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Spatial and temporal analysis of wasteland of Sirsa district for better utilization and management of natural resources of Haryana state

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ABSTRACT : Agriculture is the mainstay of India's economy. Land and water therefore, are of critical importance. Vast tracts of the land are, however, degraded but can be brought under plough with some effort. Such lands are known as Wastelands. The recently developed remote sensing and GIS technologies and availability of better resolution data, has revolutionized the mapping of wastelands and other natural resources. In the present study, the wastelands of Sirsa district, Haryana have been delineated and mapped on 1:50,000 scales through visual interpretation of Landsat ETM+ 2003 Geocoded data. Toposheet wise layers were prepared. These maps have been digitized and digital (vector) data base has been created under GIS environment. It is estimated that the major cause of wasteland formation in this area is Aeolian sand and it covers 4427.55 ha which is 6.79% of the study area of Sirsa district, Haryana. The productivity of these lands is very low and people owning these lands are poor and are therefore forced to earn a living from wage employment. Redressing these lands is regarded as a powerful tool of attacking the issues of poverty and backwardness. It is also tried to find out suitable agricultural practices like agroforesry and grass/ fodder production to fulfil the needs of peoples and livestock for batter utilization and management of these areas.

Key Words: Wasteland, remote sensing, GIS, landsat ETM+, geo-coded data, toposheet, agroforestry.