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Integrated Resource Management for Sustainable Agricultural Land Use Plan in Hisar District Using Geo-Informatics- A Case Study

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Abstract: The present study is based on the uses of qualitative and quantitative data for sustainable management of natural resources (soil, underground water quality, depth of water table etc.) with the aims to analyze the authentication of present land use in the context of sustainability of agriculture. The productivity level of rice, cotton, wheat, mustard and gram crops is showing a declining, trend, despite manifolds increase in fertilizer use and plant protection chemicals in the study area. Sustainable agricultural practices fulfill the demand of coming generation and increasing population in respect to the sustainability of natural resources. The study suggested that 700.83, 18.57, 123.92 square kilometer of the study area is recommended for agri-horticulture crops, agro forestry and for double crop with clone eucalyptus plantation on field boundary, 119.98 square kilometer area is recommended for horticulture plantation with drip irrigation and 2340.57 square kilometer area is recommended for existing cropping system with good agriculture management practices with soil and water conservation measures.

Keywords: Sustainable agriculture, Satellite data, Remote sensing, GIS, Landuse recommendation