KAZIRANGA NATIONAL PARK

Summary of Report submitted by the Forest Dept. of Assam

With the advent of the present century, ruthless destruction of forest was carried out in the higher terraces of the area between Bokakhat in the east and Jakhalabandha in the west, hills in the north and Bramapudhra in the south, for establishing tea gardens and the low line streches for paddy cultivation. Habitation forced the wild animals to the flood plains which now forms the Kaziranga National Park. The decline in the rhino population was very rapid and not more than a dozen surviving rhinos were left in KNP at the begining of the present sanctuary. Concrete protective measures were called for an area of 22,617 hectares and was declared as Kaziranga reserve forest in January 1908. From that day till now the population is progressively increasing with the latest census figure showing 1,164 +/- 136 rhinos.

KNP lies between 26°30' and 26°45' north latitudes and 93°5' and 93°40' east longitudes spread over parts of Golaghat, Nagaon and Sonitpur in Assam with rivers, road, foothills and artificial line acting as its boundary.

Legal Status :
In november 1916 the area was declared as a Game Sanctuary and subsequently changed its nomenclature to Wildlife Sanctuary with effect from 1950. It was further declare as a National Park in 1974 under the relevant provision of the Wildlife (Protection) Act of 1972.

Extension of Areas :
With the establishment of tea gardens, human habitation and agricultural activities on the southern boundary and constant erosion of the northern boundary and accretion of chapories with the villages in the southern edge harbouring poachers and the trend in the rhino population dynamics, a number of proposals for the extension of the national park were sought.

Vegetation :
Three broad categories of vegetation can readily be recognised in the park.

1) Aquatic plants in or near the water bodies.
2) Eastern wet alluvial savanna or the grass land, and
3) Woodland or the tree forests. p73

The water bodies occupy about 6% of the park. *Eichhornia spp., Andropogon spp., Ipomea spp., Enhydra spp., Pistia spp., Lomma spp., Nymphia spp.* and *Nelumba spp.* are the aquatic vegetation. *Tamarix spp.* and grasses like *Saccharum spontaneum, Imperata cylindrica, Erianthus filifolius, Narenga spp., Neyrandia spp., Cymipopogon spp.* etc are the established grassland species. The most widely distributed species of grass is *Erianthus ravanlao.* Microstegium ciliatum occur as ground cover under the tree canopies in comparatively higher ground. Woodlands occupy about 28% of the area of the park.

Ecological Status :
Both natural and man made factors have influenced the flora and fauna of Kaziranga National Park. Large part of the savannah are subjected to annual control burning duringthe winter months which arrests the furtherprogress of vegetational succession towards woodlands and in retaining its present form of an ideal habitat for terrestrial fauna particularly the larger mammals. The advantage of burning is better disposal of animals and relieving of pressure in heavily grazed short grass locations.

Annual submergance of large areas play an important role in maintaining ecological status of some of the grassland formations and flush out of the water ways and check water hyacinth growth which act as an inhibitor to the water birds. Mortality is high among deer and weak and young animals in the most adversely affected areas. There is a change in behaviour especially the breeding pattern during monsoon.

Habitat Evaluation :
Rhinoceros, wild buffalo, swamp deer, hog deer, elephant, sambar, wild boar, tiger, leopard, Bengal florican are some of the more common animals found in the park.

Habitat evaluation for rhinoceros, wild buffalo, swamp deer, hog deer and elephants has been conducted by dividing the park into minutes by the minute grid.

Habitat Suitability:
Out of the 138 one-minute grids into which the park is divided, 37 have high suitability for rhino and wild buffalo, and 94 grids have moderate suitability, while 7 grids have low suitability. The best suitability of the area is found to be for elephants as 81 grids fall under the high suitability category and 57 under moderate suitability. At present management of the park is rhinoceros oriented.

Animal Census:
The first scientific annual census in Kaziranga was carried out during 1966 and thereafter followed every 6th year. A rhino census was carried out in April 1993 but due to unfavourable conditions direct count was not possible. The 1993 figures are as follows: Rhino - 1164 +/- 136; Elephant - 511; Wild buffalo - 1034; Bison - unknown; Swamp deer - 427; Sambar - 34; Hog deer - 2048; Wild boar - 140; Tiger - 8; Bear - 2; Capped langur - 21; and Gibbon - 8.

Mortality:
There is a 7 - 10 % mortality among rhinos every year, both by natural deaths and by poaching - 93 deaths had been recorded until the 12th of November 1993.

Trend of poaching:
The trend has changed dramatically from pit poaching to elec-

trocution. The use of silenced carbines by the poachers has increased the problems for the untrained staff. The prime reason for poaching is the high value of the rhino horn in the international market coupled with the socio-economic conditions of the villagers residing around the park. Easy availability of sophisticated arms and militant activities in the North east has aggrevated the problem of poaching. Locating the poachers in the park is difficult due to tall grasses and lack of natural barriers.

Anti-poaching Strategy:
One hundred and thirteen camps all over the park are not enough to control poaching. There is constant patrolling on the southern boundary and two stationary vessels on the river Brahmaputra patrolling the river routes. With more sophisticated weaponry being used by the poachers, anti-poaching strategy will have to be evolved accordingly.

Anti-poaching Activities:
The total area of the park has been divided into four segments, and each segment is under the direct control of forest ranger with a number of camps. The total strength of staff of different categories engaged for anti-poaching are Forest Ranger - 7 ; Deputy Ranger - 6; Gamekeeper - 2; Forester I - 49 ; Forester II - 19; Head game watcher - 4; Mahout - 26; Gamewatcher - 56; Forest guard - 204; Boatman - 60; Home Guard - 45; and casual labourers - 64.

Wireless, Arms and Amunitions
The position of wireless network and sets available with different ranges and headquarters are Kaziranga range 12; Kohora Western Range 14; Baguri Eastern Range 9; Burapahar Ranger 5.

The arms provided to the anti-poaching staff are : 315 - 179; SBBL - 33; DBBL - 27; Revolver - 6; Others - 10.

Intelligence Network:
There is no particular intelligence network available with the park authorities. However, a few local people are being engaged for collection of information regarding movement of poachers, illegal trade, etc. On the basis of information furnished by the informers, good results had been achieved during raids outside the park. Poachers were killed during encounters and arms recovered.
On each successful raid or encounter, the informers were rewarded.

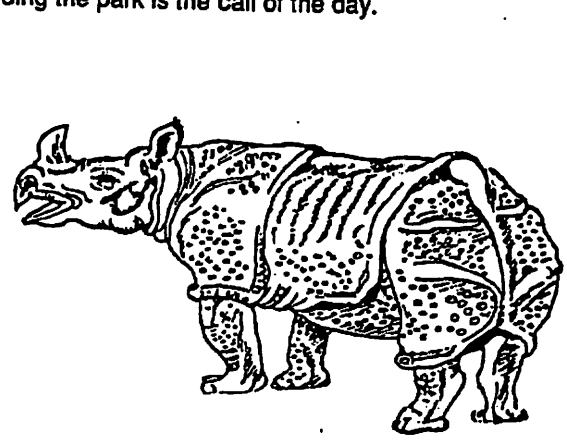
Constraints of Anti-poaching:
With no natural barriers to protect the perimeters, keeping a look-out for intruders has become a herculean task for the staff of the park. The army operation code name " Rhino and Bajrang" in Assam during 1991 resulted in restriction of movement of illegal arms and activities of all types including poaching. The main constraints thereafter are; 1. Lack of information / intelligence system; 2. Delayed finalisation of proposed additions; 3. Absence of ecodevelopment programmes; 4. Possession and movement of illegal arms and ammunitions; 5. Lack of infrastructure and incentives to the staff; 6. Lack of trained staff in combat fighting, 7. Lack of system of rewarding the staff and informers for commendable work for conservation of rhinos.

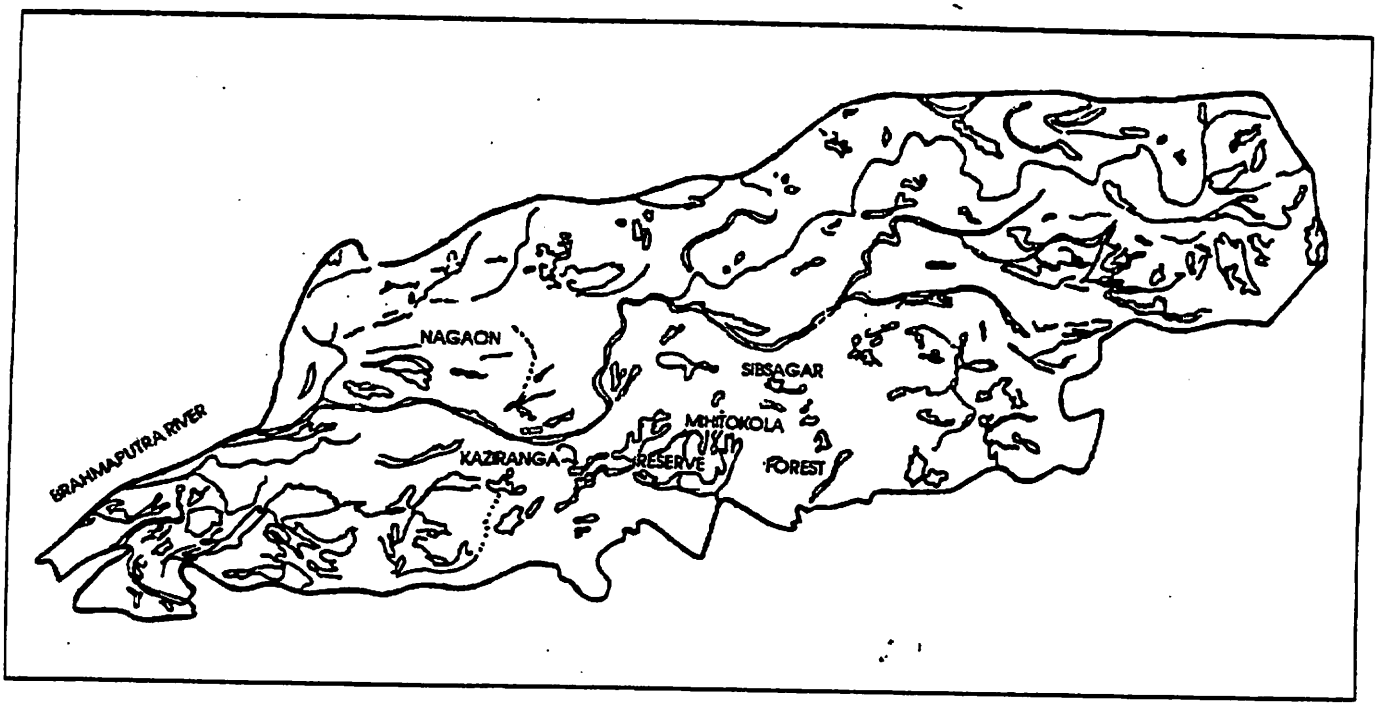
Research:
To have more proper and scientific management of the park, more research on the available resources and proper planning is a must. A systematic research on habit, habitat and reproductive growth of rhinos in relation to other animals in the park is essential to know the viability of the rhino population within the existing habitat. Research on grassland ecology and succession of vegetation are needed. Further study on invasion and control of exotic climbers which pose maintenance problems of tall grasses need attention of researchers.

Tourists and Revenue:
Tourism is mainly dealt by the Tourism Department of Assam. Elephant ride, vehicle ride and entrance fee are being realised from the tourists.

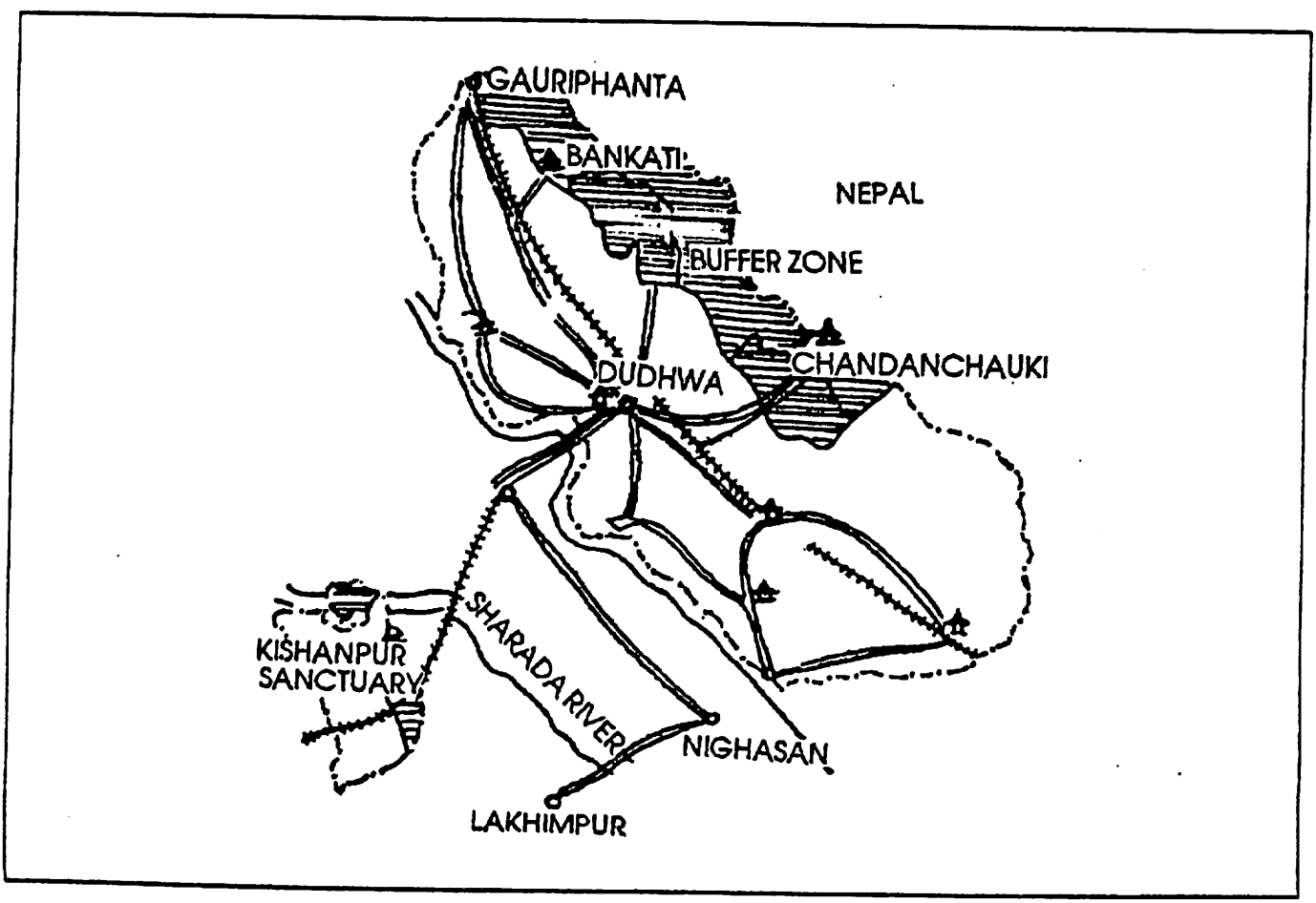
Funding:
The expenditure for the maintenance of the park and anti-poaching works are being funded from non-plan and state-plan budget to a limited extent. During the seventh 5-year plan, the Government of India provided 100% assistance through the "rhino conservation" scheme which included infrastructure, constructions, acquisitions, and entertainment. With the transfer of the scheme to the state government and non-availability of the required finance, all developmental activities of the park have been halted. No external funding is so far available.

A Few Salient Support System:
1) After the '87-'88 floods, about 68 highlands were constructed inside the park to provide shelter for the marooned animals.
2) Two floating camps - Hawk and Samrat in the Brahmaputra River to prevent intrusion by poachers on the northern side.
3) Eighty-eight country boats facilitate easy communication between different camps situated inside.
4) Twelve speedboats help in the anti-poaching activities
5) Out of 44 department elephants, 15 are engaged for tourists.
6) The staff engaged in anti-poaching activities are entitled special allowance, compulsory one-month leave, free ration, and full uniform as they are considered on par with the paramilitary forces.
7) To bridge the rift between the villagers and forest officials, massive eco-development programmes in the villages surrounding the park is the call of the day.





KAZIRANGA NATIONAL PARK



DUDHWA NATIONAL PARK