

Remote Sensing Based Management of Degraded Soil Due to Brick Industry for Sustainable Development – A Case Study

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ABSTRACT Increasing population is degrading land and soil resources by industrialisation, urbanisation etc. This paper emphasises on soil degradation due to brick industry and possible alternatives for sustainable development. SPOT data is useful for identification, mapping and thus for management of degraded soil due to 42 brick kilns in SSW of Jawaharlal Nehru University (JNU), New Delhi. Repeated heating by brick industry has reduced soil fertility. NPK (nitrogen-phosphorus-potassium) content has been estimated and found highly reduced due to gasification. Due to thermal effect by brick industry, N, P and K values have highly declined as low as 0.161 %, 0.010 % and 0.011 % respectively. Fertile acidic soil has changed into infertile alkaline soil. Water level has been gone down because of operational impact of brick kilns. Reduced soil moisture content too allow succession of limited herb and shrub species. Preventive measures for degraded soil is also one approach towards management of degraded soil. Domestic waste dumping in disused brick kiln pits and greenary development, bricks from usar soils (salt affected), fly-ash, flood prone area etc. are some possible alternatives for sustainable development in study area. Some plant species can grow well in acidic and alkaline soils to manage degraded soil due to brick industry.

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