



MORPHOMETRIC ANALYSIS OF SIWAYL BASIN BY USING RS AND GIS TECHNIQUES

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Abstract

Morphometric analysis is one of the important study in the natural sciences in general, and geomorphology and hydrology in particular, to describe the nature of surface drainage networks. The study area lies in north of Iraq, in Al-sulaymaniya province. With an area of (1545.1) Km². And the geographic coordinates of the study area is (35°.28` - 35°.52` N). (45°.20` - 46°.24` E). DEM image were used with (90 m) resolution and the drawing tools in ARC GIS program to delineate the total basin of the study area and watersheds. We conclude that there were 3 main watersheds in the study area and that group of parameters were calculated such as (linear, areal and relief properties)). The study shows that the stream density was (1.77) Km/Km² which mean that the study area has a bad discharge of water and sediments, the elongation in the study area is (0.55) and that mean the study area is closer to a rectangular shape, and the relief in the study area is (25.1) m/Km and it reflects that the study area had rich effects of erosion and weathering.

Keywords: Basin, RS, GIS, Morphometry.