

**Title:** Application of GIS and remote sensing techniques in assessment of natural hazards in the Central Zab Basin, Northwest of Iran

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**Abstract:** This research was based on a complete understanding of the central Zab basin (particularly in the neighboring Sardasht county in west Azerbaijan in northwest of Iran) and identify bottlenecks and instability, natural environmental hazards are identified and appropriate strategies should be presented in order to confront and control them. This study demonstrates the synergistic use of medium resolution of SPOT-5 Satellite, for prepare of landslide-inventory map and Landsat ETM+ satellite for prepare of Land use map. After making of TIN and DEM data from the limit of study area from topography maps, aerial photos and satellite images, and have been used GIS techniques and analysis of relevant factors. Methods In this study, based on field studies, library, quantitative and morphometric study was to prepare maps and GIS techniques and analysis of relevant factors have been used. The results indicate a dominance of geomorphologic natural hazards and human hazards. As a result, using the logical and scientific approaches can greatly reduce the morphodynamics factors and make balance between Morphogenesis and pedogenic phenomena and can be achieved stable environment with crisis management.