

PROTECTION OF EASTERN GHATS FROM LAND DEGRADATION**Dr. R. Vinolya Kumari***

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Kurnool, 518002.**ABSTRACT**

The forests in Eastern Ghats are unique, in the sense that they are the most ancient forest cover in the subcontinent. Forest biodiversity in Nallamal forest of Eastern Ghats is undergoing threat due to land degradation. Land in Eastern Ghats Presently, the prominent mountain ranges is tremendously under stress, degradation, and damage. Loss of vegetation occurs due to deforestation, cutting beyond the silviculturally permissible limit, unsustainable fuel wood and fodder extraction, shifting cultivation, encroachment into forest lands, forest fires and over grazing all of which subject the land to degradation forces. Land degradation manifest itself chiefly in the form of water erosion, followed by wind erosion, biophysical, and chemical

deterioration Extraction of wood from forests for fuel is believed to be one of the most important causes of forest Degradation in Eastern Ghats. Intrusive non-native species are taking over the forest cover and artificial block plantations in many pockets of our reserve are threatening the existence of seasonal native plants in many 'forested' areas. The discovery of bauxite deposits in Eastern Ghats is another important factor for erosion. Bauxite mining would not only render thousands of tribal people homeless, it would also sound the death-bell for the cultural diversity of the community and the endemic biodiversity of Eastern Ghats. Instead, the state government is in a hurry to sign agreements with private forms for bauxite mining. Deforestation causes increased erosion rates due to exposure of mineral soil by removing the humus and litter layers from the soil surface, removing the vegetative cover that binds soil together, and causing heavy soil compaction from logging equipment. Needless exploitation should give way to development without destruction. Other important factors responsible for large-scale degradation are the extension of cultivation to lands of low potential or high natural hazards, non-adoption of adequate soil conservation measures, improper crop rotation. In addition, there are a few underlying or indirect pressures such as

land shortage, short-term or insecure land tendency, open access resource, economic status and poverty of the agriculture dependent people, which are also instrumental to a significant extent, in the degradation of the land.

KEYWORDS: Eastern Ghats biodiversity, land mining, responsible mining, Ecology restoration.

INTRODUCTION

India is rich in plenty of Natural resources' especially Eastern Ghats is known for its Biodiversity, richness and endemism of different species. The Eastern Ghats, or Pūrva Ghaṭ, also known as Mahendra Pravata is a discontinuous range of mountains along India's eastern coast. The Eastern Ghats run from West Bengal state in the north, through Odessa and Andhra Pradesh to Tamilnadu in the south passing some parts of Karnataka. They are eroded and cut through by the four major rivers of peninsular India, known as the Godavari, Mahanadi, Krishna, and Kaveri. The mountain ranges run parallel to the Bay of Bengal. The Deccan Plateau lies to the west of the range, between the Eastern Ghats and Western Ghats. The Eastern Ghats have five ecological hot spots with endemic and endangered species in India. For millions of years they have cradles of life and civilization. The mountain ranges are rich in biodiversity, its forests ranges from dry deciduous mixed forest to semi ever green rain forest. Asia's biggest Tiger reserve Nagarjunsager- Srisailem Tiger Reserve is located in nallamala forest range of the Eastern Ghats. It is home to rich variety of flora, fauna and minerals. Presently these mountain ranges are tremendously under stress, degradation and damage. The forest region has degraded to half what it was beginning of our Republic. Logging, encroachment of forest lands, mining, poaching, forest fires, indiscriminate harvesting of forest produce. Prolific range of rare species, smuggling and export of rare flora and fauna. Myopic industrialization springing up of habitations and devouring of the forest are among the multitude of causes. That has accelerated the decline of the natural glory of the Eastern Ghats. The Eastern ghat biodiversity is under severe threat from human activities. The consequences of biodiversity erosion are becoming catastrophic, with irreversible losses of heritage and ecosystem services that are affecting food and timber supplies, the climate, water resources, genetic resources, and medicinal resources amongst others. The poorest populations in developing countries are also the worst affected, since their livelihoods are directly dependent on the existence and availability of natural resources.

Land degradation is a widespread phenomenon in the Eastern Ghats Mountains, especially affecting forestland, dwarf-shrub vegetation, pasture and arable land. To formulate integral and effective mitigation approaches both the direct and root causes of degradation have to be properly understood. Land degradation occurs when soils lose their capacity to provide services to ecosystems and those who benefit from them. It is characterized by a loss of organic nutrients in soils and results in declining soil fertility and the disruption of drainage patterns.^[1]

RESULT AND DISCUSSION

Land degradation results from climatic variations and human actions. It damages ecosystems in arid zones, affecting both biodiversity and the social and economic conditions of human populations. A billion people across the world are losing their livelihoods as a result of land degradation. These processes are driven by High level of socio-economic and political needs including economic growth, demographic change, population growth, commodity prices, alternations in diets, concerns over energy security and the need to source more than simply food from the land. More specifically decisions and priorities within specific sectors from agriculture and transport to industry and energy alter the needs and wants in terms of land use. Land degradations can include reduced yields of crops, reduced land value and resilience to future events. This can directly have an impact on food security and Ability to adapt a future extreme events for climate changes climate change. There is a consequent loss of organic matter significant quantities of greenhouse gases can be given off. This represents a potentially substantive source of climate forcing gases. In the context of climate change more generally a major concern is future water scarcity and the increase in variability in rainfall. Land degradation is important in this context. Degraded land that has lost its organic matter and soil structure holds water less effectively, impeding growth. Moreover, reduced infiltration of water will also occur. Land degradation can therefore lead to an increase in flooding and drought events, multiplying the anticipated impacts of climate change. Land degradation manifest itself chiefly in the form of water erosion, followed by wind erosion, biophysical and chemical deterioration. The discovery of bauxite deposits in Eastern Ghats is an important factor for soil erosion. The balding hill tops with stunted flora are rich in bauxite deposits. With the mining of bauxite, grasslands and water springs were destroyed. So tribal migration into villages and town is inevitable. Thus the disturbing of the ecosystem brings in a lot of social problems. If the cost of destruction of forests and the consequent problems connected with human habitations are balanced against the value of bauxite and its end

products, then one can see that bauxite mining is not a profitable venture. Destruction in eastern ghat is by Sand mining practice that is used to extract sand, mainly through an open pit. However, sand is also mined from beaches, inland dunes and dredged from river beds. It is often used in manufacturing as an abrasive, for Example it is used to make concrete. It is also used in cold regions to put on the roads by municipal plow trucks to help icy and snowy driving conditions, usually mixed with salt or another mixture to raise the freezing temperature of the road surface. Sand dredged from the mouths of rivers can also be used to replace eroded coastline.^[2] Another reason for sand mining is for the extraction of minerals such as rutile, ilmenite and zircon, which contain the industrially useful elements titanium and zirconium. These minerals typically occur combined with ordinary sand, which is dug up, the valuable minerals being separated in water by virtue of their different densities, and the remaining ordinary sand re-deposited. Sand mining leads to erosion, and also impacts the local biodiversity. Removal of physical coastal barriers such as dunes leads to flooding of beachside communities, and the destruction of picturesque beaches causes tourism to dissipate. Sand mining is regulated by law in many places, but is still often done illegally.^[3] The environmental impact of mining causes erosion, formation of sinkholes, loss of biodiversity, and contamination of soil, groundwater and surface water by chemicals from mining processes. In some cases, additional forest logging is done in the vicinity of mines to increase the available room for the storage of the created debris and soil.^[4] Besides creating environmental damage, the contamination resulting from leakage of chemicals also affects the health of the local population.^[5] Mining companies in some countries are required to follow environmental and rehabilitation codes, ensuring the area mined is returned to close to its original state.

Many countries explicitly or implicitly subsidize practices that increase land degradation, or tax activities that tend to reduce degradation. The costs of conservation agriculture and nutrient replacement practices may be reduced, and adoption increased by developing new technologies that raise returns to nutrient inputs, or reduce the costs of conservation practices.^[6] There is a particularly important role for international and national agricultural research to develop farming systems that conserve or improve soil quality, while being attractive to farmers. Past agricultural research has yielded very high returns to preserve and protect biodiversity, the IFAD finances projects that aim to bring the guiding principles of the Convention on Biological Diversity into practice. The conservation of species and habitats, traditional uses of natural resources by populations, Sustainable management of

natural resources as a driver of economic and social development, Innovative financing tools for biodiversity conservation.^[5] The most effective known method for erosion prevention is to increase vegetative cover on the land, which helps prevent both wind and water erosion. Terracing is an extremely effective means of erosion control, which has been practiced for thousands of years by people all over the world. Wind breaks are rows of trees and shrubs that are planted along the edges of agricultural fields, to shield the fields against winds. In addition to significantly reducing wind erosion, windbreaks provide many other benefits such as improved microclimates for crops which are sheltered from the dehydrating and otherwise damaging effects of erosion, habitat for beneficial bird species, carbon sequestration, and aesthetic improvements to the agricultural landscape. Traditional planting methods, such as mixed-cropping and crop rotation have also been shown to significantly reduce erosion.

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