

## Using the GIS Technology for Erosion Risk Mapping of BEN EL WIDAN Dam Watershed in Beni Mallal, Marroco

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**Abstract :** This study focuses on the diagnosis of the dynamics of natural resources in a semi-arid mountainous weakened by natural vulnerability and anthropogenic action. This is evident in the forms of hydraulic erosion and degradation of agricultural land. The rate of this damaged land is 53%, with a strong presence of concentrated erosion; this shows that balanced and semi-balanced environments are less apparent to the Watershed, representing 47%. The results revealed the crucial role of the slopes and the density of the hydraulic networks to facilitate the transport of fine elements, at the level of the slopes with low vegetation intensity, to the lake of the dam. Something that endangers the siltation of the latter. After the study of natural and anthropogenic elements, it turned out that natural vulnerability is an integral part of the current dynamic, especially when it coincides with the overexploitation of natural resources, in this case, the exploitation of steep slopes for the cultivation of cereals and overgrazing. This causes the soil to pile up and increase the rate of runoff.

**Keywords :** watershed, erosion, natural vulnerability, anthropogenic

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