



www.ggsnagpur.org

Prioritization of WRDH0-40 Watershed, Wardha River Basin, Yeotmal District, Maharashtra for Sustainable Development and Management of Natural Resources

B. S. Manjare

Department of Geology RTM Nagpur University, Nagpur-440001, India
E-mail: yogesh_manjare1@rediffmail.com

Abstract

The WRDH0-40 watershed of Wardha river basin is located in the south-eastern part of Yeotmal district, Maharashtra. This watershed forms a part of the hardrock terrain and is bounded by Latitude 19° 48': 20° 22' N and Longitude 78° 22': 78° 43' E, with an areal extent of 1409.09km². The drainage network shows dendritic to sub-dendritic pattern and is non-perennial. Poor soil cover, sparse vegetation, erratic rainfall and lack of soil moisture characterize the study area for most part of the year. Repetitive drought coupled with erratic groundwater exploitation results in decline of groundwater level. The WRDH0-40 watershed area has been further divided into seven sub-watersheds viz. WRDH0-40 SW-I, SW-II, SW-III, SW-IV, SW-V, SW-VI and SW-VII of Kuni river sub-basin of Wardha river. These sub-watersheds may be taken up for development and management plans to conserve natural resources, which will ultimately lead to soil and water conservation, including drainage density, slope and water yield capacity in the study area. On the basis of priority and weightage assigned to each thematic map, the sub-watersheds have been grouped into three categories *i.e.* high, medium and low priority. The sub-watersheds SW-I and SW-II shows the low priority, while SW-IV, SW-V and SW-VII comes under high priority and SW-III and SW-VI is categorized under medium priority zone.

Keywords: Prioritization, WRDH0-40 Sub-watersheds, Sustainable development, Remote Sensing and GIS