

ENVIRONMENTAL IMPACT OF AEOLIAN ACTIVITY IN KAMBAM VALLEY REGION, TAMIL NADU, INDIA

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Introduction and Objectives

Land degradation has long been occurring in part of Kambam region; lying close to the Western Ghats, along the West Coast of Peninsular India. The study area suffers extensively from erosion and deposition mainly due to the removal of vegetal cover in the adjacent hills of the Western Ghats of the region. A few decades ago, the forests were in a state of well-preserved condition, in the upper reaches of the Western Ghats and erosion was almost absent. Due to mismanagement and removal of the forest cover, wind gaps have paved the way for the fast blowing winds of the southwest monsoon and this has resulted in the wind erosion on the hills, transport of debris and soil to the foothills and drift and deposition of sand in the farming lands, in the rain shadow of the hills. Land uses have undergone great changes with the cropping pattern showing a downturn and erosion becoming rampant and sand deposition widespread. General land use of the area is the result of interaction between man and environment in the process of permanent adjustment between constraining properties and socio-economic factors.

The main objective of the study is to assess the erosion, land degradation processes and their impact on social and economic status of farming community in the region. Various environmental issues are discussed for further planning and development of the study area.

Methodology

Two stage land evaluation method have been used to assess the physical and socio-economic characteristics of the study area. Land use/land cover and other social economic related maps have been generated for analysis. GIS mapping techniques have been used for mapping of resources and impact areas and community in the study area.

Results and Conclusion

Erosion lead to a destruction of agriculture and reversed at high cost, by importing new topsoil or complete re-landscaping of the terrain. Erosion removes the most fertile topsoil, which holds very good organic matter and nutrients, and farmers incur costs for remedial cultivation and additional fertilizers. Eroded

material re-deposited in buildings, roads, farmlands and water bodies. Seasonal migration takes place to other areas within the stressed area, or to regions outside the effected area due to this problem. The migrants place increasing pressure on the social infrastructure of the other areas, leading to increased poverty and social unrest.

Changes in land use at regional scales, identification of sensitive areas for action at local scales, and detailed conservation planning at farm scales are necessary for sustainable development of the region.
