



Mining and Consequent Ecological Problems: A Case Study of Durgamanwad, Radhanagari, Kolhapur

* D. H. Pawar ** A. T. Gaikwad

* Asst. Prof., Dept. of Geography, Shivaji, University, Kolhapur.

* M.Phil. Research Fellow, Dept. of Geography, Shivaji, University, Kolhapur.

ABSTRACT

Mining of the natural mineral resources is an inevitable activity for the development of nation. Nevertheless, it is consequent the irreparable damage to the existing ecological balance and status of biodiversity of that natural environ too. In the present paper the attempt has been made to focus on repercussion of bauxite mining in respect of air, water, noise and land pollution and irreparable loss to the natural status of ecosystem and biodiversity of Durgamanwad situated amidst the Radhanagari wildlife sanctuary in Kolhapur district. The current reports of 'EIA' are duly referred to assess the degradation of environmental aspects. Fieldwork has also duly been conducted to verify the extent and magnitude of the pollution. It is however, revealed by this brief study that there is enormous loss of biodiversity in terms of destruction of natural habitat of flora and fauna. The effect of enormously generated toxic bauxite dust in the form of 'RSPM' and 'SPM' is devastation for natural air, surface water bodies and vegetation.

Keywords: Ecosystem, Biodiversity, 'EIA', RSPM, SPM, Pollution, World Heritage Centre.

INTRODUCTION

In spite of the implementation of the environmental impact assessment planning, the mining has caused unprecedented loss of the biodiversity particularly grass, shrubs species, land ecosystem, habitat of wild animals etc. the complete eradication of the endemic species of grasses, loss of distinguished habitat of reptiles and the total collision of land ecosystem by accelerating soil erosion, slope disturbance is the most dreaded consequent of the prolonged mining process.

METHODOLOGY, DATABASE AND SOURCES

The primary data has been generated from the intensive and extensive field work. For the measurement of the loss of biodiversity of Durgamanwad mining area has been compared with the other contemporary land forms particularly plateau of Savrai Sada and the source region of Tulsi river.

STUDY REGION

Geographically the region extended between 16° 27'E. Lat.-73° 58'N Long. This plateau is about 6 km to north-west of Radhanagari. Durgamanwad bauxite mining specifically located in Radhanagari tahsil of Kolhapur district (16° 27'-73° 58'). It covers an area of 204.56 hectare. The depth of bauxite ore varying from 2 to 4 m whereas the Laterite mineral covers up to 7m. This Laterite duricrust covering an area of about 3.2 km with a width of 150 to 600 m. Since 1994 the 7574111 tons of bauxite ore has recklessly been extracted by open cast mining process.

The mining site encircled by the Radhanagari Wildlife Sanctuary which has diverse Flora and Fauna. Biodiversity is there in all forms that are at genetic level, species level and ecosystem level. The whole area falls under the Western Ghats, which is recognized as one of the "Hot Spots" of bio-diversity in India. The Gaur (Bison) is the flagship species of this sanctuary along with the presence of Tiger, Panther, Sloth Bear, Giant Squirrel, Mouse Deer Barking Deer etc. Majority of the area is under thick forest. The plateaux of this area are covered by grasslands and shrubs which are very important for herbivores.

The plant community in various habitats gives rise to plant diversity in the area. Sadas (Open patches of Laterite Plateau)

are the unique habitats. The climate is moderate. The mean annual rainfall is about 2500 mm and maximum 5000 mm. The plateau tops are flat and are with sparse vegetation particularly devoid of trees. The plateau region is mostly covered with the grasses and this area acts as a shelter place for wild animals during monsoon seasons to avoid disturbances from the leeches and mosquitoes. Due the undulating physiography, the drainage pattern in this area is well defined dendritic type. The area is the catchments area of the Bhogavati.

EXISTING STATUS OF FLORA ON SAVRAI PLATEAU:

The area falls under the Western Ghats. The plateau tops in this region are lateritic in origin, small grasses and stunted vegetation of syzygium and mimoxylon is common on such plateaus have got very good vegetation. According to the Champion and Seth's classification the major three types of forests are seen over this area such as Southern Tropical Semi Evergreen and West Coast. Semi Evergreen Forest which occurs in and around the places like Manbet, Walwan, Hasne, Nidankhan, Sawarde, Dublewadi with the main species like Jamun, Mango, Anjani, Hirda, Surangi and Par Jambul. The shrubs like Bhoma, Shendri, Jangli Limbu, Pendri, Karvi.

Southern Tropical moist mixed deciduous forest This occurs mainly at places like Taliye, Borbet, Shelep, Fejivade, Farale and Wakibelt. The species like Ain, Kinjal, Hirda, Bibla, Nana, Behada. The species like Jamun, Mango, Umbar, Assana, Kumaba, Kumkum etc. also found to a lesser extent. The underwood consists of Lantana, Rametha, Karvand, Murud Sheng, Wavding, Chikni etc. West Coast Tropical evergreen forest where Zulumb is a common species. Species like Kali, Shisvi, Kalvan, Jambha and Holigama Grahmil are common.

EXISTING STATUS OF FLORA ON MANDWAD PLATEAU:

The Mandwad plateau where the existing mining is going on is completely devoid of grasses and shrubs which are existing at the other plateaus of same environ. Since 1994 the 7574111 tons of bauxite ore has recklessly been extracted by open cast mining process daily about 2500 to 3000 tons of bauxite ore is extracted. In spite of the implementation of the environmental impact assessment planning, the mining

has caused unprecedented loss of the biodiversity particularly grass, shrubs species, land ecosystem, habitat of wild animals etc. the complete eradication of the endemic species of grasses, loss of distinguished habitat of reptiles and the total collision of land ecosystem by accelerating soil erosion, slope disturbance is the most dreaded consequent of the prolonged mining process.

CONCLUSION:

In spite of the implementation of the environmental impact assessment planning by the company there is still ecological degradation and loss of vital elements of biodiversity. Prima facie the reason is the overexploitation of natural mineral resource that exists in area. Before the economy of the bauxite ore mining, the value of values of the ecosystem or natural resources are not comprehended which result the complex transformation of the land use and land cover of the plateau.

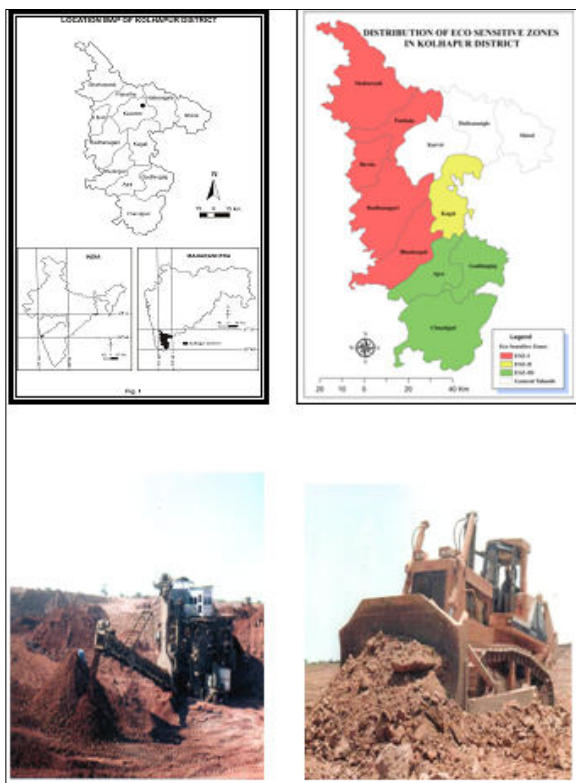


Fig. 1&2 Ripper and Dozer at mining site.

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