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Models Study for Economical and Social Consequence of the Deterioration of Groundwater Quality by Domestic and Industrial Products

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Abstract: Correct in order on the form and trends of groundwater quality and quantity is obligatory as a origin for cost-effective and public progress and for protection of ecological value. The Ground water samples were collected from 35 locations in Ranipet, Vellore district, TamilNadu was assessed in the Monsoon during 2012. Water quality assessment was carried out for the parameters like pH, Electrical conductivity , Total dissolved solids , Total alkalinity , Total hardness ,Chloride, Sulphate, Calcium, Magnesium, Sodium, Potassium, Nitrate, Chromium, Phosphate, Iron. Water Quality Index and Correlation coefficients were determined to identify the highly correlated and interrelated water quality parameters (WQPs). Regression equations relating these identified and correlated parameters were formulated for highly correlated WQPs. Comparison of observed and estimated values of the different WQPs parameters reveals that the regression equations developed in the study can be very well used for making water quality monitoring by observing the above said parameters alone. The result of analysis have been used to suggest model for predicting water quality, The analysis reveals that the ground water of the area needs some degree of treatment before consumption, and it also need to be protected from the perils of contamination.

Keywords: Groundwater, Physico-Chemical Parameters, Monsoon Season, WQI, Correlation and Regression Analysis.

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