

Groundwater Management Using Remote Sensing Data in Urban Environment: A Case Study of South Delhi Region (India)

Surendra Kumar Yadav

KEY WORDS Urbanization. Industrialization. Hydro-morphogeology. Remote Sensing Data. Lineament. Groundwater.

ABSTRACT Geologically, the study area (part of South Delhi) falls in Delhi Supergroup quartzite terrain. Because of high demand of groundwater for domestic, agricultural, industrialization, urbanization and colonization purposes the water level in Delhi has highly reduced due to overdrafting in past few decades. Hydromorphogeology is directly related to groundwater availability. The occurrence and movement of groundwater is restricted to the buried pediment and interconnected lineaments. Satellite Imagery (Remote Sensing data) provides excellent information for natural resources, ecological studies, hydromorphogeological studies and water resource management. Disused and active brick kiln areas are marked as semi-circular white patches in SPOT data which are devoid of vegetation. Repeated heating of these areas resulted change in texture of the topsoil that effectively reduces the groundwater recharge of the area due to altered soil properties. Remote Sensing data provide reliable and quick information about ground water potential areas. An approach to build check dams/ bunds for groundwater conservation has been suggested. Changed soil properties due to repeated heating favours succession of limited and selected shrub- & herbaceous species on disused brick kiln areas.

Author's Address: Surendra Kumar Yadav, Assistant Research Officer, Department of Community Health Administration National Institute of Health and Family Welfare, Munirka, New Delhi 110 067, India
E-mail: sk_yadav11043@yahoo.com