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The title (العنوان):

Mapping potential soil erosion using RUSLE, Remote Sensing, and GIS: a case study in the watershed of Oued El Ardjem, Northwest Algeria

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Abstract :

In this study, the objective was to analyze the principal natural factors causing soil water erosion in the Oued El Ardjem basin. The approach was based on the use of a Geographic Information System (GIS) and Remote Sensing (RS), with the acquisition and processing of satellite images and cross-checking with other geospatial data in the GIS tool. Also, the use of multivariate statistics is an integral part of the current study. The main factors to be estimated were related to environmental conditions such as climate, soil, relief, and land use. According to the RUSLE (Revised Universal Soil Loss Equation), we produced a descriptive map of four classes of multifactorial soil sensitivity to water erosion: low (31.08%), medium (27.04%), high (20.50%), and very high (21.38%). The areas susceptible to erosion were found in fragile soils and substrates with steep slopes and/or undergoing very extensive agriculture where the plant cover levels were low and not very protective. This study provides a tool to help decision-makers better manage water and soil resources, considering the rural population's expectations and needs. Spatio-temporal information of estimated water-induced soil erosion could help in soil conservation and management. We believe the study provides insight into erosion control and watershed management practices.

Keywords : Mapping ; Erosivity ; Potential erosion ; Geographic Information System

Available from : <https://link.springer.com/article/10.1007/s12517-021-07992-6>

2-https://www.researchgate.net/profile/Kaushik-Ghosal-2/publication/354367579_Mapping_potential_soil_erosion_using_RUSLE_Remote_Sensing_and_GIS_a_case_study_in_the_watershed_of_Oued_El_Ardjem_Northwest_Algeria/links/61b59b504b318a6970d53bac/Mapping-potential-soil-erosion-using-RUSLE-Remote-Sensing-and-GIS-a-case-study-in-the-watershed-of-Oued-El-Ardjem-Northwest-Algeria.pdf

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