

The Situation

Garamba National Park in Zaire is the last place known where there is any chance of conserving a potentially viable population of northern white rhinos in the wild, but what remains there is at extremely low numbers. Thirteen to 20 rhinos were estimated in March 1983. For the first few months of the 1984 wet season we have been working towards obtaining more detail of numbers, ages and sexes, but limited by resources and increasing grass height. In August 1984 we knew 13 individuals, including 2 calves \pm 1 year old, and evidence indicated that there were probably others that we had not seen and identified. However it is believed that at least 4 or 5 rhinos have been killed over the last 2 seasons. The 2 most recent were even while the project was at the Park, though these were not included in the known individuals, as they were north of the river Garamba.

A project has been set up to rehabilitate the infrastructure of the Park but it was not until August 1984 that it was able to start improving the anti-poaching, due to an earlier lack of a Conservateur, vehicles and equipment, and funds for rations for the guards. Improvement to the effectiveness of the anti-poaching is the most important and immediate action to be taken, but further possibilities to improve the survival chances of the rhinos could be effected this coming dry season. Others could be considered as contingency plans if all else fails. The pros and cons of various possible actions are outlined below.

These were discussed by a meeting of staff at the Park. The conclusion then was that the only action that could be taken immediately was improvement to the anti-poaching, and monitoring. This was not necessarily the only long term solution, but the ultimate decision on any further action was the prerogative of the Institut Zairois pour la Conservation de la Nature. The view expressed by the IZCN staff was that the anti-poaching must be improved and the situation given a chance to work and monitored. A committee in Kinshasa has also considered the problem and made recommendations to the President.

There are 13 northern white rhinos known in captivity, although one is of dubious parentage. Nine are together in one holding, including a calf of 10 months and two females believed to be pregnant.

A few scattered individuals probably remain in Sudan, but because of the political situation little can be done about them at present. There are varied reports of the existence or not of a young female in Uganda, but the Director of National Parks believes she exists and has requested help to catch and move her to others.

I see two aspects to the consideration of possible actions: 1) The practicalities and chances of success, 2) The objectives - Is our overall objective individual, sub-species or ecosystem conservation, or a combination?; What are the immediate and long term objectives of any action taken?

Possible Actions

Advantages

Problems/Disadvantages

<p>A. Translocation of a) all, or b) some of the rhinos to captivity or semi-captivity in another country.</p>	<p>1. a) Most or b) some of the individuals now at Garamba would have greatly increased chances of long term survival once they reached the other end.</p> <p>2. A second captive population of n.w.r. could be established.</p> <p>3. The present number of n.w.r. in captivity would be increased.</p> <p>4. The recipient would gain a group of n.w.r.</p> <p>5. The conservation organisations could give up worrying about n.w.r.</p>	<p>1. a) Zaire does not at present agree to all the rhinos being translocated to another country. b) I am also informed that nor do they agree to any going out of the country, and division of the existing population would even further reduce its chances of survival.</p> <p>2. Negotiations, preparations and execution of such an action would take a very long time, during which, more rhinos would be lost if little else was done.</p> <p>3. The expense would be in terms of many hundreds of thousands of dollars and could almost certainly only be borne by private enterprise with a vested interest (such does exist)</p> <p>4. It would signify a) the extinction of n.w.r in the wild, or b) acceptance of their inevitable extinction in the near future and the failure of conservation aid in this context.</p> <p>5. The chances of long term aid for the Garamba ecosystem would be very considerably reduced.</p> <p>6. Particularly in view of the above (5), there would be little or no chance of ever re-introducing n.w.r. to a safe situation in the wild.</p> <p>7. There is a good chance that some would die in the process, particularly since transport and bureaucracy are two of the most difficult and time-consuming problems in Zaire.</p>
<p>B. Translocation to another location in Zaire.</p>	<p>1. The responsibility for their conservation would no longer be a problem for Garamba or aid projects at Garamba</p>	<p>1. There are no known safer relocation sites in Zaire and none within the n.w.r. previous range. The main one suggested so far, Virunga National Park is subject to very heavy commercial poaching, as well as being outside the range. Other possibilities would be the President's zoo and the Kinshasa zoo. 2, 5 and 7 from A also apply, with even greater likelihood of rhinos dying in the process and afterwards.</p> <p>3. It would cost some hundreds of thousands of dollars and there is no indication of where that money could come from.</p>
<p>C. Enclosure of the rhinos in small pens in the Park</p>	<p>1. It would be easier to protect the rhinos as long as the guards were sufficiently trustworthy and controlled.</p>	<p>1. It would be impossible to feed them for any length of time, and ultimately they would all die.</p> <p>2. They would be a 'sitting duck' for poachers if protection was relaxed or the system infiltrated with corruption.</p> <p>3. It would probably inhibit reproduction.</p>

POSSIBLE ACTIONS

D. Enclosure of the rhinos in a paddock large enough to allow natural feeding and social spacing and avoid reproductive inhibition. The cheapest way to do this would be with electric fencing. Allowing 50km², a fence that would also inhibit poachers would cost at least \$280,000. If it was radio monitored it would be considerably more. A 4 wire fence against rhino, elephant, buffalo and antelope would cost in the region of \$30,000

D. Greatly improved anti-poaching.

E. Radio-tememetry of the rhinos as a back up to the above one or two possibilities.

F. Removal of horns, at the same time as one of the other procedures involving tranquilisation.

G. Promotion and execution of the recommendations of the Kinshasa commission for the protection of the rhinos which broadly include:
a) Disarmament of civilians.
b) Severely increased sentences for rhino poachers

Advantages

1. It would be somewhat easier to protect and monitor the rhinos as long as the guards were sufficiently trustworthy, and controlled. The rhinos are already, however in a relatively small area.

1. It is needed and planned anyway for the good of the whole ecosystem and the work of the Garamba Rehabilitation Project.
2. It is building on an existing system and at least some modicum of it stands a chance of continuing in the long term.
3. It can be carried out immediately, now that equipment and manpower exists, though there are initial limitations due to the problem of rations.

1. It would enable us to find the rhinos and monitor them, which would aid the anti-poaching, feed-back results, facilitate an effective field presence, enable us to find out what is happening to the population dynamics and use of the ecosystem in a reasonable time, and what the movements are that are known to occur at certain times, as well as facilitating rapid remedial action to counteract problems or failures.

2. With unsophisticated poachers and the right propaganda, it could possibly have a discouraging effect on poaching.
3. It is cheaper and could be done more quickly, even as an interim measure, than other manipulative actions.
4. It is agreed to by IZCN and potential funds have been available.
5. It would enable other material to be collected on the rhinos, such as age determination, blood to test the genetic variability, possibly even semen for contribution to the world gene pool of these rhinos.

1. It would remove the main reason for poaching the rhinos and thus hopefully their main danger (as long as word was sufficiently well spread).
2. It is a small population, where one stands a good chance of finding all or most of the animals, and where monitoring of the action would also be of value.
3. It is not irreversible, as the horn continues to grow.

1. It should help reduce the likelihood of rhinos being poached

Problems/Disadvantages

1. It is expensive and because of many logistical problems would take a long time to construct, and would therefore need intermediate action as well, especially with the disturbance.
2. It would require constant maintenance, as breakage is to be expected.
3. The rhinos would be vulnerable if protection was relaxed or the system corrupted.
4. Rhinos would have to be moved into it. At least 3 are north of the river and at present there is no way for vehicles to cross the river. Crates, or at minimum pallets would have to be constructed and lorries obtained from somewhere.
5. It would need careful fire management, as otherwise about 90% of the area burns. This is not such a problem for initial controlled burning, but stopping any accidental fires would be much more difficult there.
6. There is some danger to the rhinos in capture, moving and release.

1. Funds for the rations and uniforms and equipment for guards are needed immediately, and a long term provisioning system must be established.

1. It could not be carried out until January or February.
2. There is some danger to the rhinos but it is very minimal, especially in the dry season, and by far the least dangerous of all the manipulative possibilities.

1. It could increase the vulnerability to predators especially of young, but there is little proof of this and it is a vulnerability to be weighed against that to poaching.
2. One would need to do all the rhinos to avoid imbalances of intra-specific aggression or temptation to poachers
3. There could be some danger of infection although this has not been an apparent danger in accidental loss of horns.
4. It would need to be repeated every few years, as horn grows 1-2 inches a year in adults, faster in juveniles.
5. Disposal of horns would have to be strictly controlled (eg to museums or destroyed)
6. The population would need to be monitored as it is an untested action.
7. It would temporarily remove some of the aesthetic appeal of the rhinos.

1. It is difficult to execute, requiring funds, communication and co-operation of officials and local chiefs.

<u>Possible Actions</u>	<u>Advantages</u>	<u>Problems Disadvantages</u>
c) Improvement of the anti-poaching morale, organisation and equipment of the guards.		
d) International co-operation to stop trans-border traffic of horn and poaching.		
H. Official Presidential protection of the rhinos and a statutory severe sentence (eg death) for their killing and another for trade in rhino products	1. It should help reduce the likelehood of rhinos being poached	1. If the President agreed, it is still not easy to communicate or enforce.
I. Increased efforts to build up the captive population as a back-up to the wild, eg by promoting the further development of techniques of artificial insemination, embryo transplant and husbandary for the rhinos, and consolidation of suitable singletons. In particular, the latter include the male at Khartoum zoo and follow up on the female that may exist at Murchison Falls NP	1. It increases the number of n.w.r. in the world and ensures that the sub-species still exists, even if it becomes extinct in the wild. 2. The Director of Uganda National Parks is in favour of putting the female from MFNP, if she exists, with others, though the location would need to be considered. 3. Some development of artificial insemination techniques for this species have been started.	1. Some funds might be required, but sources of such funds would probably not be competitive with conservation funds. 2. Considerable negotiation would be required to obtain the male from Khartoum. 3. It is possible that the Uganda female no longer exists.
J. Close monitoring of whatever happens in Garamba to the rhinos and ecosystem, and to n.w.r elsewhere.	1. We would know what is going on and be able to modify actions as necessary. 2. It would be complementary to the work of the Rehabilitation project	1. It might cost a bit of money.

Having observed the situation and worked with the people on and off over the last four years, and particularly intensively over the last few months, and having surveyed the situation for northern white rhinos in the wild as a whole and seen the bulk of the captive population, and knowing only too well the practical problems I know that there is no single answer, but as the consultant who was sent to try to find out, I venture the following suggestions:

Clearly there is no immediate chance of taking the rhinos from Garamba to another country, and to admit defeat at this stage of the project would seem a little premature, particularly in the wyes of Zaire. Therefore whatever ultimately happens, something reasonably feasible should be done immediately.

Anti-poaching is the most immediate and important action that can be taken. That is starting now to be improved, but in view of the grave situation any further help or emergency aid needed should be given and the IZCN should take responsibility for contributing and establishing a long term system for providing rations, expenses, fuel etc. Close monitoring of the rhinos would help anti-poaching.

E. would make both far more effective and efficient. I suggest that F should be very seriously considered. It is not one of my favourite remedies, but under the circumstances I think it is justified. I doubt that D would acheive very much except initial disruption and a big question mark for the future, but it could be considered. If it was to be carried out, it should be conditional on long term aid and done in conjunction with E and F. G, H and I should definitely be followed up.

A combination of the above actions, together with monitoring of the situation should give a chance to see if the project can be effective and if it is possible to conserve the last of the northern white rhinos in the wild. The brief of the Rehabilitation Project specifically avoids the rhinos. There is a need for an organisation with the means to take action to accept responsibility for trying to conserve northern white rhinos in the wild. Some of us feel that SSC should take this responsibility. I think the criterion for failure and a resort to captivity should be if the population declines by over 10% per annum over the next 2½ years IF at the same time there is maximum input to conserve them and make anti-poaching effective.

IF the rhinos can be protected, even at a very pessimistic rate of natural increase, allowing for 10% mortality per year, the population would have more than doubled in 10 years. If they increased at the same rate as that found by Owen-Smith for a population of southern white rhinos (10% pa), they could be over 40 in ten years, and management in conjunction with the captive population could improve that. BUT if the rhinos are to be conserved in the wild there must be long term input of some kind, both national and international or removal of the pressure to poach. IZCN has established Projet Rhino but it needs more back-up and a national as well as international responsibility. Most parks of northern and central Africa rely to a greater or lesser extent on some international aid. Garamba is certainly worthy of being one of these in the long term, and we feel that it is part of our responsibility to try to secure some aid for longer than 3 years.