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Research Paper

Geomorphological perspective of geodiversity: A case study of Al–Zubaidat area, east of Misan Governorate (Iraq)

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ABSTRACT

This research investigates the geodiversity of the AL-Zubaidat region in Southeastern Iraq, with a focus on its geomorphological and hydrological characteristics. This information helps researchers identify suitable locations for natural reserves, thereby enhancing the protection of Iraqi biodiversity. The region attracts eco-tourism visitors, benefiting the economy and providing various scientific, cultural, educational, and aesthetic benefits. This research employed the geoinformatics methodology for geospatial analysis, constructing a comprehensive geodatabase, categorizing spatial features through topographic, geological, and hydrological maps, and correlating data with satellite imagery and elevation models. Geodiversity was classified according to physical parameters and international criteria, with the final classification attributes formulated utilizing maps, field photographs, and geodatabases. The research employed specific parameters to analyze the geomorphometric and slope diversity of the Al-Zubaidat area watersheds. The study area in Al-Zubaidat comprises dome-shaped hills, tertiary geological formations, valleys, and badlands. The area encompasses 782.308 km^2 and shall consist of three principal watersheds (Al-Sharhani, Abu-Ghraibat, and Al-Shakak), as well as 12 sub-watersheds. The watershed perimeter is correlated with the circulating ratio, form factor, and elongation ratio, with larger perimeters generally indicating larger basin areas. The region encompasses low-slope terrain, with elevated slope values in the northern sections, especially in the headwaters. Geoheritage, geodiversity, geoconservation, and geoparks can facilitate sustainable development, promote healthy lifestyles, and foster cultural diversity. These initiatives

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