
Identification of Groundwater Prospecting Zones in Morna River Sub-Basin, Central India

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Abstract

Morna river is a tributary of the Purna river and forms the B13TAU031 sub-watersheds, which is part of Upper Tapi sub-basin. It is situated in the south-eastern part of the Akola district. Overlay analysis of various thematic maps *viz.*, geology, lineaments/ fracture, geomorphology, slope and land use/land cover were used to identify groundwater potential zone and prepare map assigned with differential weightage values as per their groundwater properties. The integrated groundwater prospect map has been categorized into seven classes on the basis of cumulative weightage to different features of the thematic maps. Drainage, structure and land use/land cover are incorporated in characteristic expressions of lithology and geomorphology. Majority of the Morna river sub-basin area show good, good to moderate and moderate groundwater potential zones.

Keywords: Overlay analysis, Morna River, Groundwater potential prospecting zone, Hydrogeomorphic mapping, RS and GIS.