

Programme (MNP) of Department of Environment and Forests. The following activities have been proposed for habitat improvement programme:

a) Afforestation

Area under forest and tree cover will be expanded through systematic planning and implementation of afforestation and rehabilitation programme in degraded and open forests lands. Afforestation programme in the degraded Forest Compartments is proposed to be carried out. The species to be planted may be finalized by the Forest Department. The cost of afforestation has been included in the CAT plan cost.

b) Nursery Development

Out of the forest area one nursery shall be established. Also, the seed sowing by way of dibbling of environmentally and ecologically interactive species in the compartment prone to man-animal conflict zones is proposed. The location of these nurseries will be identified in consultation with Forest Department.

The cost of implementation of Habitat conservation and enhancement in the catchment has been covered in CAT plan cost.

1.3.1.4 *Wildlife Management*

According to Forest Working Plan of Batote Division there has been continuous decline in food and habitat of wild animals on account of biotic interference. As a result of that wildlife populations have dwindled in the area. There is lack of awareness among people regarding wildlife in the area. For protection and management of wildlife in the state, rules and regulations exist in the form of The Jammu and Kashmir Game Preservation Act, 1998 (1942 AD), Act no. XXIV of 1998. In addition The Jammu and Kashmir Wildlife (Protection) Act, 1978 also is in place for protection and preservation of wildlife. In order to ensure the implementation of above Acts, detailed regulatory mechanism for the protection of forests in upper catchment and in the vicinity of project area shall be developed in consultation with the State Forest Department which is the sole implementing and monitoring agency. An amount of **Rs. 75.00 lakh** has been earmarked for implementing these measures.

Most of the slopes along the Chenab River are highly degraded due to agricultural practices and nearby settlements. However scattered patches of pine forests can be seen located on higher and moderately steep slopes with low accessibility in the study area. As patches of good pine forests can be seen near Tangar and in Mandiyal Khad watershed, it is therefore suggested that this area should be marked as conservation reserve for management, conservation and protection which can help in preservation good pine forest and wildlife species like leopard, wild goat and barking deer. Therefore the main strategy would be the improvement of degraded slopes by providing good vegetation cover through the implementation of the Catchment Area Treatment plan and Compensatory Afforestation Plan, which will help in improving the habitat for different species.

1.3.1.5 *Safeguards during construction phase*

During the construction phase, various adverse impacts on the wildlife are anticipated in the surrounding areas of the proposed project in terms of increased noise levels, land vibrations during tunneling and blasting, release of air and water pollutants, etc. To avoid

and minimize the negative impacts of these activities, project authorities are advised to prepare strict guidelines as suggested below:

- (i) Strict restrictions shall be imposed on the workers at project sites to ensure that they do not harvest any species/produce from the forests and cause any danger or harm to the animals and birds in the wild.
- (ii) Minimum levels of noise during construction activities will be maintained.
- (iii) The fuelwood to the labours shall be provided from plantations meant for the purpose and/or the provision made for the supply of the free/subsidized kerosene/LPG from the depots being set up for this purpose to avoid forest degradation and destruction of forest and wildlife habitats.
- (iv) The interference of human population would be kept to a minimum in the adjacent forested areas and it would be ensured that the contractors do not set up labour colonies in the vicinity of forests and wilderness areas.

1.3.1.6 Awareness Programmes

Forest and Wildlife Protection committees need to be constituted at Divisional and Range level in all divisions with participation of local village panchayats, officials of the department and personnel from the project to be members of these committees. The committees shall regularly review the progress of measures taken for protection of wildlife. The committee shall also ensure implementation of activities like

- Conflict resolution
- Control on poaching, and
- Awareness campaigns aimed at creating awareness towards respecting the habitat protection in general and the protection of wildlife species in particular.

A general awareness of the Wildlife Protection Act and its rules would be spread among the locals through communication and extension services. The wildlife populations in this area are likely to be affected by project construction activities and also due to influx of migrant labour force, awareness among them and contractors also would be inculcated.

Under this programme, various activities viz. training, publishing of pamphlets, brochures, hoardings, etc. shall be carried out during the construction phase of the project.

In addition the following activities are planned under this programme:

Observance of Wildlife Week: The wildlife week will be celebrated every year to assess all the tasks set aside for wildlife management. Under this programme, seminars, art competitions and awareness campaigns are also proposed to be held.

Nature Club: Under this activity nature clubs shall be constituted at Higher secondary and High school level. They will be imparted education by means of audio-visual aids so as to brief them about importance of wildlife conservation.

Involvement of Village Panchayats and NGOs: The Panchayats of affected villages and active NGOs in the project area would be involved to disseminate the knowledge about the benefits of the proposed project and ensuring greater participation in the conservation efforts and safeguard the environment of the area.

A budgetary estimate of **Rs. 75.00 lakhs** has made under this programme.

1.3.1.7 *Mitigation Measures*

The mitigation measures that would be undertaken during the implementation of the project are described in **Table 1.1**.

Table 1.1: Suggested mitigation measures

S. No.	Issues	Impact	Mitigation Measures
I. Construction Phase			
1.	Clearance and Loss of Vegetation in the construction sites	Loss of forest vegetation	<p>Forest and vegetation will be felled only to the required by pegging the area and numbering the trees</p> <p>Compensatory Afforestation for the felled local tree species as per Forest (Conservation) Act 1980 will be carried out in consultation with the Divisional Forest Officer at the project cost</p>
2.	Loss of Wildlife and Wildlife Habitats	Loss of wildlife habitat and disturbance to rare animal species	<p>The vegetation clearing shall be done only after detailed inspection by the State Forest officials for the presence of any nesting, breeding sites of animals</p> <p>Night time blasting operations will be avoided as far as possible</p> <p>The project staff and workforce will be strictly instructed not to visit the forested areas</p>
3.	Influence of Project Internal Roads and Workforce on the Wildlife and Wildlife Habitats	Illegal poaching of wildlife by construction workforce and loss in wildlife habitat	<p>The project staff and workforce will be strictly instructed not visit the forested areas</p> <p>Outside workforce and staff found in illegal poaching of wildlife will be terminated from project jobs</p> <p>Meat of wildlife in the construction camps and colonies will be strictly prohibited</p>
4.	Impact on Forested Area	Illegal trees passing through the forested area and collection of NTFP, other forest products and poaching of wildlife by construction workforce and loss in wildlife habitat	<p>The project staff and workforce will be strictly instructed not to visit forested areas</p> <p>Meat of wildlife in the camps will be strictly prohibited</p> <p>Outside workforce and staff found in illegal poaching of wildlife will be terminated from project jobs and handed to the regulatory authorities for further action</p> <p>Conservation training, establishment of anti-poaching units, and support to the conservation area</p>
5.	Increased access to Forested areas		The project staff and workforce will be strictly instructed not to visit the forested areas
II. Operation Phase			
1.	Micro level changes in forest and vegetation patterns	Arrival of water loving vegetation along the reservoir in a long run may be possible	Regular monitoring of vegetation dynamics, and formulation of action plans accordingly
2.	Impact on Forested areas	Drowning of wildlife in the reservoir area	Fencing of the reservoir area and possible accessible areas to protect wildlife movement to the barrage site/ construction areas
3.	Increased access to forests	Illegal trespassing through the forested area by the project staff, and involvement in NTFP collection and other forest products and poaching of wildlife	<p>The project staff and workforce will be appropriately made aware about the importance of biodiversity and shall be advised not to indulge in any illegal activity</p> <p>In case of any violation Strict action and penalties would be levied on erring Staff wildlife/ illicit felling of trees like termination from project jobs</p>

Monitoring is an important part of the Biodiversity Conservation & Management Plan and key to success of any management plan. All the activities of BCMP will be closely and regularly monitored in terms of physical, financial progress and quality by the Biodiversity Conservation Committee (BCC) constituted for the purpose. The Committee shall be setup under the aegis of the State Government and shall review and oversee the conservation work to be undertaken. The Chairman of the committee will have the right to assign various activities to various members for proper functioning and achieving the tasks. The suggested composition is as under:

Principal Chief Conservator of Forests, Government of Jammu & Kashmir	Chairman
Manager (Environment), Sawalkote HE Project	Member Secretary
DFO of the concerned Division	Member
Two experts from renowned R & D Institutions like RRL, Jammu (CSIR, Govt. of India) and Jammu University	Member
Representatives from villages located in the project area	Member
Representative of a local NGO	Member

1.4 COST FOR IMPLEMENTATION

The estimated cost of implementation of various activities envisaged in the management plan would be **Rs. 340.00 lakhs**. The details are given in **Table 1.2**.

Table 1.2: Cost estimated for implementation of Biodiversity Management plan

S.No.	Particulars	Amount (Rs. in Lakhs)
1	Support to traditional governing institutions	50.00
2	Non Timber Forest Produce (NTFP) Plantations	50.00
3	Wildlife Management	75.00
4	Awareness and Information programmes	75.00
5	Habitat Improvement Programme/Plantation	Cost covered under Compensatory Afforestation and CAT plan
6	Monitoring and Evaluation @ Rs.10.00 lakhs/year for at least 9 years	90.00
	Total	340.00