

Characterization of groundwater potential zones deduced through the application of GIS in semi-arid granitic terrain

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In the recent years there has been growing demand for groundwater with increase in population and developmental activities in the industry as well as agricultural sectors. In order to meet the rapid growing demand delineation of potential groundwater zone becomes essential and one of the cost effective and rapid technique is to integrate various data on geo-information through the application of *GIS*, followed by ground truth verification. This technique is widely being used, particularly in hard rock terrain.

In a hard rock granitic terrain, application of *GIS* is being made to integrate various data such as geology, drainage density, slope, lineaments and geomorphology to obtain different groundwater potential zones. In the present paper, an attempt has been made to characterize such groundwater potential zone derived through the application of *GIS*. The area is typically characterized by scarcity of groundwater and also affected due to high salinity and fluoride content in groundwater. In order to characterize them, various hydrogeological data such as well yield, water level and water quality collected from these zones have been analyzed.

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