

HYPSOMETRIC ANALYSIS OF GHARNI RIVER SUB-BASIN OF MANJRA RIVER, MAHARASHTRA, INDIA- USING GEOGRAPHICAL INFORMATION SYSTEM (GIS) TECHNIQUES

Gurav Chandrakant and Md. Babar

Department of Geology, Dnyanopasak College, Parbhani, M.S., India

E-mail: chandrakantgurav123@gmail.com; mdbabar2002@gmail.com

Abstract

The Gharni river sub-basin covers 472.11 sq. km. area in Latur district of Maharashtra, India. It is a major tributary of the River Manjra. Present Hypsometric Integral (HI) analysis was carried out for studying the erosional condition of the basin, based on three parameters viz.,major sub-basin and its watershed HI analysis, basin asymmetry and statistical analysis of the watersheds. The Gharni river watershed was delineated using Geographical Information System (GIS) techniques ArcGIS 10.1 software, which is useful for understanding the topography of the area. The hypsometric integral values for the whole Gharni river sub-basin indicate that the river is in a mature stage.

Keywords: Gharni, GIS, Hypsometry, Watersheds.