



Application of Geographical Information System for Identification of Potential Groundwater Artificial Recharge Zones in Hard Rock Terrain

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There are several methods which are employed to delineate the groundwater artificial recharge potential zones. Remote sensing and geographical information system (GIS) technique provides an advantage of having access to large coverage, even in inaccessible areas. It is rapid and cost-effective tool in producing valuable data on geology, geomorphology, lineaments, slope etc. Detail analysis of drainage, geology, lineament, geomorphology and slope has been carried out in the hard rock terrain in Andhra Pradesh, India. These data have been digitized and finally integrated through the application of GIS to decipher groundwater potential zones in the study area. These various data are prepared in the form of thematic map using geographical information system (GIS) software tool. In order to get all these information in the form of thematic map unified, it is essential to integrate these data with appropriate factor. Therefore, all information are integrated through the application of GIS. Various thematic maps are reclassified on the basis of weightage assigned and brought into the "Raster Calculator" function of Spatial Analyst tool for integration. In the recent years digital technique is used to integrate various data to solve problems related to groundwater. In the present study approach of remote sensing and GIS technique is used for ground water exploration and identification of artificial recharge sites.