

## **Water Resource Management in Basaltic Hilly Terrain in Part of Panchmahal, Gujarat, India**

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### **ABSTRACT**

Development is a strategic intervention aimed at a desired change, which affects the lives of the people and the environment to which it is targeted. Watersheds that are defined by natural hydrology represent the most logical basis for managing water and other natural resources. GIS offers integration of spatial and non-spatial data to understand and analyze the watershed processes and helps in drawing a plan for integrated watershed development and management. In hydrological work, the measurement of runoff cannot be computed directly from remotely sensed data but its potential is widely recognized to monitor and detect changes that occur either abruptly or gradually in surface conditions over extended periods of time. The need for improved methods for resource management and environmental assessment is vital. This study was carried out in a part of Panchmahal region, Gujarat by knowing the terrain properties and the slope of the region through construction of DEM (Digital Elevation Model). Through this mapping water resource management of region was carried out. The management also includes identifying the regions for artificial recharge, which has been done through demarcating the areas suitable for construction of check dams.