

CHAPTER 4

BIODIVERSITY CONSERVATION AND MANAGEMENT PLAN

Extensive flora and fauna survey carried out in the project area has enabled to identify the rare and endangered species to be affected by the project. In the following paragraphs the mitigation measures are suggested for translocation and relocation of the species. General measures are also suggested for conservation plan of Flora and fauna.

4.1 CONSERVATION PLAN FOR ENDANGERED SPECIES

Six endangered species as per BSI Red Data Book viz. *Aconitum ferox* Wallich ex Serenge, *Coelogyne mossiae* Rolfe, *Dendrobium aurantiacum* Reichb. f., *Paphiopedilum fairieanum* (Lindl.) Stein, *P. venustum* Pfitz., and *Vanda coerulea* Griff. ex Lindl. are coming within reservoir submergence.

All in all, the magnificent flora of the Dibang catchment has a special place even among the outstanding floristic composition of the North East, mainly because it is still one of the least disturbed and perhaps the least explored botanically.

The peculiar topography, the area and the location of the dam on a comparatively narrow gorge, perhaps makes the creation of a comparatively long reservoir submerging a more than usual large forest area obligatory in this case. However, the redeeming feature is that the type of forest affected is, by no means unique to this area alone but occur in other area of the vast catchment. Moreover the percentage of forest-covered land in this catchment is higher than the accepted norm and the provision of compensatory afforestation should adequately take care of the possibility of upsetting the ecological balance. However, it is suggested that while clearing the forest area to be submerged, the Forest Department should take adequate care to translocate the rare species of plants particularly orchids, tree ferns and medicinal herbs and shrubs of importance to other adjoining forest areas as

far as feasible and the Project Authority should fully co-operate in this job. These should also ensure that their men and machineries create the least disturbance in the neighbouring forest areas. Fortunately, none of the rare and endangered species mentioned above, are confined to the submergence area.

It is proposed to afforest rare and endangered species over an area of 5 ha (as a part of compensatory afforestation) as a measure for ex-situ conservation and propagation. The propagation and cultivation of these species shall be done in co-ordination with the State Forest Research Institute (SFRI), Itanagar. A lump sum grant of Rs. 10 lakhs has been earmarked.

4.2 WILDLIFE CONSERVATION

As already described in EIA report the wildlife (birds and animals, including reptiles) resources of the Dibang river catchment is very rich and varied. These species have been described in chapter 4 of EIA report along with their conservation status. A large number of animals like Musk deer, Goral, Red panda, Takin, Snow-leopard, Hoolock gibbon. Stump-tailed macaque, Gaur, Sloth bear, Wild dog, Leopard, Clouded leopard, Leopard cat, Jungle cat, Pangolin and Porcupines are reported to be residents of this catchment. Even tigers may be met with in the lower reaches. There are a large number of other species of deer, monkeys, antelopes, wild boar and smaller animals like mongoose, civets and squirrels that live in these forests.

No parts of Mehao and Dibang Wild Life Sanctuaries will be affected either due to construction activities or due to submergence. It is expected that as the clearing of forest progresses, the wild animal population, including birds, will by natural instinct migrate to neighbouring safer places. However it is important that the adverse impact of the proposed Dibang Multipurpose Project on the faunal resources is kept at the minimum level.

There are two ecologically sensitive area viz. Mehao Wildlife sanctuary & Dibang Wildlife sanctuary. It is worth to mention here, that these are located

about 14 km and 35 km from reservoir periphery respectively. The Project Authority must take certain precaution that the labour force engaged in the construction work or the floating populations of outsiders, who visit the site for business, do not come in conflict with the wildlife population in the working area as well as its neighborhood forests. If possible, carrying firearms in the project area and its vicinity should be banned. Use of explosives and blasting material should be rigidly controlled and kept to the minimum.

During construction and operation phases and to prevent poaching in forest area around the project area, it is recommended that check posts be installed near major construction sites and labour camps. It is proposed to develop 4 check posts, which will have 8 guards and a range officer to ensure that poaching does not become a common phenomenon in the area. The range officer will supervise the guards of various check posts. It is also recommended that the staff manning these check posts have adequate communication equipments. It is proposed that 2 jeeps and 5 wireless sets would be purchased.

Apart from inter-linking of check posts, the wireless link needs to be extended to DFO and the local police station also.

8 guards @ Rs.5000 per month	:	Rs.4,80,000/- per year
One range officer @ Rs. 10,000/month	:	Rs.1,20,000/- per year
Total cost for one year	:	Rs. 6,00,000/- per year

Cost for 8 years (construction period) Rs. 48 lakhs

Cost of construction of check posts and provision of arms & ammunition and communication (Rs. 5 lakh x 4)	:	Rs. 20.0 lakhs
Purchase of 2 Jeeps @ Rs.5 lakh/Jeep	:	Rs. 10.0 lakhs
Propagation of rare & endangered species including R&D activities	:	Rs. 10.0 lakhs

Total : **Rs. 40.0 lakhs**

Note: The jeeps provided to the forest department shall be used for the implementation of various plans (like CAT, compensatory afforestation etc.) also.