

Groundwater Potential Zone Assessment using GIS and Remote Sensing

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Abstract: *Over-exploitation of groundwater and marked changes in climate over the years have imposed immense pressure on the global groundwater resources. As demand of water increases across the globe for human consumption, agriculture and industrial uses, the need to evaluate the groundwater potential and productivity of aquifers also increases. This paper aimed to delineate the groundwater potential zones using GIS and remote sensing. Overlay analysis technique is used to develop the groundwater potential prospect zones by integrating different groundwater contributing thematic layers. The thematic layers of land use and land cover, drainage density, lineament density, soil, geology, slope and rainfall were prepared and used for groundwater potential map development by assigning weights to each thematic layer and features. The weights of each thematic layer were assigned based on their importance and relationship with groundwater recharge. Finally, the thematic maps were integrated by Raster calculator tool to develop groundwater potential zones.*

Keywords: GIS, Groundwater Potential, Overlay Analysis, Remote Sensing.

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