

**NEED TO CONSERVE SOILS OF INDIA**

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In India almost 130 million hectares of land, *i.e.*, 45 per cent of total geographical surface area, is affected by serious soil erosion through gorge and gully, shifting cultivation, cultivated wastelands, sandy areas, deserts and water logging. Soil erosion by rain and river that takes place in hilly areas causes severe landslides and floods, while cutting trees for agricultural implements, firewood and timber; grazing by a large number of livestock over and above the carrying capacity of grass lands, traditional agricultural practices, construction of roads, indiscriminate quarrying and other activities, have all led to the opening of hill-faces to extreme soil erosion. Wind erosion causes development of deserts, dust, storms, whirlwinds and destruction of crops, while moving sand covers the land and makes it sterilized. Excessive soil erosion with resultant high rate of sedimentation in the reservoirs and decreased fertility has become solemn environmental problems for the country with disastrous economic consequence. Soil erosion results in huge loss of nutrients in suspension or solution, which are washed away from one place to another, thus causing depletion or enrichment of nutrients. Besides the loss of nutrients from the topsoil there is also degradation through the creation of gullies and ravines, which makes the land inappropriate for agricultural production. Subsidence of the land in some areas and landslides in the hilly regions are problems that have an effect on highways, habitations and irrigation dams. The different parts of the country-North, South, East and West- have been affected by soil erosion at different levels. Northern and Central zones have almost identical patterns in the soil eroding and biodegrading forces. Eastern zone suffers from shifting cultivation and excessive rainfall. Western zone suffers due to aridity. Southern zone suffers from general

problems related to aridity, low productivity and shallow soil depth.

Major ecological and socio-economic crisis are perpetrated by land/soil degradation. Land degradation include decline in the overall quality of soil, water or vegetation condition commonly caused by human activities. Degradation also include a change in the ground cover to less palatable species, or a change from predominantly perennial grasses to predominantly annual grasses. Direct impacts of agricultural development on the environment arise from farming activities, which contribute to soil erosion, salinity/ brackishness of land and loss of nutrients. The Green Revolution has been accompanied by over exploitation of land and water resources and use of fertilizers and pesticides have increased manifold. In the race to urbanize virgin territory, there has been random violation of the land laws.

The current trend of economic and industrial development coupled with the steady growth of human as well as livestock population has been the major reasons behind the incidence of land gradation in India. 146.82 million hectare area is reported to be suffering from various kinds of land degradation. It includes water erosion 93.68 million ha, wind erosion 9.48 million ha, water logging/flooding 14.30 million ha, salinity/alkalinity 5.94 million ha, soil acidity 16.04 million ha and complex problem 7.38 million ha.

These factors exert pressure on limited land resources of the country for agricultural, industrial and housing needs of the growing population. It is the lands under cultivation which face the biggest challenge of land degradation in India. Therefore it is utmost need of the hour to take necessary steps to conserve soil and contribute in saving the planet and life.



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