

STRATEGIES FOR THE CONSERVATION OF RHINO IN ZAIRE

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INTRODUCTION

Zaire, previously known as the Belgian Congo, has a long story of conservation. The first stage was the creation of hunting reserves, sanctioned by decrees between 1899 and 1910. The stage of national parks was marked by the creation in 1925 of Albert National Park, the present Virunga National Park, the earliest national park in Africa. This was followed by Garamba National Park in 1938 and Upemba in 1939. Currently Zaire has 7 national parks.

The total area covered by park, hunting domains and reserves is 188,497 km², which comprises 8.0% of the area of Zaire (2,345,236 km²). The long-term policy of Zaire is to conserve 12 to 15% of the National area by the creation of several other parks and reserves.

Zaire has also been active in the protection of rare and endangered species. It was in this context that Garamba National Park was created, principally for the protection of the northern white rhino (*Ceratotherium simum cottoni*), the rarest sub-species of rhino that exists now only in Garamba. A sub-species of giraffe, (*Giraffa cameopardalis congoensis*), endemic to Zaire exists only in Garamba National Park. The black rhino (*Diceros bicornis*) previously existed in the Belgian Congo in the region of Upemba National Park, which was created partly for their protection. Signs of black rhinos were last recorded in 1989. However, both species of rhino are listed in Appendix I of CITES and were protected by law from hunting.

Comprising 5000 km², Garamba National Park represents only 2.7% of the total protected areas and 0.2% of the country. These valuable rhinos are confined to the southern Park, in 900 km², which is known as the Rhino Sector, 18% of the Park.

According to reports of a certain chief Logo Maruka of Faradje, the black rhino may have also existed in the region of Garamba National Park in the last century. A map of the previous and present distribution of rhinos in Zaire is presented (Figure 1).

What are the conservation strategies in Zaire in general and for rhinos in particular? What are the results obtained, the difficulties encountered and the future perspectives for improving the strategy?

CONSERVATION STRATEGIES FOR RHINOS

Before outlining the conservation strategies for rhinos in Zaire one must emphasize that without the arrival as head of IZCN of Dr. Mankoto ma Mbaelele, one would only be talking of the northern white rhino in terms of history. He overcame the lack of administrative organization, irregular salaries, and the low level of motivation that existed at Garamba. He was one of the initiators of the project currently operational at Garamba.

The current system of administration at the park is impeccably overseen by the Principal conservator Muhindo Mesi of Garamba who has imbued the guards with a greater motivation. The successful functioning of the strategies that are outlined below are the result of this management at the two levels.

The system inherited from colonial periods is that of surveillance by guards resident at the headquarters of the Park and at patrol posts surrounding it.

A succession of events led Garamba to adopt a specific strategy of surveillance. From 1970 to 1976 an FAO project helped to protect the Park and by 1976 the number of rhinos had risen from the devastating decline caused by the Simba rebellion to 490 ± 270 (Savidge, *et al.*, 1976). Between 1978 and 1983 the rhinos were intensively poached and only 13 - 20 rhinos remained in 1983. At that time Garamba National Park had no means of bringing out adequate surveillance: there was a lack of vehicles, fuel, equipment for guards. Rations and salaries were paid irregularly. In 1984 the co-operative efforts of IUCN (International Union for the Conservation of Nature and Natural Resources), WWF (World Wild Fund of Nature)/UNESCO (United Nations for Education Scientific and Cultural Organizations), FZS (Frankfurt Zoological Society) were put into operation to overcome this situation.

With the means provided by this project, the following strategies of surveillance were put into effect in Garamba after 1984. And the patrols are sent out from the Park headquarters. There is both general anti-poaching surveillance and specific surveillance in the Rhino Sector.

GENERAL SURVEILLANCE

This is done by teams that carry out anti-poaching in the North of the Park. The strategy is based on fixed itineraries guided by the distribution of indicators of poaching, and organized to cover the largest area possible. Indications of poaching are reported by guards returning from patrol. Teams are placed at relay posts in the interior of the Park and patrol from these in different directions. This surveillance constitutes a northern barrier to the penetration of poaching towards the south.

Surveillance in the Rhino Sector

Three types of surveillance are applied here but they can be considered under two categories, anti-poaching and monitoring.

Anti-poaching surveillance

A total of 12 guards controlled by the author are organized into three teams of four guards each. Two teams are sent in two different directions, their itineraries laid out in relation to the areas of activity of the rhinos, and to cover a much of the area as possible. They gather information on the indications of poaching and on the movements of the rhinos. Certain guards have been trained to identify individual rhinos.

Monitoring

The author, with the third team of guards, patrols for 15 days or more per month to find the rhinos and follow them systematically for as long as possible. This constitutes at the same time close surveillance and the collection of scientific data of various types. Between 12.12.1988 and 12.31.1990 rhinos were systematically followed for 254 hours and 6 minutes, approximately 21 days in total. This effort of following them is made more difficult by the low density and very large home ranges of the rhinos.

Bi-monthly aerial monitoring

This monitoring constitutes the third type of surveillance. It enables us to determine the home ranges and movements of different individuals, population dynamics and relationships, and habitat use. This information enables us to orient the anti-poaching surveillance of the rhinos.

RESULTS OBTAINED

The conservation strategies outlined above permit us to contain the poaching within acceptable limits and have practically eliminated poaching in the Rhino Sector. The effectiveness of this is demonstrated by the increase in the number of rhinos from 15 to 28 individuals in seven years!

Furthermore, they have enabled us to assure the continued existence of the rhinos. For example from July 1990 to March 1991, 26 individuals were identified as seen. Probably the individuals were seen but the identification of certain sub-adults by individual identifying characteristics is not always certain.

The surveillance has also furnished scientific information which helps the management of the rhinos in the wild. Activity patterns, behavior, movements, reproductive rhythms, population dynamics and genetic indications of the rhino can be monitored. There is still much to elucidate in the area of scientific research.

DIFFICULTIES ENCOUNTERED

Despite the good results obtained so far, four difficulties arise in relation to the continuation of protection and conservation of animal populations at Garamba in general and of rhinos in particular.

1. Insufficient number of guards. 12 guards to cover 900 km² in 15 days means more than 75 km²/guard. The same problem exists with patrols in the north. In consequence, the system of surveillance is rather permeable.
2. The impossibility of ensuring the effective functioning of the Park without the help of the Project. For example from 1988 to 1990 WWF, FZS and UNESCO invested a total of US\$550,000, an average of about \$180,000 per year, compared with the support from IZCN during the same period of US\$18,350, representing a mean annual budget of \$6,000. One can imagine what would happen to the Park without the Project.
3. Improvement of living conditions of the guards. The present conditions are acceptable but not effective. They need to be improved. This would greatly increase the motivation of the guards.
4. The need to improve the training of the guards in order to improve the surveillance and monitoring of the ecosystem

FUTURE PERSPECTIVES TO IMPROVE THE CONSERVATION STRATEGIES FOR THE RHINOS.

1. The creation of a solid belt of security around the Rhino Sector. There is a need to reinforce the surveillance in the north by having 4 teams. There is also a need to institute a higher level of surveillance in the hunting domains around the Park.
2. Reinforcement of the distant surveillance, promotion of close surveillance and intensification of aerial monitoring of the rhinos. There is a need to set up six teams of four people. Four teams could be given the task of systematically following of the rhinos and conducting research. Each team would cover a specific region for 15 days. Two other teams will do periphery sector surveillance.
3. Guard training.
4. Effective integration of the Park in the process of rural development for the population surrounding the Park. This is an important condition for the long-standing future of the Park and its hunting reserves. This integration must involve a series of activities to be put into effect during the third phase of the project entitled "Garamba National Park Project, Phase III: Conservation and Development" currently in the course of execution. This consists basically of:
5. Promotion of conservation education

6. Identification and development of tourist potentials in the Park with the final objective of becoming self-financing. The attraction of international funds is essential.

7. To put into action in the buffer zones an involvement of local communities in the utilization of natural resources so that they can get direct benefit from it.

CONCLUSION

Thanks to the relic population of northern white rhino at Garamba, the Park has become a World Heritage site. It is also thanks to the help of the IUCN, WWF, FZS, UNESCO, IZCN that the northern white rhino has been saved from extinction.

But one must not lose sight of the fact that despite this monumental investment, the effect of man could destroy the population of northern white rhinos in a few hours.

In order to avoid the possibility of this catastrophe for which future generations could not pardon us, we must one more time remind the donors that funds are needed to realize the proposals put forward above to insure the continual existence of the northern white rhino.

REFERENCES

Savidge, J.M., M. Woodford and H. Croze. (1976). Report on a mission to Zaire. FAO W/K1593 KEN/71/526 - ZAI/70/001.

FIGURE 1

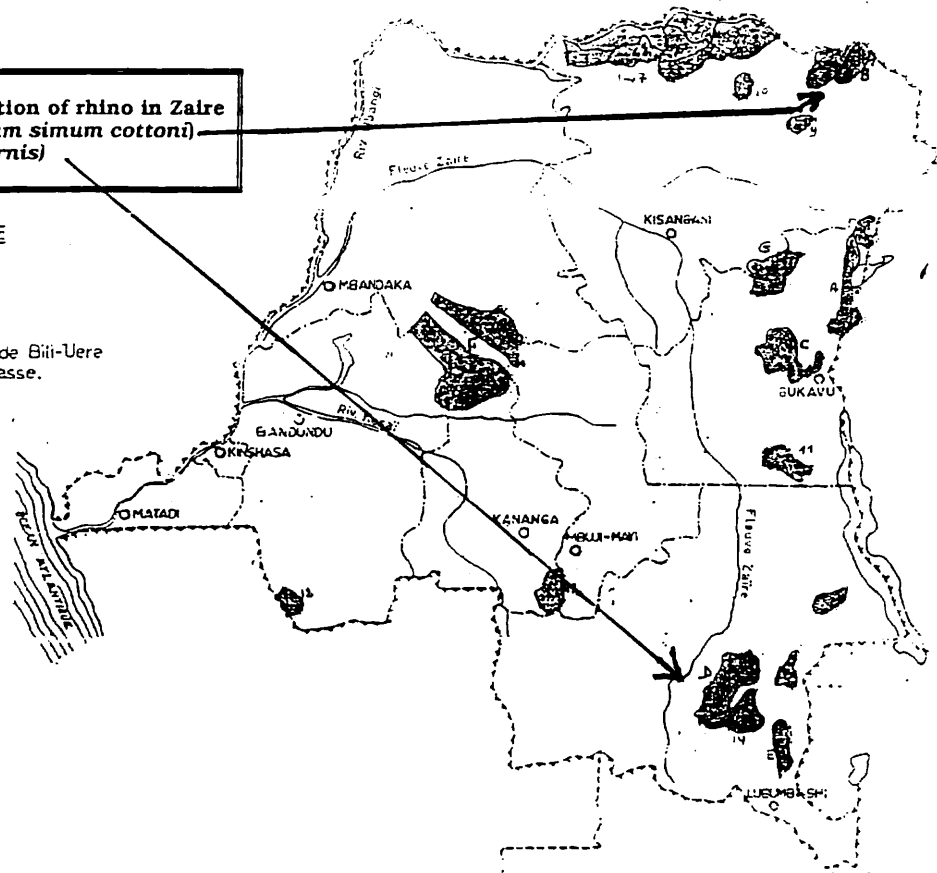
Previous distribution of rhino in Zaïre
(B = *Ceratotherium simum cottoni*)
(D = *Diceros bicornis*)

DOMAINES DE CHASSE

- 1
- 2
- 3
- 4 - Domaine de chasse de Bili-Uere
- 5 avec 7 Blocs de chasse.
- 6
- 7
- 8 Azande
- 9 Maïka - Penge
- 10 Epi
- 11 Luama
- 12 Swa-Kibula
- 13 Bushimaie
- 14 Lubudi - Sampwe
- 15 Mufufya
- 16 Luvira

PARCS-NATIONAUX

- A Virunga
- B Garamba
- C Kahuzi - Biega
- D Upemba
- E Kundelungu
- F Salonga
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