

BIODIVERSITY MANAGEMENT & WILDLIFE CONSERVATION PLAN

1 BACKGROUND

Habitat degradation that happens due to anthropogenic pressures leading to land use /land cover changes, and activities like hunting and poaching, and invasion of exotic species are main threats to the native biodiversity and wildlife. Most of these phenomena are related to activities like population growth, increasing agricultural practices, urbanization, road construction and other developmental activities. The rapid development phase in recent years has led to additional pressures on biodiversity which as a result not only poses threats to wildlife but also leads to increasing incidences of man – wildlife conflicts in many areas of India. The biodiversity conservation plan therefore needs to face such challenges and devise strategies to mitigate such threats to the biodiversity and wildlife of the area.

The biodiversity management plan is based upon the understanding of diversity and distribution of floral and faunal species gathered during preparation of baseline, identification of existing threats to biodiversity, concerns of local inhabitants and impacts of developmental activities on animal and plant species.

2 PROJECT ACTIVITIES AND LIKELY IMPACTS

The proposed project comprises of construction of earthen dam, open channel, balancing reservoir and water conductor system which is a piped network designed to distribute water in the command area. The command area of Gond Major Irrigation Project covering 28000 ha land will be irrigated by drip/sprinkler irrigation. Construction of various project components like dam, reservoir, pumping station, etc. and related activities like transportation, material handling, muck generation and disposal, etc. lead to high level of noises, high concentration of particulate matter, and influx of migrant labourers. All these activities can cause adverse impacts on the biodiversity of the project and its adjoining areas unless such impacts are mitigated and managed. Likely impacts are discussed in EIA study report.

3 BIODIVERSITY IMPORTANCE OF THE AREA

As per biogeographic classification of India, the study area is covered under 6A Deccan Penninsular Central Highlands. As per the Wildlife (Protection) Act, 1972, 6 species reported from the study area are listed in Schedule I species viz. Oriental Honey Buzzard, White Eyed Buzzard, Crested Serpent Eagle, Shikra, Black Winged Kite and Egyptian Vulture. In addition, there are a few plant species like *Dalbergia latifolia*, *Azadirachta indica* (Tree), *Justicia adhatoda* (Shrub), which are having medicinal importance and are under threats.

As discussed in Baseline Chapter the project is in the vicinity of the Sanjay Tiger and part of Sanjay Dubri Tiger Reserve is located within the study area of the project. Sanjay National Park and Sanjay Dubri Wildlife Sanctuary form a part of Bandhavgarh-Sanjay-Guru Ghasidas-Palamau landscape which is one of the four potential Tiger meta-population

landscape. Sanjay National Park and Sanjay Dubri Wildlife Sanctuary provides corridor connectivity with Bandhavgarh Tiger Reserve for Tigers and corridor connectivity for wild elephants of Palamau Tiger Reserve. The Elephant Migration corridor known as Sidhi corridor comprises of migration of elephants from Bandhavgarh Tiger Reserve, Sanjay Dubri National Park and Guru Ghasidas National Park to Bagdara Wildlife Sanctuary and passes through forested patches near the dam site and submergence area and forests around Jalpani command. Sanjay National Park and Sanjay Dubri Wildlife Sanctuary harbours populations of Tiger, Panther, Sloth bear, Cheetal, Sambhar, Four horned antelopes, Chinkara, Barking Deer and Wild Pig.

The proposed biodiversity and conservation plan are focused mainly on the issues discussed above.

4 CONCERNS OF LOCAL INHABITANTS

Usually the livelihood of villagers is associated to forests and forest resources. However, animal hunting and poaching for food, games and trophies is not reported from the zone of influence of proposed project. It would be worthy to mention that a few species like Wild Boar, Indian Hare, are reported to raid agricultural land and reportedly damage the crops, which results in the man – wildlife conflicts. To control such conflicts, this issue is also needed to address in biodiversity management plan.

5 PLAN OF ACTION

The management and conservation strategies may affect the traditional rights of local people. Taking these concerns into account, the involvement of local people in formulation of effective management plan would be helpful in its implementation. Considering all factors related to local people, biodiversity of the region, size of the project and magnitude of the impacts, the present biodiversity management plan is proposed for the project.

5.1 Development of Grasslands

Jackal, Peacock, Common Indian Hare, etc. are grassland dwellers and forage around the cultivated lands. Common Indian Hare reportedly invades cultivated fields and damages the standing crops of local people. To prevent the crops from these animals, to control the animal raids, and to avoid the man-animal conflicts and to protect these species, there is need of more grasslands in the area. The development of grasslands can be achieved by joint forest management mechanism by involving local people. Such grasslands can be developed on the government and community lands. The development of new grasslands would be beneficial to local people and would control the animal raids on private agricultural lands. This programme would be implemented by Forest Department having a sound Joint Forest Management mechanism. The detailed plan of action for this plan would be formulated by forest department. Total financial outlay for this plan is **Rs. 50,00,000** only.

5.2 Infrastructure Development & Strengthening of Patrolling

To protect the biodiversity of the zone of influence, improvement in infrastructure facilities is warranted. In this plan project authorities would assist State Forest Department in strengthening the infrastructures, so that State Forest Department can contribute to the

biodiversity protection of this area. This plan will be implemented in the zone of influence of proposed project. Project authorities would provide one time grant to State Forest Department to improve the infrastructure for the conservation of biodiversity. To improve the vigilance, to monitor the wildlife movement, and to check the poaching, State Forest Department shall be provided with grant to build necessary facilities like watch towers, check posts and patrolling paths and also grant for purchase of equipment like, cameras, binoculars, sleeping bags, search lights, health kits etc. Patrolling parties need to be equipped with Wireless communication system for more efficient system. Project authorities would provide funds to State Forest Department. Total financial outlay under this head would be **Rs. 25,00,000** only.

5.3 Conservation Measures for RET species

As already discussed, six Schedule I bird species are found in and around the project area. Therefore, a conservation plan has been suggested for them. Schedule I species like Black shouldered kite, and Shikra have been listed under Least Concern category in IUCN Redlist 2018-2. An Eco-park has been proposed for their protection. In addition, hunting should be checked with the help of forest department.

5.4 Awareness Programme/ Establishment of Nature Park

An effective wildlife conservation plan is a participatory management, involving the local communities in the conservation strategies. This approach requires a comprehensive awareness programme on the significance, benefits and sustainable utilization of biodiversity and forest resources. The awareness programme would focus on the protection of avifauna species and small mammalian species.

For the preservation and conservation of biodiversity and wildlife in the area a Nature Park is proposed to be established. Generally, most instruction in ecology and environment in schools and colleges comes from textbooks. However, this form of education rarely results in action. For any awareness programme to be successful people and children especially need to go into nature to study the flora, fauna, and ecosystems and into the environment to observe environmental problems, e.g., pollution, deforestation, and conservation processes. There is a need to evoke love and curiosity for nature, so people can become aware of the environment and motivated to take action to preserve it. Well-conceived interpretive facilities with basic environmental information are needed in natural areas to help people identify plants and animals and learn about their characteristics and their interrelationships. They must incite joy and curiosity in what people can see rather than in what they cannot see. Nature Park will have trails and walks for use by the visitors as an important support mechanism for the environmental education process and complementing the educational possibilities in more innovative ways.

The awareness programme would take certain issues like prevention of forest fire, to avoid the man-wildlife conflicts, not to damage the eggs/nests of bird species. Awareness programme can be implemented by organising the public meetings with the help of NGOs and Forest Department, distributing pamphlets, posters and hoardings, etc.

The Nature Park would play an important role as creation of vegetation belt and cover in otherwise degraded landscape in the study area and act as a check against possible dust

and noise pollution in the area and in creating awareness among the people. The Nature Park can be used for walks, jogging, and other activities. Most importantly avenue plantation at the boundaries of park can act as a natural barrier and the park area can become roosting places for birds. The important plant species which are suggested to be planted in the proposed park are *Dalbergia sissoo*, *Azadirachta indica*, *Terminalia arjuna*, and *Senna auriculata* because of their height. The height of first branches of *Dalbergia sissoo* and *Azadirachta indica* can offer better protection to birds from predators like stray dogs and humans. The budget heads include development of a nursery, collection of seeds and plant species, small laboratory and staff. The Park may be setup with the help of Forest Department, Government of Madhya Pradesh. Total budget estimated for awareness programme is **Rs.1,00,00,000** only.

5.5 Conservation and Protection Measures for Elephant Migration Corridor

Elephant is included under Schedule I of the Wildlife Protection Act, 1972. Some of the activities to mitigate Man-Elephant conflict, improvement of Elephant Habitat, restoration of Elephant Corridors and various awareness programmes are suggested under this plan. These are:

- (a) Improvement of habitats / corridors by enrichment plantation/eco-restoration
- (b) Removal of invasive species
- (c) Creation of water bodies
- (d) Fire protection measures
- (e) Eco-restoration of corridors/migration routes and paths including acquisition and relocation
- (f) Soil and water conservation measures
- (g) Awareness programme among the local villagers are taken to minimize conflict with wild elephants

5.6 Good Practices

Project authorities would follow a few precautionary and good practices in the project areas. Such types of practices are not expensive but play a vital role in protecting the biodiversity. The important safeguard measures as good practices are given below:

- i. Project authorities shall organise a training programme for the workers. All project workers must be aware of importance of biodiversity and all such types of activities related to endangering the wildlife including plants and animals. All project workers must be aware of presence of a few threatened and Schedule species in the area and legal consequences of hunting, poaching of animals and harvesting of forest produces.
- ii. Each project worker shall be provided with an identity card and would not be allowed to enter in the forest, grassland and protected areas without a valid permission.
- iii. Project authorities will be bound by rules and regulation of Wildlife (Protection) Act, 1972 of India and any others rule and guidelines, stipulated by the state Government.
- iv. Project workers will be discouraged to plant any alien and/or invasive species in the camp and colony areas, which may spread in the forest areas. State Forest Department can provide the list of such plant species. Project authorities would ensure to uproot all existing alien/invasive species from the colony and other working

areas. Restriction shall be imposed on the disposal of any types of pesticide, poison and other toxic material in the forest areas.

- v. Project authorities should control the noise pollution from the construction activities especially during night time and in proximity to forest areas.

Total budget allocated for the implementation of good practices is **Rs. 5,00,000** only.

6 SETTING UP OF BIODIVERSITY MANAGEMENT COMMITTEE

To monitor the implementation of proposed Biodiversity Management and Wildlife Conservation plan, a biodiversity management committee (BMC) would be constituted for the project. The committee shall follow the guidelines of National Biodiversity Authority, State Biodiversity Board and State Forest Department. The Biodiversity Management Committee of the project comprises the following members:

Chief Wildlife Warden/his/her representative	Chairman
Project Director /his/her representative	Member Secretary
Divisional Forest Officer	Member
Chief (Environment), Project	Member
Renowned wildlife expert (1 or 2 Nos)	Member(s)
Local Body's Representatives from at least 3 villages	Member(s)
Representative of a well-known local NGO	Member

Chairman will have right to assign different tasks to different members for proper functioning of plan. Also, the number of members of committee mentioned above may be increased or decreased or changed as per need. Project authorities would provide funds and facilities for the functioning of committee. Total financial outlay for the functioning of BMC is **Rs. 5,00,000** (Five lakh) only.

7 BUDGETARY ESTIMATES

Total budget allocated for the Biodiversity Management and Wildlife Conservation Plan for the Project would be **Rs. 1,85,00,000** (Rs. One hundred and eighty-five lakh only). Break-up of the budget is given in **Table 3.1**.

Table 3.1: Break-up of the Biodiversity Management and Wildlife Conservation Plan

S. No.	Particulars	Total Budget (in Rs.)
1	Development of Grasslands	50,00,000
2	Awareness Programme/Establishment of Nature Park	1,00,00,000
3	Infrastructure Development, Equipment, etc.	25,00,000
4	Good Practices	5,00,000
5	Biodiversity Management Committee	5,00,000
	Total Budget	1,85,00,000