

Development of vulnerability through the DRASTIC method and Geographic Information System (GIS) (Case ground water of Berrchid)

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Abstract

The vulnerability map is a fundamental document for the development of territory. It basically allows you to guide the siting of development projects that may have a negative impact on the quality of groundwater resources. The Geographic Information Systems are powerful tools of choice for the development of vulnerability maps of aquifers, they facilitate multicriteria analysis and updated models developed .

Given the strategic role of the underground water Berrechid in the economic and social development of the region of Bouregreg-chaouia, development, we proceeded to develop the vulnerability map of this area by exploiting the features offered by the GIS Arc GIS 9.3 extensions Spatial Analysis Tools and Geostatistical Analyst allowed us to calculate the indices of seven parameters of the DRASTIC method, these indices were classified into five categories: Extreme, High, Medium, Low, Very Low. Developed the card can be used as a tool for decision support in planning and helps to preserve the groundwater in the area Berrechid and surrounding areas.

Keywords: Remote Sensing, GIS, DRASTIC, vulnerabilities, groundwater, Berrechid.