

## ACTION PLAN FOR KAZIRANGA NATIONAL PARK

B.S. BONAL, DIRECTOR, KAZIRANGA NATIONAL PARK, BAKAKHAT - 758612, ASSAM

The management of Kaziranga National Park comprises two main components viz. **Anti-poaching activities** to counter the threat of organised gangs of poachers and **Habitat manipulation** to maintain the grasslands, wetlands in perpetuity to provide a suitable habitat for the rhinos and other wildlife.

### I. ANTI-POACHING MANAGEMENT

The anti-poaching activities in Kaziranga National Park may again be divided into three phases as detailed below:

- 1. PRE-ENTRY:** The main activity in this phase is a **pro-active action** that includes intelligence gathering on the activities of poachers in the vicinity of the Park. The **intelligence gatherer** are usually local villagers or poachers who have turned over a new leaf. Effort are also made by the park authorities to involve the local people in furnishing information on the movement of poachers through implementation of eco-development works as well as massive education and awareness drive in the fringe villages of the National Park.
- 2. POST-ENTRY:** This calls for a **reactive action** which denotes the activities undertaken by the staff to track down and apprehend the poachers inside the Park, if any information regarding such intrusion is received by the Park authorities from any informer. The logistics of such a track down operation is enormous and calls for **radical improvement in the existing infrastructure** for anti-poaching operations viz. improvement of **surface communication** and **radio communication network**, upgrading of **arms & ammunition**, improvement in **accommodation facilities** for field staff, greater mobility on land surface and water through **procurement of vehicles and boats, hover craft** in the mighty Brahmaputra, augmentation of **surveillance facilities** through construction of watch towers on suitable locations, etc. Over and above these improvement measures, it is also imperative to create **Mobile Squads** to react immediately in case of any emergency.
- 3. POST-EXIT:** This is the **investigative and prosecutive action** after the poachers escape from the park, usually after committing an offence inside the Park. This phase mainly consists of co-ordination with other **Law-enforcing Departments**, e.g., Police to keep track of the poachers and nab them. However, past experiences have shown that though the poachers are apprehended, they are seldom convicted in the court as the cases on behalf of the Department are not properly represented. Therefore, a **legal cell** may be constituted to pursue the cases related to rhino poaching for conviction of the poachers. Besides, a system of **reward for the staff** as an incentive to recognize their efforts in apprehending rhino poachers, is also required.

There are number of cases where the anti-poaching staffs are bitten and injured by rhinos, tiger and other wild animals rendering them invalid for normal duty. The meager medical allowance they receive is not at all sufficient for proper treatment. As such a provision for medical help is very essential.

### II. HABITAT MANAGEMENT

The other important aspect of management in Kaziranga is to maintain the climatic climax stage of grassland by preventing the invasion of trees. This is achieved primarily through annual burning of grasslands so as to discourage the growth of tree saplings. The operation also helps in enhancing the nutritional value of coarse grasses by facilitating growth of new shoots, which attract the herbivores.

## DE-SILTATION

It is observed that a number of water bodies inside the Park have shrunk in size due to siltation caused by flood. As the wetlands are an integral part of ecosystem in Kaziranga, it is imperative that these water bodies be de-silted manually or mechanically.

## ERADICATION OF WEEDS

The proliferation of various weeds like Mikenia, Mimosa and water hyacinth, causing eco-logical degradation of the habitat, is a major problem confronting the Park authorities. Eradication of these weeds should be taken up urgently to preclude any further degradation of habitat for wildlife in the Park. Increasing cane brakes also now becoming a matter to be ponder upon.

## BUND CONSTRUCTION

With the onset of dry season, bunds are also constructed in some of the *beels* (water bodies) to retain water to attract various species of migratory avifauna.

## HIGHLAND CONSTRUCTION

Some highlands have been constructed inside the Park to provide shelter to the animals during high flood. However, some more highlands with bigger dimension are required to be constructed to provide shelter to the marooned animals.

## WOODLAND MANIPULATION

Another management practice adopted in Kaziranga is the uprooting of tree saplings to prevent invasion of trees into the grassland areas.

## III. MISCELLANEOUS ASPECTS OF MANAGEMENT IN K.N.P:

### RESEARCH & MONITORING

To ensure proper planning for management of the National Park, research on the natural resources is a must. Sound management techniques can be devised only on the basis of sound research background. But very little research has been done on the habit or habitat of Indian rhinos in Kaziranga. Therefore, it is imperative that research on the morphological and ecological characters of rhino in Kaziranga should be taken up on a priority basis.

### TRAINING IN ARMS HANDLING

Though the staff of Kaziranga are equipped with .315 rifles or guns, they lack any formal basic training in handling of arms. Therefore it is imperative to impart basic training in handling of arms to the field staff.

### TRAINING FOR WILDLIFE MANAGEMENT

Most of the staff do not have any training in wildlife management. Therefore, to enhance their efficiency, capsule courses on wildlife management may be devised specially for the benefit of the staff of Kaziranga National Park.

**AMENITIES TO FIELD STAFF**

In view of the arduous nature of duties to be performed in the Park, appropriate incentives are required to be provided to field staff by way of accommodation for family members, education facilities for children, regular supply of uniform, etc. so as to attract the best persons available in the Department.

**CREATION OF RESCUE HOME & VETERINARY FACILITIES**

At present the Forest Veterinary Officer looks after the departmental elephants and specific cases of ailments of wildlife which are reported from time to time. However, there is pressing need to create an rescue home for treatment of animals rescued during flood, prior to their relocation.

**ANIMAL CENSUS**

Estimation of the population of different species of animal at regular interval furnishes insight into the population dynamics of those species. At present census operation in Kaziranga is done every sixth year. But for the purpose of better understanding of the trend in population of different endangered resident species of the Park, it is advisable that population estimation exercise for larger mammals should be undertaken every fourth year.

**BOUNDARY DEMARCATION OF THE ADDITION AREA**

Erosion along the northern boundary of the boundary causes considerable havoc to the geographical area of the Park. Therefore, to compensate for the loss incurred by way of erosion, it is imperative that the six proposals for inclusion of addition areas are finalised urgently. Some of these addition areas along the boundary of the Park are also used by animals for migration to hills during flood.

On finalisation of the proposal for extension of the Addition areas, the boundaries should be surveyed and demarcated immediately to preclude any encroachment of the Park area.

**FLOOD FIGHTING MEASURES**

During the floods, country boats and speed boats are the only effective means of communication. The repairing of country boats, speed boats and opening of boat line are to be accorded top most priority as flood combating measure.

**EROSION CONTROL PROJECT**

Cut bank erosion by the Brahmaputra River along the northern boundary of the Park is a threat looming large on the existence of Kaziranga National Park. The problem of erosion is most severe along the northern boundary on the north-eastern corner. The main causes of erosion of the National Park may be attributed to gradual elevation of the river bed due to siltation and consequent channel migration of the Brahmaputra River. Since combating erosion requires technical expertise, an integrated approach to tackle the problem should be devised by proper co-ordination amongst various agencies like Forest Department, Brahmaputra Board, Central Water Commission, ARSAC etc. to secure the future of Kaziranga National Park.

## PROJECT COST

## I. ANTI-POACHING MANAGEMENT

Pro-active	Total (Rs in lakh)
1. Development of information net work @ Rs. 100.00/ year	5.00
2. Eco-development programme in the fringe villages to K.N.P. 131 @ 200 Lakhs/year	1,000.00
3. Education and Awareness programme in each fringe village including training. 131 @ 1.00 Lakh/year	5.00
<b>Reactive</b>	
4. Strengthening of communication net work.	
4.1. Construction of all weather road, widening repairing including bridge/culvert construction @ 6.00 lakh/km 40 km.	240.00
4.2. Improvement of fair weather road @ .50 -400 km including bridge/ culvert.	200.00
4.3. Reconstruction of patrolling path 1000 km x 5=5000.02/km 200.00	100.00
4.4. Construction of wooden boats 80. @.15/- 12.00	12.00
4.5. Purchase of O.B.M.(diesel) 5 @ 3.00	15.00
4.6. Purchase of Hover craft I @ 10.00	10.00
4.7. Construction of pontoon bridge at Holalpath on Difaloo River.	8.00
5. Construction of anti-poaching camps raised with RCC pillar @ 2.00 for 20 Nos.	40.00
6. Construction of floating camp (Mechanized boat) in Brahmaputra River @ 1.30 for 4 Nos.	4.00
7. Wireless network.	
a) Fixed station 5 @ .40/-	2.00
b) Mobile 20 @15/-	3.00
c) Battery 100 @ .03/- 3.00	3.00
d) Solar battery charger 20 @ 20	4.00
8. Arms & ammunition:	
8.1. Purchase of 3 revolver @ .80	2.40
8.2. Purchase of 15 .315 Rifles @ .30/Rifle	45.00
8.3. Purchase of ammunition	10.00
9. Construction of 10 Watch towers @ 2.00	20.00
10. Purchase of 100 Binoculars @ .05	5.00
11. Logistic support, i.e., purchase of battery cells, torches, kerosine etc. 5.00/year	25.00
<b>INVESTIGATIVE</b>	
12. Strengthening of enforcement, reward etc. @ 2/- year.	10.00
13. Payment to the staff for disablement & medical treatment due to injury caused during anti- poaching work by wild animals. @ 2.00/year.	10.00
<b>II. HABITAT MANAGEMENT</b>	
14. Deepening of silted water bodies 20 @ 10.00	200.00
15. Removal of water hyacinth & eradication weeds @ 2.00/year	10.00
16. Construction bunds to retain water after flood @ .50/year.	2.50

17. Construction of 20 highlands @ 4.00/ year	80.00
18. Wood land manipulation for 1.00 hect. @ .20 lakh	20.00
<b>III.MISCELLANEOUS</b>	
19. Research & monitoring in K.N.P. @ 200/year	10.00
20. Arms training to the field staff .50/year.	2.50
21. Training of Park personnel	10.00
22. Amenities to staffs.	
22.1. Family accommodation for field staff 20.00/year	100.00
22.2. Uniform, winter clothing, rain coats etc. for 600 staff @ .02/year	60.00
23. Animal census to be carried out every 4 years interval 5.00/	10.00
24. Demarcation of boundary of Additions & Park area @ 2/- x 5 years	10.00
25. Boat line construction & Boat repairing @ 2.00/ year L.S.	10.00
26. Creation of rescue home for marooned wild animals.	5.00
27. Veterinary care for rescued animals and departmental elephants.	5.00
28. Purchase of 5 vehicles @ 4 lakhs	20.00
29. Purchase of Mini-dozer with accessories.	30.00
30. Publication of brochures, leaflets, Management Plan, Status Report, Annual Plan, etc.	20.00
31. Contingency.	16.60
	2400.00
	<b>(Total- Twenty four crores only)</b>

An additional amount of Rupees *Five to Ten crores* may be earmarked for investigative studies and formulation of project for erosion control measure in co-ordination with other Agencies.

## BREAKDOWN OF PROJECT COST DURING IMPLEMENTATION

Sl. No	Item	1 <sup>st</sup> year (Rs. In lakh)	2 <sup>nd</sup> year (Rs. In lakh)	3 <sup>rd</sup> year (Rs. In lakh)	4 <sup>th</sup> year (Rs. In lakh)	5 <sup>th</sup> year (Rs. In lakh)	Total (Rs. In lakh)
<b>I</b>	<b>Anti poaching Management</b>						
	<b>Pro-active</b>						
	1. Development of information/ intelligence network.	1.00	1.00	1.00	1.00	1.00	5.00
	2. Eco-development programme.	200.00	200.00	200.00	200.00	200.00	1000.00
	3. Education & awareness programme.	1.00	1.00	1.00	1.00	1.00	5.00
	<b>Re-active</b>						
	4. Strengthening of communication network.						
	4.1	48.00	48.00	48.00	48.00	48.00	240.00
	4.2	40.00	40.00	40.00	40.00	40.00	200.00
	4.3	20.00	20.00	20.00	20.00	20.00	100.00
	4.4	2.40	2.40	2.40	2.40	2.40	12.00
	4.5	3.00	3.00	3.00	3.00	3.00	15.00
	4.6	10.00	-	-	-	-	10.00
	4.7	8.00	-	-	-	-	8.00
	5. Construction of anti-poaching camp.	8.00	8.00	8.00	8.00	8.00	40.00
	6. Construction of floating camp.	1.00	1.00	1.00	1.00	-	4.00
	7. Wireless network.	4.00	3.00	3.00	2.00	-	12.00
	8. Purchase of arms & ammunition.	10.00	45.00	2.40	-	-	57.40
	9. Construction of watch tower.	4.00	4.00	4.00	4.00	4.00	20.00
	10. Purchase of binocular.	2.00	2.00	1.00	-	-	5.00
	11. Logistic support.	5.00	5.00	5.00	5.00	5.00	25.00
	<b>Investigative</b>						
	12. Strengthening enforcement & rewards.	2.00	2.00	2.00	2.00	2.00	10.00
	13. Medical treatment for injured staff	2.00	2.00	2.00	2.00	2.00	10.00

Sl. No	Item	1 <sup>st</sup> year (Rs. In lakh)	2 <sup>nd</sup> year (Rs. In lakh)	3 <sup>rd</sup> year (Rs. In lakh)	4 <sup>th</sup> year (Rs. In lakh)	5 <sup>th</sup> year (Rs. In lakh)	Total (Rs. In lakh)
<b>II</b>	<b>Habitat Management</b>						
	14. Deepening of silted water bodies.	40.00	40.00	40.00	40.00	40.00	200.00
	15. Removal of water hyacinth & weeds.	2.00	2.00	2.00	2.00	2.00	10.00
	16. Construction of bunds.	.50	.50	.50	.50	.50	2.50
	17. Construction of highland.	16.00	16.00	16.00	16.00	16.00	80.00
	18. Woodland manipulation.	4.00	4.00	4.00	4.00	4.00	20.00
<b>III</b>	<b>Miscellaneous</b>						
	19. Research & Monitoring.	2.00	2.00	2.00	2.00	2.00	10.00
	20. Arms training for staff.	.50	.50	.50	.50	.50	2.50
	21. Training of Park personnel.	2.00	2.00	2.00	2.00	2.00	10.00
	22. Amenities to staffs.						
	22.1 Family accommodation	20.00	20.00	20.00	20.00	20.00	100.00
	22.2 Uniforms etc	12.00	12.00	12.00	12.00	12.00	60.00
	23. Animal census.	5.00	-	5.00	-	-	10.00
	24. Boundary demarcation.	2.00	2.00	2.00	2.00	2.00	10.00
	25. Boat repairing & boat line clearance.	2.00	2.00	2.00	2.00	2.00	10.00
	26. Creation of rescue home for marooned animals.	2.50	2.50	-	-	-	5.00
	27. Veterinary care for elephant & rescued animals	1.00	1.00	1.00	1.00	1.00	5.00
	28. Purchase of vehicles.	4.00	4.00	4.00	4.00	4.00	20.00
	29. Purchase of mini dozer.	30.00	-	-	-	-	30.00
	30. Publicity, data base etc.	4.00	4.00	4.00	4.00	4.00	20.00
	31. Contingency.	3.00	4.00	3.00	3.60	3.00	16.60
	<b>Total</b>	<b>523.90</b>	<b>505.90</b>	<b>463.80</b>	<b>454.40</b>	<b>452.00</b>	<b>2400.00</b>

