

Groundwater Recharge Plan Using Remote Sensing and GIS in Mini-watershed WRWN-3, Wardha District, Maharashtra

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Abstract

The demand of water for agriculture, domestic, industrial and drinking water purpose has increased many folds in the last decade. Groundwater management remains a challenging area in hard rock terrain like Deccan Basalt and hence development and recharge is still to be seen in the holistic phase. Techniques like Remote Sensing (RS) and Geographical Information System (GIS) has provided the capacity to take into account every bit of information required to arrive at the planning for groundwater recharge. In the present study, hydro-geological survey of four villages in mini-watershed WRWN-3 was carried out. Existing water conservations structures were mapped on Google Earth and KML file was generated. The KML file of existing water conservations structures and thematic maps like lineament, geomorphology and land use-land cover, soil, geology, *etc.* were integrated in GIS platform and a recharge plan was proposed, which contain suitable artificial water conservation structures for recharge of groundwater.

Keywords: Groundwater recharge, Remote sensing, GIS, mini-watershed WRWN-3, Wardha district, Maharashtra.