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A STUDY OF GROUNDWATER POLLUTION VULNERABILITY USING DRASTIC/GIS, WEST BENGAL, INDIA

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ABSTRACT

Information about vulnerability of groundwater to contamination is essential to facilitate groundwater planning and management. The vulnerability of shallow groundwater to contamination in and around Midnapur-Kharagpur towns, West Bengal, India, is evaluated using the DRASTIC method within a Geographic Information System (GIS). DRASTIC parameters are calculated from geological, soil and elevation contour maps and groundwater level data of the study area, and thematic maps are prepared. Finally, the maps are integrated through the DRASTIC model within the GIS to demarcate vulnerable zones. In the present study, DRASTIC indices for both generic industrial-municipal and pesticide pollutants are derived and vulnerability maps for both classes are prepared. The result of the study shows that 50 percent of the area is highly vulnerable to industrial and municipal pollutants and more than 81 percent of the area is highly vulnerable to pesticide pollutants.

Reference: Shahid, S.; A Study of Groundwater Pollution Vulnerability Using DRASTIC/GIS, West Bengal, India, Journal of Environmental Hydrology, Vol. 8, Paper 1, January 2000.

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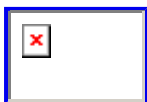
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