

A DRAFT CONSERVATION STRATEGY FOR WHITE RHINOS IN SOUTH AFRICA WITHIN THE CONTEXT OF A CENTURY OF CONSERVATION ENDEAVOUR

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INTRODUCTION

In 1987, the IUCN SSC's African Elephant and Rhino Specialist Group (AERSG), recommended the formulation of conservation plans for each African range State with > 100 rhinos. Conservation plans are essential for coordinated directional action - to clearly identify goals within an approved policy framework, mechanisms for achieving the goals, and to allow success to be evaluated.

This initiative by the IUCN was the catalyst for South Africa and Namibia to develop a plan for black rhino *Diceros bicornis*, which was selected ahead of the southern white rhino *Ceratotherium simum simum* due to its endangered status and the need to improve its status and management in the region. The black rhino plan was duly adopted in 1989, and the Rhino Management Group (RMG) formed to manage it. Its success can be measured by the 5% per annum increase in numbers between 1989 and 1997 (latest estimate) from 715 (12 populations) to 1 043 (25 populations - 7 of which are on private land).

The southern white rhino is one of the world's greatest conservation successes, so it has often been taken for granted that South Africa has a national strategy or plan. Not so, and although the RMG's mandate is strictly for black rhino, the RMG was requested by the provinces to develop an appropriate conservation strategy. This was undertaken at a national workshop held at Itala Game Reserve on 23-24 March 1999, and attended by most of the major stakeholders and interested parties such as the State nature conservation agencies, non-governmental organisations involved in rhinos and private landowners. The draft strategy was forwarded in early April to the Department of Environmental Affairs and Tourism with the request that it be considered and comment and support sought from the relevant authorities and organisations.

THE RHINO MANAGEMENT GROUP (RMG)

The Rhino Management Group of southern Africa is responsible for (i) managing South Africa's black rhino conservation plan, (ii) facilitating coordination and cooperation between South Africa, Namibia, Swaziland and (to a lesser extent) Zimbabwe, (iii) developing management strategies and plans, (iv) evaluating the performance of each black rhino population based on status reports received annually and (v) providing general management advice. It comprises representatives from each State conservation agency, the Rhino and Elephant Security Group, private owners and rhino specialists. It has no mandate for white rhino, and simply undertook to facilitate the development of the white rhino strategy in the absence of any other obvious candidate organisation.

HISTORY OF WHITE RHINO CONSERVATION

It is important for the white rhino strategy to be seen within the context of the conservation history of the subspecies in Africa.

The historical range of the southern white rhino is from southern Angola through Botswana, Zimbabwe, Mozambique and Swaziland into the northern, northwestern and subtropical eastern areas of South Africa (Fig. 1). By 1900, the only remaining population comprised 10-20 animals in the Umfolozi region in KwaZulu-Natal. It is from this relic population that the more than 8 400 southern

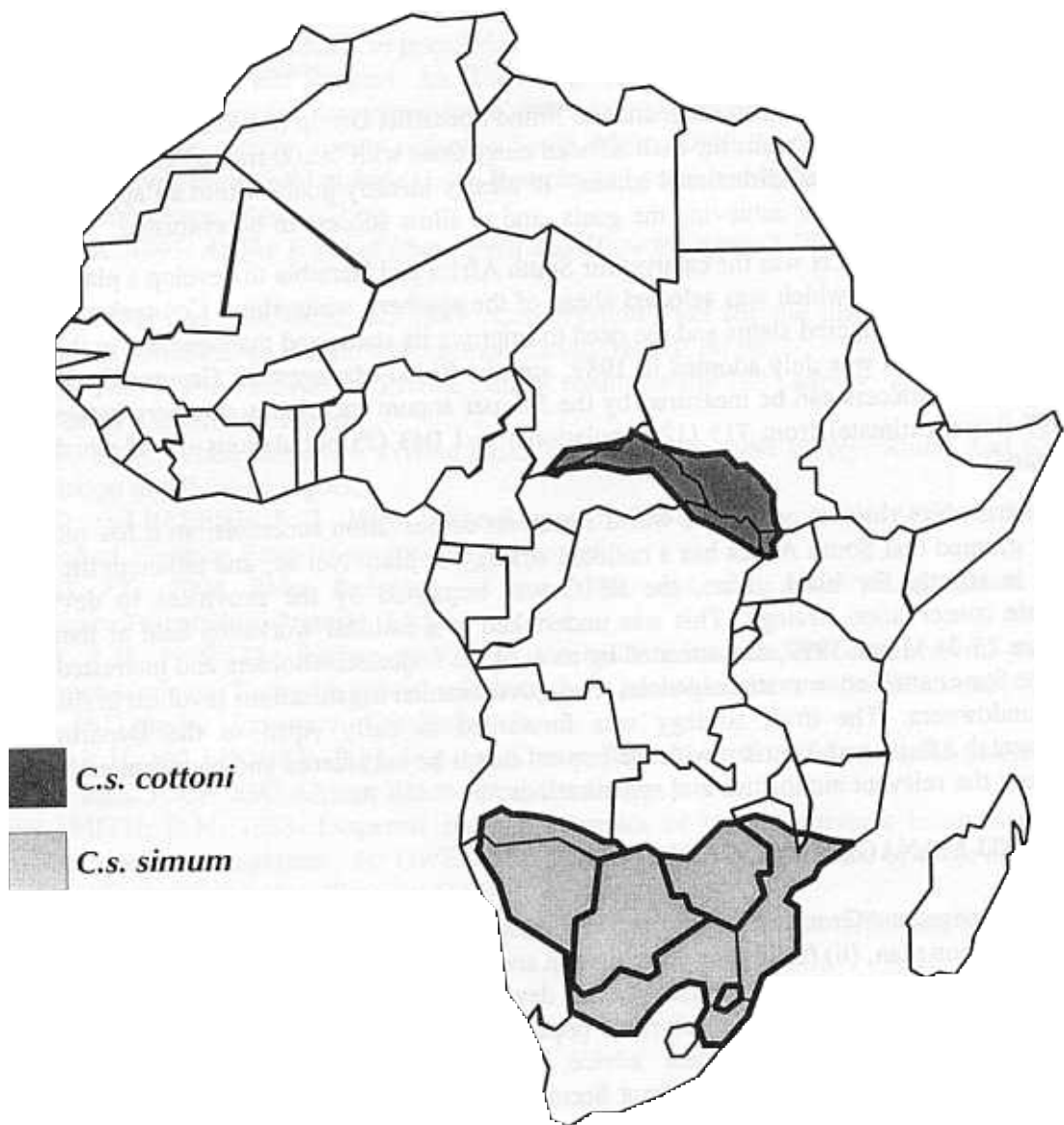


Figure 1: Probable historical distribution of the southern white rhinoceros *Ceratotherium simum simum* (from Cumming, 1987) and the northern white rhinoceros *Ceratotherium simum cottoni* around 1900 (from Hillman-Smith *et al.*, 1986).

white rhinos present in Africa today were derived. The numbers of white rhino in each African range State are given in Fig. 2, and the trends since 1900 in Fig. 3.

South Africa has therefore clearly played an absolutely critical role in the survival and recovery of the southern white rhino. This has been achieved through a number of innovations, ranging from the darting and translocation of white rhino to create new populations, which started in 1961, sale to the private sector, the introduction of trophy hunting in 1968, and the auctioning of rhino which began in 1989. These and other steps are summarised in Fig. 4, along with an approximation of the size of the South African white rhino population at each stage.

The continuing critical importance of South Africa's white rhino populations can be gauged by the fact that it holds 35 of the 45 white rhino populations rated by the IUCN Species Survival Commission's African Rhino Specialist Group as key or important to the survival of the taxon.

WHY IS A CONSERVATION STRATEGY NECESSARY?

Despite the fact that the white rhino story represents one of the most successful conservation efforts of all time, there are a number of reasons why a strategy is required.

- * The survival of the southern white rhino is not yet assured. It is rated in the IUCN Red Data list as Conservation Dependent, which means that should conservation measures (e.g. protection) be withdrawn, it could again become threatened with extinction. Poaching remains a threat, and there is competition for habitat with other forms of land use.
- * Many powerful non-governmental organisations, especially within the animal rights movement, are campaigning against sustainable use. If these are successful, the incentives for private ownership will decrease.
- * A national strategy is required as a basis for any international initiatives involving white rhinos. For example, CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Res. Conf. 9.14 Conservation of rhinos in Africa and Asia (drafted by the African Rhino Specialist Group), recommends that all range States develop recovery plans which:
 - (a) are appropriate for the country;
 - (b) will not adversely affect rhino populations elsewhere;
 - (c) allow for the reinvestment of revenues to offset the high costs of conservation;
 - (d) aim towards the long-term goal of sustaining, on a self-sufficiency basis, their rhino conservation programmes.

The adoption of a national strategy would strengthen South Africa's proposal to the next CITES Conference of Parties (COP 11, 10 - 20 April 2000) to allow trade in products from its white rhino population.

THE CONSERVATION STRATEGY FOR WHITE RHINOS IN SOUTH AFRICA

The strategy, a full copy of which is attached as Appendix 1, provides the framework for the more effective management and use of our white rhino population. It should be read carefully and, where appropriate, the relevant actions implemented. However, the overall vision identifies the need to meet the pure conservation goal of maintaining viable populations in the wild, the importance of partnerships and significant socio-economic benefits accruing to all sectors, and the need for continued national self-sufficiency.

The six key components of the strategy give expression to the vision by identifying specific objectives and the main actions required to achieve them. These provide clear direction to the various organisations and individuals which own and manage white rhino, and through promoting the integrated nature of rhino conservation and use, provide an awareness of joint responsibility. Partnership between the State and the private sector is considered a key ingredient for successful rhino conservation. As evidence of this, it is strongly developed also in Kenya, Zimbabwe and Namibia,

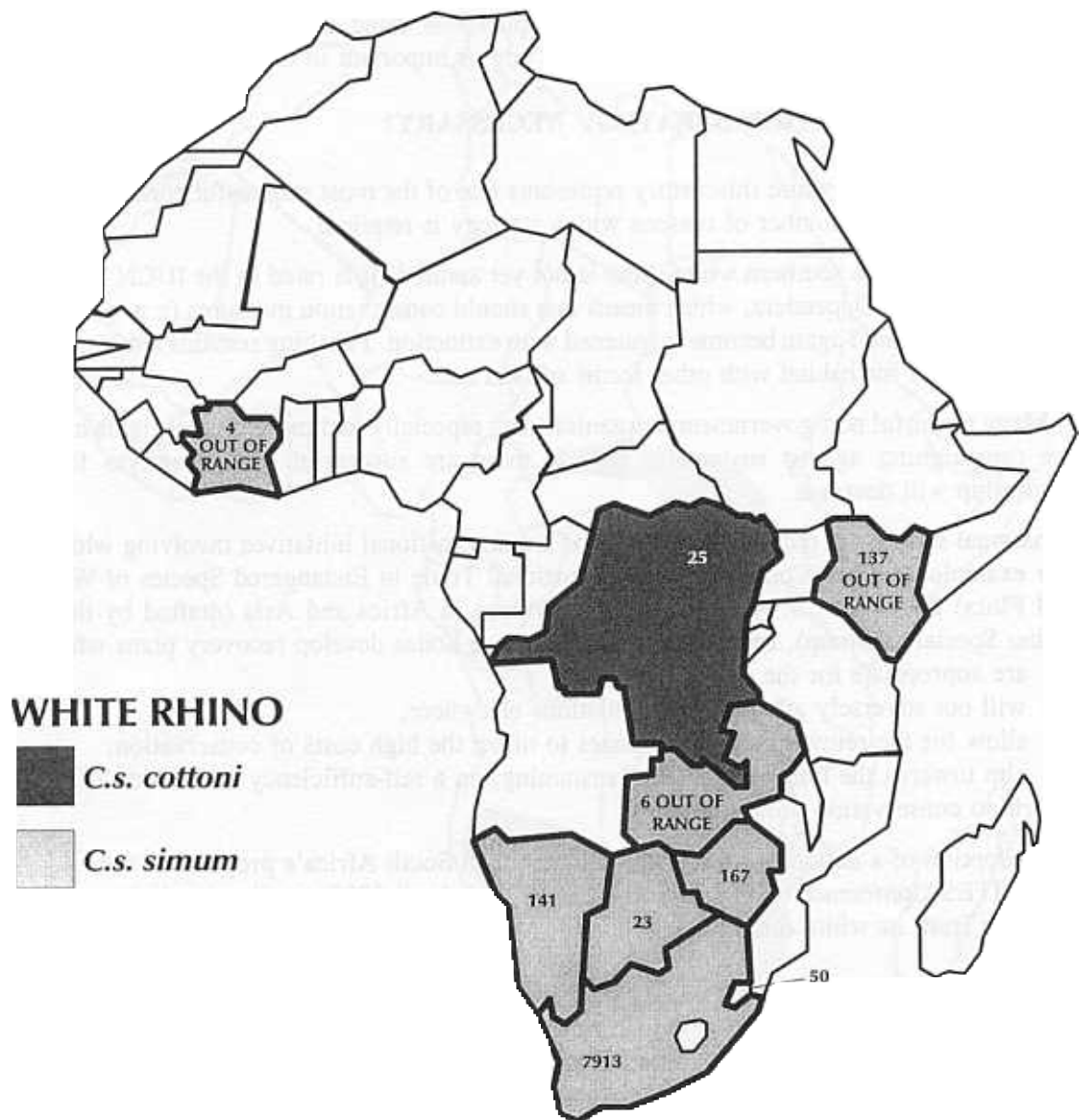
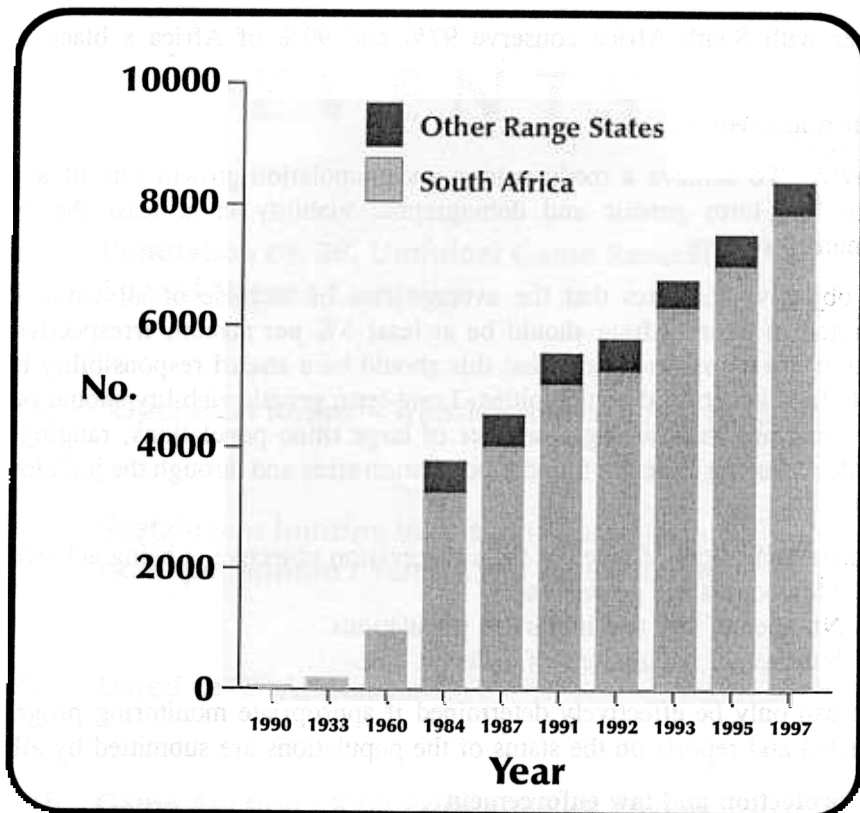


Figure 2: Numbers of white rhinos by country and subspecies in 1997, excluding speculative guesstimates. Exact locations of populations are confidential.



YEAR	SOUTHERN WHITE RHINOCEROS NUMBERS IN AFRICA		
	SOUTH AFRICA	Other Range States	Total
1900	20	0	20
1933	200	0	200
1960	1 000	0	1 000
1984	3 234	578	3 812
1987	4 060	551	4 611
1991	5 057	533	5 590
1992	5 297	523	5 820
1993	6 376	408	6 784
1995	7 095	468	7 563
1997	7 913	528	8 441

Figure 3: Southern white rhino trends in Africa: 1900-1997

which together with South Africa conserve 97% and 99% of Africa's black and white rhinos, respectively.

1. Biological management

Objective: To achieve a medium-term metapopulation growth rate of at least 5%, and to ensure long-term genetic and demographic viability in at least the State and private/community sectors.

This objective indicates that the average rate of increase of all white rhino populations combined in South Africa should be at least 5% per annum, irrespective of what type of resource use is practised, and that this should be a shared responsibility between the State, private landowners and communities. Long-term genetic viability should be ensured through developing and maintaining a number of large rhino populations, ranging from 50 to 1000 animals, ensuring effective founder population sizes and through the judicious adding of fresh blood.

The main indicators of whether the conservation objective is being achieved would be:

- * À Metapopulation growth rate
- * À Number of key and important populations
- * À Number of populations of different size

These can only be effectively determined if appropriate monitoring programmes are being conducted and reports on the status of the populations are submitted by all sectors.

2. Security, protection and law enforcement

Objective: To reduce the effects of poaching on populations, and ensure the successful conviction and sentencing of rhino poachers and illegal traders.

This again is clearly a shared responsibility between the State, private landowners and communities. A number of actions aimed at detecting and preventing poaching, effecting successful prosecutions and safeguarding and auditing horn stocks are described.

3. Sustainable use

Objective: To develop the socio-economic sustainability of white rhino conservation and the flow of benefits from sustainable use.

In line with CITES Res.9.14, which recommends that revenue derived from the use of rhino should be reinvested in rhino conservation programmes, economic incentives need to be maximised. This is particularly important given the very high cost of effective rhino management (up to US\$1 200/km²) and declining State subsidies. The actions required include the promotion and implementation of a wide variety of sustainable use options, including ecotourism, hunting and sale of live rhinos; and endeavours to open up and undertake a legal trade in rhino products. Clearly the latter will require a uniform, national scheme for identifying, marking and registering stocks, the adoption of which would be a prerequisite for an individual to trade.

4. Animal welfare

Objective: To ensure that nationally-accepted standards of animal welfare are implemented in white rhino conservation.

This requires that high standards of animal welfare are applied during the management and handling of rhinos, including ensuring that rhinos are sent only to acceptable destinations.

5. Community involvement

Objective: To promote and facilitate the participation and involvement of communities and other stakeholders in the conservation and sustainable use of white rhinos.

EVENTS

		Population Size
■	1895 Population ca. 20, Umfolozi Game Reserve Spared Nagana Campaign	20
■	1961 "Operation Rhino" - Translocated > 4 560 to date	1 000
■	1968 Sustainable hunting initiated on private land ca.40 per annum : Value 1998 - \$ 1 000 000	1 500
■	1976 Listed CITES Appendix I	2 200
■	1986 Game Auction : KZN Price 1986 - R 10 000 White Rhino : Mean Price 1998 - R 109 000	4 500
■	1994 ● SA population downlisted CITES Appendix I→II Sale of live animals Continued export of hunting trophies ● AROA formed in October	6 700
■	1997 Proposal to COP 10 : CITES Trade Horn : Zero Quota : " Moral Support"	7 900
■	1999 ● Partnerships → Major private sector investment - 160 populations → Significant state-owned populations - 40 populations ● Conservation and protection ● Sustainable Utilization	

Figure 4: Key events in the southern white rhino story

There are many reasons why it is important for all sectors in the South African population to have a stake in white rhino conservation; for example, a realisation of, and sharing in, the animals' value provide incentives for ownership and improved protection. The private sector can play a role through liaison meetings and promoting and facilitating rhino ownership by communities.

6. Coordination

Objective: To ensure the effective coordination of the white rhino industry.

White rhino conservation and use is relatively well coordinated in the State sector, but there appears to be significant fragmentation and often insularity within the private sector. AROA is providing a coordinatory mechanism for this sector, but there is clearly need for the setting of standards and increased interaction with the private sector and with the State. This is why the workshop recommended the setting up of a consultative forum at which the State nature conservation agencies, the private sector and communities could discuss issues and recommend policy and management direction.

CONCLUSION

The Department of Environmental Affairs and Tourism has yet to confirm the adoption of the white rhino strategy as drafted (Appendix 1). However, this in no way hinders its value as a vehicle for debate or the implementation of actions considered appropriate by specific stakeholders. It cannot, however, at this stage be referred to as an official South African strategy.

APPENDIX 1

A STRATEGY FOR THE CONSERVATION AND SUSTAINABLE USE OF WILD POPULATIONS OF SOUTHERN WHITE RHINO *Ceratotherium simum simum* IN SOUTH AFRICA

Rhino Management Group
DRAFT of 8 April 1999

VISION

MINDFUL OF ITS CRITICAL INTERNATIONAL ROLE IN THE CONSERVATION OF THE SOUTHERN WHITE RHINO, SOUTH AFRICA'S VISION FOR THE SUB-SPECIES IS OF:

- VIABLE POPULATIONS IN NATURAL HABITAT THROUGHOUT ITS FORMER RANGE.
- SHARED COMMITMENT BY THE STATE, COMMUNITIES AND PRIVATE LAND-OWNERS TO THE IMPLEMENTATION OF EFFECTIVE CONSERVATION MANAGEMENT PROGRAMMES.
- SIGNIFICANT FLOW OF SOCIO-ECONOMIC BENEFITS TO PEOPLE AT ALL LEVELS.
- CONTINUED NATIONAL SELF-SUFFICIENCY IN CONSERVING WHITE RHINO

KEY COMPONENTS OF THE STRATEGY

1. BIOLOGICAL MANAGEMENT

Objective:

To achieve a medium-term metapopulation growth rate of at least 5%, and to ensure long-term genetic and demographic viability in at least the State and private/community sectors. Aim to develop and maintain on State protected areas at least 2 populations of more than 1 000 rhinos, 3 greater than 100 and 10 greater than 50; and in private/communal ownership at least 3 populations greater than 100 and 5 greater than 50.

Rationale:

An increased number of rhinos in additional populations under a full range of management models (i.e. private, community and State) will add strength to the strategy from a security and genetic perspective, and provide an increased buffer against the effects of poaching. The management of populations for maximum growth also increases opportunities for rhinos to generate income that can be used to offset some of the high cost of their conservation (CITES Res Conf.9.14), as well as building up numbers of surplus animals that can be used to establish additional populations.

Actions.

- # Estimate Ecological Carrying Capacity of each rhino area.

Monitor rhinos to get accurate population estimates, measures of reproductive performance, condition, levels of disease, mortality levels, etc. (Preferably use techniques based on individual identification for all but the very large populations, e.g. more than 500 rhinos).

- # Manage for maximum productivity through stocking at a maximum of 75% of estimated Ecological Carrying Capacity.
- # Consider supplementary introductions to minimise the loss of genetic diversity.

- # Assess suitable areas for the establishment of new populations.
- # Aim to have a founder population of at least 20 animals.
- # Translocate surplus animals (following recommended procedures and guidelines) to establish new populations in areas of secure and suitable habitats.
- # Ensure rhinos that are translocated are free from any notifiable disease.
- # Accelerate the establishment of key and important populations on private and communal land.
- # Undertake applied research where necessary.
- # It is recommended that a regular system of status reporting and synthesis of reports is instituted for key** (more than 50 rhinos) and important** rhino populations (21-50 rhinos) with a potential carrying capacity of > 50 rhinos.
[**As defined by the IUCN SSC African Rhino Specialist Group].

Indicators:

- Metapopulation growth rate of at least 5% per year.
- Achieve desired number of key and important populations.
- Status reporting operational. Routine use of appropriate monitoring techniques.
- Application of reliable tests for notifiable diseases such as bovine tuberculosis (TB).
- Number of populations of different sizes by management model.

2. SECURITY, PROTECTION AND LAW ENFORCEMENT

Objective:

To reduce the effects of poaching on populations, and ensure the successful conviction and sentencing of rhino poachers and illegal traders.

Rationale:

The major threat to rhino numbers is poaching and illegal trade. These must be minimised to sustain population growth and maintain the economic, tourist, social and community value/benefits of white rhino.

Actions.

- # Maintain pro-active crime prevention through the development and use of intelligence networks.
- # Undertake threat analyses of rhino areas.
- # Develop rhino protection action plans.
- # Use effective procedures for more successful prosecutions, (e.g. use specialist investigators, expert witnesses to argue in aggravation of sentence in court, etc.).
- # Adequately contain animals within secure areas.
- # Maintain continuous monitoring of animals for security.
- # Insert micro-chips in animals using a standard system (e.g. Trovan) when immobilising them.
- # Establish and maintain good community relations.
- # Implement a uniform horn registration system, with documented audit trails and subsequent safe storage and auditing of horn stockpiles.
- # Maintain effective manpower density, training, equipment and deployment for anti-poaching activities.

- # Monitor the effectiveness of field personnel
- # Field management should strive for good leadership, active involvement and supervision.

Indicators:

- Number of rhinos poached (corrected for effort).
- Ratio of poached to natural deaths.
- Proportion of poaching cases with subsequent convictions.
- Court cases won vs. lost, and sentences handed down.
- Total number of illegal incidents (not restricted to rhinos) associated with a given rhino population.
- Ratio of all illegal incidents to arrests.
- Results of staff assessments (skills, readiness, equipment maintenance etc.).
- Morale of staff as indicated by staff turnover, corruption, number of disciplinary hearings and number of staff implicated in illegal activities.

3. SUSTAINABLE USE

Objective:

To develop the socio-economic sustainability of white rhino conservation and the flow of benefits from sustainable use.

Rationale:

The expansion of rhino populations (especially on private and communal land) and the continuation of appropriate conservation management programmes require economic incentives to be maximised. CITES resolution 9.14 recommends that revenue derived from the use of rhino should be reinvested in rhino conservation programmes.

In the face of declining State contributions to nature conservation, economic returns from wildlife help to sustain conservation management programmes. They also provide the basis for investment by the State, communities and the private sector in further land and expanded populations.

Actions:

- # Sell live rhinos to appropriate buyers.
- # Promote and undertake controlled ethical hunting, including the application of an appropriate procedure for issuing permits, the avoidance of inappropriate hunting methods, and the marking and registration of trophies.
- # Promote and undertake safe and responsible tourism opportunities which do not negatively impact on wild rhinos, their habitats or other species.
- # Facilitate investment in tourism facilities, based on rhino conservation, which provide a positive return, increased participation, and the development of new employment opportunities.
- # Pursue a legal trade in rhino products in accordance with international agreements and conventions, including CITES.

Promote a uniform national system for controlling a legal trade in rhino horn, including the identification, marking and registration of stocks.

Promote the development and adoption of national legislation.

- Introduce a system for monitoring the impact of any reopening of a legal trade in rhino horn on rhino populations in South Africa.
- Promote incentives for the reinvestment of revenues from trade into rhino conservation.

Support the captive breeding or display of white rhino by reputable institutions.

Indicators.

Number of inappropriate practices / contraventions.

Proportion of horn stocks registered.

Success in acquiring authority to trade in rhino products from CITES.

Number of tourists attacked or injured by rhino.

Number of rhinos injured or destroyed in tourist-related incidents.

Proportion of tourism revenues dependent on rhino conservation.

Revenue derived from existing trade, and prices achieved for rhinos and products.

Number of transactions, and value of trade.

4. ANIMAL WELFARE

Objective:

To ensure that nationally-accepted standards of animal welfare are implemented in white rhino conservation.

Rationale.

It is essential that South Africa maintains high animal welfare standards both for the sake of individual rhinos and for South Africa's standing internationally. This covers both the management and handling of rhinos in existing populations, as well as the evaluation of the final destination of relocated animals.

Actions.

Apply national animal welfare standards during capture, translocation**, holding live sales and their subsequent management. [** Ensuring rhinos are exported only to acceptable destinations].

Indicators.

Proportion of management exercises that achieve the required animal welfare standards.

5. COMMUNITY INVOLVEMENT

Objective:

To promote and facilitate the participation and involvement of communities and other stakeholders in the conservation and sustainable use of white rhinos.

Rationale:

The long-term conservation of white rhinos is dependent upon the support and participation of all sectors of the South African population.

Actions.

Discuss white rhino issues at established liaison meetings.

Demonstrate and promote the benefits that can be derived from white rhinos.

- # Facilitate and promote the establishment of white rhino populations on communal land through partnerships and other supportive mechanisms.
- # Create increased awareness of the value of wildlife, including the role of the white rhino as a flag-ship species.

Indicators.

- # Change in rhino numbers within different ownership categories (private, State, communal).
- # Economic benefits derived by local communities from white rhino use.

6. COORDINATION

Objective:

To ensure the effective co-ordination of the white rhino industry.

Rationale:

There is a need for improved management and controls to optimise the conservation and sustainable use of white rhinos to the mutual benefit of all parties.

Actions.

Establish a consultative forum (involving State nature conservation organisations, African Rhino Owners Association [AROA], professional hunting and game ranchers associations, communities, etc.) to develop ideas and mechanisms to promote the white rhino industry, including:

The evaluation of current legislation and policy in terms of its relevance and uniformity.

The recommendation of any further necessary control mechanisms that promote responsible management, e.g. management plans.

The identification, acquisition and interpretation of relevant information to facilitate the co-ordination and promotion of the industry.

Build capacity within the wildlife industry for effective white rhino management, including legislation, hunting and security.

Indicators:

Extent of active involvement by rhino managers and others in consultative forums.