

DRAINAGE MORPHOMETRY OF SOMWARPET WATERSHED, KODAGU DISTRICT, KARNATAKA

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Abstract

The drainage morphometry studies of watersheds plays avital role in assessing various hydrogeological characteristics. Knowing the geohydrological aspects makes it easier to study the watershed's many characteristics, such as geology, climate, morphological features, structural changes, and so on. The link between matter and energy that allows the watershed's morphometry to achieve balance could be investigated. Understanding the geomorphological and structural aspects of a watershed helps to analyze the run off nature, which is important in assessing key factors responsible for causing floods. By estimating the intensity of the flood, it becomes easier to do watershed management in a basin. A total of 15 sub-watersheds of the Somwarpet Watersheds in Kodagu district of Karnataka, were analyzed with respect to linear, areal and relief aspects of the watershed. Dendritic to sub-dendritic types of drainage patterns are seen in the study area. The highest order of stream present is the fourth order stream. Strahler's, (1957) approach was used to classify distinct stream orders in the current investigation. The region of this study was mapped with respect to the drainage network using Topographic Sheet Numbers 48 P/14, 48P/15, 48P/10, 48P/11 of 1:50,000 scale from the Survey of India. Arc GIS 10.3 was used to estimate and understand the various morphometric parameters in the study area.

Keywords: Morphometry, Somwarpet Watershed, Basin, Sub- watershed, ArcGIS