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IDENTIFYING SABKHA LAND SURFACES IN THE EMIRATE OF ABU DHABI USING EARTH
OBSERVATION TECHNIQUES

Abstract

The Land of Salt or as known in the Arabic language “sabkha” is defined as a flat area with high concentrations of neutral dissolved salt and categorized to coastal, and inland, based on their location and formation process. Since salt is the key element to distinguish such habitats, detecting soil salinization is the best approach to study sabkha land surfaces using remote sensing. Soil salinization is ubiquitous environmental phenomenon usually appears in arid and semi-arid environments, where precipitation exceeds over evaporation. The geographical location and climate of the United Arab Emirates (UAE) makes it home for world’s largest sabkhas particularly the capital Abu Dhabi. The main objective of this study is to identify sabkha land surfaces in the emirate of Abu Dhabi due to its obvious impacts on surrounding environments and agriculture. Remotely sensed data and geospatial information systems (GIS) techniques were utilized to conduct the study. The implemented approach combines multispectral information of Landsat 8 9 and spectral soil salinity detection.