Review by Rob Brett (Programme Co-ordinator) (Country visit: 28 August – 1 September, 2000)

1 MECHANISMS FOR PLANNING AND COORDINATING NATIONAL RHINO CONSERVATION EFFORTS

1.1 Rhino Management Authority

The Ministry of Environment and Tourism (MET) is the sole national management authority for black rhino. White rhino can be privately owned. However, permits are required from the MET licensing section for the import, export, translocation and hunting of white rhinos, including sale of live animals within Namibia.

1.2 National Rhino Strategy

A national rhino strategy for Namibia is contained within the current version of the Conservation Plan (MET 1997). This was first written in 1989, and has been updated twice since, the last update being in 1997 (H O Reuter (editor), plus contributions from other MET staff). The Conservation Plan is not officially endorsed by the Government of Namibia (e.g. by Minister of Environment & Tourism, or Permanent Secretary (PS)).

1.3 Action Planning

There is a separation of Conservation Plan (strategy) and periodic action plan(s). Action plans, mainly detailing rhino translocations to be carried out, have been produced since 1989 for individual years, but not for every year. Draft plans are presented to the Rhino Advisory Committee (RAC, described below), comments are received back from committee members, and this is followed by endorsement of the plan by the RAC. Staff of the MET scientific services (R Loutit, C Craig, P Erb) are presently drafting a five-year action plan (2001-2006: MET 2000a), which includes a restocking plan for new rhino populations. There is also an existing security plan (National Reaction Plan) for rhinos in Namibia (PRU 1998). The present Conservation Plan (strategy) document is comprehensive and not in immediate need of updating.

1.4 Coordination Mechanisms

The Rhino Advisory Committee (RAC) has been in existence since 1989, composed only of MET staff. These include the Deputy PS (Chair) and Rhino Co-ordinator (Secretary). There has been changing total composition of the committee since inception (varying from 15 to 5 members). Typically all MET head office staff are represented, plus the senior MET officer from each region of Namibia. Thus the RAC also acts as liaison between field and headquarters. The RAC meets 3-4 times a year, and works on a formal agenda and supporting documents. It is not primarily a decision making body, but advises the PS on rhino conservation matters. An annual translocation programme is drawn up at beginning of year, and, after passage through the RAC, is approved by the Minister. Recommendations are made by the committee on any matter relating to rhino conservation, no issues being excluded.

1.5 Focal Point

Rudi Loutit, the Namibian Rhino Co-ordinator, is the focal point for SADC programme. Peter Erb is the representative for the AfRSG, and the Southern African Rhino Management Group (RMG), AfRSG.

1.6 Potential for facilitation by SADC rhino programme

There is little or no requirement for assistance here. However, there is scope for SADC rhino programme to produce a regional template document, in order to ensure that strategies do not leave any items/issues relevant to rhino conservation unconsidered. This particularly applies to matters relating to generic issues common to many range states (e.g. management of a rhino metapopulation (within country state or regional), establishing new populations), and would be of particular value in the context of the potential resistance that some countries may have to external influence (or 'meddling') in a management planning exercise by a range state's rhino management authority. Equally, the high standards of planning for rhino conservation by Namibia would be a very useful as guidelines or use by other SADC range states.

2 EXISTING MECHANISMS FOR COLLABORATION WITH OTHER RANGE STATES (Excluding SADC Rhino Programme)

2.1 Co-ordination with other range states

Presently there are no formal agreements for co-ordination on rhino conservation with other SADC rhino states. Historically, there has been extensive co-operation between the Namibian wildlife authority and the South African National Parks, largely maintained by personal contacts between respective senior members of staff. This mainly resulted in sales of rhinos to Namibia from South Africa, and exchanges of rhinos from South Africa for other ungulate species from Namibia.

In the early-mid 1970's, white rhinos were purchased from Natal Parks Board, for MET and private farms. From the mid-1980's rhino transactions between South Africa involved SANP, who received *D.b.bicornis* populations from Namibia for Augrabies, Vaalbos and Karoo NPs. Some of these transfers were sales; others were exchanges for giraffe, buffalo and/or white rhino. In the mid-1990's white rhinos from Kruger NP (to Namibia) were exchanged for other species, including 10 white rhinos moved to Etosha NP in 1995. These transactions were commercial, and the perception from the Namibian side is that SANP got considerable benefit from them. MET have since sold 8 *D.b.bicornis* (at auction) to the Tswalu desert reserve in South Africa, and one to Lisbon zoo. MET would like to obtain more white rhinos in future, although Kruger NP would not be the desired source unless animals tested negative for TB. They would like to explore the possibility of exchanging roan antelope for white rhino from the KZNW (ex-Natal Parks Board).

2.2 Existing commitments with other SADC range states

At the time of independence, Namibia made a Presidential-level commitment to provide Botswana with two black rhinos, though this donation has not yet been taken up. A cow and calf captured in the Kaprivi area in 1989 (candidates for *D.b.chobiensis*, at one time perhaps the most appropriate ecotype for the northern part of Botswana: Moremi GR, Chobe NP) were originally earmarked for translocation at the time. The calf subsequently died, and the cow has since been moved into a *D.b.bicornis* population. A further two rhinos were to be made available for Botswana in exchange for other species, with waterbuck and sable antelope discussed, although these negotiations were complicated by veterinary issues and the lack of quarantine facilities in Botswana acceptable to Namibia. These possible transfers of rhinos by donation or exchange were discussed at PS level with Botswana up to 1999. Given the fact that the most appropriate black rhino subspecies for Botswana is probably *D.b.minor*, the RAC has also considered the option of moving *D.b.bicornis* to RSA (Addo, Augrabies or Vaalbos NP), with SANP releasing an equivalent number of *D.b.minor* from Kruger NP for translocation to Botswana. An alternative arrangement would be for Botswana to accept the *D.b.bicornis* from Namibia, and then exchange with *D.b.minor* from RSA subsequently.

3 RHINO POPULATION STATUS

3.1 Summary Statistics on rhino numbers, distribution and trends

Information on the total numbers of rhinos by population in Namibia is restricted, and Namibia has concerns over releasing information on rhino numbers and distribution (and deployment of law enforcement staff) with the risk of this information being used to target rhino populations for poaching. Summary information on population totals, and the size of key and important populations of black and white rhinos in Namibia is provided to the AfRSG which maintain a database of these totals presented at successive meetings of the group.

Namibia Estimated Totals (1999):

| Species | Total | Trend |
|----------------------------|-------|-------|
| Black Rhino (D.b.bicornis) | 697 | Up |
| White Rhino (C.s.simum) | 163 | Up |

The conservation goal of the current Conservation Plan (MET 1997) is 2,000 black rhinos, and future progress towards this goal is largely dependent of the availability of protected habitat, and the capacity to manage and protect this number of animals.

3.2 Population monitoring and reporting

Rhino monitoring in Namibia is based largely in identification of individual animals (e.g. using full-moon waterhole counts during dry seasons, and regular patrols on foot, horseback or from vehicles). in the large populations of black rhinos (e.g. Etosha NP, Kunene), there are constraints on what is logistically possible, and the approach to resolving the problem of clean (unidentifiable) animals, and unseen animals still needs to be resolved. Within the limitations of resources in the routine census of large rhino populations, and alternative approach being considered would involve less emphasis on estimation of the total population, with better information on the numbers and breeding performance of a sample of the population. This can be measured against a model or indicators of expected performance, assuming adequate knowledge of distribution and the frequency of visits to census points (largely waterholes at night).

Radio-telemetry has been used extensively in Namibia in monitoring individual animals (ranging patterns, drinking frequencies, etc), although collars design continues to restrict effective monitoring to the first 6-12 months after deployment. MET have been proactive in testing new technologies for use in rhino monitoring (e.g. digital photography, radio-telemetry data-logging, etc), and wish to continue these developments with assistance from the SADC rhino programme (see section 6).

National rhino databases for black and white rhino are maintained at the Etosha Ecological Institute (P Erb), although this excludes the database for the Kunene black rhino population (maintained by Save the Rhino Trust (SRT)). On the basis of routine monitoring and regular complete census exercises, SRT maintain a sightings and individual animal register, and co-ordinate these activities and reporting with MET. Population and country rhino totals are provided from these databases.

MET also maintains a rhino mortality database, including information on poached animals. This could be linked to the MIKE programme for elephants, and there is considerable scope for common approaches to monitoring poaching of both species, particularly if a common approach to patrol/sampling effort can be devised. At present there is very limited collection and use of intelligence information, and a need for improved use and analysis of existing intelligence data (see section 6).

3.3 Requirements for surveys and monitoring

There is a need for better information on the size, distribution and performance of the black rhino populations of Etosha NP and Kunene, with particular regard to the requirements for future translocation of rhinos from these areas in order to maintain a supply of rhinos to new areas of protected habitat (e.g. Private Land Custodianship scheme). Together with use of alternative approaches to monitoring trends and performance of these populations (e.g. using indicators from a representative known and easily identifiable sample), the use of ear-notching to increase the proportion of identifiable animals is considered very important. A programme of ear-notching of clean black rhinos in Etosha NP has been successful in notching 115 animals in the park since 1989 without any associated mortality. Maintaining a target proportion of notched or identifiable animals would need estimation of the number of animals needed to maintain that proportion by notching each year. The present data available from rhino monitoring in Namibia is adequate for safe and conservative offtake of rhinos from large populations (e.g. Etosha NP) to form new populations. The limitation on continued growth of Namibia's black rhino population is primarily the suitability and availability of areas to form new or expanded populations.

4 MANPOWER AND OTHER RESOURCES FOR RHINO CONSERVATION

4.1 Anti-poaching resources

As with information on population sizes and locations, the MET is concerned about potential misuse of information on staffing by protected area for rhinos. Consequently, related information on staff numbers and densities in Namibia is not reproduced here. The point was also stressed that using staff numbers to indicate level of effective protection available for rhino populations can be misleading when the effectiveness of a given number of field staff is compromised by the lack of support for these staff to operate in the field (subsistence and travel, performance-related incentives, patrol allowances, equipment, etc). Field staff numbers at Etosha NP have increased significantly in the last 6 months following drafting of 120 ex-combatants to MET staff in the park. However there is little provision in existing budgets for their support or routine deployment on anti-poaching duties.

Summary operating budget information for Etosha NP is provided below:

| Area | Type | Size (km²) | Operating Budget (USD) | USD/km ² |
|-----------|------|------------|------------------------|---------------------|
| Etosha NP | S | 22,175 | 246,000 | 11 |

In addition to the MET Wildlife Protection Services (Anti-Poaching Units), Etosha NP can call on the Namibia Defence Force and Police (including the Protected Resource Unit (PRU)), as necessary. The APU staff based at Etosha do not currently record intelligence information, or use information debriefed from patrols. Although the police have an informer network outside the park, there is a perception that the difficulty in evaluating the threat to rhinos is an additional constraint in evaluating effectiveness of deployment of staff for protecting rhinos or any link between deterrence of poaching and scout densities. Recent cases of poaching of white at a private rhinos (the only rhinos known to have been poached in Namibia in the last four years) also indicate a lack of the deterrent effect of heavy sentencing of convicted poachers (e.g. 10 years) for the same offence (at the same place).

MET junior staff salaries are summarised below:

| Staff Salaries USD pa | Low | High |
|-----------------------|------|------|
| Scout | 1720 | 2473 |
| Ranger | 2904 | 3903 |

4.2 Expertise available for specialised aspects of rhino management

There is a wide range of expertise specific to rhino conservation and management available in Namibia, both within the MET, and (more available) outside it, particularly former members of staff. The latter include former senior park managers/wardens with extensive rhino experience (e.g. A Cilliers), veterinarians (e.g. H O Reuter) and capture staff (e.g. L Geldenhuys). MET staff can be contracted to carry out short consultancy work following approval from the PS MET, as long as the intended work does not compromise or conflict in any way with normal duties.

4.3 Specialised equipment available for rhino management

MET has a fully-equipped and staffed rhino capture unit, with veterinary and aircraft (helicopter, fixed-wing) support. Inside the country, the capture unit has been used for translocating white rhinos at private landowner's expense. The MET capture truck(s) have also been used in the past for moving animals outside of Namibia (e.g. translocation of black rhinos to Tswalu Desert Reserve in RSA. Hire of the MET capture unit including the truck(s) based in Windhoek (Mercedes 4 x 4, Scania Horse and '6-pack' trailer for transport of 6 rhinos at one time) would be possible for short periods.

5 PARTICIPATION OF NON-STATE AGENCIES IN RHINO CONSERVATION

5.1 Community Involvement

There has been a long-standing and successful involvement of local communities in the conservation of the black rhino population on communal land in western Kunene region. This has mainly involved employment of local inhabitants as rhino monitoring staff (SRT) or community game guards (IRDNC), with additional opportunities for economic returns from ecotourism and local crafts. The primary function of the rhino-related activities involving communities has been information and monitoring with a secondary protection function (e.g. deterrence of poaching). The perceived success (one of the few stable or increasing free-ranging rhino populations on communal land areas) has been dependent on the input, funding and direction of NGOs, with tolerant communities receiving benefits in an area with zero agricultural potential. Further options for realising the value of rhinos in these areas could involve the sale of live rhinos to existing interested parties outside Namibia (e.g. Tswalu desert reserve), or private landowners inside Namibia (if they were allow to purchase black rhinos themselves).

The establishment of several conservancies across the Kunene rhino range has inevitably introduced additional political difficulties to the challenge of equitably sharing of any benefits/income available (e.g. from ecotourism concessions, hunting, sale of live rhinos). Consequently, there is a pressing need for a common agreement across conservancies on the priorities for conserving the common rhino population within an agreed rhino management plan which can be then implemented within constituent conservancy plans under a common framework for rhino surveillance and monitoring.

Further, the responsibility for rhino surveillance and protection in the future has to be taken on by MET in co-ordination with communities to remove the existing dependence on NGOs for adequate standards of rhino monitoring. There are a number of impediments to obtaining agreement between stakeholders in the areas related to the numerous existing plans (land use, conservancies), and the fact there is no legal means of control over human activities in the area (e.g. tourist access, etc), some of which pose an immediate threat to the survival of threatened wildlife in the western Kunene, including rhinos.

In other areas with rhinos in Namibia, although there are no specific rhino-related community programmes, there are community programmes attached to particular protected areas (e.g. south west side of Waterberg NP).

5.2 Local and International NGO Involvement

WWF has been funding rhino conservation-related activities and equipment in Etosha NP for the last 10 years, focused on rhino monitoring and support for anti-poaching and filling in 'gaps' in the routine budget. This has amounted to ca. 1 million N\$ in the last two years (US\$ 70,000 p.a.). A significant activity, the ear-notching of rhinos in Etosha NP, has been supported by WWF during this period. Additional donors to rhino conservation in the past decade have been: AWF (Waterberg NP, US\$ 1,500), Save the Rhino International (Waterberg NP, Kunene), African Wildlife Management (US\$ 5,700), Raleigh International (construction of patrol camps). Other MET rhino areas (Mangeti GC, Hardap) and activities (Game capture unit) have been entirely funded by MET.

In order to maintain present standards, there will be increasing need for donor/NGO support for rhino conservation in MET-managed areas in future. MET operating budgets have been declining in real terms year on year. For example, although the operating budget for Etosha NP increased by ca. 10% over the last two years, the proportion of the budget per employee decreased by 80%, largely due to the introduction of 120 ex-combatants to the staff complement in April 1999.

5.3 Private Sector Involvement

Namibia has established a successful custodianship scheme for black rhinos on private land, involving a formal process of selection of candidate farms for receiving small populations of government-owned black rhinos and subsequent appraisal of rhino monitoring, and management and security standards in recipient areas. The scheme, which commenced with the first placement of rhinos on private land between 1993 and 1997, is at an advanced stage and still progressing. Initial assessment of farm properties for placement of black rhinos is conducted by selected MET staff using a standardised set of criteria and a scoring system (MET 1993a). Successful properties enter into a Memorandum of Agreement with the MET (1993b, now under revision) over responsibilities and conditions on either side. There is a comprehensive background document (MET 1998) that provides detailed information on the custodianship scheme, and includes material for the instruction and use of custodians in maintaining adequate standards of monitoring and management.

Due to the size of appropriate farms available, and availability of rhinos, rhinos were mainly placed in founder groups of six animals per property (3m:3f). After the initial period of translocation of rhinos out of Etosha NP, and placement on seven selected properties (1993-97), there was a pause in translocations (1998-99), associated with a change in Minister and PS in the MET. After submission of justification for continuation with further placements, and approval, a further three properties received rhinos in 2000, including transfer of rhinos from the most successful custodianship area where rhino numbers had more than doubled since 1993. Since many of the recipient farms have limited capacity and populations are likely to remain small (e.g. < 10), the future genetic and demographic health of the custodianship metapopulation will depend on exchange of rhinos (e.g. exchange of breeding males) between populations on a regular basis. Through the present rhino co-ordinator, the MET continues to make regular checks on rhino monitoring standards on custodian farms. In 2000, re-training of monitoring staff in three areas has been arranged using staff of SRT.

With the continuing demand for protected habitat with which to stock rhinos moved from Etosha NP, larger areas will need to be considered for stocking, particularly if groups of farms can be persuaded to enter into common agreements for managing wildlife, including rhinos. There is considerable potential for developing such private conservancies at Erongo (13 farms covering ca. 20,000 km2) and Eden, where in the latter case, communal areas of Bushmanland could be included to open up a very large area for rhino conservation. Conditions for agreement on adequate standards within and between constituent properties are potentially improved through negotiations with several landowners, who are

often coincidentally relatives. One area that has been considered for development as a rhino sanctuary (Hobatere, on western Etosha NP boundary) has already received approval from the RAC (July 2000) and requires government confirmation of appropriate land classification, as well as support for planning the necessary upgrade of infrastructure (fencing, water) and security.

6 PROPOSED PROJECTS

Project Concepts

Rhinos in communal areas - Kunene Region, Namibia

SADC RPRC Activities: 3.1, 4.1, 4.2, 5.3, and 7.1

Lead agency: SRT

Collaborating agencies: MET Possible Timing: Semester 4

This project aims to build capacity for rhino monitoring in communities and the government wildlife authority, including specific training for selected members of the community/conservancies and MET WPS, and further implementation of research studies and management planning for conservancies that have small numbers of rhinos *in situ*. This transfer of expertise from the main NGO conducting rhino monitoring and surveillance to local communities and MET staff, is vital to the future conservation of the second largest population of *D.b.bicornis* in the region. The SADC Programme would also facilitate and support additional funding proposals necessary to implement the project over six years.

Regional workshop and collaboration on design and operation of intelligence databases

SADC RPRC Activities: 4.1, 4.2, and 5.2

Lead agency: MET, NP PRU

Collaborating agencies: KZNW, SADC Rhino Management Authorities on request

Possible Timing: Semester 3

This project would assist national rhino management authorities and/or their police counterparts in the SADC region to develop effective means for capture, storage and use of intelligence data, using existing operating databases as a guide. A generic intelligence database would be developed for regional use following a workshop held in an area where an operating intelligence network and database is in routine use (e.g. KZNW area(s)). Estimated cost would include workshop and facilitation, and travel and accommodation for range state representatives, and the production of an electronic manual/booklet.

Regional collaboration on design and operation of rhino monitoring databases

SADC RPRC Activities: 4.1, 4.2

Lead agency: AfRSG

Collaborating agencies: SADC Rhino Management Authorities on request

Possible Timing: Semester 3

Building on the rhino databases task completed in Semester 2, this project would develop guidelines and a structure (and manual) for a generic rhino monitoring and population database (based on existing rhino databases developed in *MS Access*, using individual animal and sightings registers: Kenya, Namibia, SADC programme/Zimbabwe, RMG?). The product would be a digital booklet. A subsidiary aim would be to allow the import of sightings data to an upgraded RHINO population estimation package, and import of estimates derived to a population level database. This project could be carried out remotely through contacts between database developers and managers in the SADC region, with additional input from Dr R Amin (ERA/ZSL: developer of the Kenya Rhino Management System).

Development of a management plan for the Kunene black rhino population

SADC RPRC Activities: 1.2, 5.1, 5.3, and 7.1

Lead agency: MET

Collaborating agencies: WWF, SRT, IRDNC

Possible Timing: Semester 4

A formal process of developing a new management plan for the western Kunene rhino population would be funded and followed, involving all stakeholders (MET, Communities, Conservancies, NGOs). The rhino plan would 'sit' under the present Namibia rhino conservation plan (MET 1997), and, where possible, complement existing conservancy and land use plans. This would involve an initial stakeholders meeting to agree on and sign up to management principles and monitoring needs across the Kunene rhino range, facilitated by a neutral consultant. This would be followed by a second meeting to develop plans for capacity building for rhino monitoring within the conservancies (to be addressed by project (i)), and agreement between all parties on managing rhinos (e.g. removal of outliers and surplus animals from areas at ECC, to stock other areas of Namibia) and potential sources of income derived from rhinos (e.g. live sales, ecotourism). The initial aim would be to try and pre-empt and resolve possible conservancy-related differences over use of rhino-related income by obtaining initial agreement on conservation principles that would apply across all the range and all constituent conservancies.

Investigation and deployment of new technologies for rhino monitoring

SADC RPRC Activities: Lead agency: MET

Collaborating agencies: WWF Possible Timing: Semester 3/4

A pilot project for testing of new or emerging technologies for application in rhino monitoring and surveillance. Its scope would be wide enough to include any technology that might be of use in survey, census and/or monitoring of rhinos, and have components developed potentially in several SADC areas with specific demands. The following fields would be investigated:

- Monitoring of rhinos in remote/low density situations
- Camera-trapping at water holes, rhino paths (including elephant filter)
- Spoor identification (outline trace, digital camera ID)
- Monitoring of marked animals at fixed points (water points, salt licks)
- Transponder implants and detector antennae, data logging
- Digital Photography and Videography
- · Radio-tracking datalogger
- · Data capture for rhino monitoring and patrol reporting
- Customisation and Use of GPS dataloggers (*Cybertracker*), following recommendations of WWF database consultants (SADC programme task: Semester 2)
- · Monitoring of rhino monitoring/management vehicles and vehicle-borne staff
- GPS vehicle position/track logging, periodic data download

Metapopulation management: detailed study of rhino interactions following translocations

SADC RPRC Activities: 3.1, 6.2

Lead agency: MET

Collaborating agencies: WWF, SRT, IRDNC

Possible Timing: Semester 4

Given the requirement of routine transfer of rhinos between small populations as part of management of the Namibian black rhino metapopulation, solutions to the problematic introduction of males and females to new populations must be found. One approach would be to study the initial interactions between introduced and resident animals in populations of differing composition (including introduction to females to populations founded by all male groups). This would be achieved by radio-telemetry, particularly if a small light GPS collar could be developed, which would only need to stay on the animal for 3-6 months, and not require any remote data-download function (The possible development of light GPS collars for rhino could be considered during the deferred radio-tracking task from Semester 2).

The result of a study would lead to guidelines for prediction of appropriate candidates (age/sex) for introduction to populations of different composition.

Developing and expanding populations outside protected areas in Namibia for *D.b.bicornis*: Hobatere and Erongo

SADC RPRC Activities: 3.1, 7.1

Lead agency: MET
Collaborating agencies:
Possible Timing: Semester 4

In order to provide enough protected habitat for the regional metapopulation of *D.b.bicornis* to increase to minimum viable numbers (e.g. national goal of 2,000 animals in Namibia), larger areas need to be developed for stocking new populations. Two areas identified for development as large fenced sanctuaries or private conservancies require funding for planning and development: Hobatere (320 km2) and Erongo (potentially 20,000 km2). The project would assist with development planning for both areas, and identification of funding for necessary infrastructure to minimum standards for management and protection of black and white rhinos.

7 NATIONAL LEGISLATION AND POLICIES

Legislation relating to conservation and protection of rhinoceroses in Namibia is covered by the Nature Conservation Ordinance of 1975 (GoN 1975), also including proclamation AG 42 of 1980, and a further amendment of 1990 (Annex 4.1). The relevant clauses are provided in Annex 1 of MET (1998), and also summarised in the Conservation Plan (MET 1997). Both species of rhino have the same legal status regardless of their origin, locality or ownership (state/private). There is a policy document covering the management and control of rhino horns (MET 1999a). There is a revision of the 1975 Ordinance in preparation, which will include update of the definition of categories of protected area (MET 2000b).

7.1 Penalties

- a) Rhino are designated specially protected game in Ordinance 4 of 1975, which specifies that no person may hunt such game without a permit from the Executive Committee (excluding Article 26 (4) (a)) with a fine of R1,150 R2,500 and/or 2 6 years imprisonment if they should do so.
- b) Special legislation was promulgated with regard to possession, utilisation, export, import, trade and transportation of and with any part of a rhino (and elephant) in Proclamation AG 42 of 1980, except if a permit was issued. The maximum sentence was a fine of R6 000 and/or 6 years imprisonment, as proposed by the ARSG for southern Africa.
- c) In 1990 the legislation was amended to increase the sentence to a fine of R200 000 and/or 20 years in prison.
- d) All aspects of possession, transport, sale, capture, hunting and disturbance in game reserves of rhino are under legal control through the above-mentioned legislation while certain other aspects are also covered by veterinary legislation.

7.2 Ownership of Rhinos

The framework document for private sector involvement in rhino conservation (MET 1998: Annex 4.2) provides detail on legislation relating to ownership, custodianship and use of rhinos (Chapter 3).

7.3 Hunting and live sales of rhinos

White rhinos can be hunted and trophies exported to several countries, and it is possible, under certain conditions and after MET approval, to practise non-lethal 'hunting' methods, which may include the removal of horn. Black rhino belonging to the State can be sold to private individuals and exported from Namibia.

8 DATA SOURCES

8.1 Names, addresses and contact details of all informants/interviewees

- Dr Colin Craig, Chief Conservation Scientist, Division of Specialist Support Services, Directorate of Resource Management, Ministry of Environment & Tourism, Private Bag 13306, Windhoek, Namibia. specres@iafrica.com.na
- Dr Peter Erb, Chief Warden, Etosha National Park, P O Box 6, Okaukeujo via Outjo, Namibia. eei.staff@mweb.com.na
- Mr Rudi Loutit, Senior Warden/Rhino Co-ordinator, Division of Specialist Support Services, Directorate of Resource Management, Ministry of Environment & Tourism, Private Bag 13306, Windhoek, Namibia. specres@iafrica.com.na
- Dr Pauline Lindeque, ag Deputy Director, Division of Specialist Support Services, Directorate of Resource Management, Ministry of Environment & Tourism, Private Bag 13306, Windhoek, Namibia.
- Mr Ben Beytall, Deputy Director North, Directorate of Resource Management, Ministry of Environment & Tourism, Private Bag 13306, Windhoek, Namibia
- Chief Inspector Kandjibi, Protected Resource Unit, Namibian Police. Tel +264 61 232420, Cell +264 811295993
- Warrant Officer Cecil Routh, Protected Resource Unit, Namibian Police. Tel +264 61 233610, Cell +264 811249221
- Ms Blythe Loutit, Director of Fieldwork, Save the Rhino Trust, P O Box 224, Swakopmund, Namibia. blythe@rhino-trust.org.na; srtrhino@iafrica.com.na
- Mr Mike Hearn, Save the Rhino Trust, P O Box 224, Swakopmund, Namibia. mikeh@rhino-trust.org.na

8.2 Documentation

- MET (1993a) Farm assessment for the placement of black rhino. Criteria for qualification and selection of farms for black rhino custodianship.
- MET (1993b) Black rhino custodianship programme. Initial memorandum of agreement for placement of black rhinoceros (*D.b.bicornis*) outside protected areas in Namibia (found at end of Annex 4.2)
- MET (1997) Rhinoceros conservation plan for Namibia. 40 pp (Restricted document)
- MET (1998) Rhino Conservation in Namibia: a framework for private sector participation (Reuter, H-O & Lindeque, M, comp) 92 pp (Annex 4.2)
- MET (1999a) Policy on the management and control of trade in parts and derivates of elephants and rhinos. (Lindeque, P M & Lindeque, M, comp).
- MET (1999b) Conservation of rhinoceroses in Namibia. Annual report for CITES (Loutit, R & Lindeque, P, eds)
- MET (2000a) Draft five-year plan for black rhino conservation in Namibia. A concept for the period 2000-2004.
- MET (2000b) Policy on Categories of Protection of Wildlife and the Taxonomic Coverage of Future Legislation on Wildlife. Draft.
- Government of Namibia. Nature Conservation Ordinance, 1975, including proclamation AG 42 of 1980, and further amendment of 1990.
- PRU (1998) National Reaction Plan for the security of rhino and elephants in Namibia. Protected Resource Unit, Namibia Police (Mostert, I & du Toit, F, eds).

8.3 Sources of Digital Information

Databases

- Dr Peter Erb, Chief Warden, Etosha National Park, P O Box 6, Okaukeujo via Outjo, Namibia. eei.staff@mweb.com.na
- Mr Mike Hearn, Save the Rhino Trust, P O Box 224, Swakopmund, Namibia. mikeh@rhino-trust.org.na

GIS

- Dr Holger Kolberg, Division of Specialist Support Services, Directorate of Resource Management, Ministry of Environment & Tourism, Private Bag 13306, Windhoek, Namibia.
- GIS Section, Etosha Ecological Institute, P O Box 6, Okaukeujo via Outjo, Namibia. eei.staff@mweb.com.na

9 TRADE AND IMPORT/EXPORT OF LIVE RHINOS

9.1 CITES Management Authority

MET is CITES management authority for Namibia. White and Black Rhino are on CITES Appendix I for Namibia, with the exception of White Rhino imports from RSA, which could be re-exported under Appendix II.

9.2 Veterinary Controls

For live import/export of rhinos, permits are required from MET, Veterinary Services and CITES. An annual report is provided to CITES by MET (e.g. MET 1999b), which summarises rhino population status, monitoring programmes, incidents of illegal trade in rhino horn, and incidents of illegal hunting of rhinos.

9.3 Past Imports and Exports

Namibia has exported *D.b.bicornis* to SANP and private land in RSA since the mid-1980's (details incomplete):

| Year | Source | Destination | No | Transaction |
|--------|-----------|---------------------------------|----|-------------------|
| 1980's | Etosha NP | SANP: Augrabies, Vaalbos, Addo | ? | Sales, Exchanges |
| | | NP | | for other species |
| 1990? | Etosha NP | Lisbon zoo (since moved to Addo | 1 | Sale |
| | | NP, via Augrabies NP) | | |
| 1995 | Etosha NP | Tswalu desert reserve | 8 | Sale |

White rhinos have been imported from RSA extensively since the mid 1990's (details not available), largely in exchange for other game species, and including the following:

| Year | Source | Destination | No | Transaction |
|------|-----------|-------------|----|----------------------------|
| 1995 | Kruger NP | Etosha NP | 10 | Exchange for other species |

10 HORN STOCKS

10.1 Control, Storage and Identification

Rhino horns are controlled and stored in two places in Namibia: at the two strong rooms at MET HQs (Resource Management) in Windhoek, under permanent police guard: ca. 30% of total stock at a bank strong room in Windhoek: ca. 70% of total stock.

A stock take was done in 2000. Horns are all marked with a Permit Number in black permanent marker. Namibia has been experimenting with Ultra Violet fluorescent liquid (invisible), from which a unique chemical signature can be traced. No transponders have been used for tracking rhino horns.

The Namibian Police currently only deal with seizures. The new policy on controls on rhino horn (and ivory) coming into effect (MET 1999a) includes a schedule on horn seizures. Horns received from the Police are given a permit number from MET (all recorded on database). Police provide case completion reports (including horn data, value, sentence, forfeiture to state), and hold horn in the short periods between its seizure and handing into MET prior to a court case.

MET has recently provided a complete register of horn stocks to TRAFFIC, and is co-operating on completing data forms on horn seizures.

10.2 Involvement in AfRSG rhino horn fingerprinting project

Namibia (MET) has been extensively involved in the rhino horn fingerprinting project, and has supplied horn samples from all representative population areas in Namibia. Results have shown very distinct profiles from horn sampled in different parts of Namibia, in particular the western Kunene population.