



N. BENGAL WILDLIFE SANCTUARIES

Summary of Report submitted by the Forest Dept. of West Bengal

Until the early 17th. century, the great Indian one horned rhino was distributed along the Teral belt from Pakistan to Indo-Burma. Today this pachyderm is found only in a few pockets of Assam, West Bengal and Nepal. The Asiatic two-horned rhinoceros roamed the forests of North Bengal even about a century ago. Presently, West Bengal has only two disjunct populations of the one horned rhinoceros in its protected areas namely Jaldapara and Gorumara Wildlife Sanctuaries.

The 216.00 Sq.Km. of Jaldapara Wildlife Sanctuary holds a mosaic of vegetation compared to a much smaller protected area of Gorumara. Vegetation in these two protected areas can be classified into the following types.

1. Northern dry deciduous seral khair-sissoo association
2. Eastern bhabar sal and eastern terai sal
3. Sub Himalayan secondary wet-mixed forest
4. Eastern sub-montane semi-evergreen forest
5. Northern tropical evergreen forest
6. Savannah forest.

The forested tract of the present Jaldapara Wildlife Sanctuary has been under the control of the forest department since 1866 and under systematic management through prescriptions of Dr. William Schlich in 1874-75. The first management plan prepared for this sanctuary prescribed maintains of salt licks, glades, wallow pools, cultivation of fodder grass in glades. This stressed the need for the maintains of fire-lines. To save grasslands from being swamped by *Mikania* species, experiments for its eradication were initiated. To arrest xeric succession in plants cutting back operation for trees was initiated on experimental scale.

History of management of Gorumara wildlife sanctuary has been much less eventful as this has been managed as a unit of Jalpaiguri Forest Division since the creation of the forest department. The first management plan prescribed the provision of core and buffer area after substantial expansion of the existing sanctuary area. It provided for opening of the canopy in riverine forest to keep grasslands alive and planting of suitable areas with indigenous grasses to expand the grassland ecotypes of the sanctuary.

Gorumara was managed as a game sanctuary till 1976 was declared as Wildlife Sanctuary in 1976 with an addition of 100 sq. kms. Now the total area of the sanctuary is 216.51

sq. kms. A proposal for the constitution of Gorumara National Park with an area of about 66 sq.km. having the present sanctuary as its core.

Jaldapara Wildlife Sanctuary had a population of 33 rhinoceros in April'92 and 34 in 1993. Gorumara Wildlife Sanctuary had 12 individuals in 1989 and 13 now. There were two disastrous spells of poaching during the period 68 - 72 and 82 - 85 which reduced the numbers drastically. During the period 1986 to 93 there has been steady accretion to the population.

It has been observed that poor representation of individuals in the potentially reproductive class has generally resulted in a very slow rate of increase in the population and will continue to remain so for another 10-15 years till young individuals enter into the reproductive class.

Tiger and leopard are two predators that occur in association with the Indian rhino in the protected areas. Ungulates include the Indian gaur, hog deer, sambar and the barking deer. Elephants sometimes share the same habitat with the Indian rhino. In recent years it has been observed that a composite herd of 20 elephants use the prime habitat of the rhino for a period of 7-8 months.

Hunting is a major threat for the survival of this species presently. Currently there are indications that rhino horn is being bartered for gold. During 1991 - 93 three animals have fallen victims to poachers' action in Jaldapara Wildlife Sanctuary. In Gorumara seven & four rhinos were poached during 68 - 72 & 81-90.

32 inhabited mouza and eight tea estates exist along the fringe of the Jaldapara Wildlife Sanctuary. 4 forest villages are also included within the boundry of this protected area. The livestock population of these villages is about 1.25 lakh, mostly comprised of cows, bulls and buffaloes. Domestic cattle not only compete with wild herbivores for forage but also pose hazard of communicable diseases. In Gorumara WLS this problem exists in the grasslands on the eastern boundary and high forests on the western side.

Inhabited fringe mouzas, tea estates and forest villages have a large population of approximately 2 lakhs. Firewood continues to be the principal source of domestic energy and subsistence living by sale. Demand for wood both immature and mature and khair disrupts the khair - sissoo formations which is the prime habitat of the rhino.

Shrinkage of habitat by weed invasion is the serious problem in Jaldapara Wildlife Sanctuary. *Mikania spp.*, *Laea spp.*, *Eupatorium odoratum spp.*, *Ageratum conyzoides*, *Lantana camara*, *Clerodendron spp.* and *Cyclosanrun spp.* are the main weeds of the sanctuary. Close planting with indigenous grasses is a costly proposition but is considered to be very effective to add to the exist ing forage resources of large herbivores including the

Indian rhino. Gorumara Wildlife Sanctuary does not have any serious problem of weed infestation in its grasslands.

Two important rivers namely the Torsa and Malangi traverse through Jaldapara WLS floods of severe nature that deserve mention on account of damage caused to the forest crop took place during 1952, 54, 64, 68 and 93. 1968 flood is considered to be a physiographic landmark as this flood resulted in change of course of the river Torsa. The rivers Jaldhaka and Murti experienced severe floods in 1993 but had beneficial effects on the grasslands of Gorumara WLS.

Intraspecific aggression was high during 1985-92 when cases of severe assault on adult males by dominant males were recorded. A calf in Gorumara WLS died to death because of aggression by a male preparing to mate its mother.

Jaldapara WLS is now managed by the Divisional Forest Officer, Wildlife Division II and Divisional Forest Officer, Cooch-Bihar Division. An officer in the Junior scale of IFS is located at Madarihat to oversee the management of the sanctuary from closed quarters. The staff strength responsible for the management of Jaldapara WLS are : DFO - 2 ; Attached Officer - 1 ; Forest Ranger - 6; DR/Fr - 19 ; FG/WLG - 43; Watchman - 24 ; Orderly/CDL/D-Group - 156; NVFS - 10. All ranges, beat offices and camps are under cover of a RT network with 16 fixed stations, 3 mobile station and 12 walkie talkie sets, 3 jeeps, 1 mobile van and 12 elephants, ten .315 rifles and 40 DUM/30MM guns have been provided for patrolling by officers and staffs.

The existing Gorumara WLS is managed by a Forest Ranger under the control of the DFO, Jalpaiguri Division. There are two beats and two camps, two elephants, RT network and arms for the personnel.

Current Management Objectives and Strategy :

I. Preservation and maintenance of diversity and interspersed habitats through site-specific manipulative management so as to secure the long term survival of rhinoceros and its associates.

- 1) Eradication of weeds followed by close planting of indigenous fodder grasses.
- 2) Overwood removal in areas colonised by khair, sissoo, malata, tantari, sidha followed by weed elimination and enrichment planting with grasses.
- 3) Judicious use of fire for production of nutritive fodder.
- 4) Aforestation with hardwood species

II. Elimination of grazing by domestic cattle from prime rhino habitat in a phased manner for improvement of habitat and prevention of outbreak of cattle-borne diseases.

- 1) Construction of boundary wall with suitable live-hedge of thorny shrubs and multi strand energised fence along vulnerable boundaries to prevent cattle trespass into Jaldapara Wildlife Sanctuary.
- 2) Raising fodder plantations on community lands to be shared by beneficiaries for stall-feeding and also raising silvo-

pastoral plantations on such lands to permit rotational grazing.

- 3) Larmarking 2 kms of Tashmar Block situated between the RT and the Railway line as a grazing block for the practice of rotational grazing in consultation with the members of eco-development committees.

- 4) Reduction in number of low-yielding milch-cattle through castration of useless bulls and artificial insemination of cows.
- 5) Dealing with cases of unauthorised grazing under provisions of the Wildlife (Protection) Act, 1972 - which provisions for seizure and confiscation of all such cattle.
- 6) Immunisation of all domestic cattle living within 5 Km. of the protected area through organisation of camps involving local veterinary organisation.

III. Strengthening protective network and ensuring intensified vigilance to prevent poaching Indian Rhino and its associates, and illicit felling of timber and fuelwood.

- 1) Placing the entire area of Jaldapara Wildlife Sanctuary under unified control of a Divisional Forest Officer and transfer of the management of the proposed Gorumara National Park to a Wildlife Manager.
- 2) Strengthening the RT network by bringing in all stations located in the extended part of the sanctuary on same frequency.
- 3) Re-organisation of Ranges & Beats as necessary on transfer of extended area of Jaldapara Wildlife Sanctuary and Gorumara National Park to Wildlife Managers.
- 4) Establishment of an intelligence network for collection of information on attempts to poach valued individuals, to degrade habitat and a mechanism of mutually rewarding information and govt. servants.
- 5) Establishment of additional beats & camps at vulnerable points to prevent entry of poachers and organised smugglers.

IV. Reinforcing conservation efforts in the sanctuary by developing a rapport with people through implementation of eco-development works for economic uplift of the rural people on the fringes.

V. Judicious promotion and regulation of tourism in the sanctuary as well as provision for appropriate extension and interpretation facilities.

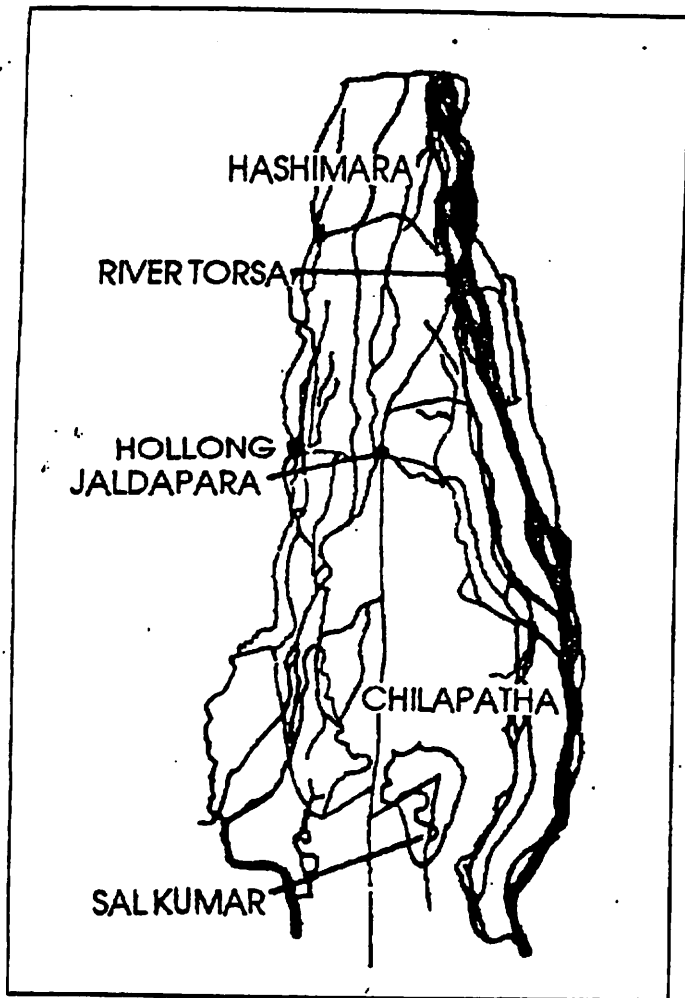
VI. Provision of social facilities for park personnel for getting the best out of them on park-management related issues.

VII. Provision of training facilities for park personnel.

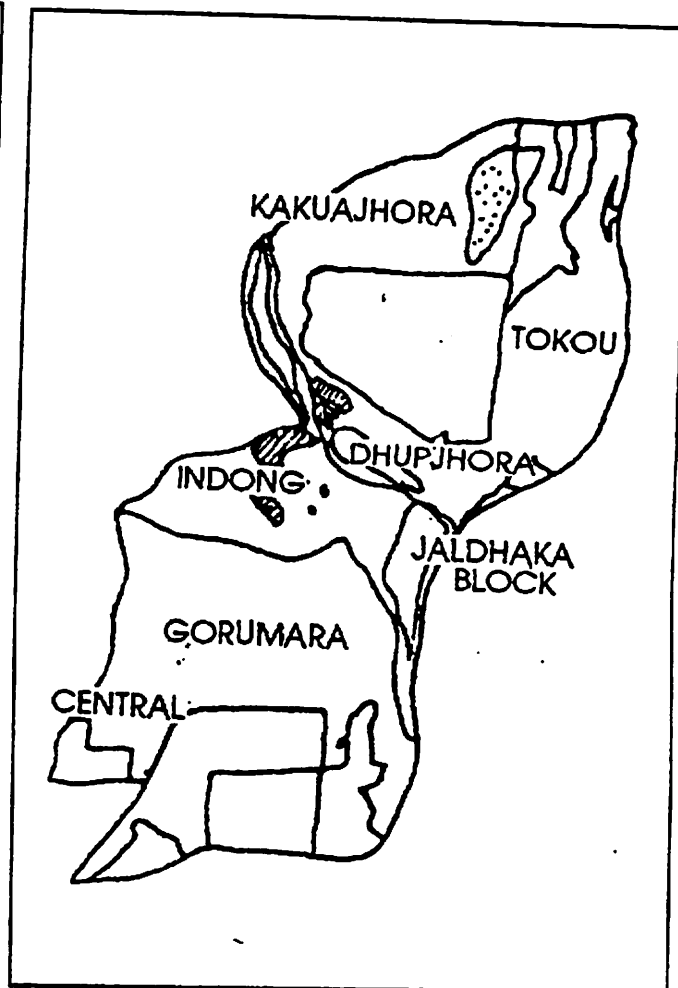
- 1) Grassland ecology and management for Indian rhino
- 2) Tranquillisation, rescue and veterinary care.
- 3) Management of captive elephants
- 4) Animal signs, monitoring and census techniques
- 5) Erection and maintenance of energised fences
- 6) Interpretation and extensions

Research priorities.

Rhino-evaluation sub-committee of the Indian Board of wildlife during early eighties observed that the rate of reproduction of these populations was below optimal. The introduction of new blood, they suggested may result in promoting reproductive behavior of the population.



Jaldapara Wildlife Sanctuary



Gorumara Wildlife Sanctuary