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Modeling of Water Erosion in the M'Goun Watershed Using OpenGIS Software

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Abstract : Water erosion is the major cause of the erosion that shapes the earth's surface. Modeling water erosion requires the use of software and GIS programs, commercial or closed source. The very high prices for commercial GIS licenses, motivates users and researchers to find open source software as relevant and applicable as the proprietary GIS. The objective of this study is the modeling of water erosion and the hydrogeological and morphophysical characterization of the Oued M'Goun watershed (southern flank of the Central High Atlas) developed by free programs of GIS. The very pertinent results are obtained by executing tasks and algorithms in a simple and easy way. Thus, the various geoscientific and geostatistical analyzes of a digital elevation model (SRTM 30 m resolution) and their combination with the treatments and interpretation of satellite imagery information allowed us to characterize the region studied and to map the area most vulnerable to water erosion.

Keywords : central High-Atlas, hydrogeology, M’Goun watershed, OpenGis, water erosion
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