

## EXECUTIVE SUMMARY

There is a range of pro-conservation and pro-development (exploitation) arguments of the biome. Evaluation of the level of sustainability of the utilisation of the vegetation of the biome needs to link: a. Social, b. Economic and c. Environmental including (climatic) issues. Thus, the Cost Benefit Ratio is an important milestone to decide as to where we go and with what, 'conservation' or 'development'. There always have been efforts of the developing nations, to establish the supremacy of the United Nations Convention on Biological Diversity over the World Trade Organization Trade Related Intellectual Property Rights (TRIPS) agreement. The UNEP has come up with 'Results of the UNEP Foresight Process on Emerging Environmental Issues' which covers the major environmental themes namely- Land and Water, Freshwater and Marine, Biodiversity, Climate Change, Energy and Waste and Technology including crosscutting issues- Environmental Governance, Human behavioural change and Bridging Science and Policy. It has come up with 21 issues for the 21<sup>st</sup> Century.

Conservation and Development have been always at crossroads and have been the eye of the storm for both 'conservationist- individuals and organisations' and 'development agencies and crusaders of development'. With the dwindling natural resources, it has become inevitable for both these sectors to do away with their standalone thinking and adopt the concept of 'Conservation Oriented Development'. As we all know that interaction between the physical and biological environment is termed as 'ecology' and every living being on this earth enjoys an ecological niche. It carries out its function and dies. Mankind does not have any right to encroach upon the resources which are used by other living forms as well as its conservation is vital for all. However just as conservation of natural resources is vital to the survival of human beings, development is essential for well- being of human beings but not at all at the cost of natural resources. Thus, 'Conservation Oriented Development Strategy' promotes both. It promotes development with least possible damage to the ecosystems and does so, with due regard to the ecosystem services provided by these ecosystems.

One of the most fundamental principles of conservation is that there should be a system of natural linkages across the landscape, interspersed with large core natural

areas to provide an inter-connected web of natural habitats. Such linkages are called corridors. In India, as per management functions, forest areas are basically under the Protected Areas namely, Tiger Reserves, National Parks and Wildlife Sanctuaries and the Managed Forests which are termed as territorial forests. The Managed Forests, intervening the Protected Areas are basically termed as corridors which is actually a misnomer. If we think about management of wildlife in managed forests then we may term the large chunks of the managed forests as Habitat Blocks and the intervening linkages, between these habitat blocks as corridors, which are under tremendous biotic pressure. Corridors need not be always a forested tract but nocturnal long ranging carnivores may use non-forested corridors and agricultural fields also as transit paths. The proposed lease area of M/s Jayaswal Neco Industries Ltd, Nagpur **doesn't exactly fall within the operational forested corridor but lies in engulfed by various land use such as agricultural fields, human habitation, roads and existing mines. The entire agglomerate of human use and developmental activities and the operational forested wildlife corridor are an ecosystem in entirety which keeps interacting with each other and will keep continue to do so.** The area, though lying approximately 8 km from **Mansinghdeo Wildlife Sanctuary** does not fall within the **Eco Sensitive Zone** because the **Government of Maharashtra** has yet not taken any concrete decision till date about deciding upon the **extend of the ESZ for National Park, Wildlife Sanctuaries and Protected Areas.** Mining is a temporary land-use because, in any one place, the mineral deposit is finite and eventually gets exhausted. The social and legislative context of mining in many parts of the world today means that some form of land-use goals will be set prior to the granting of planning permission for a new mine. The direct impacts of mining disturbance to land surfaces are usually severe with the destruction of natural ecosystems, either through the removal of all previous soils, plants, and animals or their burial beneath waste disposal facilities.

Objective of the wildlife mitigation/monitoring plan is to assess the area of plantation, overburden dump, active mining area, water bodies, and distribution of wasteland, agricultural land and forest in the leasehold area of the project. The plan, in its conclusive stages comes up with a mitigation strategy as a deliverable.

Wildlife mitigation is the practice of avoiding, minimizing, or compensating for (offsetting) impacts to wildlife. Mitigation strategies continue to evolve, and multiple agencies and stakeholder groups have their own terms, definitions, and notions of

what constitute mitigation activities. The wildlife mitigation hierarchy consist of a. Avoidance, b. Minimisation and c. Compensation. This Wildlife Mitigation Plan for the M/s Jayaswal Neco Industries Ltd, Nagpur follows this hierarchy. Mitigation often involves **on-site , off site, in kind, out of kind** and **compensatory**. Monitoring is used to assess the effectiveness of mitigation, if measurable management goals are in place.

Jayaswal NECO Industries Limited (JNIL) is a well-known industrial group of Central India viz. NECO GROUP. NECO's Steel Plant at Siltara, Raipur, Chhattisgarh has an annual consumption of various grades of Manganese ore & Ferro alloys of 10,000 tonnes & 4,000 tonnes. At present, since the company doesn't own manganese mines, the same is purchased from open market. To meet its requirement of manganese ore, the Company intends to set up Ferro-manganese plant in Maharashtra. The proposed mine will be an open cast mine. **The intended lease area is located in the vicinity of village-Ramdongri, Tehsil- Saoner, Forest Division- Nagpur, Forest Range – Khapa (Khubla Round, Randongri Beat, Compartment No. 213) at the southern end of Khapa forest between the river (Southern side) and the State Highway (Northern Side) and is adjoining to Shri Ravindranath, SM Sancheti, Shubham Mineral and Nagpure Mines.** It is 44 kms from Nagpur, the district headquarters and 4 kms from Khapa which is the Forest Range Headquarters. The area for mining was notified by Govt. of Maharashtra vide notification dated 29/08/02. The ML area is 61.45 Ha in Protected Forest for which the clearance is anticipated. Mining in the proposed area will be done using open pit method.

Potential impacts of mine developments are typically centred around three main issues, direct habitat impacts associated with the footprint of excavation and related buildings, environmental contamination associated with heavy metals and acid-generating waste rock, and direct and indirect mortalities associated with the creation of new access roads and the attendant increase in human disturbance of wildlife populations. In the current case there are bound to be impact on wildlife through all the stages of the project, though disastrous impacts which might be completely irreversible do not exist. The ensuing area is a protected forests falling within an agglomerate of habitations, managed forests and protected areas of a potential established corridor. The mitigation strategy as indicated earlier has taken

a conceptual view of 'Conservation Oriented Development' and ensures least possible permanent damage to the surrounding ecosystem.

The proposed site and the surrounding area falling within the radius of 6 kms were studied between September and October 2012. During this period floral and faunal survey were carried out using direct and indirect methods. Direct method included recording of presence through direct observation. This method was used for recording of floral and avian components of the biodiversity. Indirect method that included observation of signs of presence was used in case of mammals. To ascertain the presence of wildlife, stream beds and other water bodies were surveyed for foot prints/marks and droppings. Data of presence of animals was also collected by interviewing people of surrounding villages. The mines were considered as the centre of the so called circle of influence. From the proposed mines the area falling in the radius of 2 kms. was considered to be an 'High Impact Zone'(HIZ), the area with a radius of 4 kms concentric to the HIZ was termed as 'Medium Impact Zone'( MIZ) and the area of 6 km radius again concentric to the previous two circles was considered as a 'Low Impact Zone'(LIZ). The basis of delineating these zones was the nearest forested areas or vicinity to the forest area, the kind of mining activities those will be carried out, the ecological setting of the area, the kind of Human Wildlife Conflict (HWC) and Wildlife Occurrence (WO) through indirect evidences , the way the demographic structure of the area was found to be and field based experience of the team encountered.

The hierarchy of the 'Mitigation Strategy has been proposed zone-wise separately for HIZ, MIZ, and LIZ. In the HIZ the strategy aims at deviating the wild-animals from coming close to mining activity to ensure that there are no accidents which would lead to loss of wild animals. Monitoring of Ecological attributes and wild animal movements is proposed. It is also proposed to ensure that the macro as well as micro flora and fauna are least disturbed or displaced. The MIZ intends to act as a buffer between the HIZ and the LIZ so that least possible impact reaches the surrounding forested corridors and the managed forest Protected Area Complex. The strategy in the LIZ is proposed to be that of promoting ecological insulation of the area from biotic disturbance, monitoring of ecological attributes, assessment of ecosystem services, departmental infrastructure, staff utilities and awareness generation and Education for Sustainable Development (ESD). Education and awareness for sustainable development is overlapping all the zones. In the same manner

monitoring of ecological attributes and wild animals has been proposed to be overlapping all the zones.

The mechanism of implementing the Wildlife Mitigation Plan shall be that, the total outlay of Rs. **1,21,55,850** for the implementation of the Wildlife Mitigation Plan shall be deposited by the M/s Jayaswal Neco Industries Ltd, Nagpur with the Forest Department. Negotiations, if any shall be done by the two parties concerned. A Wildlife Mitigation Plan Committee shall be appointed by the Chief Wildlife Warden of Maharashtra State which will include members of the forest department, M/s Jayaswal Neco Industries Ltd, Nagpur, Civil Society Architects, Non-Government Organisations and three subject experts in Wildlife, Forest and Environmental Conservation, Sociologist and an Environmental Economist. The M/s Jayaswal Neco Industries Ltd, Nagpur shall have full right to ensure that as a 'Corporate Social Responsibility' the wildlife mitigation strategy delivers and is implemented and monitored properly.

The budget provided in the Budget Chapter is indicative, and precise budgeting restricted to the amount designated for that activity will be done by the forest department in consultation and with approval of the Wildlife Mitigation Plan Committee. It needs to be appreciated and accepted that complete mitigation is near to impossible and there is a limit to what a developmental agency can spend for mitigation. Some of the mitigation strategies are long-term, thus an initiation , testing and cost benefit analysis of each intervention in the Wildlife Mitigation Plan needs to be done . An Operational and Monitoring Protocol may be one of the deliverables form a portion of funds set aside for long-term interventions. Development of study material for 'Education for Sustainable Development' for the communities and middle school students may be one of the deliverable. As a matter of fact at least 25 % of the total mitigation costs may be spend on developing an' Integrated Wildlife Mitigation Implementation and Monitoring Protocol' which will cover the learning from the project. This may become a ready reckoner for other such projects to come.

The Report is organised as follows:

Chapter One: Introduction

Chapter 2: Project Site

Chapter 3: Wildlife Sanctuaries in the Surround

Chapter 4: Wildlife Corridor and their Importance

Chapter 5: Mitigation Measures

## RECOMMENDATIONS

The following recommendations are made based on the above discussed Wildlife Mitigation Plan.

1. Mining projects needs to be developed such that biodiversity is harmed in the least
2. The Forest Department should have the entire state digitally mapped as this will help in generating Ecological Status Models for proposed areas , and 'Environmental Economics' Profiling can be done before any clearance is given.
3. Assessment of the Ecosystem Services should be done so that an environmental value may be put on that for developmental agencies and people at large to appreciate them.
4. The Wildlife Mitigation Plan needs to be strictly implemented and monitored as per the 'Integrated Wildlife Mitigation Implementation and Monitoring Protocol' which may be developed as one of the deliverables utilising the funds deposited by M/s Jayaswal Neco Industries Ltd, Nagpur.

The Wildlife and We Protection Foundation is known for giving an unbiased technical opinion through its Plans irrespective of the hiring agency. It is for the M/s Jayaswal Neco Industries Ltd, Nagpur and the Forest Department to decide upon the mitigation costs. It has already been mentioned that the budget is indicative.