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Suitable Site Selections for Artificial Recharge Structure in Bandalli Watershed. Chamaraja Nagar District, Karnataka, India Using Remote Sensing, and GIS Techniques.

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Abstract

Bandalli watershed is characterized as an arid to semi-arid region with little access to water. Water is essential for all life forms for human consumption, agriculture and industry. Artificial ground water recharge is a process by which the groundwater scrounges is reduced at a rate almighty the augmentation rate beneath natural replenishment conditions. The work aims to understand the groundwater scenario in distinction to the geological point of view as the geology of the area concerned is the primary control of groundwater recharge and potentiality. The study began with gathering and analyzing necessary data for creating water balance and determining the best techniques for artificial recharge. The best artificial recharge sites in the vicinity have been validated. The present investigation is to find and select ideal sites for future zonesto create a new shape using GIS (Geographic Information System) software version 10.8. To estimate the appropriateness of the site for artificial recharge, the model incorporated numerous criteria, various parameters slope, Lu/Lc, stream order, soil aspect and hydrology. Artificial recharge planning was calculated using runoff availability, aquifer dimension, priority locations, and local water table conditions. Most areas are undulating to recommend recharge structures, which will help the water table and the agricultural sector to augment the water harvesting to improve the groundwater.

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Runoff; Site Selection.

Introduction

The primary sources of water depend upon the nature of precipitations, for these sources, mainly the storage role is essential and the role of recharge of water based on the role of the Physiographical components is highly significant. Under the water table, fully saturated soils and geological formations contain subsurface water. Therefore, safe groundwater abstraction and good groundwater management are critical for the resource's long-term

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