Dedication leads to reduced rhino poaching in Assam in recent years

Bibhab Kumar Talukdar

Aaranyak, Samanwoy Path (survey)
PO Beltola, Guwahati – 781 028, Assam, India
e-mail: bibhab1@sancharnet.in

Abstract

Assam has a proud legacy of successfully conserving the great Indian one-horned rhino (*Rhinoceros unicornis*) and presently holds two-thirds (66.9%) of the world's wild population of about 2500. The gradual shrinking and fragmenting of habitat are ominous threats for this species' struggle for survival. Of particular importance is the threat posed by poachers. In the past few years, however, anti-poaching staff of the Forest Department in Assam's rhino areas have renewed their dedication and courage, which have minimized rhino poaching. Better coordination among the various conservation agencies and positive support extended by non-governmental organizations has paid dividends in rhino protection in Assam.

Additional key words: threats, strategy, conservation

Résumé

L'Assam est fier d'avoir su depuis toujours conserver le fameux rhinocéros unicorne de l'Inde (*Rhinoceros unicornis*) et il détient actuellement les deux tiers (66,9%) de la population totale vivant en liberté dans le monde (2.500 animaux). Le rétrécissement et l'émiettement progressifs de l'habitat constituent des menaces inquiétantes pour la lutte que mène cette espèce pour sa survie. La menace posée par les braconniers est particulièrement grave. Ces dernières années pourtant, le personnel du département des forêts chargé de la lutte contre le braconnage dans les régions de l'Assam où il y a des rhinos a renforcé son dévouement et son courage et a réussi à réduire le braconnage des rhinos. Une meilleure coordination entre les différents organismes de conservation et le soutien positif accru des organisations non gouvernementales ont eu un effet très bénéfique sur la protection des rhinos en Assam.

Mots clef supplémentaires : ménaces, stratégie, conservation

Introduction

Assam occupies a special place in its conservation of the great Indian one-horned rhino *Rhinoceros unicornis* (AsRSG 1999; Talukdar 2000). Of the total estimated world population of Indian rhino in the wild of around 2500, Assam conserves an estimated 1672 according to a census carried out in 1999. The conservation movement in Assam started protecting rhinos at the beginning of the 20th century. With a combination of success and failures, rhino conservation initiatives in Assam have begun the 21st century giving renewed hope to environmentalists keen to see the Indian rhino alive in the wild. This paper describes current successes in curbing rhino poaching in Assam and shows how dedicated field staff are largely responsible for protecting the rhino from poaching. It is based on the study conducted by the author for the Wildlife Crime Monitoring Centre of Aaranyak of Assam, which is a society for biodiversity conservation in north-east India.

Areas conserved for rhino and basic requirements

The number of rhinos found in Assam is 1672; the area available for rhino conservation where rhinos still exist is only around 1100 km^2, covering areas like Kaziranga National Park (NP), Manas NP, Or-

ang NP, Pobitora Wildlife Sanctuary (WLS) and Laokhowa WLS. Among these sites, rhino conservation efforts in Manas and Laokhowa took a severe blow from poaching, particularly during periods of social unrest around these two rhino areas. During the social unrest of 1983, almost 54 rhinos were killed in Laokhowa WLS, marking the beginning of the disappearance of rhinos from this protected area. Currently, no rhinos are resident in Laokhowa WLS, but occasionally a few rhinos from Kaziranga, Pobitora and Orang wander into the area. The habitat at Laokhowa can still hold a sizeable rhino population, but before any major translocation exercise to re-establish a founder group of rhinos is planned and executed, infrastructural needs such as more personnel and equipment must be met and sound planning undertaken to protect the rhinos from poachers.

Recently I analysed the conservation status, threats and success of rhinos in Pobitora WLS (Talukdar 1999, 2000). Pobitora WLS is one of the smallest rhino areas, being only 16 km^2, but at 4.75 rhinos per km^2 its rhino density is high. Although the area was extended up to 38 km^2, lack of political and administrative will by the district administration has meant that the additional area of about 22 km^2 has not been officially handed over to Pobitora WLS. This delay will hamper rhino conservation, because as the human population continues to increase yearly the harder it will be to hand over the additional area. If the area is handed over to the manager of Pobitora, infrastructure for it will need further boosting. In addition to the assistance for infrastructure development the government provides, Aaranyak and the David Shepherd Wildlife Foundation (DSWF) have donated a wireless base station, handsets and solar panels. They have also repaired a few of the old handsets in the past two years. Since 1995, the Rhino Foundation based at Guwahati has donated motorcycles, wireless main sets, handsets, solar panels and battery chargers. This in-kind assistance has greatly increased the morale of the forest staff in their efforts to protect rhinos and their habitat.

The current proposal is to extend Kaziranga National Park, holding around 1552 rhino according to the 1999 census, with the addition of six areas that will add another 400 sq km^2 to the existing area of 430 km^2. This will provide rhinos with ample area in which to move and will contribute further towards population build-up of the species in Kaziranga. However, with this expansion, the Forest Department will need to ensure that infrastructure and resources are adequate to manage these additional areas. The manager of Kaziranga NP will need to prepare a long-term plan, keeping in mind the current financial constraints of the state government and future uncertainty, which together with the assistance of NGOs (non-governmental organizations) will help him fulfil his management duties.

This plan, which would include requirements for infrastructure, will help NGOs assist Kaziranga NP and will minimize duplication of effort with regard to in-kind assistance.

Orang NP has been getting infrastructure assistance from Aaranyak, DSWF, and the Rhino Foundation. Recently the Wildlife Trust of India in collaboration with Aaranyak and DSWF have donated around 100 anti-poaching kits to the forest staff of Orang NP (fig. 1). To assist in anti-poaching efforts in Orang NP, Aaranyak and DSWF have donated wireless handsets, base stations, a speedboat and a number of solar panels; the Rhino Foundation has also donated handsets, base stations, solar panels and battery chargers over the past five years.

Threats

Periodic assessment of threat is an important component of site as well as species' conservation planning. The threats include the following.

Poaching

Poaching is the major threat facing rhino conservation (Vigne and Martin 1998; Martin 1999) and whenever more poaching takes place the morale of the forest staff is lowered. However, whenever morale of the forest staff is high, poaching is reduced. This situation has fluctuated at times, based on the situation on the ground and on issues such as the degree of social instability, political and administrative support, and quality of intelligence. Details of rhinos poached during 2000 until August are summarized in table 1.

Covering only 16 km^2, Pobitora WLS is another interesting site for rhino conservation in Assam. My study revealed that an average of 20–30 rhinos stray out of the sanctuary every night, mainly to graze and migrate and to mate. Although many wildlife activists and zoologists claim in the media that Pobitora WLS is overpopulated with rhino, valid conclusions cannot be drawn as no scientific study on the carrying capacity of the

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Figure 1. Anti-poaching kits distributed to forest staff in rhino areas include raincoats, jackets, sleeping bags, caps, rucksacks, water containers, a tarpaulin sheet, torch lights and hunting boots.

sanctuary has been conducted. During this field study, I observed that rhinos from Pobitora tended to migrate from November until early March.

Pobitora WLS is proud that during 2001 no rhinos were poached although poachers made numerous attempts.

Table 1. Rhino poaching in three rhino protected areas in Assam, 2000–2002

Protected area	Poached in 2000 (no.)	Poached in 2001 (no.)	Poached Jan–Sep. 2002 (no.)
Pobitora WLS	2	0	1
Orang NP	5	2	0
Kaziranga NP	4	8	3

WLS – wildlife sanctuary; NP – national park

A strong intelligence network and follow-through activities of the range officer and forest staff paid dividends. Poachers shot and killed one adult female and her calf in June 2000. On 2 January 2002, a group of poachers electrocuted and killed a rhino. While doing so, two of the poachers were also electrocuted. In investigations the forest range officer, Mrigen Barua, and the officer in charge of Mayong Police Station, Pradeep Nath, and I carried out, we found that more than 900 m of electric line was used to kill the rhino. These investigations further revealed that the poachers had been engaged by a vested interest group to kill as many rhinos as possible that night. The group's intent had been to use their established media network to criticize local conservationists and so create chaos, which they hoped would lead to these two dedicated officers being removed. Expert poachers would know how to avoid electrocution while fixing the elec-

tric line. The poachers killed in this incident were novices with no previous experience in this type of activity. In a raid the two officers carried out within 24 hours of the incident, they recovered the horn from a house in the nearby village. This particular incident reveals the deep-rooted conspiracy involved to demoralize the forest and police staff.

Orang NP went through a difficult time from 1995 to 2000, when poachers killed more than 50 rhinos, reducing the rhino population from 97 in 1993 to only 46 by 1999. However, dedicated forest staff continued their struggle and in recent times they have successfully reduced the amount of rhino poaching in the park. Between May 2001 and September 2002, no rhinos were poached in Orang, an achievement of which the dedicated field staff are proud. During the period from 2000 to August 2002, anti-poaching staff shot dead two poachers attempting to poach rhino inside Orang NP. This incident has further boosted the morale of the staff, and the casualties the poachers have suffered have created a fear psychosis that deters others who might otherwise attempt to poach rhino in the park.

Kaziranga NP (KNP) has also been successful in controlling rhino poaching from 2000 through September 2002. Compared with earlier average annual rhino-poaching rates of around 40 animals per year in KNP (Vigne and Martin 1998), poaching was reduced by an estimated 90% in 2000 and 80% in 2001. This does not mean that patrolling has been cut back or that detection of carcasses is low. In places like KNP, patrolling cannot be taken lightly and it takes place regularly. As more than 70% of the KNP area is open canopy, detecting carcasses is not a problem, and observing birds of prey helps.

From 2000 through September 2002, more than six rhino poachers, including one Bhutanese, were killed in encounters with KNP forest staff. Two of the four rhinos poached in KNP during 2000 were shot and two were killed in pit traps. In 2001 six more rhinos were killed in pit traps and two were shot. During 2000, Kaziranga lost 44 rhinos from natural deaths that included old age, tiger predation and disease. In 2001, 35 rhinos died from causes other than poaching. During that period three rhino horns were recovered from a poachers' den, two of which are shown in figure 2. On 17 March 2002, a poacher killed a rhino that had strayed out of the park into the Gohpur Jaroni area in Sonitpur District. One person was arrested in connection with this incident and a court trial is still in progress. All three rhino-poaching incidents shown in table 1 took place outside the KNP boundary, where definitely the rhinos had strayed.

Trade

Illegal rhino horn trade has been the main problem facing managers of the rhino-protected areas of Assam. Assam and north-east states border other countries where endangered species (including rhinos) are more vulnerable to being poached to supply the illegal wildlife trade. Lucrative prices offered by rhino horn traders have increased the financial gains of the illegal trade resulting in a large number of mafia-like operations, which the current forest staff with their limited organizational set-up find difficult to counter. So far, the judiciary and the police have shown little sensitivity towards quick apprehension and timely prosecution of rhino-poaching offences.

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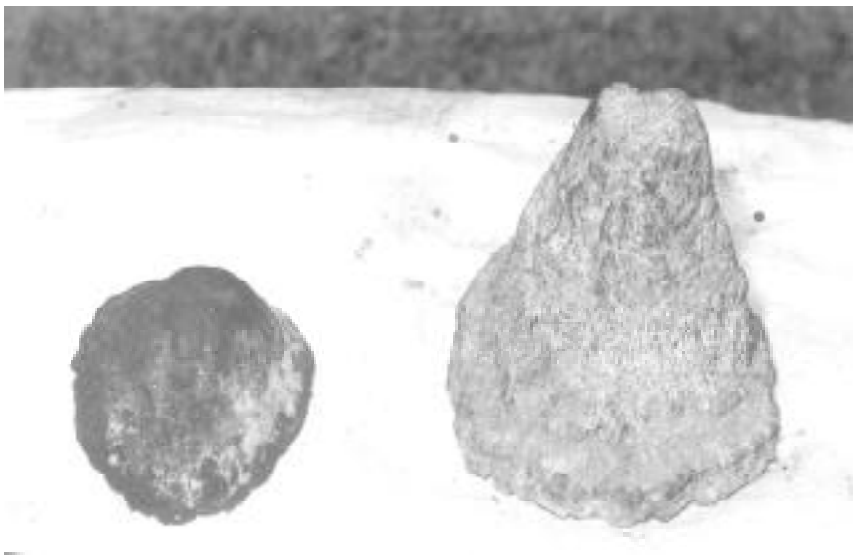

Figure 2. Rhino horn recovered near Kaziranga.

The Subramanian Committee and the High Court Committee have made certain relevant recommendations in this regard, which need quick implementation by both central and state governments.

The current price for a rhino horn varies anywhere from USD 300 up to USD 38,000. The chronology of rhino horn transportation, with prices, is shown in figure 3.

The poacher who shoots the rhino generally gets a negligible amount compared with the national and international smugglers and traders. Efforts the forest department takes to curb rhino poaching will depend on how it deals with the poachers. In addition to implementing various laws, we need to initiate awareness and motivation programmes for family members of known poachers so that they can try to influence the poachers to stop this illegal means of livelihood. Clearly no children would want to introduce their fathers or family members to their friends as rhino poachers. Further, environmental education campaigns should focus on how traders and smugglers exploit the poor poachers for a few thousand rupees. Non-governmental organizations should also help in education campaigns.

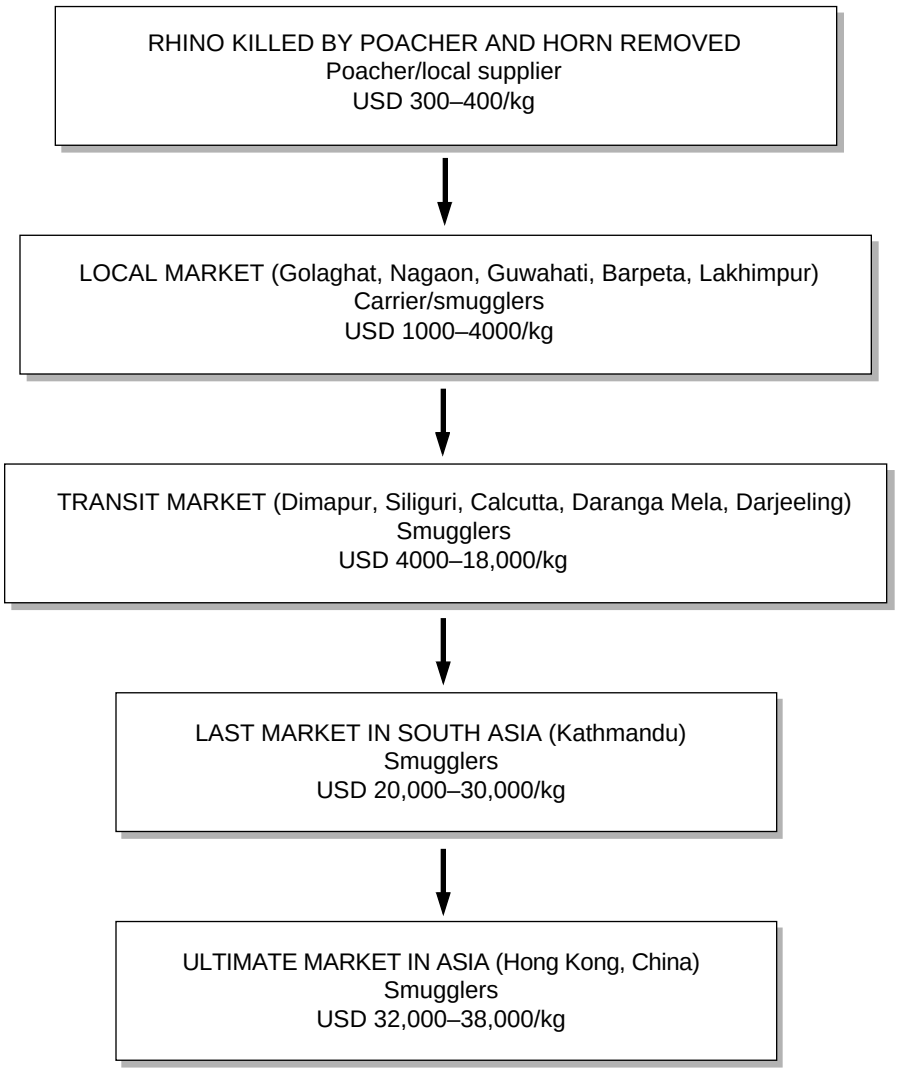

Figure 3. Movement of rhino horn from place of poaching to ultimate trading centre, showing price escalation.

Other causes for worry

Potentially, regulated, low-impact tourism can be an important conservation tool. It helps win public support for rhino conservation and offers opportunities to generate additional revenue to fund essential conservation activities. In recent times, however, the number of tourist visits to Kaziranga NP has mushroomed. The concern is that in future tourist numbers could create management problems if their impact is not studied and analysed properly. More than 100 vehicles enter the park every day during the tourist season, often putting animals under stress. In case of any conflict between tourism and the conservation interests of protected areas, it must be stressed that the interests of the park take precedence over tourism, because tourism exists for the parks and not the other way round. The demands of tourism must be subservient to and in harmony with the conservation interests of protected areas and all wildlife (MOEF 2002).

Eco-tourism in Assam should inculcate in the visitors empathy for nature and provide a communion with nature, rather than merely ensure sightings of maximum numbers of rhinos. Eco-tourism should involve and benefit villagers living at the fringes of the park, and the first benefits of tourism activities should flow to the local people at the park boundaries.

It is time to enhance the efforts made to win the support of politicians, legislators, judges, planners, bureaucrats and technocrats who manage the state to effectively implement rhino conservation measures in Assam. Broad-based public support should be elicited from different sections of the society, particularly communities neighbouring the rhino habitats of Assam. NGOs in particular need to convey a sense of urgency to young people and win their support to protect the rhino—the legacy of Assam.

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