Keywords
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Scientific Journals Home Page

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Geographic Information System and Remote Sensing Based Land Evaluation of Beypazarı Area Soils by ILSEN Model

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Abstract: Land evaluation is of great importance in guiding decisions on land uses in terms of their potential and conserving natural resources for future generations. The main objective of this study was to determine land resources and to evaluate land utilization types and their suitability in Beypazarı area soils. In addition to field studies, digital soil and land use related (satellite data, DEM and digital geology maps) data were used and analyzed with remote sensing (RS) and geographic information systems (GIS) techniques and a new digital soil map and database were generated for the study area. Soils were classified using soil taxonomy. RS and GIS techniques were successfully applied in this land evaluation study. An ILSEN computer model was used to determine potential land use groups and suitability classes for agricultural uses of Beypazarı area soils. The suitability map for agricultural uses results showed that 42.8% of the study area soils were not suitable for agricultural use and that 90.4% of these soils are classified as lithic xerorthents. Only 12.7% of the study area soils were found to be highly suitable for agricultural uses. These soils were classified as typic xerofluvents (30.7%), typic haploxerepts (42.4%) and fluventic haploxerepts (26.9%).

Key Words: Land mapping units, Land qualities, Land utilization type, Land evaluation