

## **Drainage Morphometric Analysis Using the Geo-Spatial platform**

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### **ABSTRACT**

The morphological features retrieved using Arc Hydrology methods with the input of digital elevation model earth observation datasets are significant in comprehending the spatial arrangement of stream network feature. These are widely applied in deriving detail linear, relief, and areal morphometric parameters. Drainage density differs from 2.75 to 3.11 km/sq.km with a mean density of 2.8 km/sq.km indicating a coarse-grained texture. The sub-watershed in the study area displays a lower overland flow length of 0.2 km. Therefore high precipitation is vital to contribute a substantial surface runoff volume to the acquittal stream in the basin area. Hence DEM is considered as an advanced data source in the GIS platform to extract and store digital databases for water resource management.

**Keywords:** *Linear, Areal, Relief morphometric parameters, Prioritization of subwatershed*