SADC REGIONAL PROGRAMME FOR RHINO CONSERVATION

MEETING OF SADC RHINO RANGE STATES AND CONSORTIUM

PILANESBERG NP, SOUTH AFRICA 6-8 MARCH, 2001

PROCEEDINGS















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A INTRODUCTION

Exactly 12 months since the 'Stakeholders Planning Workshop' of the SADC Regional Programme for Rhino Conservation (6-8 March 2000), the focal points appointed by each of the SADC Rhino Range States convened at Kwa Maritane Lodge, Pilanesberg NP, South Africa, together with representatives of each of the members of the SADC Rhino Consortium (SADC WSTCU, DGCS (Italian Ministry for Foreign Affairs), IUCN ROSA, WWF SARPO, CESVI and the IUCN/SSC AfRSG).

The primary objectives of the meeting of the meeting were:

- To review progress of the SADC RPRC to date;
- To further planning for a regional strategy for rhino conservation in the SADC region, and agree on the institutional structure(s) under SADC necessary for this development;
- To present proposals for regional rhino conservation projects to be funded by the SADC RPRC (originating from SADC Range States and Consortium Members)

The Range States Meeting, proceedings of which follow, was followed by a meeting of the SADC Rhino Consortium, where project proposals presented were reviewed and screened, and decisions made on funding support within the remaining three semesters of the currently funded programme. Participants at the Range States Meeting are listed in Annex A to these proceedings. Copies of all proposals presented at the Range States Meeting have been compiled, bound and circulated separately, for the information of range state focal points.

B PROCEEDINGS

1 INTRODUCTION AND PROGRAMME REVIEW

1.1 Welcome (Humphrey Nzima - SADC WSTCU)

All participants to the meeting were welcomed by The Chair, who was representing both the SADC WSTCU and the Malawi DNPW (as Deputy Director, Parks). In brief, his summary of the expectations of the meeting were: (a), enhanced regional planning for rhino conservation, and (b), approval of funding by the SADC Rhino Programme for projects proposed by the SADC range states and consortium.

1.2 Opening (Alfredo Guillet - AIDGCS)

Dr Guillet described his emotional investment in programme, in addition to the official involvement. The previous meeting (Stakeholders Planning Workshop) had grounded the Programme through identification of its niche in regional activities. There had been a clear focus on regional issues, and involvement of broad range of stakeholders. Since the workshop, there had been the following significant developments:

- Range state focal points had been identified.
- The detailed country reviews had been completed, and appreciation gathered on all issues
 influencing rhino conservation in range states, including issues cutting across range states. There
 were technical and policy level requirements in order to strengthen capacity for rhino conservation.
 There was a need to provide expertise to individual demands. These were main regional themes.
- Many project proposals had been submitted by range states, most of a more mature type than
 previously presented for funding. These proposals would shape following phases of the meeting.

Dr Guillet emphasised that regional co-ordination and consultation mechanisms would be more effective if they did not overlap with existing structures. The Programme had been negotiated between Italy and SADC; a clear definition was needed of what the SADC umbrella could offer to strengthen future institutions. He looked forward to the discussions in the meeting.

1.3 Introduction and Objectives of Range States Meeting (Rob Brett – Programme Coordinator)

Dr Brett summarised the objectives of the meeting and the structure of the agenda (Annex B). The first part of the meeting would be devoted to a review of programme activities in the last two semesters (2 and 3), and reports from range states on the status of rhino conservation activity in the respective countries since the last meeting. The second part of the meeting would comprise some presentations on existing rhino conservation bodies and the options for institutional structures for guiding regional rhino conservation effort in future, followed by a discussion on the approach to be adopted under SADC. Finally, each of the project proposals developed by range state focal points and consortium members would be presented by their proponents (where present), and discussed by all participants prior to review and screening at the meeting of the SADC rhino consortium.

1.4 Review of Programme Objectives (Raoul du Toit – WWF SARPO)

Mr du Toit reiterated the broad objectives or 'national anthems' for SADC programme, followed by a description of the agreed programme outputs. A vision for programme had been elaborated at the last workshop, along with formalised objectives to be stuck to throughout. The programme goal was to ensure that Southern African rhinos were maintained in viable and well-distributed populations in future, and the best way of achieving this was through sharing expertise and rhinos through regional coordination under SADC. It was important that there was a co-ordination framework to further these sharing opportunities.

Output 1. Development of institutional arrangements. These were vital at a national level, along with technical plans put in place, followed by political endorsement and adoption. National plans can be reinforced by regional co-operation and internal stakeholder co-operation. Even in countries without rhinos at present, some structure is needed for demands of managing rhinos. The SADC regional institutional approach may also possible for other species.

Output 2. Reporting system. Co-ordination of information on rhino conservation status within and between range states was important to ensure no duplication of effort. Surveys of rhinos, and status reporting were valuable for gauging the success of conservation measures.

Output 3. Implementation of projects. Where funding and implementation of field projects by the Programme was not appropriate, then the Programme could catalyse other funding.

Output 4. Capacity building. (e.g. technology, training, manuals, guidelines). It was important that there was consistency on range state representation (focal points), and range states were requested to keep key staff members involved.

Output 5. Community participation. Here there was need for innovation, particularly through education and awareness on key aspects of rhino conservation, and integration of local communities and rhino management. This effort needed to be focused, and had received little attention so far under programme.

Output 6. Understanding of rhino conservation factors, and provision of expertise. (e.g. on habitat assessment, application of technology). The programme would promote a sustainable use view, and use of land for wildlife with rhinos as a catalyst. There was a need for regional understanding of options for realising the economic value for rhinos, not just through tourism.

Output 7. Facilitation of funding. Use of SADC programme to catalyse additional or alternative funding sources for rhino conservation.

Output 8. Programme Management.

A set of criteria had been developed for use in identifying projects to be supported by the Programme, with conditions agreed at last workshop. After reviewing range state's needs during the country review process, a flow of project proposals had started. However it was clear that a number of project proposals submitted were not reaching the regional conditionalities.

1.5 Review of Progress by SADC RPRC: Overview of Semester 2-3 Projects (Rob Brett – Programme Coordinator)

Dr Brett began by emphasising the importance of the informal contacts between individual focal points, particularly in maintaining effective communication on rhino conservation issues of shared concern. The activities of the programme in the last 12 months (semesters 2 and 3) were summarised, with information presented in the form of tables outlining progress against tasks planned for semester 2 (Annex C – Table 1), the contribution of these tasks to programme activities (Annex C – Table 2), and progress against tasks planned for semester 3 (Annex C – Table 3). After a slow start after the first year of the programme, progress on projects had improved in Semester 3 following approval of project proposals submitted to a meeting of the SADC rhino consortium in October 2000.

1.6 Range State Reports

Angola

Unfortunately, the meeting could not be attended by the focal point for Angola (Nkosi Luta Kingengo) and no report on the current situation for rhino conservation in Angola was forthcoming. However, the IDF in Angola did submit one project proposal for review at the Range States Meeting.

Botswana (Moremi Tjibae)

Introduction

Botswana like many other countries of Africa experienced the extinction of both black and white rhinos in the 19th century. Rhinos currently found in Botswana are remnants of rhino introduced into the country from south Africa between 1960 and 1980, and recently in the last decade.

Conservation measures taken to protect the remaining white rhinos

In the past both the Department of Wildlife and National Parks and the Botswana Defence Force mounted anti-poaching patrols in the northern parks especially in Chobe NP and Moremi GTR to protect the few rhinos that were present in those respective areas. Unfortunately those attempts were not successful as carcasses of poached rhinos were spotted during patrols and some poachers arrested. Between 1992 and 1996 the Department of Wildlife captured rhinos from Chobe NP and Moremi GR and relocated them to the newly established Khama Rhino Sanctuary. More rhinos have since then relocated to Botswana from South Africa with some on loan basis.

There are currently thirty-two (32) rhinos in Botswana at the following areas:

Khama Rhino Sanctuary
Mokolodi Nature Reserve
Tholo Ranch
Moremi Game Reserve
Gaborone Game Reserve
1

Trust organisations and private individuals own most of the above rhinos, only a few loaned to Khama Rhino Sanctuary are owned by the government. Compared to the past, there is maximum security, and rhinos are monitored on a daily basis.

Rhino Conservation Strategy

Botswana's current draft of the Conservation and Management Strategy covers both the black and the white rhino. Through the assistance of SADC, a workshop was held at Khama Rhino Sanctuary on the 15th January this year to try to finalise the draft of the Rhino Conservation and Management Strategy. All stakeholders of the rhino management in Botswana attended the workshop. Through the assistance of the SADC rhino coordinator, the contributions from the workshop were incorporated into the former Rhino Management Strategy. The draft is currently circulating among Rhino Stakeholders for comments. The intention is to have it finalised and approved by the Department of Wildlife and National Parks before the end of June this year. Besides sponsoring the above workshop, SADC will also sponsor four people from Botswana for training in rhino monitoring/surveillance methods. Two people will be from the Department of Wildlife and National Parks, while the other two will be from Khama Rhino Sanctuary and Mokolodi Nature Reserve.

Botswana has two projects that require assistance from SADC which are as follows:

- Assessment of future management options and carrying capacity of Khama Rhino Sanctuary for black and white rhinos
- Assessment/feasibility study for a rhino IPZ in Moremi GR, and if possible adjacent areas (initially
 for white rhinos, but with potential for black rhinos later) based on opportunities for partnership for
 security and monitoring of rhinos between the Department of Wildlife and National Parks and
 private concessionaires.

It is important to carry out assessments in the two areas, as an increase in rhino population is anticipated. It is hoped the assessment will come up with a well-defined programme for rhinos that will guide us in future to avoid mistakes of the past. It should also be noted that there are probably three to four rhinos in Moremi GR according to reports received from the area, and this makes the place ideal for future rhino release. Besides rhinos in the above-mentioned areas, reports of migrant rhinos from Hwange NP in Zimbabwe have been received. In January this year a hand raised black rhino strayed into Botswana from Hwange NP. The rhino was captured and relocated back to Zimbabwe. A few days later two (2) white rhinos were seen in the area and driven back to Zimbabwe.

In should be noted that the private sector or non-governmental reserves have played in important part in the management of rhinos in Botswana; only a few rhinos are managed by the Department of Wildlife and National Parks. It is the intention of the Department of Wildlife and National Parks to build up a viable population of both black and white rhinos that will be managed by avoiding mistakes that have lead to rhino extinction as in the past.

Discussion

Mr Tjibae said that two rhinos had recently been sighted in Moremi GR. Mr Brooks said that the problem in past in Botswana had been security. He asked if there were any plans to increase capacity for DWNP to protect rhinos (e.g. in Moremi GR). Mr Tjibae said that the Maun Anti-Poaching unit was based 70 km from Moremi, and BDF were also available for assistance. All rhinos released would be fitted with radio-collars. Mr du Toit said that it had been easy for the SADC programme to engage with the rhino conservation process in Botswana. Strategic planning was being followed by Assessment and Implementation. Mr Nzima asked if Botswana had plans for any transboundary rhinos. Mr Tjibae said that there was no clear provision in the rhino strategy apart from monitoring. Ms Msipa said that the area south of Hwange NP was not suitable for rhinos, hence the rhino movements observed. Mr Tjibae said that there was a plan to supply 10 + 10 white rhinos to Botswana in the next year, available from SANP and NWPTB. Negotiations were underway for custodianship by Jwaneng and Orapa Game Reserves.

Malawi (Roy Bhima)

Introduction

The black rhino, *Diceros bicornis minor*, became extinct in Malawi in 1990. Today the country has one introduced population in Liwonde National Park. A pair (male and female) was introduced in 1993 and was released in a fenced sanctuary of 13 km². A second pair was introduced into an 18-km² sanctuary in 1998 and a third pair was introduced in a 7-km² sanctuary in 2000. All were introduced from South Africa. The first pair has reproduced twice and the second pair has reproduced once. The first calf to be dropped was exchanged with one of the two introduced in 2000, and the second bull died in a fight with the first bull when their sanctuaries were combined. The population today is seven rhinos.

Management

The rhinos are patrolled by a team of six scouts. Two scouts patrol the rhino in turns, 24 hours every day and exchanges after five days. The first team in 1993 went to Kruger National Park in South Africa for training in field techniques. The J & B Circle of Friends has supported the rhino programme with construction and maintenance of the electric fence around the sanctuary. Since the rhino were first introduced in 1993, there has been no security problem.

The rhino sanctuary is located in the middle of the park. Its area has been increasing as more and more rhino has been introduced. It now is about 38 km² and it is almost dividing the park into two, blocking the movements of other animals, particularly elephants. A management plan is being planned to consider how best to overcome this problem.

The SADC Rhino Coordinator, Dr Rob Brett, visited the Liwonde rhino sanctuary in February 2001. Two members of staff from Liwonde National Park have been nominated to participate in the forthcoming rhino monitoring workshop organised by the SADC Rhino Programme to be held in South Africa. It is hoped that this will enhance the management programme in the park.

Discussion

Dr Emslie asked about the animals brought into Liwonde in the last years (a female from South Africa and the male from NWPTB). Dr Bhima said that one of the animals moved in had been exchanged with a male calf born in Liwonde (moved back to Kruger NP), making the sex ratio at Liwonde biased heavily towards females. Dr Brooks asked about security for the whole park. Dr Bhima said that there were four scout camps and that more scouts would be brought in. There was concern about the viability of the area without complete fencing of the park. Dr Knight said that the presently fenced area was a maximum of 44 km². The original sanctuary had been necessary for the donation of rhinos, and was a pragmatic option, necessitating sequential stocking of the park.

Mozambique (Felismina Longamane Langa)

Summary

In the last year a national committee was created for rhino conservation, including representatives chosen from the provinces. Unfortunately, due the lack of funds, it has not been possible to hold a meeting of the committee up until now.

Evidence of Rhino Presence

In 2000, there was new evidence of the presence of rhinos in Mozambique:

- 1. Spoor of two rhinos was reported from villagers within Sinave National park, after floods.
- 2. In November 2000, three rhinos crossed the border from Kruger NP to Coutada 16. These animals were taken back by SANP.

Rhino conservation Goals

- Long Term of existence of rhino ensured;
- Anti-poaching unit established;
- Conservation profile of Mozambique increased;
- Number of rhinos known

There is a plan to set up an IPZ for rhino within Coutada 16, and reintroduce 10 rhinos. As soon as funds have been obtained, the priority will be the fencing of an area in Coutada 16 where rhinos can be reintroduced in order to fulfil these goals.

Discussion

Mr du Toit wondered how firm was the rhino report from Sinave, and if it was likely that these were hippos. Ms Langa said that the rhinos that moved into Coutada 16 were repatriated to Kruger NP without Mozambican involvement. There was a proposal to change the status of Coutada 16 as a rhino protected area. In Mozambique, there was now a fine for rhino poaching of 1 billion meticals (USD 90,000), under a new law approved in 1999, with no option of a custodian sentence.

Namibia (Rudi Loutit)

Introduction

Namibia's black rhino *D.b.bicornis* population currently numbers 735. The country population is made up of 2 Key 1 populations (Etosha NP and Kunene region), one Important 1 population in Waterberg Plateau Park, the metapopulation on ten ranches under the MET Custodianship scheme and the two small rhino groups at Hardap Game Park and Mangetti Game Camp in the Kavango Region.

Etosha NP

Rhino in Etosha are primarily monitored during the dry season at permanent water points, where they drink regularly at night. The method is to observe as many rhino as possible at each different waterpoint, during the full moon periods. Rhino are photographed during these full moon counts, for individual recognition. There are currently more than 2000 photographs of individual rhino in a database. Photos are linked to the relevant individual rhino and particular waterpoint counts. This allows for the viewing of all photos of a particular rhino of the photos taken during a particular waterpoint count. 64 waterpoints are covered each year during the full moon periods from July to September inclusive. Only 8% of individual rhino are opportunistically observed at waterpoints and 5% of recorded sightings of individuals are made by chance in the field, during routine patrols. Earnotching of clean rhino continues and in 1999-2000 a further 61 individuals were notched. Some rhino were fitted with transmitters and tracked to provide information on movement patterns, drinking frequency and number of waterpoints used. Ear-notching commences in the Namutoni area in March 2001.

Kunene Region

Black rhino in the Kunene Region occur in eight ecozones covering the total range area of the population. Ecozones are based on differences in terrain, geology, and rainfall patterns, differences in the availability of food and water and the resulting differences in rhino density, breeding and

movement patterns. Although limited movement between areas occurs within the eight ecozones, they are effectively isolated units. A minimum population estimate for black rhino in the Kunene Region is based on known recognisable individuals (identifiable by characteristics such as horn size, shape, ear notches, tails an and distribution range). All 124 are recorded as present in the 1997 census and have been seen subsequently. There is a further 10 clean individuals as yet unidentifiable, but regarded as being present. The age structure indicates a healthy population when all eight zones are combined. However, the sex ratio is slightly biased towards males, and 66 males to 55 males and 3 currently unsexed calves. The sex ratio of the rhino younger than 15 years is of greater concern, having 42 males to 26 females.

Waterberg Plateau Park

The black rhino population at Waterberg currently numbers 33 individuals. This population showed a growth of approximately 6% during 1999/2000.

Custodianship Scheme Metapopulation

This population currently numbers 77 animals. 58 rhino have been introduced onto ten ranches throughout Namibia during 1993-94, 1996 and 1997 followed by a moratorium while the scheme was revised in 1998-99. Following cabinet approval for continuation, a further 16 rhino were translocated during 2000. A total of 58 rhino have been introduced to ten ranches over the five years that translocations took place. In total eight (8) rhino have died and 27 calves have been born and survived. To date all females in the scheme have had at least one calf each, some giving birth to their third calves in 2000.

Hardap Game Park

This population is made up entirely of Kunene Region animals translocated to Hardap in the early 1990's. A single female aged 4.5 years old was translocated to a Custodianship ranch in 2000. Two calves were recently born to the two adult females. Population 7.

Mangetti Game Camp

The initial population rose to 7 animals during the mid 1990s, but three mortalities has reduced the numbers to 4 as at the end of February 2001. The remaining rhino will be translocated to Eden Wildlife Sanctuary in 2001.

Comments

- 1. A further 14 rhino are scheduled to be translocated to Custodianship ranches in 2001
- 2. There is a five-year plan for both rhino species in Namibia. This plan guides the annual capture/translocation programme of the MET.
- The National and Kunene Region strategies are currently being revised. The Etosha and Kunene Region populations will in future be managed jointly under the guidance of the Principal Conservation Scientist in Etosha. Joint monitoring teams are to be trained combining the best of MET/SRT staff.
- 4. The security evaluations of all rhino localities in Namibia are currently being revised following full scale on site inspections by joint MET/Protected Resources Unit teams in 2001.

Discussion

Mr Loutit said that in future the Etosha and Kunene rhino populations would be managed jointly. They would start to reduce numbers in Kunene below carrying capacity. Recipient areas would be the Erongo conservancy (2000 km²), the Namib Naukluft NP, and possibly eventually the extreme South of Namibia. Western arid-adapted animals are to be moved to the more arid western strip of Namibia. Dr Emslie asked about the small population sizes on farms. Mr Loutit said that there was minimum area of 100 km² for the farms. Larger areas could be developed in the Erongo and Waterberg 'conservancies', and possibly a Transfrontier area in the South with the Richtersvelt in South Africa. Mr Loutit said that the last animal poached in Etosha was in 1999. Two white rhinos had been poached more recently at Ojiwa Ranch.

South Africa (Mike Knight)

Rhino population sizes & trends

Table 1. Rhinoceros populations in South Africa for 1999 and 2000.

Species/ ecotype	1999			2000	2000		
	State	Private	Total	State	Private	Total	
D. b. minor	946	54	1000	NA	NA	NA	
D. b. bicornis	32	10	42	32	10	42	
D. b. michaeli	20	12	32	13	20	33	
Total (black rhinos)			1074				
C. s. simum	7743	2011	9751				

By 1999 the South African black rhino population had increased to 1074 (1271 if probables from the KNP population are included). With the inclusion of KNP probables, the population would have increased by 7.5% since 1997 (population = 1100). The actual *in situ* populations of *D.b.bicornis*, *D. b. minor* and *D. b. michaeli* populations have increased by 3.0, 5.6 and -1.1 %, respectively since 1995. The radical decline in the *D. b. michaeli* population growth rate during this period results from translocations out of the Addo population to East Africa and zoos. Accounting for the introduced population of 8 *D.b.bicornis* onto private land reduces the actual growth rate of this ecotype to 3.0%. Without the recent 8 deaths of animals due to elephant, new habitat and disease the population would have increased at a healthy 7.0%. The temporary stagnation of the *D. b. bicornis* in the country has resulted from a total of 8 deaths over the last three years (five from introductions and three from *Babesiosis*).

The *D. b. minor* metapopulation is showing particularly varied results with the important populations in Hluhluwe-Umfolozi Park (HUP) and Ithala Game Reserve, as well as smaller populations in Ndumu and Umkhuzi Game Reserves showing relatively poor recruitment (< 5 % since 1997). This may reflect the fact that the populations have either exceeded their ecological carrying capacities or reflect as management maintain a growth rate expected for a free-ranging large population in constant contact with large predators. None-the-less the possible need to reduce these populations to see if growth can be stimulated should be considered has been debated at the 2000 AfRSG and RMG meetings. During 2000 another private property in the Eastern Cape purchased black rhinos, increasing the number of private landowners to 9.

Since 1997 the South African white rhino population has increased by 10.6% to 9754. A minimum of 2011 (22%) was located on private property, an increase of 7.1% from the 1740 in 1997. However, the actual number of private landowners has in fact declined by 1 to 164 (14 new populations established and 14 (6 sold, 2 not traced, 2 incorporated in neighbouring properties, & 4 moved to existing populations) since the 1997 survey. The number of key (>50 individuals) and important (>20 individuals) properties numbered 3 and 13 in 1999, similar to the 2 and 14 noted in 1997. On the whole the sex ratio in favour of females (1:1.5) in the private white rhino population structure is acceptable, as is the 29% subadult component. The number of state reserves with white rhino has increased from 34 to 39 since 1997, seven of which are either Key 1 or 2 populations. The Kruger NP population was estimated to be 5073 animals (the lower 95% confidence estimate) in 1999, making it 52% of the total South African population.

National rhino initiatives & problems

The Rhino Management Group (RMG)

Since March 2000, the RMG (which consists of representatives from the nine provincial conservation organisations, South African National Parks (SANP), private land owners (AROA), a number of rhino experts, representation from Namibia and Swaziland) has met once in October 2000. This group continues to prove effective in information sharing and consolidation of population status information. The status reports have become a crucially important management tool in gauging how well our diverse populations in different habitats are fairing. Furthermore, it has been instrumental in creating a unity towards rhino conservation. Important milestones at the October meeting included the

participation of a representative from the Zimbabwe Department of National Parks & Wildlife. This in itself is expected to further enhance regional co-operation in the management of rhinos.

Utilisation of surplus black rhino males

A questionnaire survey was distributed amongst the South African conservation fraternity, private landowners and some NGOs in December 1999 to assess their opinions as to the sustainable use options for surplus black rhino males. The notion of trophy hunting of these males was welcomed by most conservation organisations and the private ranchers, but rejected by welfare groups. The RMG recommended that old post-reproductive bulls should be made available for trophy hunting with a number of provisos.

Private rhino land-owners (AROA)

The South African private rhino land-owners association (AROA) is apparently going through a rather inactive phase. It will need to be revitalised to attend to important issues associated with registering white rhino hunting records, population numbers, and private rhino horn stocks if South Africa is to make progress towards developing a proposal around the sustainable use of rhino horn. The once active Rhino & Elephant Foundation (REF) is in a similar situation having lost its credibility with the Tuli elephant debacle.

Elephant induced white rhino mortalities

Pilanesberg NP and the Hluhluwe-Umfolozi Park (HUP) introduced adult elephant bulls to reduce the losses of white rhinos to delinquent elephant bulls. It appears to have so far worked in Pilanesberg NP.

Concern as to the recommended 5% growth rate for black rhino population

Concern has been expressed with the 5% growth rate as recommended by the RMG. A number of important *D. b. minor* populations in KwaZulu-Natal have been performing less than this. Management argue that this does not reflect a population at carrying capacity but one impacted by large carnivores or some other factor. Records from KNP and other parks with lions do not substantiate this argument. Plans to hold a workshop to clarify the matter are planned.

Gaza/Kruger/Gonarezhou Trans Frontier Conservation Area

Progress towards creating this 98 000 km² conservation giant was taken further in the interim period with the signing of the international agreement. If this can come to reality, it could potentially be the most important rhino conservation area in Africa. Concerns as to the safety of the large rhino populations in the KNP are of concern as the park expands.

D. b. michaeli population

A further seven *D. b. michaeli* were removed from Addo to the private reserve on which the population is being housed. A further four animals are to be translocated from Addo to Mkomazi Game Reserve in 2001 leaving only five *D. b. michaeli* in separated sections of the park. This last group will be removed in later 2001 making Addo an entirely *D.b.bicornis* park. The whole process to replace the *D. b. michaeli* with *D. b. bicornis* has taken about three years to implement. The introduction of the *D. b. michaeli* zoo-born adult male to the Addo Elephant NP has been a success with him having now fathered two calves thus increasing the genetic diversity of this population.

The Great Fish River Reserve

This reserve received a further 20 black rhino this year bringing their total to 67, making them the fourth largest population of black rhino in the country.

Two D. b. minor to Liwonde NP

A further two (1.1) animals were successfully introduced to the 44 km² large sanctuary in the Malawi park. The total number of animals is now 7.

Loss of animals to Babesia

A total of three *D. b. bicornis* in the main elephant section of Addo Elephant National Park were lost to *Babesia* infection in late 2000. The animals appear to have succumbed to this parasite as a result of a

combination of dry conditions and stress induced by high elephant densities on top of their possible lack of immunity to this disease not recorded in this arid adapted ecotype.

Land expansions

The Marakele, Karoo and Addo Elephant National Parks continue to be expanded. Marakele National Park has had another 20 000 ha of important lowland habitat added to the park increasing this parks potential to carry more black rhino.

Training and ID manuals

The training manuals for rhino identification for field staff have been updated and distributed to local conservation organisations.

Budget cuts

Budget cuts to conservation organisations continue to plague the conservation activities of these organisations. This is having substantial negative affects on rhino monitoring and general park management. Some of the hardest hit provinces include the Northern, and Eastern Cape Provinces.

Damages as a result of the 2000 floods in the Kruger NP are estimated at R70m alone to bulk infrastructure. The park and organisation experienced a loss in revenue from its three main camps for three months during this period, which in turn has seriously affected cash flow within SANP.

White rhino to Botswana

Plans are in progress to provide 20 white rhino (10 from North West Parks and 10 from SANP) to Botswana in exchange for roan antelope.

White rhino conservation strategy

The white rhino conservation strategy for South Africa, drafted by the RMG, was adopted nationally.

Illegal trade activities

Table 2. Total number of rhinos (black (bl) & white (wh)) known to have been poached in South African reserves since 1990.

Year	No. rhino (wh, bl)
1990	8
1991	5
1992	15
1993	13
1994	26
1995	10
1996	6
1997	5 (5,0)
1998	11 (11,0)
1999	11 (11,1)

The number of rhino poached in South Africa has marginally increased from 5 in 1997 to 11 in 1999 on state properties. This included a single black rhino shot in KwaZulu-Natal reserves, the first in many years. Poaching of white rhino on private land has increased from two to 12 in the same period. In the last three years there have been 30 incidents of illegal trade in rhino parts. There appears to be an indication of an increase in rhino poaching but a decrease in elephant poaching. The unstable Zimbabwe situation is of concern.

The restructuring of the Endangered Species Protection Unit (ESPU) is also of concern with a lot of their functions being taken up by Provincial structures. The poor state of affairs regarding a number of the latter is of concern. In the light of the above, there is a need to resurrect the Rhino and Elephant Specialist Group (RESG) to enhance security and information transfer at the provincial and national levels.

Future challenges

- Survival of the conservation organisations in the face of decreasing operational budgets.
- Enhance the population growth rate of flagging *D. b. minor* populations and boost those able to support larger numbers, such as the KNP.
- Increase support for other conservation initiatives in South Africa and the subregion.
- Increase community involvement in rhino conservation.

Discussion

Dr Cumming recommended that the risks of establishing new populations be assessed relative to the risks of leaving rhinos where they are. When asked by Mr Daconto about community-rhino issues in RSA, Dr Knight said that RSA needed to look at introducing rhinos into communal areas. There were some initiatives. Communities have not owned rhinos in RSA to date. Kenyans have some interesting examples. Mr du Toit recommended improved veterinary coordination and situation reporting within SADC programme, highlighting alarming disease problems from Ngorongoro and Addo NP, including *D.b.bicornis*.

Swaziland (Ted Reilly)

Introduction

Swaziland's rhino populations continue to flourish. Breeding levels of both black and white rhinos remain satisfactory to excellent, and poaching of rhinos remains nil since December 1992 when Swaziland's last rhino poaching incident occurred. There have been alarm calls from time to time when informer reports of horn contracts being made have necessitated counter measures being taken. Reports of horn trading have also come to hand, but in each case a rhino count on the ground dispelled the possibility of the horns being from Swazi rhinos. To pre-empt the possible loss of rhinos, we offered a horn on the black market when informers revealed a killing contract, and though this exercise excited some response from the Swazi underworld, the final result was that the purchase of this horn was considered too risky to be concluded in Swaziland, and so, after several months of cat and mouse encounters with potential buyers, the deal fell through. It is rewarding that in discussion much reference was made to the Game Act and the Rangers who apply it so thoroughly, leaving no doubt that the severity of the penalties of the Act and its application presents a very daunting risk to would be poachers and traffickers.

Rhino Numbers

Because there is still interest in illegal horn, the numbers of rhinos in Swaziland remain classified information.

Rhino killings by elephants

We thought we had escaped the traumas of rhino losses by elephants experienced by other Parks. But sadly this was not to be. A bull elephant of about 20 years of age – a well grown bull with very promising "tusker" values was seen by tourists attacking and killing a white rhino cow with calf at foot. Ground evidence showed it as having been a vicious attack. Shortly after this a lone rhino calf was seen and this prompted a thorough search, which resulted in another cow being found dead and gored all over. The calf too had been injured. Then the following morning in the early hours rhino screams (there is no other word to describe the sound) attracted rangers to a spot where another cow was found dead. All of these rhinos were highly productive cows – in calf with calves at foot. The three calves all succumbed to their injuries, denoting a final tally of nine rhino losses in 24 hours! The decision to destroy the elephant was not an easy one to take for he was a placid beast with a very good nature, and totally tolerant of people. A few days later another bull elephant of approximately the same age was seen chasing a black rhino and so he too was shot. A third slightly younger bull elephant was also shot after he had shown signs of rhino aggression.

We have, for the time being anyway, determined to eliminate elephant bulls at the age of 18 years. In reaching this decision consideration was given to the fact that the elephants would still breed on. Several calves have been born of elephants mating at 14 years, so elimination of these bulls would not mean a non-viable population as regards breeding. What it will mean is that no tusker

development, which has enormous tourism values, would happen. Until another solution emerges this is the current policy in place in Swaziland where elephants co-habit with rhinos. We simply cannot afford to risk more rhino losses.

Many questions arise. Are these mortalities not natural happenings? Much has been said of juvenile delinquency of orphaned elephants in the absence of parental guidance. But there are cases of elephant/rhino conflicts and death in the early 1960's in the Kruger National Park, after rhinos were first relocated from Zululand to the Park, where the full social structure of the elephant population was intact. How many more deaths went undiscovered in such a large area at a time when field staff were fewer and resources less? Now that elephant and rhino have been brought together in many smaller places where monitoring is easier – making such conflicts more visible – is this not perhaps the reason why attention is drawn to this "recently discovered new happening"? All animals are individuals and have their own individual temperaments and dispositions. Like people, there are placid ones, aggressive ones, tolerant ones, impatient ones, and so on. Is it not possible that elimination of rhinoaggressive individuals would solve or partly solve the continuation of this problem? Has the reported success of introducing adult animals to suppress young maturing bulls had enough time to have been fully tested as a solution? These are questions the future will in time unfold. To provide tourism with "tuskers" would castration not curtail aggression? As controversial as this might be, it is also a question to be considered along with contraception.

Interestingly Rock hyrax which, we are told, are the closest living relatives of the elephant, show similar behaviour during mating time. The males become extremely aggressive, even to people, though here too there are differences among individuals.

Weaner removal of white rhino

Raw experience has shown that white rhinos are at their most vulnerable between the time when they are expelled and weaned by the dams in favour of new born calves, and the time when they become re-united again some three months later. We have experienced several losses during these periods over the years, and invariably the losses were female. To overcome this we have strategised a policy of weaner removal from the population of white rhino and relocated them to a "mature bull-free" environment, after boma confinement for 24 hours to allow for recovery from the immobilants. This, in line with our stated aim to maximize propagation of rhinos to distributable numbers, has worked well for us.

Surplus white rhino bulls

Specific individual surplus bulls in our small areas remain a problem for us as they continue to be a major cause of injury and death. The option to remove weaners was chosen over the removal of these bulls because Swaziland's rhinos are considered to be Appendix I animals, whose trade value is severely curtailed because they may not be resold and no one will pay reasonable market prices if this investment is not redeemable. However, contrary to the initial belief that Swaziland's adult rhinos are all Appendix I animals, they hold, we are told, pre-convention status which allows for trading without restriction on resale, thus opening them to a wider market. This will temporarily relieve us from some of the tensions we have had to live with. But post-convention born animals will revert to Appendix I, which revives the problem. Swaziland will therefore consider applying for Appendix II classification for her white rhino population.

Productivity of rhino cows

Eight white rhino calves have been born since February 2000, only one of which is female. One black rhino was born last week but its sex has not yet been determined. One black rhino female acquired from Natal in 1995 and who is now 12 years old has never calved, strengthening a growing belief that she is a queen. All other female rhinos that are capable of bearing are productive and have calves at foot. This is true of both species of rhinos in Swaziland. Swaziland's rhino populations therefore continue to be optimally productive.

Manipulated use of habitat

To the extent that it has been possible to assess, in view of the last two seasons being excessively wet, the water reticulation development at Mkhaya is promisingly functional. This development was

sponsored by HRH Prince Bernhard of the Netherlands, who piloted an appeal through WWF Netherlands. It is aimed at servicing the Park with water in the dry season in a way that enables enforced rotation of animals, whose dependence on water dictates their movements. It is a switch on/switch off system, which provides several options to water within cells into which the park is divided. Six cells cover the park and utilization of one or two cells being serviced with water assures utilization by turning off the water to the remaining cells. When the habitat of the cells in use is considered sufficiently utilized by management the water in an adjoining cell is turned on for a week or so before the water in the cell in use is closed off – thus forcing rotation. This of course can only happen in dry times when surface storm water does not cover the veld, causing general dispersal of game over the whole park. With black rhinos, based on the premise that a dominant bull cannot be in two places at once, it gives subordinate or incompatible animals other water and wallowing options, and reduces conflict by providing alternative water points.

One danger we have been faced with was contamination at the source of water, which is pumped from the sand bed of a river. Somehow *Salmonella* entered the system and cost us a rhino, so that aspect must be completely managed. The real value of this development will be evident in the next dry cycle. The water holes are sunken concrete troughs with water delivery controlled by a ball valve. This is adjusted to allow a trickle of water out of the drinking trough and into a natural pan to provide wallowing possibilities. Where possible, all water troughs are positioned alongside natural seasonal pans into which they can be made to overflow.

Expansion of Mkhaya

After a visit by HRH Prince Bernhard of the Netherlands to Swaziland in 1998, His Royal Highness enabled the expansion of Mkhaya by 20%. This very generous contribution of land was from the Prince's personal resources and amounts to the most substantial single contribution by any one person to Swazi Nature conservation. On a subsequent visit to Swaziland in December 1999 HRH Prince Bernhard bestowed upon King Mswati III the honour of his Golden Ark award for our King's contribution to Nature conservation, and for the unprecedented support he gave his Rangers during crisis times. Our Head of State is the youngest ever recipient of this most prestigious award.

Correction of a record

Last year Swaziland was improperly represented at the Stakeholders Planning Workshop held in Johannesburg on 6-7 March. As a consequence some of the information given in the paper on Swaziland's rhino position is incorrectly stated.

The reality is that, though Mlawula Nature Reserve was the recipient of a gift of 16 white rhino by Big Game Parks (BGP) before the rhino war of 1988-92, the close of that war left not a single rhino alive on Mlawula. The 16 rhinos, which had been placed on Mlawula Nature Reserve by BGP, had satisfactorily increased to 27 resident animals on Mlawula when the rhino war started. No prosecutions, nor even arrests, resulted from the loss to poaching of the 27 rhinos on this Reserve, which is governed by the Swaziland National Trust Commission (SNTC).

The three white rhino referred to in the paper were in fact captured on Umbuluzi Estates (adjacent to Mlawula) and taken into a high security area at Hlane Royal National Park. They were vagrants that wandered from Hlane to Umbuluzi to Mlawula and back again. No rhinos, other than those given by Big Game Parks, were ever acquired or re-established by the SNTC in Swaziland. This is not to say that SNTC Reserves (or any other suitable habitats in Swaziland for that matter) will not again qualify for rhino translocations, but BGP would have to be satisfied that security, discipline and sustainability was in place before allocating such vulnerable animals to new pastures.

Top Priorities for Rhino Conservation in Swaziland

1. Expansion of existing rhino range

This must be a top priority because Swaziland's protected areas are small. Not only does this expose them to externalisation, but it also is very restrictive on numbers of animals that can be accommodated. The cost of such expansion cannot be accurately quantified because of the general stability of the land market but it is safe to say that good but non-agricultural habitat would

now not be available at less than R3,000 per hectare. A realistic budget on this item would therefore be R20 million.

2. Introductory boma at Hlane National Park

New bomas are an essential priority at Hlane to accommodate and settle new arrivals of rhinos. The original bomas are 35 years old, are now obsolete and have to be replaced. The cost would be approximately R150,000. It is not wise to free release rhinos into new areas. Rhinos have to be settled in confinement and settle before release to optimise on habitat acceptance, and to minimize chances of accidents and onward flight. Mkhaya has been assessed for carrying capacity for black rhino and we are almost at this figure now, so very soon translocations will be necessary. Therefore this construction of a boma is a top priority in terms of facilitating rhino requirements on the ground.

3. Ground Support for Rangers: Two 4 x 4 vehicles and two motor cycles – a security imperative The Rangers on the ground are the nucleus around which rhino protection is made possible. Remove the custodians in the bush and their commitment, and no amount of political support will save Africa's rhinos. However it is also true to say that political support for the Rangers is pivotal to their success as custodians. In Swaziland we have both the political support and the commitment of the men at the sharp end in place. The former in the shape of the Head of State, who has taken Nature conservation under his own portfolio, so placing it under the highest authority in the land, and the latter in respect of the Rangers, whose effective law enforcement reputation runs rampant ahead of them. The Rangers however have to be adequately enabled – which is most effectively done by efficiently servicing them with their needs on the ground. Such needs cover a whole spectrum from deliveries of such essentials as food, water and other supplies to their remote pickets and patrolling grounds in the bush, as well as to mobilize them with rapid reaction potential.

The first essential in facilitating the above is a 4x4 Pick-up for each park where rhinos are protected – Hlane and Mkhaya. Two such vehicles at approximately R110,000 each requires R220,000. Motorcycles are used on each park for the cost-effective maintenance of low cost high security discipline and control of the Ranger force. They provide quick cheap access to any point on a troublesome fence line or to spot check reports of rhino sightings. This we have found to be an essential tool in security checks. Two of these machines will cost approximately R40,000.

These then are Swaziland's top rated priorities in her rhino protection and conservation programme. If none of these fall into the scope of donor aid then an additional requirement would be the habitat and carrying capacity assessment of Hlane National Park for black and white rhinos, and the revised assessment of Mkhaya Game Reserve, for the same purpose.

Tanzania (Mathew Maige)

Background

Tanzania is the only East African member state to SADC Regional Programme for Rhino Conservation. The presence of more than three discrete *D.b.minor* populations that need to be quantified in the Selous GR, qualified Tanzania to become one of the countries for inclusion in the programme. Tanzania does not have more than 20 year of active rhino conservation requiring development of special mechanisms for managing the national rhino population. It is probably during the last 10 years that concerted efforts to manage this species have been realized by a few wildlife managers in the country. Due to this reason the country requires a lot more of technical support from SADC Regional members with such technology.

Rhino Population Status

Two black rhino subspecies occur in the country, *D.b.michaeli* in the north covering the Ngorongoro highlands through the Serengeti plains. A re-introduced population of *D.b.michaeli* is located about 200 km East of the Kilimanjaro in a sanctuary within the Mkomazi GR. *D.b.minor* is found in small pockets in the Selous GR and few remaining stragglers in most of the southern highlands. However, the *D.b.minor* population in the Selous remain largely unknown and require concerted effort to

establish their numbers and distribution and other demographic parameters in some of the known habitats in the Selous. This is one area of utmost importance for which country requests assistance.

The *D.b.michaeli* population in the Serengeti is steadily increasing since our last meeting with an additional birth early this month making the number to be 8. This is realized from a founder population of 2 females and one male put together at one locality in 1996.

The Ngorongoro Crater has lost a total of 5 animals since mid-2000. Lions preyed upon one calf in May 2000 and the mother of the fateful calf died in September 2000. It has recently been brought to the attention of NCAA that the mother might have died of serious injuries (possibly following an encounter with an elephant or sustaining injuries after falling off the crater rim). However, more dramatic this year, an unconfirmed Babesiosis (a tick-borne protozoan disease) is suspected to have claimed the lives of a one-year female calf (August 2000) and two cows, both in January 2001. As I present this information, the Permanent Secretary and the Director of Wildlife are visiting the Ngorongoro to listen to a report by veterinary experts. A prolonged drought that claimed lives of many other herbivores including some 300 buffalos on the Crater floor is suspected to have contributed greatly toward poor animal health and consequently boosted tick-borne disease attacks following poor animal conditions.

Measures taken to safeguard the crater population

Between 23 and 29 January 2001, Dr Peter Morkel, with Tanzanian vets, embarked on a prophylactic treatment of the remaining crater population (13 animals) by darting them with a dose of *Berenil*. After the treatment, further investigation was recommended to involve experts from outside Tanzania. Everybody is worried as to whether the unconfirmed disease will spare this rhino population. The *D.b.michaeli* in Mkomazi is doing fine while expectations of new calves from this re-introduced population (since 1997) are haunting the author.

Discussion

Mr du Toit said that there appeared to be problems with administrative issues in Tanzania. The 1997 national rhino strategy had been approved but not endorsed, and the MoU for the Selous Rhino Trust had not been approved. There was little enablement of rhino conservation effort by the Government of Tanzania. On the strategy, Mr Maige said that there had been problems of resentments by successive Directors of Wildlife of their predecessors, and individual internal clashes were responsible. There would be a new workshop to review the rhino strategy document. A meeting of the rhino steering committee was pending. On the MoU, there had been a problem of inclusion of a clause relating to tax-free exemption; SRT is a charity, so not exempt. Mr du Toit asked if the SADC forum could assist on the ratification of the strategy. Mr Maige said that there was no need for intervention on MoU.

Zambia (George Kampamba)

Introduction

Wildlife in Zambia is the main basis for tourism development. The Ministry of Tourism is entrusted with the responsibility to foster ahead Zambia's economic development through tourism. The level of management profile and participation by constituent stakeholders will determine how Zambia realises consumptive and non-consumptive tourism potential in full.

Transformation from national parks and wildlife service to Zambia Wildlife Authority

The process of change from a Government Department to an autonomous company, the Zambia Wildlife Authority (ZAWA), took effect on 01 November 1999. The Ministry of Tourism provides policy guidance to the Zambia Wildlife Authority. The Zambia Wildlife Authority was established by the Government of the Republic of Zambia and is governed by Zambia Wildlife Act, No. 12 of 1998. The Board of Directors heads the Authority (Zambia Wildlife Authority, 1998). The primary objectives of ZAWA are as follows:

- To control management of National Parks for conservation and enhancement of wildlife ecosystem and biodiversity;
- To promote opportunities for the equitable and wise use of resources in National Parks;

- To develop and implement management plans to enhance the benefits to local communities and wildlife resource;
- To promote local community development in wildlife areas in order to enhance wildlife productivity and maintenance of sustainable biodiversity in National Parks and Game Management Areas;
- To reverse the decline in wildlife resources;
- To raise the profile of wildlife management for sustainable flow of benefits accruing from wildlife utilisation;
- To promote participation of local community and private entrepreneurs in order to improve the wildlife resource base.

ZAWA's organisational structure

The legal establishment of ZAWA provides for de-linkage from civil service administrative structure in order to facilitate a much more efficient and effective provision of services for management of the wildlife estate. ZAWA is expected to attain high profiles of management levels and conservation of biodiversity. The philosophies and approaches of the former management regime are changing rapidly in terms of strategic objectives, roles and functions.

The new organisation structure presently reflects the following attributes (Zambia Wildlife Authority, 2000):

- · Wholly mandated autonomous entity;
- Vividly top class managerial capabilities;
- Allocation of roles and functions that strengthen coordinated approach to achieve institutional policies and objectives;
- Strong motivation for positive response to execute policies and instruments of wildlife management.

The Chief Executive Officer will head the Authority. Below him are five Directors:

- Director Conservation and Management
- Director Planning, Research and Information Services
- Director Commercial and Corporate Services
- Director Finance and Human Resources
- Director Game Management Areas

Rhino conservation in Zambia

Brief background: Both black rhino (*Diceros bicornis minor*) and white rhino (*Ceratotherium simum*) were widely distributed at high densities in Zambia. The white rhino ranged the upper Zambezi while black rhino population was in most parts of the country. Lack of proper management strategies, objectives and appropriate policies on rhino management resulted into the decimation of Zambia's population.

Creation of metapopulations of rhino: We believe that biotic diversity is good and has the intrinsic value. Re-establishment of subpopulations and high profile management in Zambia will contribute to the conservation of a sub regional metapopulation. In certain cases rhino populations have been split with no contact of individuals between subpopulations. Such are situations in National Parks, ranches and zoos that host subpopulations of the rhino that came from contiguous populations. In this regard ZAWA has planned to pursue management interventions which will re-build rhino populations and allow gene flow between the national subpopulations. The rhino re-introduction plan of ZAWA is to reestablish ecological balance and increase the population size in areas of historic range.

Rhino Policy: The history about the species is seen as crisis management of the animals in the wild that lead to their decimation national wide. In view of this it is the intention of the Government of Zambia to reverse the trend and restore the rhino as a national heritage. Zambia through ZAWA commits itself to a rhino rehabilitation plan.

ZAWA plans to embark on re-introduction of black rhino and intensively manage the white rhino in Mosi-oa-tunya National Park. The working paper on development of the policy for rhino management in Zambia is ready and will culminate in a legal instrument for rhino conservation.

Summary of project proposals

The newly established Research Department of Zambia Wildlife Authority (ZAWA) has developed an overall research plan and prioritised research and monitoring activities for the year 2001. The concept notes given below represent some of the priority research and monitoring activities that should be undertaken by the Department this year.

Formulation of policy for rhinoceros management in Zambia

The proposal is designed to facilitate the formulation of a policy framework for rhinoceros management in Zambia. The main output will be development of an institutional framework to guide the management and monitoring of rhino in the country. It will also ensure the species long-term survival for national and regional socio-economic benefits through the promotion of regional tourism and conservation of biodiversity. Management objectives and Action Plans are presented in draft form and will provide for promotion of rhino populations on private game ranches. The policy document will culminate into development of a legal framework by the year 2002. The support requested is therefore for a stakeholders' workshop for input to finalise the policy document.

Habitat evaluation for the re-introduction of rhino in Zambia

Stressing the importance of promoting regional cooperation through conservation of biological diversity and development of sustainable regional tourism, ZAWA recognizes the need to conduct habitat evaluation in priority National Parks to facilitate the rhino reintroduction program and the implementation of an effective rhino surveillance program; this will guard against direct and indirect human induced impacts on the species and particularly those that caused the species' local extinction. The major outcome of this strategy, after the habitat evaluation, will be the known feasibility of reintroduction by October 2001 and improved policing capacity to ensure the species' long-term survival. We are resolved to establish a population of 10 individuals by the year 2010 in North Luangwa National Park. This will be a stock seed for translocations to restock other areas and justify Zambia's membership to SADC Rhino Group.

Study tour to rhino conservation areas in the SADC region

Aware of the urgent need to develop rhino sanctuaries as well as capacity to provide the required technical guidance to plan and implement the program, ZAWA recognizes the need for specialized knowledge, skills and capacity of the staff involved in the planning and implementation of this strategy. To that effect, ZAWA staff involved in this program, in addition to their respective professional knowledge find it necessary to undertake a regional tour to various private and publicly owned rhino management facilities in the sub region. This will provide the team with the relevant exposure, experience and skills needed to guide the implementation of this program.

Management of white rhino population in Mosi-oa-tunya National Park

Except for one young dropped in August 1995 the population has not procreated since re-introduction in 1994. This status is a source of concern to us. It is therefore important to investigate the factors that are limiting the population to low density and improve the management profile of the population. Expertise will be drawn from the Research wing of the Zambia Wildlife Authority with support from Research experts/professionals in the region. Noting that there is a potential threat of reduction or loss of genetic diversity of the white rhino population in Mosi-oa-tunya National Park, ZAWA recognizes the need to improve management of the species, to enhance the reproductive status. The target is to establish a population of at least 10 individuals by 2010.

The main outcome of this project will be improved habitat management and monitoring of the species. The objective of the investigation is acquiring an understanding of the factors that are limiting the population of rhino in Mosi-oa-tunya National Park for improved management. The rhino to be studied for improved management represent remaining groups of founder populations from which the revival of future populations depend. They are a unique and formidable component of Africa's biodiversity. The rhino has always been viewed as one of the two most valuable species in Zambia, the other being

the elephant. The implications therefore if this project is not undertaken are that the only rhino population available in the country would head for demise. The population may not be revived, as there has not been any reproduction since 1995. This situation needs to be investigated. We have to find a way for continued propagation.

Conclusion

Zambia recognises the rhino program and the facility as vital for conservation of biological diversity and contribution to the development of the national economy through enhanced tourism. The SADC Program has the potential to propel rhino conservation in Zambia to greater heights and the valuable support to ZAWA will help in achieving the set goals and aspirations of our people. Last but not the least I want to thank the consortium for their support to the course of rhino conservation and the SADC Regional Program for Rhino Conservation, the organisers of this meeting.

Discussion

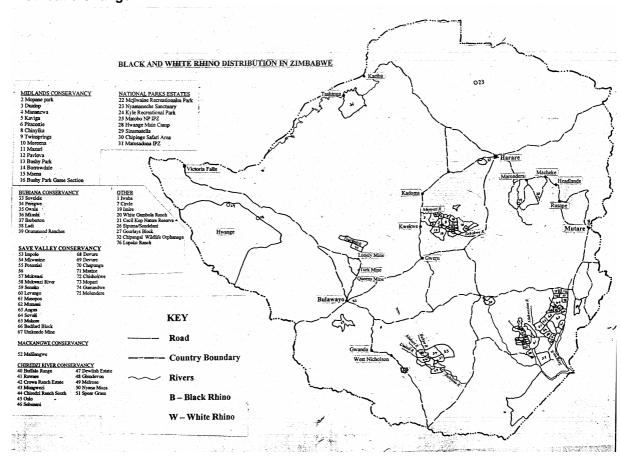
It was generally felt that the fenced area for white rhinos as Mosi-oa-Tunya NP (10 ha) was far too small, and could be the main reason for the lack of performance by this small population.

Zimbabwe (Florence Msipa)

Population

The current black rhino population is still estimated at 460 individuals and the white rhinos at 200 individuals.

Distribution/Range



There are five major conservancies in the country, namely, Bubiana, Save Valley, Chiredzi River, Malilangwe and Midlands Black rhino conservancy. The first four are collectively known as the lowveld conservancies. In addition to the five, there are 6 small conservancies (single farmer), two breeding programmes, four IPZs, two recreational parks, a sanctuary, a nature reserve and a forestry area.

Annual Growth Rate

The Zimbabwean rhinos are estimated to be recovering at an annual growth rate of 9 percent per annum. In some areas such as Gourlays Block and Sinamatella the growth rates are as high as 12 and 11% respectively. In the Midlands the growth rate is estimated to be as low as 3% per annum.

Mortality

Poaching

There have been no confirmed incidents of rhino poaching for the year 2000 to end of February 2001. An adult male caught in a snare in one of the conservancies later died after the snare was removed. The cause of death was believed to be stress as the animal was very old. Another rhino moved out of a conservancy through a broken fence last year. To date the rhino has not been located. Two black rhinos were discovered at an advanced stage of decay this February. Cause of death is still to be established.

Other

Elephants killed a rhino on Iwaba. Another died in the later part of the year in a conservancy as a result of fighting, and lions in Matusadona killed a calf.

Management and Research issues

Ear notching

Ear notching operations were successfully carried out in Malilangwe and MacIlwaine Recreational Park last year. A similar operation at Matusadona was not successful. A rhino database is to be implemented in April this year with Sinamatella, Matusadona and hopefully the Midlands as target areas. Information for the database will be collected from ear notching, radio collaring and sightings of rhinos. A need to carry out a census in Matusadona and the Midlands in order to generate more information about rhino status in the two areas has been identified. This will be done at the same time as the ear notching and radio collaring operations. A programme for ear notching and radio collaring activities for the year will be implemented in the last week of March.

Law enforcement

There are many areas in the country where manpower densities need to be increased as well as the overall effectiveness of law enforcement monitoring.

Limitations

At the annual stakeholders workshop in October 2000, limitations to successful rhino management were identified and some recommendations made. The resultant document awaits directorate approval. Lack of skilled manpower, equipment and finances remains a problem.

2 INSTITUTIONAL ARRANGEMENTS FOR REGIONAL RHINO CONSERVATION

2.1 Presentation: The value of rhino status reporting (Martin Brooks, AfRSG Chair)

The Rhino Management Group (RMG) model

The primary aims of the RMG are to:

- Conserve Populations
- Maximise Population Performance

Apart from country representatives (RSA, Namibia, Swaziland, Zimbabwe), membership includes representatives from each of the RSA provincial bodies. Each organisation is requested to report annually on each population, with common statistics on their rhino populations. These are analysed for evaluation and understanding of underlying factors, and the results are used for guidance in improving monitoring and management. Every 2 to 3 years, a summary report is produced, containing comparative information, and information on individual populations. The report is aimed at improved management (and can be provocative, this also being a good result).

The Contents/Headings of RMG Status report are as follows:

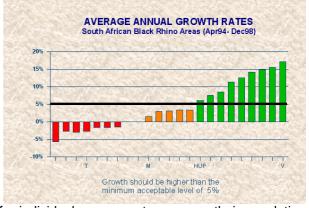
- Population estimation
- Sex and Structure
- Female breeding performance
- Mortalities
- Introductions
- Translocations
- Behaviour
- Security
- Neighbours programmes
- Research
- Black rhino reports
- General

Population Performance

Data accumulated over five years gives good growth rate estimates (rolling estimates). The aim is to maximise growth rate of each populations in order to:

- act as a buffer against poaching
- provide surplus animals to create new populations
- Minimise loss of genetic diversity in rapidly expanding small populations.

There is a target of 5% intrinsic growth rate. IGR is divided into 3 Categories: (a), 6-17% for good performers in RMG region comparison (n=9); (b),



2-3% (5), and (c) -1-6% (negative) (7). It is useful for individual managers to compare their population against others, which can lead to understanding of the reasons for poor populations performance (and at least begs the guestion of why performance is poor).

Examples in the graph (above):

V = Vaalbos (17%)

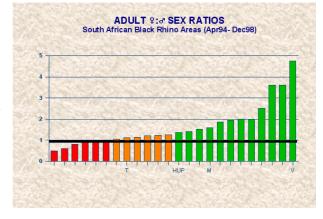
HUP = Hluhluwe-Umfolozi Park (6%)

M = Mkuze (2%)

T = Tembe (-2.5%)

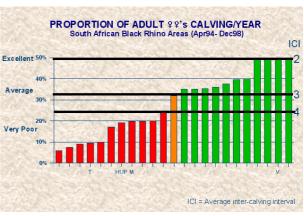
Adult Sex Ratio

There is a confounding factor: differential mortality of males, leading to female biased sex ratios. Most populations are female biased, including Vaalbos (highly so). Better comparison between populations might be made if performance indicators were recalculated as if the sex ratio was 1:1. However, individual cow performance is independent of this relationship. A standardised and consistent ageing system/criteria is always required.



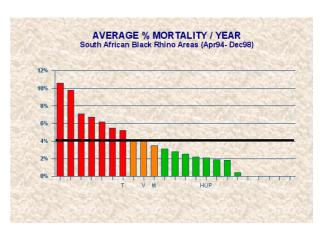
Female breeding performance

This can be measured by the proportion of adult females that have a calf of that year (0-25% = Very Poor; 25-33% = Average; 33-50% = Excellent). 50% is equivalent to an inter-calving interval (ICI) of 2 years, 33% = ICI of 3 years, 25% = ICI of 4 years. In the period 1994-98, breeding performance has been very poor for Tembe (9%), HUP (19%), Mkuze (24%) vs. Vaalbos (50%). Poor performance may be due to loss of calves or no calving, and may highlight a carrying capacity problem. Age at first calving is another useful breeding performance indicator (e.g. At Great Fish River, females are first calving at 6 years on average).



Average Mortality Rate per Year

For the period examined, mortality was 4% on average, including all age classes. There are possible problems with low detection of calf mortality in large populations. Less than 3% is low population mortality. All top performing populations in RSA have low mortality rate. If carcasses are found, it is important to establish the cause of death (see table below), and PM reports are requested by RMG. The detection rate of carcasses gives some indication of the quality of monitoring in a rhino population area.



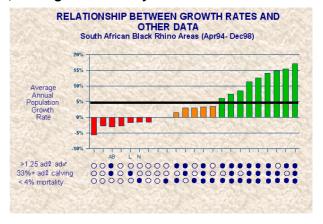
Causes of mortality (RMG: April 89-December 98)

	Causes	No	Percentage
NATURAL	Diseases	8	3.4
	Fighting	58	24.5
	Nutrition	9	3.8
	Accidents	20	8.4
	Killed by other species	15	6.3
	Other	36	15.2
UN-NATURAL	Capture, Translocation	27	11.4
	Poaching	61	25.7
	Other	1	0.4

TOTAL 237

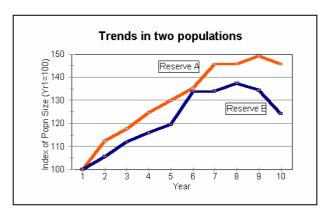
Population Growth Rates: influence of sex ratio, calving and mortality rates

It can be seen that female-biased sex ratios, high breeding female performance and low mortality are all associated with high population growth rates.



Individual Population Performance

Comparing the performance of two populations, and potential carrying capacity effects, Reserve A population appears to have reached a limit after 8-9 years, while Reserve B has reached K after 6 years. Effective removals (man-induced) or deaths may also be used to indicate carrying capacity effects.



Summary on the Value of Status Reporting

- 1. It promotes effective monitoring
 - Population size
 - Sex and Age
 - Life history
 - Mortality
- 2. It objectively assesses population performance and understanding of contributing factors
- 3. It promotes implementation of effective management programmes

Effective status reporting operates through soliciting appropriate population statistics on all rhino populations, and analysing these to determine population performance, and hence recommended management responses. Standardised interpretation is required from a range of populations under various management regimes. There are also spin-off benefits in terms of motivation of members of monitoring teams. For other SADC rhino range states (e.g. outside the current RMG), other information may be more appropriate (e.g. for newly established populations).

Discussion

Mr du Toit emphasised that it was crucial that population performance is calculated correctly (compound over five years). Mr Chafota suggested a roving standards checker for SADC region. Dr Knight highlighted the complications of RMG-type reporting for big rhino populations (e.g. Kruger NP), and the difficulty of providing these indicators. Mr du Toit said that the Zimbabwe conservancies have individual 'cells' with their own modular monitoring, and this answers the question of how to monitor rhinos over large areas. Limited numbers of rhinos are known and monitored in constituent areas. Dr Cumming added that is was useful to involve staff on the ground in the results, as this was enormously important in motivating and maintaining high standards in field data collection.

2.2 Presentation: Existing regional institutions/bodies for rhino conservation, and options for the role and function of SADC Regional Rhino Bodies (Martin Brooks, AfRSG Chair)

Introduction

The session Chair (Yemi Katerere) introduced this presentation, stressing that any development of institutional arrangements for rhino conservation at a regional level should not undermine any progress made at National Level. The SADC Rhino Consortium had debated options for regional structures, including the SADC regional rhino body or bodies with a life extending beyond the currently funded programme, and these would be presented as options for discussion. It was appropriate that there was support and synergy for all SADC range states in order to build on the success of RMG, and benefit from the SADC umbrella, as a political catalyst, and also for raising funding for rhino conservation in the region. The proposal is summarised using the slides presented below.

Existing structures for rhino conservation

1. IUCN/SSC African Rhino Specialist Group (AfRSG)

IUCN SSC African Rhino Specialist Group (AfRSG)

"To promote the long-term conservation of Africa's rhinos and where necessary, their recovery to viable levels"

- Membership
 - ▶ Range State Reps
 - ► Rhino experts
- Main Activities
 - Continental objectives and strategy
 - Assist with national rhino plans
 - Determine rhino status and trends
 - Identify conservation priorities
 - Develop techniques
 - Provide information, advice and cooperation
- 2. Rhino Management Group of Southern Africa

Rhino Management Group of Southern Africa

"To provide coordination, research and management advice to assist the conservation agencies and private landowners in achieving the various national metapopulation goals for black rhino".

- State conservation agencies:
 - · South Africa, Namibia, Swaziland & Zimbabwe
- Private rhino owners
- Rhino experts
- Rhino and Elephant Security Group of Southern Africa

Activities of the RMG

RMG - Main Activities:

- Ensure conservation objectives & programmes in place
- Develop and promote appropriate techniques
- Debate key / controversial issues
- Evaluate performance of populations

Options for SADC Regional Rhino Groups

Option: SADC Rhino Groups

- Bring existing Rhino Management Group (operational since 1989) under SADC
- Deals only with black rhino
- Primarily concerned with large metapopulation monitoring & management; management for high population growth, desirable stocking rates, carrying capacity constraints, resource use -hunting, sales

Option: SADC Rhino Groups

- Strategic need to create Rhino Recovery Group under SADC which can focus on issues such as surveys, re-establishment of rhinos, development of national rhino plans, creation of Sanctuaries/IPZ's
- Rhino Recovery Group could focus on both black and white rhino
- Proposed sharing of information and expertise between AfRSG, RMG and RRG via some shared members
- Set up initially under SADC rhino programme

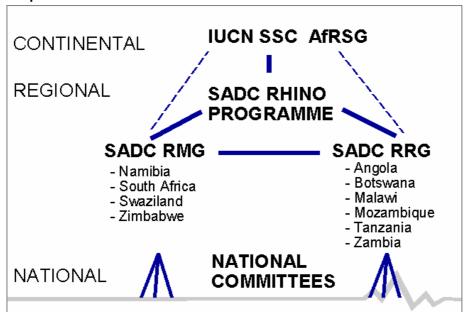
Option: SADC Rhino Groups

- RMG and RRG therefore would focus on different issues and problems
- Both RMG and RRG would avoid duplication with African Rhino Specialist Group at the Continental level. Continental perspectives and strategy can be shared if Groups have some shared members with AfRSG (as is the case with existing RMG)

Option: SADC Rhino Groups

- Precedent for Splits
 - AsRSG → Due to different species, habitiats, and conservation problems, and increase focus and be more cost effective, the AsRSG split into 2 Regional Groups {India&Nepal} & {SE Asia: Malaysia, Indonesia & Viet-Nam}
 - ► AERSG → Split into separate Rhino and Elephant Specialist Groups
 - ▶ Both examples similar a few shared members, still have access to same experts.
 - Key advantage = Groups can focus on problems/activities most relevant to them

Proposed Framework for Rhino Conservation Institutions



2.3 Discussion: Institutional Framework for SADC Regional Rhino Bodies

(*Linkages and Meetings*) Mr Nzima suggested that the connection between AfRSG and the proposed two SADC rhino groups be firmed up. Dr Brooks said that there was linkage anyway on technical issues and members should also be AfRSG members. Mr Hill said that if funding was not a problem, it might be beneficial to have one SADC plenary, but with separate sessions, split out for most of the issues. The RRG could then meet more often. Dr Brooks said that RMG used to meet regularly, but now only meets when sufficient issues have accumulated (2-3 years). The AfRSG meeting might be used, with extra time for subgroups. Dr Emslie said that since there were shared members, there could be a session in each group with report-back. RRG would report-back on progress with its own issues (similar to the feedback by the Asian Rhino Specialist Group (AsRSG) to AfRSG meetings).

(*Membership*) Mr Tjibae asked when a country could move between groups. Dr Brooks said that it would be up to a country to motivate, and there could be a transition phase when it was member of both RRG and RMG. Mr Chafota said that clarification was needed when the terms of reference for the RRG were defined. Dr Brooks said that there could be a mechanism for making contacts through present SADC rhino programme (not necessarily the Italian-funded segment). Dr Kampamba said that there needed to be a mechanism for movement between the SADC rhino groups. Dr Cumming said that the Italian-funded programme provides the present mechanism for effective interchange between the groups, including initial support for the Rhino Recovery Group. The question would be how to ensure continuation of the groups after 18 months (currently funded programme).

(Sources of rhinos) Mr Maige said that the RRG countries needed to avoid being 'cut off' from potential sources of animals for reintroduction. Dr Brooks said that RMG countries would not necessarily provide animals only for RRG (e.g. Malilangwe received 28 rhinos from KZN). The RMG and RRG would be advisory groups only, not dictating to the other. Mr du Toit said that transactions in live rhinos did not happen at meetings in any case.

(Funding and sustainability) Mr Hill asked about contingency for the SADC rhino groups, in the event that the SADC rhino programme is not funded after five years. Dr Brooks said that SADC would be the contact point, facilitating and coordinating the groups. Dr Guillet reminded participants of the key Italian – SADC link, with the objective that, at the end of the funded programme, SADC would be better able to manage this sort of programme in future. Capacity should be built for SADC to be in a better position to request further funding (e.g. from the Italian government). Mr Nzima added that the SADC programme exists already under the roof of SADC WSTCU, and that the existing proposals for SADC rhino groups would not be a problem, and would not require SADC approval or direction. Mr Nzima had no problem with proposed structure, and said that the working groups under SADC should operate autonomously.

(Approval by Range States) Dr Katerere asked if there was support from Range States for the proposed structure. There was need for the Programme Coordination unit to draw up terms of reference, jointly. It would also be necessary for the coordinator to identify changes needed to the outputs and structure of the SADC rhino programme. Dr Katerere suggested that a caucus of range states form to debate the proposition. Mr Nzima wanted to allay any initial reservations, saying that they were only being asked to accept the proposal in concept. He said that there was no problem with procedure from SADC Malawi. Approval at the meeting would not be binding, and all reservations should be noted. Approvals for the proposed framework of SADC rhino bodies in concept was given by the focal points of Tanzania, Botswana, Zimbabwe, Malawi, Zambia and Mozambique. Dr Kampamba said that he would like to look at the terms of reference before formal approval.

(*RRG composition*) Dr Knight stressed the need for strong linkage between the groups, so that the SADC RRG was not perceived by members as being a 'poor brother' of the SADC RMG. Dr Brooks said that the RRG needed to define its needs in detail (e.g. input from other bodies). It was suggested that the RRG chairman be elected by the nominated government representatives, and that these decide on what experts to co-opt to the group. Dr Cumming said that (with the exception of Angola), all RRG countries would be managing *D.b.minor* and *C.s.simum*. Consequently linkages with RSA are likely to be strong.

Mr du Toit said that facilitation would be needed for the first meeting, and suggested that this be chaired by SADC Malawi with Programme Co-ordination support. It was decided that Mr Nzima would facilitate a caucus of range state representatives to get outline agreement on RRG composition.

2.4 Report back: SADC Rhino Recovery Group (H Nzima – SADC WSTCU)

Mr Nzima reported back to the plenary meeting that the caucus of proposed SADC RRG member states had endorsed the interim leadership at SADC WSTCU in Malawi, since this would be better placed to co-ordinate with Programme co-ordinator. The SADC WSTCU would convene the first meeting of the SADC RRG, where terms of reference would be agreed, and a new chair would be elected, Malawi then standing down.

3 PRESENTATION OF PROJECT PROPOSALS

3.1 Criteria for Funding Support by the SADC Rhino Programme (Rob Brett, Programme Coordinator)

The agreed criteria or conditions for funding support by the SADC Rhino Programme were listed:

- 1. Projects must be of a SADC regional nature or importance. The Programme will concentrate on rhino projects and policies that area of a regional nature (e.g. those which involve sharing of expertise between SADC member states, involve sharing or exchange of their rhinos, are conservation models for potential replication elsewhere in the region, and/or have regional economic or political implications).
- 2. Projects must limited to 'subspecies' *Ceratotherium simum, Diceros bicornis minor* and *D.b.bicornis*. The Programme will be limited to rhino 'subspecies' whose historical range included more than one SADC state and whose future metapopulation management is also likely in involve more than one SADC state (i.e. southern African subspecies: *Ceratotherium simum, Diceros bicornis minor, D.b.bicornis*).
- 3. Fundamental rhino management issues as well as land use economics, community involvement, etc. must be taken into account. The Programme will be primarily concerned with fundamental rhino management issues and with clearly relevant aspects of land-use economics, community interaction, applied research, etc. It will endeavour to assist SADC rhino range states, to the extent that they request, with the establishment of proactive measures to protect their rhinos from poaching, but will not become involved in law enforcement or in the investigation of illegal activities. Information on numbers and distribution of rhinos will be kept to the level of confidence that is specified by each range state.
- 4. Both public and private rhino conservation projects will be considered. The Programme will include public and private sector rhino conservation projects
- 5. Implementation must make use of existing institutions and linkages. The Programme will be designed and implemented to complement existing institutions and their linkages, particularly the SADC Wildlife Sector Technical Co-ordination Unit, existing national and regional rhino management committees (notably the Southern African Rhino Management Group) and the IUCN African Rhino Specialist Group (AfRSG).

Discussion

Mr du Toit recommended that the independence of proposed projects be used in rating procedure, since this would improve sustainability. Mr Nzima asked about the minimum conditions for funding support from the programme. Dr Brett said that the 5 conditions had to be satisfied, but the criteria for rating project proposals by the SADC Consortium still needed further development.

3.2 Presentation and Discussion of Project Proposals for funding in Semesters 4-6 (Martin Brooks, AfRSG Chair)

Each of the project proposals developed by range states and members of the SADC consortium were described in brief by the proponents (if present) or by the range state focal points or consortium representatives involved. Each proponent identified the primary output of the SADC rhino programme to which the proposed project would contribute. Each presentation was followed by queries, comments and discussion from plenary.

Following serial numbering of each proposal submitted at the October 2000 Consortium meeting, each proposal was numbered, and all are listed in Annex D, including summary information on each. The project proposals themselves (including subsequent revisions) have been compiled into a separate document for information and circulation to range state focal points.

Project Proposals

Proposal 20 – Ecological Studies to develop a management plan for the black rhino in Liwonde NP, Malawi (R Bhima). Primary Output 6 (6.1); Other Outputs: 1, 2, 3 & 4.

Discussion: Mr Nzima recommended that the perimeter fencing of Liwonde NP be included in the proposal. Dr Bhima said that small sections remained to be fenced.

Proposal 24 – Assessment and feasibility study for an IPZ for rhinos in Moremi GR, Botswana (M Tjibae). Primary Output 6 (6.1); Other Outputs: 1, 2 & 4.

Proposal 25 – Assessment of habitat, carrying capacity and management options for black and white rhinos in or near the KRS, Serowe (M Tjibae/R Brett). Primary Output 6 (6.1); Other Outputs: 1, 3, 5 & 6. Discussion: It was clarified that the new area of land acquired for the Khama RS was 5000 ha, close to but separated from the existing sanctuary.

Proposal 28 – Technical support to the Selous Rhino Project (M Maige). Primary Outputs 2 (2.1) and 4 (4.1); Other Outputs: 1, 3 & 6.

Proposal 35 – Madikwe GR as a model for developing a successful community rhino conservation programme. No proposal was ready for presentation at the meeting.

Proposal 38 – Improving and standardising methods for black rhino carrying capacity assessment (R H Emslie). Primary Output 4 (4.2); Other Output: 6.

Proposal 39 – Improved calibration of the RMG black rhino carrying capacity model (R H Emslie). Primary Output 4 (4.2); Other Output: 6.

Proposal 40 – Incorporation of benchmark Zimbabwean black rhino areas into the RMG black rhino carrying capacity model (R H Emslie). Primary Output 4 (4.2); Other Output: 6. Discussion: Ms Msipa asked for clarification on the rationale for inclusion of the Zimbabwe component, stressing that there had to be contact between the proponents and Zimbabwe before approval. Dr Emslie said that the project would make the developing carrying capacity model more applicable to Malawi habitats, and provide more data points to increase its power. Dr Brooks said that proponent and target countries must coordinate. Mr du Toit said that national coordination must also be sorted out in order to see clearly that national priorities mesh with SADC regional project proposals. Dr Brooks suggested that project proposals be circulated further in advance of meetings, including proposals sent to focal points of range states concerned for their endorsement prior to submission.

Proposal 44 – Scene of the Rhino Crime Training (R H Emslie). Primary Output 4 (4.1, 4.2). Discussion: Potential trainees could be drawn from Namibia, South Africa (several agencies), Malawi, Zambia, Zimbabwe and Botswana.

Proposal 48 – Workshop on biological management to meet continental and national black rhino conservation goals (R H Emslie). Primary Output 1 (1.2). Discussion: Dr Emslie emphasised that the need for the workshop had been stimulated by the slow growth of some RMG populations, and the consequent loss of potential rhinos.

Proposal 49 – Compilation of RMG report: 'Status and management of black rhino in the RMG region: 1/99-12/00' (P M Brooks). Primary Output: 4; Other Output: 6.

Proposal 52 – Expert assessment of black rhino carrying capacity in one Swaziland reserve (E Reilly). Primary Output: 4; Other Output: 6 (6.1). Discussion: Mr Reilly said that two reserves needed carrying capacity assessment. Mkaya reserve had already assessed by R H Emslie, before addition of 20% more land area. There would be a need to move surplus animals on to Hlane, and an improved estimate of the carrying capacity for deciding on the point at which to remove.

Proposal 55 – Improving Security and management of rhino horn stocks in SADC rhino range states (R A Brett). Primary Output: 2. Discussion: Dr Brooks said that the progress of the project would

depend on the approval of government agencies. Dr Cumming said that TRAFFIC must already have the necessary government approval for this work. Mr du Toit said that MINMEC would be the forum for engagement with SA government and provincial authorities.

Proposal 59 – Trovan scanners and equipment for rhino identification (M Knight). Primary Output: 2. Other Output: 4.

Proposal 60 - Pilanesberg Security and Monitoring Centre (M Knight). Primary Output: 2. Other Output: 4.

Proposal 80 – DNFFB Institutional Strengthening, Research and Relocation of Rhino in Mozambique (F L Langa). Primary Output: 2. Other Outputs: 4 & 6. Discussion: Ms Langa said that Coutada 16 would be changed to a NP in November 2001. Mr du Toit said that a thorough feasibility assessment of Coutada 16 as rhino reintroduction area was required, including all things that needed to be in place (e.g. security, management, capacity etc.). Mr Chafota and Mr Daconto wondered about linkage of the project to the TFCA planning. Dr Brett and Mr du Toit were asked to work with Ms Langa on identifying the primary components of the proposal for further development.

Proposal 81 – Capacity Building in Rhino Monitoring (R Loutit). Primary Output: 4. Discussion: Mr Loutit said that a multi-disciplinary training team of MET and SRT would be the key component. The intention was to build up skills of new staff recently imported into MET (ex-combatants), and also community/conservancy members. 35 government and 12 NGO/communal staff would be trained, and rhino custodians would also be included.

Proposal 82 – Development of Hobatere Area in Kunene Region, Namibia, as a Rhino Sanctuary (R Loutit). Primary Output: 3. Other Output: 6. Discussion: Mr Loutit said that Hobatere had been proclaimed as a Nature Reserve, in preparation for reintroduction of rhinos in 2003. The funding requested from the SADC programme (\$50,000) was for infrastructure (fencing and ground dams), matched to \$180,000 input from MET. Mr Daconto said that this would be a suitable project as a pilot activity for communal land, but was not sure if the equipment alone was the best focus of project. It would be difficult to justify for SADC funding if it just including the fence. Mr du Toit said that this project was a good model for an area adjoining a NP, but was concerned about initial stocking at 1 rhino to 10 km². Mr Loutit said that the adjacent Kaross area had up to 45 rhinos.

Proposal 83 – Building bridges between communities and government for improved rhino management (video) (R Loutit). Primary Output: 5. Other Output: 6. Discussion: Ms Msipa said that Zimbabwe would like to develop a similar video. Messrs Hill and Chafota asked if the Namibia video might be used to extend or provide segments for use in other states. Mr du Toit said that the video would be focusing on the Namibia situation alone, and the focus on its application to Namibia community rhino conservation should not be diluted. Dr Brooks said that the linkage of Kunene to Hobatere was very promising as a potential model of a communal land rhino sanctuary. Mr Reilly cautioned on danger of promises or commitments made in visual material.

Proposal 84 – Attainment of carrying capacity for rhino on communal land of north-western Namibia (R Loutit). Primary Output: 4. Other Outputs: 5 & 6. Discussion: Mr Loutit said that the Kunene population was key 1, and had reached carrying capacity in its arid environment. It needed to be utilised in the country context, and SADC context with RSA. The project mainly entailed habitat assessment.

Proposal 85 – Upgrading of SRT Patrol & Training Bases at access points to Kunene/Erongo rhino range (R Loutit). Primary Output: 5. Other Output: 2 & 4. Discussion: Mr Loutit said that the proposal was developed in response to the difficulty of controlling and monitoring human access to rhino areas. Only 'courtesy stops' had been used so far.

Proposal 86 – Black Rhino Monitoring project on communal land north of the Hoanib River in Kunene Region, Namibia (R Loutit). Primary Output: 6. Discussion. Mr Loutit said that there were 10-11 rhinos in Kaokoland, north of the Hoanib river. There were limited water points, and there had been no population growth in recent years. This proposal complemented the carrying capacity proposal (84),

with the intention of expanding the rhino range to the north. Dr Brooks suggested that this proposal be combined with 84. Dr Emslie pointed to the need for research only aimed at making and facilitiating decisions on when and how many rhinos to remove to stimulate further population growth.

Proposal 87 – Education & awareness of state of black rhino and habitat (R A Brett). Primary Output: 5; Other Output: 6. Discussion: Mr du Toit recommended a review of the situation in the Midlands since 1993/94 (when last assessment carried out by Dr Emslie), perhaps hand in hand with a complete census (e.g. 1994). This was supported by Ms Msipa, who added that the data collected from the area since 1993 had been unreliable.

Proposal 88 – RESG Meeting in Namibia (R H Emslie). Primary Output: 1; Other Output: 2. Discussion: Dr Emslie stressed the value of the revitalised RESG, for which this meeting would 'piggyback' on a ECTG meeting. Mr du Toit cautioned on taking on too many phases at once with the new RESG. It would be better to take a first step, have the meeting, and define past and future activity (i.e. as a precondition for project 89).

Proposal 89 – RESG Coordinator's Desk (R H Emslie). Primary Output: 2; Other Outputs: 4 & 6.

Proposal 90 – Madikwe rhino ear-notching programme (M Knight). Primary Output: 2 (2.2, 2.4); Other Outputs: 4 (4.1). Discussion: Dr Emslie asked how, since animals were photographed regularly, earnotching would assist in monitoring. Mr Daconto said that the regional component of this proposal needed to be enhanced. There had to be a clear demonstration of need.

Proposal 91 – Habitat evaluation for the reintroduction of the black rhino in priority parks in Zambia (G Kampamba). Primary Output: 4; Other Output: 1, 3 & 6. Discussion: Dr Kampamba said that the evaluation would include former black rhino range areas (NLNP, SLNP, Kafue NP, Lower Zambezi NP). It was clear that habitat availability was not the problem in selecting future areas for black rhinos in Zambia. What was needed was capacity building, and commitment of ZAWA staff. Zambia's inclusion in the SADC RRG would assist. Dr Brooks said that habitat assessment of all areas, including models to be applied in each, would take too long. The project should be limited to a couple of priority areas. Dr Cumming said that there was need to prioritise areas, even if NLNP had already been identified. Dr Kampamba said that there had been commitment from FZS for long-term assistance to NLNP. Dr Emslie recommended that the other areas be examined as future areas, with NLNP as seed population. Dr Brooks agreed that only a peripheral assessment of other areas was needed for now.

Proposal 92 – Formulation of policy for rhinoceros management in Zambia (G Kampamba). Primary Output 1. Discussion: Dr Brooks recommended that the development of the policy be followed by an action plan.

Proposal 93 – Study tour to rhino conservation areas in the southern African sub-region (G Kampamba). Primary Output 4 (4.1). Discussion: Dr Brooks suggested that membership of RRG should provide information/awareness for members on rhino conservation models to be applied.

Proposal 94 – Building capacity for rhino surveys and monitoring in selected rhino areas in Zimbabwe (R A Brett/F Msipa). Primary Output: 2; Other Output: 4.

Proposal 95 – Development of approaches to community involvement in rhino conservation (G Daconto). Primary Output: 5. Discussion: Mr Daconto said that community involvement has not been a key component in rhino conservation to date, but with rather traditional means (PAs, and relationships with neighbours). The project would examine what are the commonalities in terms of community participation in rhino conservation, what could be built for a regional agenda. Each project proposal listed (Annex D) was indicated for inclusion if there were general community aspects. Mr Reilly said that 58% of visitation to parks in Swaziland was by locals, and fulfilled a vital awareness function. Drs Katerere and Emslie said that a critical analysis was needed, possibly using a carefully designed questionnaire, and focusing on the link with conservation benefit in terms of rhino population performance indicators.

Proposal 96 – Management and Conservation of remnant black rhino population and reintroduction of white rhino in Angola (R Brett). Primary Output: 1. Discussion: In the absence of an Angolan representative, it was thought that this would be ideal proposal for RRG to tease out the priority items, given the huge scope (and difficult operational conditions).

Proposal 97 – SADC Rhino Recovery Group (RRG) inaugural meeting (H Nzima). Primary Output 1. Discussion: Following approval for formation of the SADC RRG, an inaugural meeting requires funding in semester 4, including the drawing up of terms of reference, and future organisation as a group. A proposal was not presented or developed at the meeting, but was included for approval of outline budget by the SADC rhino consortium. Mr du Toit said that there was continuing need for review of rhino conservation situation in other countries. The venue of the RRG meeting could allow for demonstration of principles of re-establishment of new populations. Dr Cumming said that there was a future need for development of regional projects at a regional forum, rather than the present country-by-country focus.

Proposal 98 – Management of white rhinos in Mosi-oa-Tunya NP (G Kampamba). Primary Output: 6. Discussion: There had been no growth in the population, and the area and its management needed a specific evaluation. Dr Brooks suggested that this be included within project 91.

Proposal 99 – Translocation of black rhino to North Luangwa NP, Zambia from South Africa (M Knight) Primary Output: 3.

4 OTHER BUSINESS

4.1 Any Other Business (Humphrey Nzima)

Mr du Toit said that in planning the programme for next semester, there was need for flexibility for needs that arise. *Ad hoc* issues will continue to crop up (e.g. rhinos moving between Zimbabwe/Botswana), so some flexibility to tasks in work plan needed to be built in.

Dr Brooks said that sharing expertise was required during discussion of projects. This should be taken further during the next meeting, in order to help with the development of projects during discussion.

Ms Msipa said that range states needed to be more involved in the planning and implementation of projects under the SADC programme, and that executants of all projects should clear with the country focal points concerned. If funding has been approved, all country representatives should be made aware of the timing of projects. Messrs Chafota and Nzima appealed that effort was made to involve country nationals in project activities.

Mr Maige asked that all project proposals be circulated to all country representatives, which would help with information and building capacity for developing new proposals. Mr Chafota asked that lists of documents produced by the programme in a particular semester by circulated.

Mr Nzima said that there needed to be an agreed mechanism for provision of funding to range states. The consortium needed to sort out this aspect of project implementation.

4.2 Concluding Remarks and Closure of Range States Meeting (Humphrey Nzima/Alfredo Guillet)

Dr Guillet summarised his impressions of the workshop. The major development had been the refinement of the concept of the SADC RRG, and the meeting had been very useful for exchange of information during the gathering. He listed points for improvement of the programme:

- The Consortium needed to take note of the reaction of range states.
- There was a need for refining the way to make use of somebody else's proposal.
- Increased sharing of expertise and information flow within the region.
- SADC must facilitate representation and flow of information to and from the Programme Coordinator.
- The need to ensure flow of information on progress of project proposals to and from range states.

Mr Nzima said that this Range States meeting had built on the success of the last one, and agreements reached would maintain progress toward an improved regional rhino effort. With that, he then declared the meeting closed.

ANNEX A: LIST OF PARTICIPANTS

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ANNEX B: AGENDA

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Session 1 Chair: H Nzima

- 0800 Welcome (SADC WSTCU H Nzima)
- 0810 Opening Remarks (DGCS A Guillet)
- 0820 Self-introduction by participants
- 0830 Introduction and Objectives of Range States Meeting (R Brett)
- 0850 Review of Programme Objectives (R du Toit)
- 0910 Review of Progress by SADC RPRC to date: Overview of Semester 2-3 Projects (R Brett)
- 1000 Coffee/Tea Break
- 1030 Range State Reports (updates from 10 focal points):
- 1030 Angola (N L Kingengo)
- 1045 Botswana (M Tjibae)
- 1100 Malawi (R Bhima)
- 1115 Mozambique (F L Langa)
- 1130 Namibia (R Loutit)
- 1145 South Africa (M Knight)
- 1200 Swaziland (T Reilly)
- 1215 Tanzania (M Maige)
- 1230 Zambia (G Kampamba)
- 1245 Zimbabwe (F Msipa)
- 1300 Lunch Break

Session 2 Chair: Y Katerere

- 1400 Presentation: The value of rhino status reporting (M Brooks)
- 1430 Presentation: Existing regional institutions/bodies for rhino conservation, and options for the role and function of SADC Regional Rhino Groups (M Brooks)
- 1500 Discussion of the Institutional Set-up and Terms of Reference for SADC Regional Rhino Groups
- 1530 Tea/Coffee Break
- 1545 Discussion of the Institutional Set-up and Terms of Reference for SADC Regional Rhino Groups (continued)
- 17:00 Close

Day 2 Wednesday March 7th, 2001

Session 3 Chair: M Brooks

0800	Criteria for Funding Support by the SADC Rhino Programme (R Brett)
0815	Presentation and Discussion of Project Proposals for funding in Semesters 4-6
1000	Coffee/Tea Break
1030	Presentation and Discussion of Project Proposals for funding in Semesters 4-6 (continued)
1230	Any Other Business: Outstanding Agenda Items, Dates for next meeting (H Nzima)
1250	Concluding Remarks and Closure of Range States Meeting (H Nzima/A Guillet)
1300	Close of Range States Meeting

ANNEX C: PROGRESS REPORTS

Table 1: Progress against Semester 2 tasks (March 24th – September 23rd, 2000)

Task	Task	Subtask	Sub task	Activi	ty	Task Leader	Executants	Progress	Future Needs and Plans
Name	No	Name	No	1ary	2ary				
Detailed Country Reviews	1.2-1	Develop structured checklist and questionnaire as guidelines for review	1.1	1.2	1.1, 1.3, 3.2	Raoul du Toit	Richard Emslie, Rob Brett	Completed, and used for country reviews.	
Detailed Country Reviews	1.2-1	Develop Terms of Reference and engage consultants	1.2	1.2	1.1, 1.3, 3.2	Rob Brett	Brett	Generic consultants IUCN contract for country reviews completed and used for engagement of consultants.	
Detailed Country Reviews	1.2-1	Confirm plans for reviews with each range state	1.3	1.2	1.1, 1.3, 3.2	Rob Brett	Rob Brett	Plans for all reviews confirmed and completed.	Improved communications with representatives from Angola necessary for facilitation of any planning for rhino conservation in Angola
Detailed Country Reviews	1.2-1	South Africa review	1.4	1.2	1.1, 1.3, 3.2	Richard Emslie	Richard Emslie, Keryn Adcock	Visits/interviews at KZNW, Kruger NP and SANP Port Elizabeth office complete (RE). Visits/interviews at Pilanesberg/NWP in week of 26th August (KA). Report from reviews of NWPTB (KA) completed and submitted. Report from review of SANP, KZNW and other authorities (RE) pending.	black and white rhinos probably necessary for completion of review.
Detailed Country Reviews	1.2-1	Zimbabwe review	1.5	1.2	1.1, 1.3, 3.2	Raoul du Toit	Raoul du Toit	Review completed during first two weeks of Semester 3, including Zimbabwe rhino stakeholders meeting (12-13 October, 2000). Draft report submitted, pending results of meeting, and scoping of project proposals from Zimbabwe.	
Detailed Country Reviews	1.2-1	Botswana review	1.6	1.2	1.1, 1.3, 3.2	Rob Brett	Rob Brett	Review was half completed when RB was still employed in DWNP. Country visit was done 10-13 September, including interviews at DWNP, and with representatives of the major private land sanctuaries (Khama RS, Mokolodi NR). Report and 6 concept/draft proposals completed.	
Detailed Country Reviews	1.2-1	Namibia review	1.7	1.2	1.1, 1.3, 3.2	Rob Brett	Rob Brett	Country visit done 28-31 August, including visits to Etosha NP and MET in Windhoek. 7 concept and draft projects proposals resulted, including 3 regional. Report completed.	

Task	Task	Subtask	Sub task	Activi	ty	Task Leader	Executants	Progress	Future Needs and Plans
Name	No	Name	No	1ary	2ary				
Detailed Country Reviews		Swaziland review	1.8	1.2	1.1, 1.3, 3.2	Richard Emslie	Richard Emslie	Country visit done 6-10 September, including interviews at Hlane with Big Game Parks and with the National Trust Commission. Report completed and submitted.	
Detailed Country Reviews	1.2-1	Zambia review	1.9	1.2	1.1, 1.3, 3.2	Rob Brett	Conybeare	Country visit done 21-24 August. Report completed and submitted, now including 4 concept/draft project proposals for Zambia	
Detailed Country Reviews	1.2-1	Mozambique review	1.1	1.2	1.1, 1.3, 3.2	Rob Brett	Rob Brett, Giuseppe Daconto, Antonio Reina	Country visit done19-22 September. AR was engaged for 3 days of preliminary information gathering. Report completed, including 3 project proposals/tasks for Mozambique in semesters 3-6.	
Detailed Country Reviews	1.2-1	Tanzania review	1.11	1.2	1.1, 1.3, 3.2	Richard Emslie	Richard Emslie, Martin Brooks, Raoul du Toit	Country visit completed in June 2000. Report completed and received, including project proposals for Selous GR.	
Detailed Country Reviews	1.2-1	Malawi review	1.12	1.2	1.1, 1.3, 3.2	Rob Brett	Conybeare	Country visit done 28 August to 1 September. Report completed and submitted, including 2 project concept proposals, not yet drafted by Malawi focal point.	
Detailed Country Reviews	1.2-1	Angola review	1.13	1.2	1.1, 1.3, 3.2		Rob Brett	Review in progress during last week of semester 2 and 2nd week of semester 3. Outline report circulated at consortium meeting of 10-11 October. No projects proposed.	
Detailed Country Reviews	1.2-1	Check all reviews and compile overall report	1.14	1.2	1.1, 1.3, 3.2	Rob Brett	Rob Brett, Raoul du Toit, Richard Emslie	Most individual review reports scheduled were completed before end of September. Overall draft report was presented at Consortium meeting, along with project proposals for semester 3-4 (8.3-1).	
Review of conservation models including legal aspects	1.2-2			1.2		Raoul du Toit		None.	Defer to Semester 3
Co-ordination with Continental Rhino Conservation Strategies	1.3-1			1.3	1.2	Richard Emslie		Mainly completed during AfRSG meeting in Tanzania. Additional co-ordination achieved during Kenya and Zimbabwe rhino stakeholders' workshops.	
Review and contribute to rhino database	2.2-1			2.2		Raoul du Toit	WWF SARPO: Wendy Marshall, Craig Springett	Comprehensive Rhino Monitoring and Population Database (Individual, Population, National levels) completed (WILDb), including documentation. Implementation within Zimbabwe DWNP and conservancies still required (semester 3 task).	
Radio-tracking co- ordination	6.1-1			6.1		Raoul du Toit		Radio-collar materials procured, and meetings held.	Defer to, and extend project in semester 3

Task	Task	Subtask	Sub task	Activi	ty	Task Leader	Executants	Progress	Future Needs and Plans
Name	No	Name	No	1ary	2ary				
Development and prioritisation of projects	8.3-1			8.3	1.1, 1.2	Rob Brett	Rob Brett; Raoul du Toit, Richard Emslie	70 project proposals from range states and consortium listed, scoped and presented at Consortium meeting. Projects rated, selected and prioritised for programme support in semesters 3 and 4 (see consortium meeting summary: Annex H). Detailed workplan and budget for semester 3 included 12 projects derived from country reviews and consortium members.	
Consortium meeting	8.4-1			8.4	8.1, 8.3	Rob Brett	Rob Brett	Convened on 10-11 October, in Harare, with full attendance by consortium members, with the exception of Y Katerere (IUCN). Summary attached to semester 2 technical report (Annex H).	

Table 2: Progress of Semester 2 tasks against Programme Activities (at October 2000)

A OTH (IT)	C=	ATOMES OF PROCEEDS	Everyne Names and Draws
ACTIVITY	SEM -	MESTER 2 PROGRESS	FUTURE NEEDS AND PLANS
· ·	Y		•
1.1 Establishment	of Deta	ailed Country Reviews completed. Individual focal points for Zimbabwe,	Individual focal points still needed for Botswana and Mozambique, and vital for progress
national rhino	Zam	nbia, Malawi, Namibia and Swaziland established before or during country	with planning for rhino conservation in these range states. National Committees to be
committees.	revie	ews. National Committees not yet involved in developing project proposals	facilitated in Botswana during Semester 3.
	for the	the SADC rhino programme.	
1.2 National rhino	Deta	ailed Country Reviews completed. Proposals for revision of national rhino	New rhino strategies also required by Zambia and Malawi, but development of this not
conservation st	strategies cons	servation strategy and plan submitted by Botswana only.	submitted as project proposals by either country. Mozambique requires surveys as basis
and action plan	ns.		for development of any strategy. Review of rhino conservation models deferred to
			Semester 3.
1.3 SADC rhino pro	_	ailed Country Reviews completed. Co-ordination with continental rhino	
committee.		servation strategies at AfRSG meeting (June 2000). SADC focal points	
		ablished in all countries, but individual representation still not achieved in	
		ne (e.g. Botswana, Mozambique).	
2.1 Surveys of rem	nnant Non	ne	Proposals for rhino surveys and provision associated technical support submitted for
populations.			Semester 3 onwards: Tanzania, Mozambique
2.2 SADC regional			Implementation of database in Zimbabwe populations (DNPWLM and conservancies)
database.	Zimb	babwe rhino populations as model.	planned for Semester 3. Planning for co-ordination and integration of rhino databases in
			the SADC region, including SADC programme, still required, including further
			development of database software (Semester 3 proposals)
	of GIS into Non-	ne	To be developed.
database.			
2.4 Annual rhino st	status Non	ne	To be developed.
reports.			

	ACTIVITY ▼	Semester 2 Progress ▼	FUTURE NEEDS AND PLANS ▼
3.1	Specific field projects.	None	Proposals for field projects submitted for inclusion for support in Semesters 3 – 6 from range states and consortium. Selection and Prioritisation of projects to commence with October 2000 consortium meeting.
4.1	Specialized training.	None.	To be developed in projects selected for programme support in Semesters 3 – 6.
4.2	Production of technical manuals.	None.	To be developed in projects selected for programme support in Semesters 3 – 6.
5.1	Materials for community awareness.	None.	To be developed in projects selected for programme support in Semesters 3 – 6.
5.2	Incentive schemes for reporting poachers.	None.	To be developed in projects selected for programme support in Semesters 3 – 6.
5.3	Benefits to local communities.	None.	To be developed in projects selected for programme support in Semesters 3 – 6.
6.1	Provide expertise for research.	None.	Radio-tracking co-ordination task deferred to Semester 3. Provision of expertise for research the emphasis of several project proposals submitted for programme support in Semesters 3 – 6.
6.2	Pilot projects to test new technologies and methods.	None.	Radio-tracking co-ordination task deferred to Semester 3. Development and testing of new technologies the emphasis of several project proposals submitted for programme support in Semesters 3 – 6.
6.3	Economic analyses.	None	To be developed.
7.1	Assist with the drafting and "marketing" of proposals	None	Several proposals submitted for programme support that will require assistance with drafting for (additional) donor funding.
8.1	Executive Board and Programme Coordinator	Completed in Semester 1. Executive Board convened at least monthly during Semester 2. Programme Co-ordinator started work at IUCN ROSA on 31 July 2000.	Range states meeting planned for January 2001 (proposed venue: Gaborone, Botswana).
8.2	Financial and reporting procedures	Administrative protocol approved and in use.	Some minor revision of protocol still required by consortium members.
8.3	General workplan	selection and prioritisation for support in Semesters 3-6 (Consortium meeting 10- 11 October 2000)	Semi-annual workplans to be developed for Semester 3 and 4 in October 2000 (consortium meeting), including tasks from projects selected from country review process, and consortium proposals.
8.4	Semester technical reports	Consortium meeting planned for 10-11 October 2000 in Harare. Semester 2 technical report in preparation.	Technical report for Semester 2 to be submitted to CESVI by 7 November 2000.
8.5	Semester financial reports	Inputs to financial report for Semester 2 received by IUCN accounting.	Financial report for Semester 2 due for submission to CESVI on 7 November 2000.
8.6	Final report	None.	To be completed in Semester 6.

Table 3: Progress against Semester 3 tasks (September 24th, 2000 – March 1st, 2001)

Task	Task	Task Leader	Indicators of progress	Progress to date
Name	No.	Leauei	semester 3	semester 3
Development of Rhino Conservation Models (semester 2 workplan)	1.2-2	Raoul du Toit	Draft report complete, and circulated by end of semester.	None.
Revised National Rhino Strategy for Botswana	1.2-3	Rob Brett	Draft strategy document complete, and circulated by end of semester.	Botswana Rhino Stakeholders Workshop convened on 15 January 2001 at Khama Rhino Sanctuary. Draft of updated rhino sanctuary document produced, and DWNP comments incorporated. Now in circulation with private sector stakeholders, prior to endorsement.
Co-ordination with national and continental rhino conservation strategies	1.3- 1.2	Rob Brett	(a) Missions to at least two SADC range states by programme co-ordinator; (b) Missions to SADC WSTCU (Malawi) and AfRSG offices (South Africa).	Two missions by Programme Coordinator done: (a) to Dar es Salaam, Tanzania (24-26 January 2001), including coordination of SADC and USFW RTCF funding with Wildlife Division and Selous Rhino Project/EU funding. (b) to Liwonde NP (12-15 February) to co-ordinate with DNPW staff and J&B group on programme support.
SADC Rhino Range States Meeting (Includes Preparation)	1.3-2	Jonas Chafota	(a) Range states meeting held in March 2001; (b) further project proposals originating from range states and consortium tabled for inclusion in workplans for semesters 4-6.	
Attendance of RMG meeting by SADC range state reps		Martin Brooks	Meeting held and attended by representatives from at least two SADC rhino range states.	Meeting Held. Task Completed.
WILDb Rhino Database: field testing, refinement & implementation	2.2-2	Rob Brett	(a) WILDb database established at the Zimbabwe DNPWLM and hardware (2 PCs) procured. (b) Functioning WILDb database in use at least one IPZ and one conservancy. (c) Refinements to database made after field-testing. (d) Final version of database produced, and available to regional applicants.	developed to version 1.2, and now in routine use. PCs for establishment of the
Rhino Monitoring Databases: coordination between range states	2.2-3	Rob Brett	(a) Copies of all rhino databases in use or under development circulated between database developers/managers; (b) At least one meeting or workshop held between database developers/managers to discuss common structures and useful features.	1 , ,

Task	Task	Task Leader	Indicators of progress	Progress to date
Name	No.		semester 3	semester 3
Training in rhino monitoring techniques	4.1- 1.1	Rob Brett	(a) Training course held and attended by representatives from at least three SADC range states. (b) Course material purchased and provided to attendees for further in-country training courses.	
Manual for guiding development of rhino projects by range states	4.2- 1.1	Ryan Hill	Draft manual developed and circulated by end of semester.	Draft of manual completed.
Manual for assessment of black rhino carrying capacity		Martin Brooks	Draft manual reviewed, and software developed and circulated by end of semester.	Draft of manual and software completed.
Guidelines for rhino reintroduction projects	4.2-3	Raoul du Toit	Draft guidelines circulated by end of semester.	Initial draft requires circulation and comment from users in range states, consortium members, and members of IUCN/SSC Reintroduction Specialist Group.
Guidelines for survey & recovery of dispersed rhinos	4.2-4	Raoul du Toit	Draft guidelines circulated by end of semester.	Recommendations outlined and communicated to Tanzanian authorities, to be re-drafted to be of more generic applicability and reviewed within consortium.
Rhino post release data: synthesis of guidelines for translocations	4.2-5	Rob Brett	(a) Agreement on common standards for analysis of translocation and post-release data on individual rhinos. (b) Data from at least two SADC range states combined and collated for analysis.	
Review of community involvement in rhino conservation in range states	5.1-1	Giuseppe Daconto	(a) Draft report circulated by end of semester. (b) Follow-up activities identified.	Draft report completed.
Radio-tracking Coordination (semester 2 workplan)	6.1- 1.2	Raoul du Toit		Consultant engaged to review current collar designs, and develop two new prototype collars. Two collar designs already built and will be field-tested on tame rhino to be released in Matusadona IPZ before June 2001. Malilangwe workshop.

Task	Task	Task Leader	Indicators of progress	Progress to date
Name	No.		semester 3	semester 3
- 1 - 1	-	Richard Emslie	(a) Main users of RHINO over the years canvassed for suggestions and desired modifications to RHINO. (b) Developer and Statistician/Programmer to examine a range of existing RHINO database applications (including new SADC application, new KWS application and KZNNCS corporate database) to facilitate efficient generation of RHINO input data sets. (c) The developer to supply consultant Statistician/Programmer with copy of RHINO 1.21 Software, and a full set of manuals plus the original program code in electronic format (October 2000). (d) Developer and consultant Statistician/Programmer to meet in South Africa in November for initial discussions (e) Detailed design specifications for new version of RHINO to be completed by the end of Semester 3. (f) Programming and testing of new version modules commenced by the end of Semester 3.	Pietermaritzburg in November 2000. Indicators (a), (b), (c), (d) and (e) achieved. Indicator (f) due for completion before end of semester.
Intelligence databases: coordination between range states	6.1-3	Rob Brett	(a) Meeting/workshop held to demonstrate example intelligence databases and networks to representatives from at least two range states; (b) Copies of database software made available to, or purchased for wildlife management authorities or police units for use in individual range states, or on a regional basis.	intelligence database demonstrated during rhino databases symposium of 20
Rhino horn fingerprinting techniques: validation		Richard Emslie	(a) Paper on horn fingerprinting statistical analyses to date presented at the South African Statistical Association (SASA) Conference at Wits University, Johannesburg, 8-10 Nov 2000. (b) Project leader to meet with other statisticians/programmers, and lab staff as required to further project objectives. (c) Existing datasets and sample description databases made available to consultant Dr Rajan Amin to assist him investigate potential alternative analysis procedures (e.g. Neural Networks, Decision-Tree analysis etc.)	Pietermaritzburg in November 2000. Indicators (a), (b) and (c) achieved.
New technology for rhino monitoring: transponders, GPS, etc	6.2-2	Raoul du Toit	Draft report circulated by end of semester, with information available fro circulation at range states meeting.	Information accumulated from Internet sources on (a) development of Digital Angel transponders, (b) GPS collars available from four manufacturers, and (c) <i>Cybertracker</i> software. Information also obtained on development of Palm Computers and GPS/GSM modules as future platforms for (a) and (c).
Project Development & Prioritisation	8.3- 1.2	Rob Brett	(a) Project proposal format circulated to all range state representatives and consortium. (b) Project proposals submitted in format for selection and approval at SADC rhino programme committee meeting (March 2001)	

ANNEX D: LIST OF PROJECT PROPOSALS SUBMITTED

No	Project Proposal Title	Range State	Originator	Proponent	Contact	Semester	Period	Submitted	Funds requested
20	Ecological Studies to develop a management plan for the black rhino	Malawi	DNPW	DNPW	R Bhima	4,5	12 months	Proposal & budget	\$9,420
	in Liwonde NP, Malawi								
24	Assessment and feasibility study for an IPZ for rhinos in Moremi GR	Botswana	SADC RPRC	DWNP	M Tjibae	4	2 months	Proposal & budget	\$9,758
25	Assessment of habitat, carrying capacity and management options for	Botswana	SADC RPRC	Khama RS	F Schutyser	4	2 months	Proposal & budget	\$8,038
	black and white rhinos in or near the KRS, Serowe								
28	Technical support to the Selous Rhino Project	Tanzania	SADC RPRC		M Maige	4	2 months	Proposal & budget	\$27,376
35	Madikwe GR as a model for developing a successful community rhino	South Africa	NWPTB	NWPTB	R Hustler	4	6 months	Concept only	-
	conservation programme								
38	Improving and standardising methods for black rhino carrying capacity	SADC Region	K Adcock	K Adcock	K Adcock	4	6 months	Proposal & budget	\$6,742
	assessment								
39	Improved calibration of the RMG black rhino carrying capacity model	SADC Region		K Adcock	K Adcock	4	6 months	Proposal & budget	\$6,310
40	Incorporation of benchmark Zimbabwean black rhino areas into the	SADC Region	K Adcock	K Adcock	K Adcock	4,5	9 months	Proposal & budget	\$7,580
	RMG black rhino carrying capacity model								
44	Scene of the Rhino Crime Training	SADC Region		AfRSG	R Emslie	4,5	12 months		\$10,000
48	Workshop on biological management to meet continental and national	SADC Region	RMG	RMG	M Brooks	4	1 week	Proposal & budget	\$28,239
	black rhino conservation goals					1			-
49	Compilation of RMG report: 'Status and management of black rhino in	SADC Region	RMG	RMG	M Brooks	5	1 month	Proposal & budget	\$4,300
	the RMG region: 1/99-12/00'		505	505		1			
52	Expert assessment of black rhino carrying capacity in one Swaziland	Swaziland	BGP	BGP	T Reilly	4	1 month	Concept only	=
	reserve	0400000000	TDAFFIO	TD A FFIO	O Milla dasa	4.5	40	Duran and Orbital and	0.47.500
55	Improving Security and management of rhino horn stocks in SADC	SADC Region	TRAFFIC	TRAFFIC	S Milledge	4,5	12 months	Proposal & budget	\$47,500
	rhino range states	O a settle Africa a	ANA/DTD	AUA/DTD	Dilleration		0 (1	Duran and Orbital and	#0.000
59	Trovan scanners and equipment for rhino identification	South Africa	NWPTB	NWPTB	R Hustler	4	6 months	Proposal & budget	\$9,000
60	Pilanesberg Security and Monitoring Centre	South Africa	NWPTB	NWPTB	R Hustler	4	6 months	Proposal & budget	\$24,000
80	DNFFB Institutional Strengthening, Research and Relocation of Rhino	Mozambique	DNFFB	DNFFB	F Langa	5	12 months	Proposal & budget	\$50,000
04	in Mozambique	Nie weile ie	NACT	NACT	Diantit	4.5.0	47 41	Drange al O burdenst	Φ Γ Ω 000
81	Capacity Building in Rhino Monitoring	Namibia	MET	MET	R Loutit	4,5,6		Proposal & budget	\$50,000
82	Development of Hobatere Area in Kunene Region, Namibia, as a Rhino Sanctuary	Namibia	MET	MET	DD Parks	4,5,6	17 months	Proposal & budget	\$50,245
02	Building bridges between communities and government for improved	Namibia	MET	MET	D Rudman	4,5,6	10 months	Proposal & budget	\$27,555
03	rhino management (video)	INamibia	IVIE	IVIEI	D Ruuman	4,5,6	10 1110111115	Proposal & budget	φ2 <i>1</i> ,333
84	Attainment of carrying capacity for rhino on communal land of north-	Namibia	SRT	SRT	M Hearn	4,5	10 months	Proposal & budget	\$42,810
04	western Namibia	Inamibia	SKI	SKI	Willeam	4,5	10 1110111115	Froposal & budget	φ42,010
85	Upgrading of SRT Patrol & Training Bases at access points to	Namibia	SRT	SRT	B Loutit	4,5,6	18 months	Proposal & budget	\$49,500
03	Kunene/Erongo rhino range	INGITIDIA	J SIX I		Louin	7,0,0	10 1110111115	Troposara buuget	ψ+3,300
86	Black Rhino Monitoring project on communal land north of the Hoanib	Namibia	SRT	SRT	S Uri-Khob	4,5	12 months	Proposal & budget	\$49,920
	River in Kunene Region, Namibia	- Tallibla				1,0	12 1110111110	i Topoda a badgot	Ψ 10,020
87	Education & awareness of state of black rhino and habitat	Zimbabwe	MBRCT	MBRCT	B Swift	4	12 months	Proposal & budget	\$2,200
88	RESG - Meeting in Namibia	SADC Region	_	RESG	S Pillinger	4	1 week	Proposal & budget	\$7,000
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No	Project Proposal Title	Range State	Originator	Proponent	Contact	Semester	Period	Submitted	Funds requested
89	RESG - Co-ordinator's Desk	SADC Region	RESG	RESG	S Pillinger	4,5,6	18 months	Proposal & budget	\$17,000
90	Madikwe rhino ear-notching programme	South Africa	NWPTB	NWPTB	R Hustler	4,5,6	18 months	Proposal & budget	\$50,000
91	Habitat evaluation for the reintroduction of the black rhino in priority parks in Zambia	Zambia	ZAWA	ZAWA	G Kampamba	4	20000	Proposal & budget	\$20,000
92	Formulation of policy for rhinoceros management in Zambia	Zambia	ZAWA	ZAWA	G Kampamba	4,5	12 months	Proposal & budget	\$36,000
93	Study tour to rhino conservation areas in the southern African sub- region	Zambia	ZAWA	ZAWA	G Kampamba	4,5,6	18 months	Proposal & budget	\$27,000
94	Building capacity for rhino surveys and monitoring in selected rhino areas in Zimbabwe	Zimbabwe	SADC RPRC	SADC RPRC	R Brett	4,5	12 months	Proposal & budget	\$7,858
95	Development of approaches to community involvement in rhino conservation	SADC Region	CESVI	CESVI	G Daconto	4,5,6	18 months	Proposal only	-
96	Management and Conservation of remnant black rhino population and reintroduction of white rhino in Angola	Angola	IDF	IDF	Kingengo	4, 6	9 months	Proposal & budget	\$50,000
97	SADC Rhino Recovery Group (RRG) inaugural meeting	SADC Region	SADC RPRC	SADC RPRC	H Nzima	4	6 months	Developed at range states meeting	\$10,000
98	Management of white rhinos in Mosi-oa-Tunya NP	Zimbabwe	ZAWA	ZAWA	G Kampamba	4, 5	7 months	Proposal & budget	\$39,500
99	Translocation of black rhino to North Luangwa NP, Zambia from South Africa	South Africa	SANP	SANP	M Knight	4	6 months	Proposal & budget	\$31,600