

1. ► Strengthening of political and institutional support.

This was extremely successful, starting with the Round Table meeting on conservation in the DRC hosted by the Ministry . A guard training programme in Garamba and placement of a Technical Advisor in Kinshasa was agreed. The Embassies of USA, South Africa, UK, Holland and Switzerland were particularly supportive of the conservation effort The President of the Republic pledged his support to Garamba and WWF in a very successful audience in February, and Garamba representatives participated in an ICCN strategic planning workshop in March. A strategic planning workshop for Garamba was planned.

2. ► Developing the personnel capacity

Support to the personnel was maintained by the project as far as possible during the difficult time of the reporting period. ICCN evaluated and carried out disciplinary action on personnel who had been involved in looting and other disloyal activities. The bonus system was revised and developed and all staff back paid and paid until the end of June on a results based system.

3. ► Implementation of strategic law enforcement

The patrolling system was re-developed to the full strength possible within the limitations, during the period, and recommendations for improvement have been made. The poaching was severe, largely for meat and mainly on elephants, buffalos and hippos, but at least two, probably more rhinos have been poached and the poachers were in the Rhino Sector at the start of the period. The training and support programme proposed to help develop and reinforce the capacity of the guards to counteract the poaching was agreed upon, but could not be supported by WWF or other NGO funds, if it involved in-field para-military training by non ICCN or government personnel. However, for external reasons, the poaching eased, with indices dropping by a half on average after January 1998.

The guards have been awarded the Fred Packer Award from the IUCN Commission of National Parks and Protected Areas for their long standing bravery and action, but there has not yet been an opportunity for its presentation.

4. ► Logistical support to park operations

The back ground work and obtaining of import documents and agreements took until March 1998, but in March 3.5 tonnes of guard equipment was flown in by Antanov and issued to the guards. In April a year's fuel supply was flown in by the same Antanov. The radio relay is still to be installed and preliminary work has gone into the development of an all season means of crossing the Garamba river for maintenance of law enforcement and protection of the relay north of the river at all times, even in the absence of the aircraft.

5. ► Continuation and development of rhino monitoring and research

Rhino monitoring by ground patrols and occasional aerial observation continued to provide information. In April a comprehensive and intensive aerial rhino survey was carried out and a minimum of 24 rhinos confirmed, with four calves having been born since the Liberation. Another survey in May saw 22 individuals, but added another to the 24 previously seen in April, bringing the confirmed minimum to 25, with the rhinos missing in May having been seen again in June. This result is far better than was feared possible and reflects well on the motivation of the guards.

6. ► Maintenance and development of law enforcement monitoring

Law enforcement monitoring through guards reports continued throughout and has enabled a thorough objective measure and demonstration of the level of illegal activity and law

enforcement. This has been valuable not only for feed-back in the direction of the law enforcement effort, but in demonstrating the situation and raising support and in calculating the results based bonuses. Some minor modifications have been made and intensive training programmes are planned for both data collection and analysis levels.

A systematic sample count of the whole park indicated drops in numbers of elephants of the order of a half, buffalos to a third and hippos to a quarter of the 1995 count results. No significant reductions of other species are indicated, but the northern two thirds of the park are almost devoid of large mammals.

7. ► Initiation of a community outreach programme

A pilot project for the proposed community outreach programme was planned, so that information could be available for development of a full proposal at the workshop. Unfortunately, insufficient funds were available within the time frame, but this activity is a priority for implementation, not only to support the conservation efforts of the park and ecosystem, but in the context of National priorities..

GARAMBA NATIONAL PARK PROJECT

ZR 0009, July 1998,

Part 1: Report for the period July 1997 to June 1998,

Fraser & Kes Smith

Part 2: Overview of the Northern White Rhino population of PNG,

Kes Hillman Smith & Mbayma Atalia

- Status and population dynamics, past, present and future potentials

- Individual details and history

- Ecology and relation to conservation

- Behaviour and relation to conservation

-Rhino Monitoring Programme

- Meta-population conservation of Northern White Rhinos

Part 3: Overview, through monitoring, of the status of law enforcement and illegal activities,

Kes & Fraser Smith, C.P.Mafuko Girineza & C.P.Mbayma Atalia

- Recent history of the development of illegal activities at PNG and in surrounding D.C.s

-Current status and future prospects

-Law enforcement monitoring

Part 1: Report for the period July 1997 to June 1998,

INTRODUCTION

Overview

Initially the project was started for the rehabilitation of the Garamba National Park ecosystem, of which the Northern White Rhinoceros was the key flagship species. The park had suffered massive poaching over the period 1978 to 1984. After the preliminary rehabilitation phase, the project went into the Conservation and Development Phase. During the first 10 years of the project, the rhino and elephant populations doubled and the capacity of the Institut Congolais pour la Conservation de la Nature (ICCN, then IZCN) was considerably enhanced and supported.

After the civil riots in the country in 1991, most government linked aid projects moved out and sanctions were placed on many sources of funds, which curtailed several planned development activities for Garamba, and the Project was instructed merely to keep a "Holding Action" going. However at the same time the civil war in adjacent Southern Sudan moved close to Garamba and 80,000 refugees settled into areas adjacent to the Domaines de Chasse. Arms and ammunition moved relatively freely in the region, and groups of military, "deserters" and later "rebels" based across the border and in other areas outside the park, were probably contributing to the off take of meat that increased in quantity and aggression from 1991 onwards. Military based in this border area were a mixed blessing, sometimes providing support, training and ammunition, at other times actively involved in ivory off take. Despite an excellent guard force who followed three major military training and support courses in the park during that time, a holding action

was insufficient against the level of poaching , which moved southwards through the park towards the Rhino Sector. Specialised conservation and bush warfare training coupled with increasing and improving the logistical support base, with more personnel of suitable experience and more effective and broader back up was proposed. A consultant of widely recognised expertise in this type of training carried out a training needs assessment at the park on behalf of the Game Rangers Association of Africa, with the Project Leader during the time that the park was occupied by mercenaries (Greeff 1997 Training Needs Assessment Garamba National Park).

Between October 1996 and April 1997 what had been Zaire was swept by civil war, which overturned the Mobutu regime and installed President Kabila as head of the Democratic Republic of the Congo.

Garamba was occupied by mercenaries fighting for Mobutu and then by the AFDL forces, who began by disarming all the park guards. The general state of the country and the enforced reduction in anti-poaching allowed free rein to the poachers who moved right into the rhino sector, killing elephants, buffalos, hippos and a few rhinos. (Smith & Smith 1997a).

Initial project activities focused on getting back into the park and providing back up support. The project leader was blocked in Goma in March, when the aircraft was impounded, but got in overland in May and the project executants were able to fly in in June and carry out an aerial evaluation of the rhino and poaching situation in the southern sector. The results were so striking and the poaching so active in the rhino sector, coupled with all forms of logistical support to anti-poaching having been looted, that the project activities for the whole of the past reporting year have centred on rescue and rehabilitation, The process however had to start at the top, since there was no means to operate in the park, the headquarters was under military occupation, and it was important to ensure that conservation became recognised as an major factor in the reconstruction of the nation. Urgent crisis action therefore had a three pronged approach: a) a collaboration with other organisations and field projects to strengthen the relationship with the new government, to present the current status, request high level support and to develop a joint approach to solutions, to raise financial and practical backing and to obtain the necessary clearances for re-equipment, and in the field, : b) support through training and back up to law enforcement and to monitoring, following the lines proposed by the GRA consultant, and c) major, rapid logistical supply and regular on-going back-up.

LONG TERM GOALS, OBJECTIVES AND OUTPUTS

The original **goal** of the project was:

Conservation of Garamba National Park with the rhinos as a focal part of the ecosystem.

The current **goal** is :

Conservation of the northern white rhinos in Garamba National Park.

To achieve this goal, however, involves support to the whole management of the National Park and its surrounding Reserves, which revolves around law enforcement in the park as a core activity and the other actions as supportive of this. Under normal circumstances, project

activities are based around 7 main **outputs**:

1. ▶ Strengthening of political and institutional support.
2. ▶ Developing the personnel capacity
3. ▶ Implementation of strategic law enforcement
4. ▶ Logistical support to park operations
5. ▶ Continuation and development of rhino monitoring and research
6. ▶ Maintenance and development of law enforcement monitoring
7. ▶ Initiation of a community outreach programme

GOALS, OBJECTIVES AND OUTPUTS FOR THE REPORTING PERIOD

In view of the disrupted situation following the war, military occupation and the heavy poaching at the start of the reporting period, as evidenced by the results of the survey in June, normal activities were impossible and although actions can still be classified within the same basic categories, there was a need to change targets.

The **Immediate goal** for the period therefore was:

- ▶ ***To stop or reduce the heavy poaching and move it back from the rhino sector before too many rhinos were lost for a viable population.***

This action falls under the output of implementation of strategic law enforcement, which is central to the whole park/ project operation. All other park and project outputs are basically related in a supporting role to this central ICCN activity as outlined in the flow chart..

The specific objectives aimed at achieving this goal during the reporting period were:

- ▶ Direct support, by means of a field training programme working with the guards, and in the initial crisis period, direct government support was requested.
- ▶ Logistical support in the form of urgent re-supply of essential equipment for effective law enforcement and training, which involved fund raising, purchase, essential documentation, re-development of a secure environment for re-supply and aerial transport.
- ▶ On-going support with every effort possible, to the personnel during the period, and re-organisation by ICCN on the basis of actions and results during the events.
- ▶ Strengthening political and institutional support in the context of a new nation, to re-develop the positive collaboration and to facilitate re-equipping and training as required by ICCN and the Ministry.
- ▶ Maintenance of basic rhino monitoring during the events, summaries of data and aerial surveys to evaluate the rhino and poaching status as soon as possible. Re-training and revision of the draft Rhino Monitoring Manual in collaboration with the Rhino Protection Officer and on the basis of unsupervised results, to ensure long term continuity.

- ▶ Maintenance of basic law enforcement monitoring, summarising and reporting on information, re-training and manual development as necessary.
- ▶ Initiation of a pilot project to develop the role of local communities in controlling and benefitting from the sustainable use of natural resources. Preliminary results were to be produced for the workshop as a basis for development of the full project.

PROGRESS

1. Political and institutional support

In view of the enormity of the problem in the field, the military involvement and the optimistic spirit of change and reconstruction in the country, in which conservation needed a voice, the first activities were to approach the government for support and to develop a collaborative partnership.

The following missions to Kinshasa took place during the year:

July 1997

Round Table Meeting on conservation in the DRC hosted by the Minister of Environment Present from WWF and Garamba: Director General (DG), Reg. Rep. EARPO & CARPO, Project Leader (PL)GNPP, Coordinator Monitoring & Research (CMR)GNPP.

September 1997

Follow up meetings with Minister ECNT and presentation of proposal for a training programme for the guards by the Game Rangers Association of Africa.
RR-EARPO,CMR-GNPP

January 1998

Meetings with Minister to present that fact that WWF could not fund the training programme carried out by a security group, but to encourage them to continue with it, with facilitation by WWF if they fully supported the need.
RR-EARPO, PL-GNPP, Programme Officer (PO) EARPO

February 1998

Delegation for an audience with the President of the Republic.
DG, RR-CARPO ,CMR-GNPP, POEARPO

March 1998

ICCN Strategic Planning Workshop
RR-CARPO, CMR-GNPP, Chef de Parc (CP)GNP, Rhino Protection Officer (R.P.O.)GNP & 3 consultants

The process was initiated in Kinshasa in July by the CMR working in collaboration with other NGOs. The Minister of Environment hosted a Round Table Meeting attended by the main NGOs with interests in the country, the government, ICCN and Embassy personnel. WWF was

represented by the Director General, Regional Representatives Eastern Africa and Central Africa and the representatives of the Garamba National Park Project. It was an expression of solidarity in the conservation of the valuable natural resources of the D.R.Congo and an examination of the priority problem situations. Support for urgent action was offered by several of the Embassies represented in the country, most actively by the American and South African Ambassadors. At the request of the American Ambassador, a proposal for emergency re-equipment of the park to be supported by end of fiscal year funds from USFWS was presented in August 1997 through the Embassy. It was favourably received, but has not yet been finalised through all the organisational processes and translated into equipment.

In September the Training Programme Proposal developed in conjunction with the Game Rangers Association was presented and agreed in principle and later fully. When GRA found that they could not recruit the right people they proposed that the security training group Saracen International were suitably qualified, and Saracen presented a proposal to carry out the work. In January, when this proposal was to be discussed with the Minister, it was found that WWF could no longer fund it if carried out by a professional security group. The delegation in January then went to inform the Minister of this, but to facilitate his approaching other funding organisations to carry out the action, if he agreed with the proposal, which he did.

In February a WWF delegation was granted the possibility of an audience with President Kabila. The delegation was designated as the WWF Director General, Dr Claude Martin, The Regional Representative of Central Africa, Dr Olivier Langrand and the Coordinator Monitoring and Research of Garamba, Dr Kes Hillman Smith. The Programme Officer Ir Sylvie Candotti was also present and joined the delegation that almost had an audience on the Saturday after Dr Langrand had left. The visit coincided with the week in which Jesse Jackson was refused an audience and Tshisekedi was arrested. Most of the week was therefore spent waiting for a summons to the meeting. Eventually all left, except the CMR, who was pursuing the documentation for the import of the equipment for Garamba. The delegation that was called to see the President on the following week therefore consisted of the Minister and the CMR. It was a very successful audience, with the President giving his support to collaboration with WWF and the placement of a Technical Advisor in Kinshasa, and particularly focusing on his concern for the northern white rhinos and the conservation problems in the Garamba area and pledging his support. Mounted photographs of the rhinos and elephants and of the maps that demonstrate the current picture for Garamba were presented to him. Both the President and the Minister emphasised the value of a long term personal commitment to conservation in the Congo.

In March, the CMR participated in the ICCN strategic planning workshop, which gave an overview of the current status of natural resource conservation and developed a framework of the needs and priority activities to address them within the country. (Copies of the plan available if required).

The output of developing political and institutional support has therefore been extremely successful, and has developed a very strong sense of joint purpose in the conservation of Garamba and the northern white rhinos.

2. Developing the personnel capacity

The events of the war period and the following transition period have demonstrated the capacity and motivation of the personnel that has been built up over the years. The continuation of anti-poaching and monitoring, albeit in a limited way at first, as soon as possible after the events shows this strength of purpose. The anti-poaching capacity has been built up again with regular continuous patrolling, and poaching has reduced during 1998. However, the effectiveness of the anti-poaching has been limited by the lack of vehicles, the radio system and the lack of aerial support without fuel.

Personnel support and management

Throughout the war and the post war transition period, the project executants maintained support to the ICCN staff, with regular radio contact as soon as it could be re-established, and visits to the park every six weeks. The Logistics Officer (LO), with his long term experience of the country and civil disturbance, remained in place throughout with his Congolese family and provided valuable daily back up to the Chef de Parc (CP). The C.P. moved into the Research Unit house next door to the LO when he was ousted from the Residence by the military, and shared all meals as his family was not present.

Inevitably there were several of the park personnel who were seriously implicated in the looting and other disloyal activities. ICCN have therefore held a full investigation and have taken disciplinary and corrective action. Where cadre have been instigators or leaders of looting, ICCN decided on transfers. The payment of the new bonus system with back pay for the whole period, could not take place until the transfers were implemented.

By March 1998 all the ICCN staff disciplinary action had taken place. A new personnel structure was drawn up, with the middle level leadership role being selected from within the ranks on the basis of proven qualities and ability, as measured by their on-going work and their results in previous training programmes. (Annex 1) The new bonus system was developed by the Chef de Projet and Chef de Parc and LO and was implemented from April onwards. Back pay on the basis of results was calculated and paid.. The senior guard inspector and Chefs de Section carried out the extraction of results per guard from January 1997 to March 1998 from the law enforcement monitoring data. Spreadsheets to calculate the results based bonuses were drawn up by the CMR and the results for each guard entered by the Researcher. (Annex 2-example of one month.)

3. Implementation of strategic law enforcement

The training programme was proposed as a means not only of giving the guards the in-field support and tactics to remove the poaching from the rhino sector and the centre of the park, but to give them the long term ability to maintain effective law enforcement with thorough conservation principles. In other words, it encompassed an approach to the implementation of strategic law enforcement coupled with developing the personnel capacity in the long term. It

was designed with an element of training the section leaders as trainers themselves, and of having a review and re-training period where guards from other ICCN stations could benefit from training. The Ministry has proposed that this be developed into a guard training centre at Garamba, and training in the monitoring of law enforcement could become an integral part.

It had been anticipated that the danger to the rhinos would be greater in the short grass environment of the dry season at the start of the calendar year. However, according to patrol reports and the Conservateur Principal there had been a drop in poaching from January onwards and this is supported by the aerial count results. Contacts per 100 patrol days dropped from an average of 19 between June 1997 and January 1998 to 6 between February and May 1998, while gunshots recorded dropped from 3.2 per patrol day to 1.6 per patrol day during the same time periods. This eased the pressure, despite the fact that the training programme had been postponed in the search for suitable funding that could be used for in-field training in law enforcement and the radio system was not re-installed or the aircraft possible for back up.

A professional conservation law enforcement training unit has now been established in Southern Africa, which could do the training as previously agreed and lead on to developing the Training Centre requested by the government. While this is under development, a professional military trainer is being hired by WWF to do short term training in weapons handling and military tactics.

There had been a series of different military units based at the park since the Liberation in February 1997, but although they began to help the antipoaching patrols, most were considerably less experienced than the guards at the type of action necessary, and the park had to support many of their logistical needs through requisitioning. Following the visit of the PDG and the Conseiller Avolumombo from the Ministry of Environment, the remaining soldiers were moved away for training in October, and a vehicle has been returned. The guards continued effective anti-poaching and the poaching has been much reduced. In June 1998 well trained military were sent by the President himself to defend the area and the valuable resources of the park. Apparently it is planned that 1500 will be deployed in the border area, with 250 based at the park head-quarters. Meetings have been held with the General and Colonel in charge, who aim for a strongly collaborative partnership with the park and have proposed establishing a protective cordon around the park. Unfortunately none of their own equipment has yet arrived and the rations brought with the first group have been used.

4. Logistical support to park operations

Methods

Logistical support, in terms of guard equipment, vehicles, fuel, maintenance, spare parts, construction materials and rations is the major expenditure of the project in contributing to park operations. The in situ Logistical Officer for local procurement who was recruited just prior to the events, has proved to be a valuable asset in obtaining and transporting rations, equipment and medicine within the country, as well as maintaining and supporting the Conservateur Principal in maintaining some control of their use during military occupation. However, although most of the above materials come from outside the country, there has been no effective external

logistical support base in operation.

It was therefore necessary for the project executants to do the ground work to urgently re-equip the park after the looting. However there were several pre-conditions to be overcome first:

- ▶ The initial occupation by relatively inexperienced and not always adequately controlled military had to leave, and military respect for the conservation priority in use of park equipment needed to be established.
- ▶ It was necessary to raise funds for the extra capital equipment that had not been foreseen, although it was possible for existing funds to be advanced .
- ▶ The WWF agreement with the government needed to be revised and re-signed or validated in order to get the documentation to allow for the import of the materials.
- ▶ Equipment had to be researched, purchased and transported
- ▶ Specific documentation for the equipment had to be obtained
- ▶ Aerial transport was foreseen as necessary for urgent re-supply during the wet season, and this had to be sought and arranged.

With the Ministerial and Presidential backing of the conservation effort for Garamba, events moved faster and the project is extremely grateful for all the support. Nevertheless it was not until March 1998 that it was possible to fly in 3.5 tonnes of guard equipment, and later an annual fuel supply. We are grateful to Skylink's courageous aircrew for flying into a small bush airstrip in an Antanov 32.

Results

From April onwards, therefore, the guards were issued with tents, backpacks, uniforms and other equipment when on patrol. Allocations for different grades were as indicated in the example equipment issue sheets. (Annex 3).

In April and May it was possible to carry out intensive aerial surveys of the status of rhinos and the ecosystem and to provide aerial support to anti-poaching, while the few vehicles that had been recovered had fuel for operation. Installation of the radio relay was delayed by the visits of delegations and consultants, but is a priority for July as this is essential for commanding the patrols, obtaining feedback and providing rapid back up. Preliminary work has also been carried out on developing an all season means of crossing the Garamba river to ensure law enforcement and protection of the relay north of the river even at times when the aircraft is absent.

The first steps have therefore been taken in rehabilitation of the effective functioning of the park, but there is much to be done. The results of the law enforcement effort over the past few years clearly show that while the guards have been doing a very courageous and effective job of law enforcement, it has not been effective enough. Part of the problem is due to inadequate logistical support in terms of the equipment, vehicles and maintenance units necessary and insufficient motivated, trained personnel with a sensitive understanding of how things work in this environment to carry out all the tasks necessary, and to the almost complete absence of a logistical procurement and supply system. The project executants have therefore proposed that in the context of the new development potentials in the DRC, this is the time to address these

issues in a professional manner, with additional alternative approaches to support the necessarily limited conservation funds.

5. Continuation and development of rhino monitoring and research

Methods during the reporting period

Rhino monitoring by reporting and centralising of ground observations was maintained throughout the events and the post war transition period by the guards, inspectors and researchers. This was carried out in collaboration and in radio contact with the CMR, but without direct supervision and reflects very positively the training and motivation of the ICCN staff. The rate of rhino observations from the ground on walked rhino patrols, however, is 0.03 per hour, compared with 3.3 per hour from aerial recce series searching (Smith & Smith 1996, GNPP Report Jan-June 1996) so inevitably the number of observations was limited and depending on the level of training of the reporting observer, precision also varied.

During the time spent at the park by the Project Leader during this period a few aerial reconnaissance flights were possible but flying was limited by the lack of avgas after the looting. On each visit the PL had to bring a 44 gallon drum of avgas in the aircraft. The recce flights were made with the Conservateur Principal, the guard inspector Giningayo and other trained and skilled observers. It was during these flights that three of the four rhino calves born during the reporting period were found and that a major contribution to the rhino data collection for the year was made.

The third and most intensive level of monitoring was the intensive aerial reconnaissance series made to evaluate the status of the rhino population and the poaching in June 1997, April and May 1998. The flights in June 1997, carried out in the C-206 used most of the stock of avgas which had survived the war. The next aerial recce series was therefore not possible until a load of fuel had been brought into the park, which, as outlined above, was in April. This count and the subsequent one were carried out in the PA-12. (Smith & Smith 1997, Hillman Smith et al 1998a, Mackie Part 1, Hillman Smith et al Part 2 1998b)

The intensive aerial recce series were the most effective method of making an objective and thorough evaluation of the effects of the events associated with the war and the transition period on the rhinos and on the poaching. However the regular flights by the PL and observers and the regular patrol reports by the guards are vital for an on-going appraisal of the situation and particularly for their observations of indices of poaching threat to the rhinos, which can be countered by the law enforcement action of the guards, directed by the CP.

Results

Table 1 and 2 summarise the observations of rhinos, classified by individuals.

In June 1997, 18 different individuals had been found, and approximately 22 estimated as possible on the basis of the representative intensity of previous results. The survey also showed

the extremely high level of poaching that had moved down into the northern edge of the rhino core area. 49 recent poaching camps were found and ten groups of poachers in the park, nine of which were occupying camps. Fresh elephant, buffalo and hippo carcasses were densely distributed, particularly near the Garamba river. (Map1) (Smith & Smith 1997, Evaluation de l'état du PNG, Haut Congo en juin 1997, Rapport présenté au Table Rond réunissant le gouvernement de la DRC et les organisations oeuvrant pour la conservation de la nature, Kinshasa juillet 1997)

Four calves are known to have been born since the Liberation, to the females *F6, Pacque (6eM Congo)* in August 1997, *F3 Kunalina (3gM Laurent)* in December 1997 or January 1998, *4bF Mai (4ba Edi)* in February 1998 and *F1 Mama Moke (1fM Fraise)* in March 1998.

During the aerial survey work from 16 to 24th April 24 group observations were made involving 45 rhinos, and a further 4 groups comprising 7 rhinos were observed from the ground. On the basis of individual identification, this gave a confirmed minimum number of individuals present of 24, of which 21 were counted on the baseline section of the survey and a further 3 were found during re-survey of core blocks to search for missing animals, verification and placement flights. The population counted comprised the following age and sex structure, classified as defined in the Rhino Monitoring Manual (Hillman Smith et al 1996):

Male adults	2
Female adults	7
Male sub-adults	6
Female sub-adults	2
Male juveniles	2
Female juveniles	2
Infants	3

In May another rhino survey was carried out with external consultants in collaboration with the project executants, coupled with a testing of methods. This time 14 group observations comprising 30 rhinos which with double sightings comprised 22 individuals were made. One young female, recently separated from her mother on the birth of her next calf was found extra to the individuals identified in April. A group of three, comprising *F6 Pacque, 6eM Congo, and 6dM Willibadi* was not found during the count, but was subsequently observed again in June. This therefore brings the known minimum to 25 rhinos. Of the seven adult females, 6 have calves (86%).

Tables 1 and 2 give the individual observations by month, and a summary of the status of different individuals.. There were 116 rhino observations in 1997, compared with 158 in the first 6 months of 1998 and with 822 in 1996. The frequency of observations of different individuals is presented graphically. It can be seen that two subadults and one adult female were not seen in 1997, but were found again in 1998. The adult male Eleti M2 was observed 5 times in 1997, but has not been found at all so far in 1998.

Detailed results and an overview of the results of rhino monitoring since 1983 are in Part 2 of this report.

Training

Based on the results of the continuation of ground rhino monitoring with minimal supervision and the re organisation of the patrol system, it was planned in June to hold a re-training session for guards and an intensive period working with the researchers on data entry, together with a revision of the Monitoring Manual into two documents. These will comprise a simple handbook for the guards to use, in Bangala, and the more detailed guide that consolidates the data collection and analysis methods and gives training guidelines.

Revision of the first draft of the Monitoring Manual has been awaiting feedback from Dr Mbayma. He only returned to the park in May. The rhino and general counts were delayed because of the fuel shipment and time had to be given to several delegations and consultants. Hence the revision of the manuals and the training session have had to be postponed. The manual revisions and data entry development will take place after August. The main guard training sessions will be carried out by Mbayma and Hillman Smith in the short grass period.

6. ► Maintenance and development of law enforcement monitoring

Patrol monitoring

Law enforcement monitoring has also continued throughout the events. At patrol level, it comprises the regular reporting using the standard formats by the guards, de-briefing by the Conservateurs, with the Inspectors and Chefs de Section and immediate use of the information in reaction and deployment, summarising by the inspectors, higher level analysis and mapping of results by the CMR and use of the personnel deployment information coupled with results, by the PL, CP and LO to calculate bonus payments on the basis of a standard format. The immediate reporting by radio and the back up that this facilitates, was not possible during the reporting period, since the radio relay had been destroyed and the batteries, solar panels and radios looted. However, new equipment has been purchased and it is urgent priority that this is installed as soon as possible.

The maps produced from the patrol monitoring, clearly demonstrate the spread of poaching south through the park since the events of the Sudan War began to affect the region seriously. They have been produced in colour in CAMRIS (Computer Aided Mapping and Resource Inventory System) and have been used very profitably to illustrate the situation for the Chef de Parc and to demonstrate it to raise support and have even been presented to the President of the Republic. The whole law enforcement monitoring system has clearly demonstrated its worth and its durability.

Systematic aerial reconnaissance

The second level of law enforcement monitoring is the aerial reconnaissance for indices of poaching and for back up to patrols. This is carried out largely by the PL with trained observers and contributed to by the rhino monitoring reces. This has been very limited during the period because of the absence of fuel for most of the time and the absence of radio communication

which made nearly impossible any back up to or guidance of guards. To carry out anti-poaching reconnaissance without being able to bring in patrols to deal with any poachers found can have a negative effect, since poachers learn that the aircraft under those circumstances is ineffective and it loses its deterrent effect. Actions must be cost effective especially when resources are severely limited. Aerial law enforcement monitoring that has taken place included the surveys in the rhino sector in June and April, when poaching indices were counted and mapped and used for patrol guidance and for presentation of the situation to raise support. It included the aerial reconnaissance flights made by the PL whenever possible as fuel allowed.

In February, a series of reconnaissance flights was carried out by the PL and CP with observers specifically to search for any signs of the “rebel” camps of some 5,000 people that the international press was reporting as being based in Garamba. No signs of these rebel groups were found in the park, although the level of meat off take indicated by the patrol monitoring supports the likelihood of large scale bases somewhere in the vicinity, probably across the border.

Systematic aerial surveys

The third level of law enforcement monitoring comprises the systematic aerial surveys of the park and Domaines de Chasse. These are to count and map the resource being protected and the factors affecting them, and enables the park to measure the results of law enforcement action, poaching pressure or other events, such as, in this case, the war..

In May a systematic sample count of the whole park was carried out. Due to time and fuel constraints it was decided to limit the count to the park and not to cover the Domaines. Due to the delay in the fuel shipment, and the consultant visits, the count was about 6 weeks later than planned and there had been heavy un-seasonal rains linked to *El Nino*. The grass was therefore about 1 metre tall. This made the carcass count comparable with the count from 1995, which was also later than ideal, but not comparable with other counts which have been made in March or April. All other species counts, however, are comparable with previous results, since basic methods and trained observers were the same. A full report is being prepared by members of the count team, but preliminary results are presented here.

Basic methods followed those outlined in the Count Manual (Hillman Smith et al. 1995). The same north central and south strata were used, but the south stratum, where virtually all remaining animals were located was counted at double intensity with 2.5km spaced transects to increase precision. The other two strata were covered by 5 km spaced transects. East-west transects were used and each stratum analysed separately and combined for the species.

Figures are presented comparing the numbers from the 1995 survey to those of 1998. Elephants are down by half of the 1995 figure and buffaloes down to one third. As the example distribution map of elephants shows, the northern two strata are almost devoid of animals. Elephants and other species are concentrated only in the south stratum.

SPECIES	1995 POP.EST.	SE	1998 POP.EST.	SE
Elephant	11,175	3,679	5,874	1,339
Buffalo	25,242	8,299	7,772	2,063
Hippo	3,601	1,294	786	207
Giraffe	178	108	144	73
Waterbuck	1,680	669	1,362	433
Hartebeeste	2,819	590	1,685	398
Kob	6,601	1,495	6,505	1,558
Warthog	5,606	1,261	4,765	668
Roan	81	78	8	7

The declines of elephants, buffalos and hippos are significant, buffalos since 1983, ($p < 0.05$). The striking declines of these species correlate with the predominance of fresh elephant, buffalo and hippo carcasses counted in June and the old signs and patrol reports since then. These three species were the most abundant large mammals, with enough meat to be worthy of the effort of poaching them, though smaller species also get taken for the pot. Meat is still the main driving force, but ivory adds an extra value. As Fig.2 shows, over the last few years there has been an increase in selection for elephants over buffalos, in higher proportion than their availability.

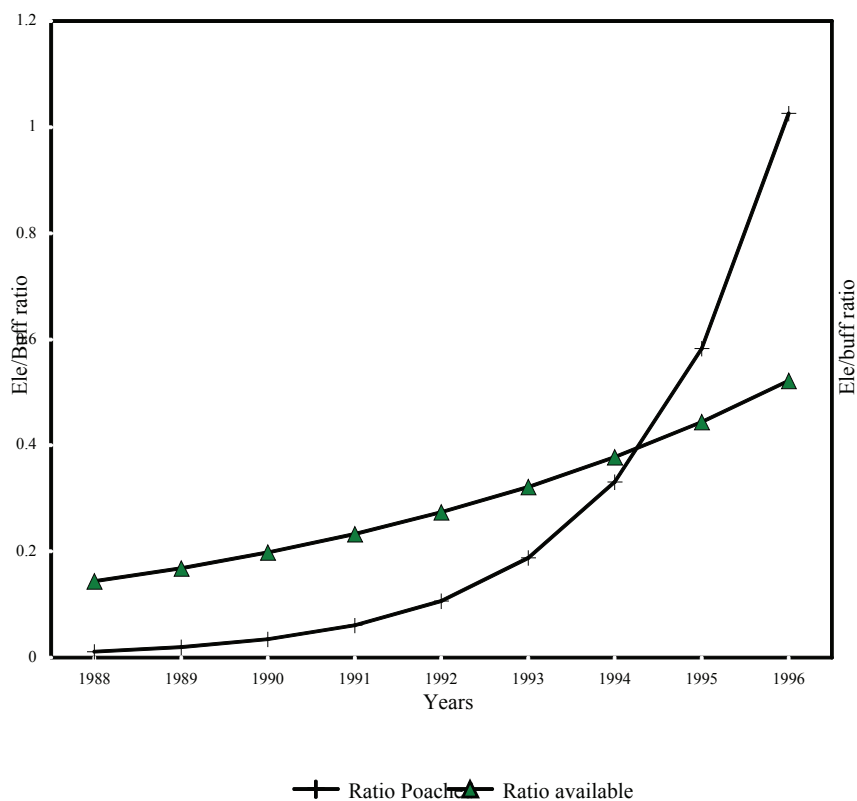
Carcase counts were all old, and there were no occupied or recent poaching camps in the south of the park.

Figure 2

Summary

These count results and those of the distribution maps and poaching indices from the rhino surveys and from the patrol reports

Parc National de la Garamba
OFFTAKE & AVAILABILITY, Elephant/Buffalo



demonstrate that there has been a heavy level of poaching that has included both meat and ivory and some rhino horn, but is still largely for meat. It has wiped out virtually all large mammals from the northern two thirds of the park and the front line of poaching has moved south to the rhino sector. The results from these same methods, however, also show that the heavy poaching was mainly during 1997 and that there is a current drop in poaching. Whether this is due to the effectiveness of the guards and the military back up, or whether it is simply due to a temporary movement away of the military or rebel bases in Sudan to another focus of the war is a point in question.

A full historical evaluation of the law enforcement monitoring results will be presented in Part 3

7. ► Initiation of a community outreach programme

An innovative framework for community involvement was developed, and this is one of the highest priorities of the new government. Funds were being sought to implement a pilot project, that could test the approach, gather information and make a preliminary evaluation before the proposed workshop, as a basis for developing a full project. However funds were apparently not available from the sources approached and WWF did not have the \$25,000 available within the budget. Unfortunately therefore this is still pending, but as one of the highest priorities of the new government, and with the proven record of the importance of local communities in times of trouble, it is important that this project is implemented soon.

Domestic Elephants and Tourism

The elephants have been well looked after during the events. Kiko gave birth in October 1997, but unfortunately the baby died the same night, which was apparently very wet and cold. Lukutu gave birth to a female infant on 16th June and the baby is still fine.

There have been several requests to bring visitors to the park again. The main priorities of the government in relation to the environment in the reconstruction of the country include the development of tourism, as a means of becoming more self-sufficient, and the involvement of the local communities. During the audience with the President, he specifically requested help in facilitating the development of tourism. This issue should therefore be considered in an overall planning exercise, and the results of the ecotourism meeting of 1996 re-visited. The re-opening of airstrips would be needed from the government's part in order to make tourism possible.

DISCUSSION, EVALUATION, LESSONS LEARNED AND RECOMMENDATIONS

The fact that the project has been able to stay in place with the support of its core donors through the tribulations of the previous regime and all the bilateral funding cuts and restrictions has been a key factor in the relative survival of the park. The fact that the guards began anti-poaching and monitoring again as soon as possible after the events and the motivation of all personnel to continue what is possible, despite all the losses has been key to the fact that there are still at least

25 rhinos. This gives considerable cause for optimism to build on the capacity that now exists. But the project was under instructions, even during the period of intense and increasing poaching pressure, to keep a “holding action” going. The maps of the distribution of poaching and of large mammals, the law enforcement and rhino monitoring results demonstrate clearly that the level of anti-poaching and the limited ramifications of its back up that were possible under these previous constraints, were insufficient. The major losses during the recent events have been the final straw. Yet, the capacity is far greater than at the start of the project,. There is support at all levels and already we have been able to begin the process of rehabilitation. When the PL first got back to Garamba in April 1997, the situation was bad. It has been considerably improved from then and there is the basis to continue and build on that improvement. In the context of a new country and new levels of support, the project executants believe that now is the time to develop some of the ideas on how to address the needs that have been raised by the Garamba Management Unit (GMU) for several years and in which all can work together to ensure a long term future for the park and the rhinos. To do this would require a higher level of funding, and to achieve that there needs to be a more open and democratic framework of donor management and project steering in order to be able to involve other funding partners and to manage alternative long term support mechanisms. The GMU as a totally collaborative unit between ICCN and the project has proved an excellent mechanism for smooth in situ management of the park and project. However at the next level it is necessary to develop a steering mechanism in collaboration with ICCN, and other partners in a functional and sustainable way.

Accordingly, in February , the project executants proposed developing the following ideas when the current WWF contracts finish.:

For Garamba

- ▶ Full development of a broad based management plan in conjunction with all the participants, field, head-quarters, ICCN/Ministry and donor partners and in the current context. It is widely recognised that management planning should be largely a product of the field people who carry out the work and therefore have the knowledge and commitment to follow it through. Garamba has a solid base of structured planning exercises involving all participatory levels, an understanding and respect for the new national priorities and several potentials for innovative approaches.
- ▶ Active initiation of all aspects of this management and support plan, within a prioritised framework
- ▶ Development of a broader stronger long term funding base, with more partners, bigger funding sources and examination of ideas such as Trust Funds and semi-commercial enterprises
- ▶ Development of an effective democratic steering or management group with full involvement of all major partners, particularly ICCN, with donor representation, field and technical representation, traditional authorities, ecotourism participants and others with objective interests
- ▶ Long term maintenance of rhino, law enforcement and ecosystem monitoring and development of adaptable training programmes to develop and apply such systems more widely, through development of a savanna research and monitoring training unit at

- Garamba, possibly as an extension of CEFROCOF
- ▶ Development of a guard training centre, following on from the intensive training programme previously proposed and agreed , and combined with the monitoring training above.
 - ▶ Development of the aerial reconnaissance and support wing and use of the trained ICCN survey team more widely in baseline protected areas surveys.
 - ▶ Development of the community and ecotourism aspects as part of the management plan

For the DRC

- ▶ Development and implementation of a survey of all protected areas, with a collaborative team involving several experienced partners and covering different areas of expertise within a standard agreed framework. The survey team from Garamba would contribute the savanna survey work. The whole would include:
 - ▶ Faunal and where relevant floral inventories by means of aerial survey in savanna areas, ground transects or use of existing data in forest areas and broad habitat mapping if relevant
 - ▶ Human conservation resources
 - ▶ Equipment, budget and infrastructure evaluation
 - ▶ Situation with regard to practical management and management planning
 - ▶ Rapid appraisal of relationships with local communities and needs
 - ▶ Existing databases
 - ▶ Training needs
 - ▶ Perceived problems and solutions

General

- ▶ There is a need for development of a logistical support, procurement and maintenance unit for field projects in remote areas, with full understanding of field conditions and research and negotiation into the best sources for given needs.

These issues fit closely into the planning framework for national conservation development established by ICCN in March 1998. They have been discussed with the ICCN HQ and the Ministry and in general fit into their requirements and planning framework.

Workshop

Some of these and other issues should be addressed at a planning workshop on Garamba, where the current situation can be presented and the overall approach and priority needs in the current context can be addressed in situ.

The initial proposed planning process was two stage:

- a) Development of a comprehensive plan of needs for management of the park based on the previous planning workshops and knowledge and experience of the GMU, coupled with ideas and approaches from external sources and missions, revised in the current context of post war disaster, and finalised with ICCN Direction General and other relevant parties,
- b) A meeting of donors, ICCN and field participants with extra resource people to address the practical issues of how to realise the above plan, to establish sufficient levels of support for the long term and to develop an agreed framework for donor partnership and management of resources.

The workshop as currently planned is more geared towards b) than a), but it may be possible to develop a) later.

There is much to be done if the effort and finances invested over the last 14 years and the successes achieved are not to be lost. A larger, dedicated team, a greater level of finance, practical back-up and an assurance of a sustainable long term support base are needed and will require a collaborative effort of all donors and ICCN to be achieved. The contingency actions for the rhinos in any possible future instabilities or build up of unmanageable threats need to be re-addressed and agreed.

LIST OF ANNEXES

Annex 1 - List of personnel April 1998

Annex 2 - Equipment issue (sample)

Annex 3 - Pay calculation (1 month sample)

**GARAMBA NATIONAL PARK PROJECT
CONSERVATION OF THE NORTHERN WHITE RHINOCEROS
DEMOCRATIC REPUBLIC OF THE CONGO**

ANNUAL REPORT

July 1997 to June 1998,

**Fraser Smith
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&

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