CHAPTER 50

TECHNOLOGY
POLYMER TECHNOLOGY

Doctoral Thesis

442. KATYAL (Deeksha)
      Hydrochemical Analysis of Groundwater for Correlating Important Parameters to Ascertain Zonal Status.
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Abstract

Gives all general introduction of Water resources, Land use, rainfall, waste water generation and total ground water situation of NCT Delhi and detail of various sampling stations with sample distribution network from various blocks and source. Describes the physical-chemical characteristics of quality variables of various zones and areas. Deals with preliminary statistics for checking the correctness of analysis with the cation anion balance and its represntation. Statsitical computations are done on the data for formulation of the regression model. Calculation of mean, standard deviation, coefficient of variation, checking for distribution and polynomial fit and finally calculation of correlation coefficients among various parameters is performed. Final regression equations with the error are formulated. The results are validated using ANOVA for two different areas for two years. Index formation and categorization of zone in various indices has been done. Future zonal status is predicted by preparing thematic maps of groundwater use, groundwater quality and groundwater table and overlaying them using Geographical Information System.

Contents

1. Introduction. 2. Zonal distinctions and their typical characteristics. 3. Sampling stations and their relevant characteristics. 4. Zonal variations. 5. Balancing analysis and hill piper diagram for Delhi. 6. Fixing indicators through correlations and their importance. 7. Zonal equations and their optimisation. 8. Formulation of satistical indices. 9. Evaluating zonal status using GIS overlays. 10. Conclusions and discussions. References. Appendix.