from Zimbabwe or South Africa. These Niassa rhinos may have closest genetic similarity, within the same sub-species, to black rhinos that survive in Selous Game Reserve in Tanzania. Therefore, it may be appropriate to manage them in a metapopulation with the Selous rhinos.

White rhinos were found only south of the Zambezi River, in areas with grasslands, and were of the sub-species *Ceratotherium simum simum*.

### **2.2 Policy determination**

In the national rhino strategy, it will have to be clearly stated what the policy will be on sub-species distribution, i.e. whether re-introductions will be confined within historical ranges of the sub-species. Internationally, introductions out-of-range are not generally supported by conservation agencies and donors.

## **3. Where should rhinos be re-introduced?**

### **3.1 Issues to be considered**

Biological factors that have to be considered include:

- Historical ranges of sub-species (see above);
- Habitat suitability (vegetation types);
- Extent of each area (small reserves, with low carrying-capacities, are to be avoided);
- Tsetse fly distribution (white rhinos are susceptible to trypanosomiasis, but black rhinos are more resistant);

Strategic planning issues to be considered include:

- Distance to other rhino populations (relevant to the logistical constraints of metapopulation management);
- The distribution of other important biodiversity features or hotspots (so that a concentration of effort on rhino conservation can coincide with the conservation of other key elements of Mozambique's biodiversity);
- Mozambique's priorities for tourism development and general improvement of its parks (so that rhinos are put first into areas where they can boost the tourism attractions, and can generate tourism revenues that will help to pay for their conservation);
- Plans for Transfrontier Conservation Areas (particularly the Great Limpopo TFCA for re-introductions of black and white rhinos in the south, and the proposed Selous-Niassa TFCA for metapopulation management of the few black rhinos that survive in the north);
- Allocations of wildlife areas for development by the private sector (where the awarding of long-term concessions could stimulate commercial investment in rhino re-introductions);
- Plans for community-based conservation projects that could, in due course, be boosted by the additions of rhinos.

### **3.2 Policy determination**

Relevant plans and spatial data need to be reviewed, with maps of habitat, tsetse distribution, biodiversity priorities, etc., overlain in order to show where the most suitable convergence of positive factors for rhino re-introductions can be achieved. The rhino re-introduction plans should be integrated within park development plans, TFCA management plans, etc. While being based on some unchanging biological criteria (particularly the availability of suitable habitats), the rhino distribution plan should remain flexible to take account of changing socio-economic developments in different parts of Mozambique.

## **4. How should rhinos be re-introduced?**

### **4.1 Issues to be considered**

Both the SADC-RPRC and the IUCN Re-Introduction Specialist Group have developed guidelines for re-introductions. These are demonstrated in the SADC-RPRC review of the rhino conservation potential of Limpopo National Park. Among the primary considerations are the ecological, demographic and genetic principles for establishing new rhino populations.

These guidelines suggest that each new population should be started with at least 20 founder rhinos, each "founder" being a rhino that definitely breeds and is not closely related to others in the population (so if a population is started with five bulls and five cows each of which has a calf, then the maximum founder size is not 15 but only 10 because the cows and calves are directly related). Another guideline, to maintain genetic diversity, is that each new population should grow at maximum possible growth rate (5% per annum being the minimum target) and should have sufficient area available to reach a total population size of over 100 rhinos. For black rhinos in typical bushveld habitats, this means an area of at least 1,000 km<sup>2</sup>, although the initial release area (which is often a fenced enclosure within a larger reserve) might be as small as 200-300 km<sup>2</sup>, with the fence being removed as the population grows. It is desirable to bring all 20 or more founders in to a new area in a single year, rather than phasing the introductions over several years, because otherwise bulls that have come in first will establish home ranges and social dominance, and will fight with the bulls that are brought in afterwards. If it is not possible to achieve a single phase of introductions, then the rhinos may have to be released in different parts of the

reserve. This will spread the effort that is required for their protection over a larger area. Alternatively, the rhinos could be released into a series of adjacent, fenced compartments and the fences can be removed once the rhinos have established their home ranges. However, this requirement for fencing is expensive.

Of the non-biological factors that govern re-introduction plans, the most important is the issue of security. As a general guideline, the minimum manpower density that should be in place for rhino protection, before the animals are brought in, is one trained and adequately equipped scout per 20 km<sup>2</sup>. Initially, this manpower density need not be achieved throughout the reserve but should certainly be achieved in the re-introduction zone (as an "Intensive Protection Zone" within the reserve).

## **4.2 Policy determination**

The rhino conservation strategy for Mozambique should set out some minimum requirements for rhino re-introductions, in terms of number of founders, expansion potential, security levels, etc. These requirements can be based on SADC-RPRC re-introduction guidelines as well as more general guidelines of the IUCN Re-Introduction Specialist Group. For rhino introductions by the private sector (into concession areas), the guidelines may have to be made less stringent because private operators will generally not be able to source 20 or more rhinos at a time. However, regional experience has shown that long-term metapopulation management of rhinos can become very complicated and expensive if various small populations are created through private investments. A compromise may be to allow private sector re-introductions to be as low as 10 founders in the initial introduction, provided the investor agrees to cooperate in a metapopulation plan for rhinos in Mozambique or in a TFCA. This plan should specify conditions for genetic and demographic management of rhinos that strike a compromise between protecting private investments and meeting the conservation goals of a national rhino strategy. Captive breeding has not been a cost-effective approach to building up rhino populations and the strategy should note that any approval of such operations should be subject to a detailed feasibility assessment, involving advice from regional rhino conservation experts.

## **5. How to source rhinos?**

### **5.1 Issues to be considered**

Options to obtain rhinos for re-introduction projects include the following:

- Purchase of rhinos in South Africa (and possibly in Zimbabwe), either on auctions or through special arrangements with conservation agencies;
- Arrangements for purchase which include investment in private sector wildlife projects within Mozambique, such that private funding is used to introduce rhinos to concession areas according to lease arrangements for these areas;
- Donations of rhinos for free, or at discounted prices, by neighbouring conservation agencies;
- Business deals with these neighbouring agencies, whereby they allocate rhinos in exchange for other valuable animals (for instance, Botswana recently exchanged roan antelope for white rhinos), or receive a return of progeny in future, or some other kind of investment approach;
- Repatriation of rhinos from overseas zoos (this is a complicated option because of the problems of getting zoo animals habituated to free-range conditions, and because of potential disease implications that arise in captivity);

- TFCA arrangements which allow rhinos to move from one reserve in a neighbouring country to an adjacent reserve in Mozambique, as is the case with Limpopo National Park.

## **5.2 Policy determination**

If the relevant authorities in Mozambique see policy complications in any of these options to obtain rhinos, then these complications should be addressed in the national rhino conservation strategy. The private sector involvement in rhino conservation will depend upon economic incentives. Before a comprehensive rhino conservation strategy can be developed for Mozambique, the authorities must first clarify the conditions under which this investment in an endangered species can occur. Can the rhinos be owned by private investors? Even if they cannot be owned (and remain fully under the control of the State), can they be traded by private investors? Will there be any import duty reductions on rhinos to encourage their importation by private investors?

## **6. How to ensure sustainability of rhino projects?**

### **6.1 Issues to be considered**

Rhino management involves some specialized activities, which can be undertaken through advance planning and sometimes through regional cooperation. Some of these needs, for which sustainability has to be ensured, are:

- Monitoring of the rhinos, not only to ensure their safety but also to assess their breeding performance, and to identify factors that may be reducing their breeding performance (such as habitat constraints and overstocking);
- Veterinary interventions such as drug-darting of rhinos to treat injuries, to remove snares or to translocate rhinos;

In addition, there are routine activities that have to be undertaken over the long-term, such as anti-poaching at an effective manpower density.

### **6.2 Policy determination**

The ways to ensure sustainability of rhino conservation activities will vary greatly from area to area, depending upon the strengths, weaknesses, threats and opportunities that exist in each area. TFCA and private sector collaboration will be important factors to consider. Because of the variability in conditions for rhino conservation, a national policy cannot be specific about how to ensure sustainability in every situation, but it should at least recognize the need for considering sustainability and should specify that this need must be addressed in every rhino re-introduction plan.

## **7. How to coordinate rhino conservation?**

### **7.1 Issues to be considered**

Rhino conservation involves a large number of supporters (government agencies, NGOs, private operators, donor agencies, regional and TFCA programmes, etc.) all of which need to be coordinated within the framework of a national rhino conservation strategy. At a policy level, the lead agencies will be Ministry of Agriculture, Ministry of Tourism and MICOA, while at an implementation level DNAC, DNFFB, MICOA, Livestock and Veterinary Services will be involved.

### **7.2 Policy determination**

The national rhino strategy for Mozambique must clearly identify coordination arrangements, including the specification of a national committee and a national coordinator (focal point) to implement and, when necessary, to update the strategy. This is particularly important because the conservation agencies in Mozambique have some overlapping responsibilities.

## RHINO RE-INTRODUCTION WORKSHOP

MAPUTO, 30 MARCH 2004

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