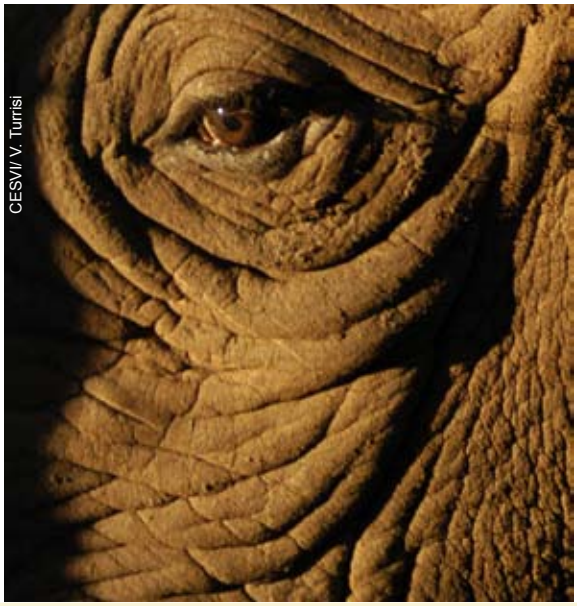
STRATEGIC PLANNING FOR RHINO CONSERVATION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SUMMARY OF GUIDELINES FOR: STRATEGIC PLANNING FOR RHINO CONSERVATION

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National and regional strategies for rhino conservation should not make rhinos seem like museum specimens or like dinosaurs or that are close to natural extinction. Instead, rhinos must be presented as robust species that can play a very positive role in sustainable wildlife industries, to the economic benefit of rural people.

It can easily be shown that efforts to protect rhinos will, at the same time, create protection for a range of other species. For this reason rhinos should be referred to as “flagship species”.

Regional efforts to achieve a wider distribution of rhino populations, and to make rhinos more economically relevant to rural people, can and should be linked to SADC’s objectives for the coordinated development of southern Africa.

Cross-border cooperation is often required for effective conservation of rhinos. The spread of rhino populations will therefore be proof of constructive diplomacy within the region. This is another reason to suggest that rhinos are “flagship species” for SADC.

There are three recognized subspecies of black rhinos in the SADC region, and two white rhino subspecies. Breeding between the different subspecies should be avoided.

For the long-term evolution of each subspecies, regional “metapopulations” of 2,000-5,000 animals will be required. The term “metapopulation” means that there is some mixing of rhinos between different populations of the same subspecies (but not between populations of different subspecies). This need for exchanges of rhinos is another reason why regional collaboration between range states must be maintained.

Apart from the obvious need to maximize the growth rates of rhino populations to build up numbers of rhinos, healthy growth rates (at least 5% per year) are essential for maintaining genetic diversity.

The range of objectives in rhino conservation, ranging from economic objectives to biodiversity objectives, can only be achieved through strong technical coordination, for which a number of interlinked structures have been developed within the region.

At the national level, coordination structures are also needed and a typical way of building the national structure has emerged from the experience of various range states.

The means to achieve rhino coordination must be expressed through a national rhino strategy, which also has typical components.

Annual action plans must be developed to implement the strategy through the clear, time-scheduled assignment of responsibilities and resources for the various aspects of rhino conservation.

2.1 Setting strategic goals for rhino conservation: what are we trying to achieve?

2.1.1 Broad goals for conservation and development

A common perception, perpetuated in media reports, is that rhinos are "living dinosaurs". However, this perception is far from the truth. Both species of African rhinos have evolved over a time-scale that is not greatly different to that of human evolution, and are well adapted to a range of habitats including very arid ones. They are also more compatible with some agricultural land-use systems than is generally appreciated. This potential compatibility arises because:

- rhinos are hardy animals that do not carry significant livestock diseases (such as foot-and-mouth disease);
- they do not normally damage crops or harass livestock to the same extent as elephants, predators, etc.;
- they tend to remain within well-defined home ranges with regular movement patterns around which land-use activities such as cattle ranching could be planned;
- they have low requirements for water or other supplementation and, in the case of black rhinos, do not compete with livestock for grazing resources.

Therefore, of the "big five" wildlife species within Africa, rhinos have the greatest potential to fit into mixed land-use systems where adequately sized areas of suitable habitats can be retained. Unfortunately, incompatibility arises because of humans impacting on rhinos through poaching and poor land-use planning, not because the rhinos are invariably problematic for all forms of agriculture or rural development.

Where wildlife-based land-use systems are established, rhinos act as true "flagship species" because:

- they require large areas and significant protection measures that help to conserve a wide range of biodiversity;
- the conservation of these rare and charismatic animals attracts donor as well as state support, with the latter being stimulated by the national prestige of a rhino conservation project;
- the rhinos are a major attraction for ecotourists and (where markets are established) have a high value in live sales, thus generating revenue for wildlife operations.

These factors suggest that, when initiating a rhino re-introduction project, a government should give careful consideration to the siting of the project in order to maximize overall conservation opportunities (seeking spatial overlap with "hotspots" of biodiversity) and also to boost top-priority development initiatives such the establishment of certain tourism facilities, creation of transfrontier conservation areas, etc. (see Section 5.7). The extent to which these broader objectives can be promoted would, however, be conditional upon habitat suitability for rhinos, security and the size of the proposed re-introduction area.

Examples of the extent to which rhinos add value to wildlife operations have been researched within the SADC Regional Programme for Rhino Conservation. This study (Spenceley and Barnes, 2005) highlighted the following examples.

- Between 2000 and 2005, live sales of rhinos from the Hluhluwe-iMfolozi Park in South Africa generated the equivalent of 60% of the park's conservation budget.
- Surveys of tourists in this park, as well as in private reserves in South Africa and Namibia, indicate that 7-14% of total wildlife viewing value can be ascribed to rhinos.
- In Zimbabwe's south-eastern Lowveld and in Namibia's arid Kunene region, rhino conservation programmes have been major catalysts in the formation of commercial and communal conservancies.

White rhino safari hunting in South Africa, and to a lesser extent in Namibia, has for many years generated significant income for conservation. In future, as rhino populations recover, safari hunting could become a very significant form of income-generation from black rhinos as well as white rhinos. For instance, Spenceley and Barnes (2005) estimate that with carefully regulated safari hunting in the Torra Conservancy of Namibia, black rhinos could sustainably contribute

US$0.43 per hectare to the annual community income from this communal conservancy which is too arid to support agricultural options.

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, poor choice of release areas, or other factors) would create a poor international perception of a country's conservation efforts. Hence, to ensure that the gains from rhino conservation do in fact outweigh the costs, strategic planning is required along the lines that are advocated in this manual.

2.1.2 Relevance to SADC development priorities

The Protocol on Wildlife Conservation and Law Enforcement in the Southern African Development Community notes that:

- *Article 21 (F) of the SADC Treaty designates natural resources and environment as an area of co-operation for Member States;*
- *conservation and sustainable use of wildlife in the Region contribute to sustainable economic development and the conservation of biological diversity; and,*
- *the viability of wildlife resources in the Region requires collective and co-operative action by all Member States.*

Article 3 (Principles) of the Protocol on Wildlife Conservation and Law Enforcement in the Southern African Development Community commits State Parties to: *co-operate with other Member States to manage shared wildlife resources as well as any transfrontier effects of activities within their jurisdiction or control.*

Similar commitments to regional co-operation in the conservation of wildlife species are expressed in the SADC Regional Indicative Strategic Development Plan (RISDP), which in Paragraph 3.4.8.1 of Chapter 3 notes that current policies focus on the conservation of regional ecosystems and landscapes, endangered, endemic and cross-border migratory species; management of water catchments and aquatic ecosystems; and prevention of extinction of indigenous plant and animal species, especially those distributed across national boundaries.

These and other SADC formal commitments provide a very clear rationale for continuing with a SADC regional programme for rhino conservation, and to strive for development-orientated outcomes as well as conservation outcomes from this programme.

Rhinos are particularly appropriate as "flagships" for regional cooperation in resource management because the decline of many of the sub-continent's rhino populations was due to cross-border poaching and illegal trading networks that extended through several countries. Showing a reversal of this trend, through regional cooperation in law-enforcement, sharing of rhino management expertise, and sharing of rhinos through metapopulation management, would be a very graphic demonstration of SADC's effectiveness.

Implementation of rhino conservation projects with a development orientation is in accordance with one of the ten principles that were expressed in the "Agenda for Action" that was drafted at the World Parks Congress in Durban in 2003. This principle states that: *The African people's extreme dependence on biodiversity and natural resources will not be sustainable unless protected areas are linked with mainstream local, national, and regional development priorities. Lessons from integrated conservation and development programmes have shown that both conservation and development can only be integrated if projects are conceived within a similar framework. Perhaps more than anywhere else in the world, biodiversity conservation must be integrated into the livelihoods of local people and their economies.*

From these perspectives, there is a clear rationale for ensuring that any national or regional goals for rhino conservation refer to the interdependency between human welfare and sustainable management of wildlife resources, within which the "flagship" role of rhinos is highlighted.

2.1.3 Rhino metapopulation management goals

National and regional rhino conservation strategies set goals in terms of conservation biology (genetic and demographic considerations) as well as in terms of the broader conservation and development issues that are outlined above. This section of the manual deals with goal-setting for rhino metapopulation management while Section 4 shows how the relevant management principles can be put into practice.

First, it is important to clarify what is meant by a "metapopulation". This term is often used loosely or incorrectly. A metapopulation is not simply a set of separate rhino breeding groups within a region. Instead, it is defined by the fact that there is interchange of genetic material between sub-populations, i.e. breeding animals (or, potentially, their semen, ova or embryos) are exchanged between geographically separated groups so that they amount to a single population in genetic terms.

The reason for maintaining a metapopulation is to avoid losing genetic diversity that is essential for the long-term evolutionary potential of rhino species, which means the ability to adapt to changing environments. Loss of genetic diversity can arise through two main processes that affect small populations: inbreeding and genetic drift. Inbreeding is a well-known genetic problem that does not warrant elaboration. Genetic drift is a less obvious problem which arises from the fact each birth constitutes a sample of the genetic composition of the previous generation. If there are few births, therefore few samples, it is likely that the random sampling process will result in an incomplete transfer of the overall genetic diversity of the parent generation. Some of the diversity is left behind with the previous generation, and is thus lost.

Another process, outbreeding depression, might arise if rhinos from distant populations are mixed so that local genetic adaptations become obliterated or diluted by the genetic inflow from a population that has been evolving in a somewhat different environment. Outbreeding depression is avoided by managing rhinos within several conservation units or "subspecies", hence there is no continental metapopulation for all black rhinos or for all white rhinos, only regional metapopulations of each species.

Drawing a line of spatial separation between subspecies is mainly a matter of common sense rather than taxonomic precision. Studies of black rhino DNA from across the continent (Brown and Houlden, 2000; Harley et al., 2005) indicate that the genetic variation is discernible (and sufficient to suggest that subspecies designations are valid) when comparing DNA from geographically distant populations, but is only gradual between each of the intermediate populations. Subspecies differentiation is therefore like trying to separate grey scales rather than black and white (this is known as "clinal variation").

The IUCN/SSC African Rhino Specialist Group has defined four nominal "subspecies" or conservation units for the black rhino that are geographically and ecologically separated as follows:

- west Africa (Cameroon), being *Diceros bicornis longipes;*
- east Africa (Kenya and northern Tanzania), being *Diceros bicornis michaeli;*
- south-western Africa (Namibia and the arid areas of South Africa, i.e. mean annual rainfall <400mm), being *Diceros bicornis bicornis;*
- south-central Africa (southern Tanzania, Zimbabwe, Zambia, Malawi, Mozambique and the less arid areas of South Africa, i.e. mean annual rainfall >400mm), being *Diceros bicornis minor.*

For white rhinos, the situation is simpler because there are only two defined "subspecies" of which one (the northern white rhino, in the Democratic Republic of the Congo) is virtually extinct.

Some countries that are re-establishing rhino populations, such as Botswana, are on the indistinct boundary between two black rhino conservation units. In these situations, careful consideration must be given within the national rhino strategy to the question of whether to restock with both "sub-species", or only one. Restocking with two "sub-species" will entail extra costs and management problems involved in maintaining two separate populations or metapopulations within the same country. However, there may be reasons related to the supply and cost of the founder animals that might suggest the need to source the animals from both rhino conservation units (but not to inter-breed them).

The number of animals that is sufficient, within a population or metapopulation, to avoid loss of genetic diversity through inbreeding and genetic drift cannot be precisely determined on the basis of current knowledge of the reproductive behaviour and population dynamics of rhinos. A previously-stated guideline was that each panmictic population (i.e. one in which there are no barriers or distribution gaps to prevent breeding between any animals), or each metapopulation (i.e. one in which barriers or gaps are overcome by deliberate translocations), needs to contain at least 2,000 animals to maintain long-term evolutionary potential for each "subspecies". However, recent research (Lande, 1998; Reed et al., 2003) suggests that the "minimum viable population" may need to be significantly higher than this, at over 5,000 animals.

In view of the problem of genetic drift, rhino conservation strategies often specify a target growth rate for a population or metapopulation, sufficient to ensure that rhinos do not get stuck in a "genetic bottleneck". This is generally specified as being at least 5% per annum, which requires an average inter-calving interval (in a population with normal age and sex structure) of three years or less per breeding-age female. At this rate, a population would double in 14 years.

In summary, typical goals relating to conservation biology within rhino conservation strategies are:

- developing a metapopulation of over 2,000 (ideally 5,000) animals of each rhino subspecies that exists, or is known to have occurred in the past, in that region;
- preventing loss of genetic diversity; and,
- maintaining a population growth rate of at least 5% per annum.

2.2 Achieving coordination

2.2.1 Continental and regional coordination mechanisms

Each country and population requires its own tailor-made strategy and programmes to meet the unique challenges it faces in funding, implementing and ensuring long-term sustainability of rhino conservation efforts. Unfortunately, many of the African rhino range states lack sufficient rhino expertise to develop and maintain rhino programmes on their own. A number of mechanisms and structures have been developed over the years not only to address this problem, but also to ensure that broad species survival objectives are set, effective rhino conservation strategies and action plans are compiled, appropriate techniques are developed and made available, and expertise is shared so that effective rhino conservation programmes can be implemented. This requires coordination and commitment at the continental and regional levels so as to provide support and direction for the range states that are responsible for implementation.

The continental strategic framework is provided by the IUCN Species Survival Commission's African Rhino Specialist Group (AfRSG), and is documented in the *"Status Survey and Conservation Action Plan: African Rhino"* (Emslie and Brooks, 1999). This document provides the continental goals and guidelines for the successful conservation of African rhinos, concentrating on surveys, monitoring, field protection and law enforcement, criminal justice, community involvement, sustainable use, applied research, and national plans. Other aspects covered are: the conservation status and historical distribution of the rhino, range state reports, threats, the international and regional framework for African rhino conservation (updated within this manual), and captive breeding. The continental plan should be used as reference material, as should the proceedings of the biennial AfRSG meetings as these contain valuable sections on strategic issues, techniques, rhino status and conservation support programmes.

The major structures or mechanisms operating at the continental and regional levels are as follows.

2.2.1.1 IUCN SSC African Rhino Specialist Group (AfRSG)

This was reconstituted in 1991, with a continental scope, following a period during which it was amalgamated with the African Elephant Specialist Group. As one of more than 100 specialist groups within IUCN's Species Survival Commission, the mission of the AfRSG is: *"To promote the long-term conservation and maintenance of viable populations of the six subspecies of Africa's rhinos in the wild".*

The AfRSG comprises a Chairman, a partially-funded Scientific Officer, representatives of most African rhino range states and a variety of rhino experts who operate as a network to address both strategic (e.g. government rhino policy) and implementation challenges for rhino conservation, ensuring that the best scientific knowledge is used as the basis for decision-making and field conservation programmes. To achieve this, meetings attended by the 30-40 members are held every two years, and in addition individuals or groups of members are assigned to contribute to important international, regional and national initiatives where their expertise is required. The value of the face-to-face nature of the exchanges helps establish a sense of belonging to a serious and relevant professional peer group, which strengthens the confidence and influence of government rhino conservation managers in particular. The AfRSG Chairman or individual members may be approached by any range state wishing technical support or advice. Further details of the AfRSG's role are provided by Emslie and Brooks (1999).

2.2.1.2 SADC's regional structures for rhino conservation

SADC Regional Programme for Rhino Conservation (SADC RPRC). This programme was initiated in 1999 with funding from the Italian Ministry of Foreign Affairs – Directorate General for Development Cooperation – and has thus far been implemented through a consortium comprising SADC FANR, WWF-SARPO, IUCN SSC AfRSG, CESVI (an Italian NGO) and IUCN-ROSA. Consortium partners may change over time according to shifting institutional interactions and funding commitments. The programme has provided expertise, specialised logistical support, training and catalytic funding for projects of a regional nature or importance.

The scope of the programme has been limited to rhino subspecies shared by more than one SADC country (i.e. situations of relevance to regional metapopulation management), and hence has been restricted to the southern white rhino *Ceratotherium simum simum* and two black rhino subspecies *Diceros bicornis bicornis* and *D.b. minor.* The Democratic Republic of the Congo (DRC) has not been included in the programme since the relic northern white rhino population *(Ceratotherium simum cottoni)* of the DRC is not managed within any metapopulation. The other range states within the SADC RPRC include 95% of Africa's rhinos.

The SADC RPRC has helped to bridge the gap between the high-level umbrella strategy provided by the AfRSG, and programme implementation by the range states, by providing technical and financial support for a variety of projects. After the initial phase of funding by the Italian Government (to the end of 2005), the SADC RPRC continues with a focus on promoting and implementing a regional strategy for rhino conservation that is orientated towards SADC development policies. This can be achieved, despite a lower level of funding, by networking existing rhino conservation projects within the region and by maintaining collaboration between rhino management authorities and key NGOs under SADC auspices, thereby giving regional political momentum to initiatives such as re-introduction projects.

SADC Rhino Management Group (RMG). This was established in 1989 on a bilateral basis between South Africa and Nambia, later incorporating Swaziland and Zimbabwe, and thereafter being subsumed within the overall SADC RPRC. The common factor between these countries, which together contain 94% of Africa's rhinos, is the relatively sophisticated nature of the monitoring and management programmes undertaken, so they face common challenges and benefit from jointly developed solutions. The RMG comprises a chairman, representatives of each state conservation agency, a representative of the South African private owners, a number of elected independent rhino experts and the chairman of the Rhino Recovery Group (see below). The group's main activities are: ensuring that effective conservation objectives and programmes are in place, developing appropriate techniques (e.g. monitoring, re-introductions), debating key issues (e.g. auction sales, trophy hunting of black rhinos) and evaluating the performance of all individual populations and also by subspecies. This latter activity involves regular but confidential status reporting on all populations, with periodic reviews providing recommendations for improved monitoring and management based on population performance. This approach has been catalytic in encouraging improved biological management of the population in the region. The RMG therefore provides a focused evaluation of black

rhino management (excluding security) that is not provided by the higher level AfRSG or SADC RPRC programmes.

SADC Rhino Recovery Group (RRG). This regional subgroup of the SADC RPRC was established in 2001 to place particular emphasis on the management needs of 1% of Africa's rhinos that are in the minor range states and where there is considerable scope for re-introduction projects and population expansion (Zambia, Botswana, Malawi, Mozambique, Tanzania, Angola). The RRG's aim is: *"To coordinate and facilitate the application of regional resources in establishing re-introduced rhino populations and managing remnant rhino populations, and ensuring their future viability"*. Activities are focused on developing national policies, strategies and plans, promoting rhino surveys and area evaluations, sourcing rhinos for reintroduction, facilitating access to funds, sharing expertise and capacity-building. The RRG comprises representatives of each range state (one of which will act as chairman and one as vice-chairman for a period of two years each), the AfRSG Chairman, the RMG Chairman and a representative from the SADC RPRC consortium.

SADC Rhino and Elephant Security Group (RESG). This grew out of a Security Sub-committee of the RMG. It was formed in 1989 and met regularly till 1998 when it became dormant. With support from the SADC RPRC, the group was re-launched in 2001 with new, more focused terms of reference. More recently the group has also come under the SADC RPRC framework. The overall objectives of the RESG are to develop guidelines, strategies and databases for the effective and efficient protection of African rhino and elephant populations, to assist the various conservation agencies, communities and private landowners to minimise rhino and elephant poaching and the illegal trade in rhino horn and ivory, and to provide advice, training and coordination. The group also promotes procedures for effective investigation and prosecution of rhino and elephant crimes. Membership comprises representatives (usually wildlife investigators or managers) of rhino conservation management agencies, specialist police units, including the Interpol Environmental Crimes Working Group (IECWG), and co-opted specialist technical members as required (e.g. from TRAFFIC, AfRSG, etc). To save on costs and increase sharing of information, RESG meetings have, since the group's re-launch, been held back-to-back with regional IECWG meetings.

2.2.2 National coordination and planning mechanisms

A number of mechanisms are necessary for rhino conservation programmes to be effectively directed and coordinated within the range states, and these are all present in those countries with the most successful rhino programmes. In some countries the situation is complicated by the fact that there is more than one formal conservation agency. In such cases, the various agencies should endeavour to manage their rhinos in accordance with national and indeed regional goals and should not operate only according to their own organisational level strategies and plans.

2.2.2.1 National Coordination Committees

These committees should be responsible for driving, coordinating and advising on all rhino conservation activities within each country. As each country varies according to the extent to which powers have been delegated to lower levels by the relevant Minister, and because the rhino programmes themselves will vary significantly in extent and complexity, there is no single model of rhino committees that will suit all countries. The model presented here is something of a hybrid based on the use of committees by Kenya and Namibia in 2004.

Rhino Executive Committee. This committee sanctions all policy and strategy decisions concerning rhino conservation in the country, although it may need to refer to higher authority (e.g. Minister or Parks Board) for ultimate approvals. It receives and endorses policy proposals (including revisions of national rhino strategies) and annual work plans, provided by a lower level committee. Typically, it comprises the head of the Rhino Management Authority (the accounting officer), senior conservation and research staff and the national rhino coordinator. This committee normally meets twice a year.

Rhino Management Committee. This committee drafts (generally on an annual basis) and oversees the implementation of the national rhino plan, in accordance with policies expressed within the overall national rhino strategy, and makes the necessary

recommendations to the Rhino Executive Committee. It typically comprises the national rhino coordinator, rhino sanctuary/IPZ wardens, rhino management and security experts and representatives of private landowners or custodianship populations. Such a committee tends to meet two to four times per year. Typical terms of reference of the committee are as follows.

- Draft national rhino strategy (policy) and annual work plans and submit to the Rhino Executive Committee for approval.
- Review the management, including security, of all rhino populations.
- Determine rhino numbers and the performance of all populations and present as an Annual Status Report.
- Recommend on rhino removals, reintroductions and sourcing of rhinos.
- Secure funding for rhino programmes.
- Debate key issues and draft national positions on them.
- Convene meetings and workshops with stakeholders.

2.2.2.2 National Rhino Coordinator

Each country should have a person who acts as the focal point on rhino conservation matters, whether this is a full-time National Rhino Coordinator or an individual who represents the range state and provides some internal coordination as part of a larger portfolio. The duties of the Coordinator would be as follows (Brett, 2002).

Planning and operations:

- oversee revision and implementation of National Rhino Strategy (policy);
- oversee production and implementation of periodic action plans (considering not only management interventions such as captures and translocations, but also monitoring programmes, training and capacity-building, and research projects such as habitat studies);
- convene and provide secretariat for meetings (Rhino Executive Committee, Rhino Management Committee, external stakeholders, etc.), dealing with agenda notifications, minutes and follow-up.

Status reporting and information:

- compile and circulate reports (recording population status and performance, survey and monitoring programmes, site selection and inspections for rhino translocations, rhino horn stockpile data, training and performance of staff);
- maintain rhino population database;
- monitor expenditure on rhino conservation projects (expenditure against budgets; reporting to donors).

Coordination and liaison with stakeholders:

- within Rhino Management Authority (providing link from field to headquarters on rhino priorities);
- between Rhino Management Authority and stakeholders (coordinating and monitoring rhino custodians/owners; maintaining liaison with and between donors; information-sharing with international rhino specialists and other national rhino coordinators).

Representation and funding:

- identify and prioritize funding needs;
- draft and present funding proposals;
- obtain official endorsement of priority projects and proposals;
- advise RMA on international matters through coordination committees;
- represent the country on regional and continental bodies (IUCN/SSC AfRSG, SADC RRG/RMG, RESG, etc.).

A key consideration is the continuity of the National Rhino Coordinator/country representative function as the expertise and credibility of the individual is critically important to the effective functioning of this role within the country and externally at the regional and continental levels. It takes time for the National Rhino Coordinator to develop this expertise and credibility, therefore wildlife departments should make every effort to view this as a long-term role for an individual, and wherever possible should ensure that the capacity of one or more other staff members is developed such that there is always an individual with advanced expertise to take over should that be necessary. The National Rhino Coordinator should represent the country's rhino conservation programme at all relevant regional and international

fora to ensure a rapid development of rhino expertise and the efficient incorporation of lessons learnt into the national programme.

2.2.2.3 National Rhino Strategy

A major range state, such as South Africa, will have evolved rhino conservation principles over time, within broader legal and institutional arrangements and programmes that are well established. Minor range states, particularly those undertaking re-introduction programmes, will not necessarily have an adequately comprehensive policy framework in place to guide their rhino conservation efforts. In such situations, it is desirable for the relevant ministry to formally express a national statement of intent to conserve rhinos (in accordance with goals discussed in Section 2.1) along with a commitment to set up the appropriate legal and institutional frameworks required to achieve this. These statements could either be expressed within a National Rhino Strategy, or in a high-level policy document.

The National Rhino Strategy provides the policy framework and direction for the rhino conservation programme, ensuring that priority actions are identified and, wherever possible, international best practice for rhino conservation is applied. This document, which should be drafted by the Rhino Management Committee and approved at the highest possible level within government, needs to be revised at regular intervals (about every 5 years) to ensure that it remains up-to-date and relevant to both the national and park levels to guide decision-making. This strategic document is critically important not only to ensure a coordinated, focused direction for the rhino programme, but also to provide credibility for any international funding applications (or applications for rhinos) that may be made.

The key issues that need to be considered and incorporated in the strategy (pertaining to the vision, objectives, and international "best practice" principles) are summarised in Section 2.1 of this manual. Most national strategies have a long-term Vision, indicating the desired situation to be achieved in future. The strategies then invariably include much more precise and measurable shorter-term targets or Conservation Objectives to cover the period of the lifespan of each strategy (usually 5 years). A strategy will usually go on to identify Actions needed to meet these objectives, as well as verifiable Indicators of Success. These need not be exhaustive, but usually will include those "best practice" approaches or actions that experience has indicated as needing to be implemented for the programme to be successful.

The following key objectives are common to many of the national and continental strategies.

Security and protection: to minimise illegal activity and losses of rhinos through appropriate management action, improved legislation and sentences, cooperative intelligence, detection, effective investigation and prosecution, law enforcement and community support.

Biological management: to manage rhinos (and possibly also their habitats and other competing species) to achieve sustained rhino metapopulation growth of at least 5 % per annum; and where possible to promote longer term genetic viability by minimising loss of heterozygosity, limiting inbreeding and minimising genetic drift (i.e. to manage populations to achieve demographic and genetic goals).

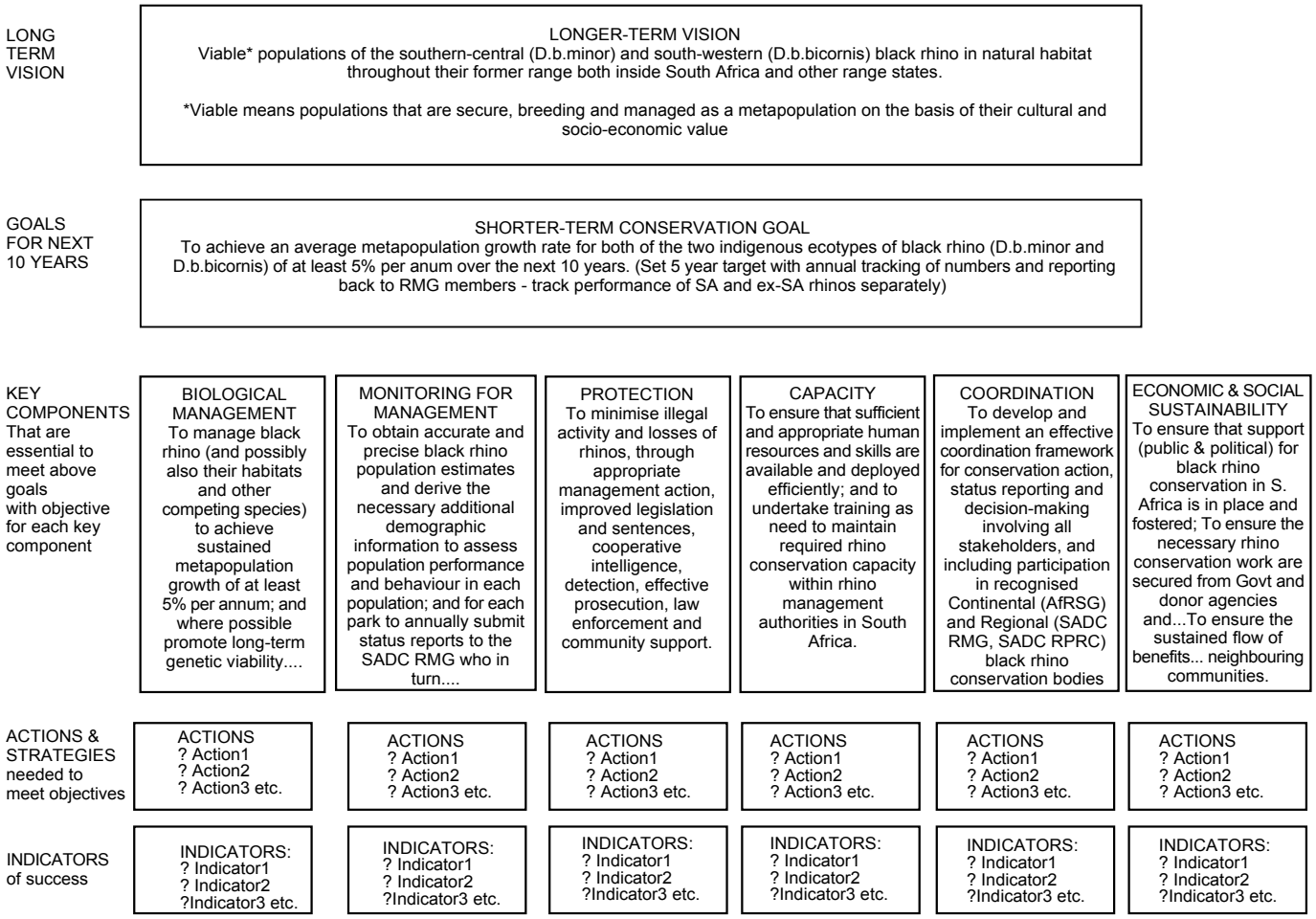
Monitoring: to maintain accurate population estimates and demographic measures of performance for populations, and where possible to synthesise these data at a metapopulation level. This will aid future biological management and provide quantitative measures against which progress towards meeting conservation objectives can be assessed, as well as providing lessons to help improve future rhino management.

Coordination: to develop and implement an effective coordination framework for conservation action, status reporting and decision-making involving all stakeholders, and including participation in recognised continental and regional conservation bodies.

Capacity: to ensure that sufficient and appropriate human resources and skills are available and deployed efficiently, and to undertake training as needed to maintain required rhino conservation capacity within rhino management agencies.

Economic and social sustainability: to ensure that support (political and public) for rhino conservation is in place and fostered, that the necessary financial budgets and manpower to undertake rhino conservation work are secured from government, donor agencies and through the sustainable use of black rhinos (provided that in the latter case acceptable standards of animal welfare are practised); to ensure that the sustained flow of benefits from the conservation of rhinos contributes to the social and economic development of neighbouring communities.

Figure 1: Example of national rhino strategy log-frame.



An advantage of this structured approach is that it is possible to graphically show the structure of a plan and its key features on a single poster diagram. The example given above is from the revised South African black rhino plan.

2.2.2.4 Annual action planning

Work plans with approved budgets that put into effect the highest priority elements of the National Rhino Strategy are essential to drive implementation of the rhino conservation programme. These should include specific time frames and responsibilities, and should be drawn up with all the staff that will ultimately be held responsible for implementation to ensure ownership and accountability.

Work plans that outline the major programme-level activities will need to be drawn up by the Rhino Management Committee and approved by the Executive Management Committee (see Section 2.2.2.1).

Activities that cannot be adequately funded by the Management Authority should be considered for external donor support. These should be "packaged" as discrete projects, stressing their importance to both national and international rhino goals and include clear end-products or deliverables that are measurable and relevant to improved rhino conservation status. The major rhino conservation support and funding agencies include the WWF African Rhino Programme, the SADC Regional Programme for Rhino Conservation, the US Fish and Wildlife Service's Rhino and Tiger Conservation Fund, the International Rhino Foundation, the Frankfurt Zoological Society, Save the Rhino International and periodic fund raising campaigns such as the EAZA 2006 Rhino Campaign (European zoos). The IUCN SSC African Rhino Specialist Group is often requested by funding agencies to evaluate projects and rate them for importance. This is done using defined criteria that have been developed by the AfRSG to identify projects of continental priority and importance to subspecies survival, and those at a subsidiary level of national importance.

2.2.2.5 Definitions of terms used within plans for rhino conservation

To avoid confusion and differing standards for rhino conservation within the region, it is important that rhino management authorities are consistent in their use of terminology that is applied to the various rhino conservation situations. Some key terms (modified from Leader-Williams et al., 1997) are as follows.

- **Rhino Conservation (Protection) Area.** A medium to large area (state, private or communal) in which rhinos are able to range over the whole area, which may be fenced or unfenced, and in which staff are deployed at moderate to high density throughout the area, with an emphasis on rhino protection.
- **Intensive Protection Zone (IPZ).** An unfenced section of a larger conservation area, with this sub-section having a significantly higher staff density (at least one man per 20 km^2) than the rest of the area, specifically to protect rhinos.
- **Rhino Sanctuary.** A relatively small area (state, private or communal) within which rhinos are deliberately confined by perimeter fencing or other barriers, and within which manpower densities are high (as in an unfenced IPZ).
- **Rhino Conservancy.** A relatively large area, fenced or unfenced, of private and/or communal land (possibly combined also with state land) in which rhinos are managed by stakeholder groups rather than by a single state agency or private agency.