



Remote Sensing Techniques and Geographic Information Systems to Study Soil Characteristics in Baquba Governorate

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Abstract: This study was conducted in the district of Baquba in the province of Diyala in central Iraq between latitudes 44 ° 24 '03.306"- "41 44° '36.564, and latitudes 33° 47'13.824" -33° 58'27.108 "and the area of 527,820 km². For the purpose of studying the soil characteristics (texture, virtual density, pH and EC), the field survey was based on the selection of 30 random samples with a depth of 0-30 cm for each sample using GPS and the use of a satellite image of Landsat 8 satellite for the purpose of preparing maps of the studied soil characteristics. Soil texture was soft to medium and pH values ranged from 7.27 to 7.88, which were neutral soils to moderate alkaline soils. EC for the study area ranged from 0.54 to 7.91 ds m⁻¹. This study aims to identify some of the soil characteristics in Baquba and map them for assessment and management of these soils, which makes it easier for researchers to obtain the require information.

Keywords: Remote sensing, GIS, Soil texture, Soil salinity
