

A Preliminary Assessment of the Groundwater Conditions in Bago City

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Abstract

The domestic water use of the study area is one of the basic factors to estimate the volume of water consumption of an area because domestic water use is related to the systematically water supply system. This study is only concerned with the urban area covering Bago Township which has a water deterioration and water scarcity area in summer. The primary objective of this study is to practically apply geostatistical tools that can help to improve an evaluation of groundwater quality for a particular area. Bago City, located in the southern part of Bago Region, was selected as a source for different data sets to be used as case studies. A set of geostatistical tools has thus been applied to the different real data sets which were collected from the shallow aquifers. There are nine different methods of data analyses used in this study, which include: (1) Experimental Laboratory Test, (2) Water Quality compared with WHO Standard, (3) Exploratory Statistical Data Analysis. TDS, Salinity from ground water and surface water are higher than WHO standard. Some key variables of groundwater quality in this area such as chloride, iron, etc that frequently exceed the requirements for drinking water in concentration will preferentially be selected for spatial variability analysis. The combined use of spatial (Geostatistics) and multivariate statistical measures have proven to be of major assistance in questions of assessing groundwater quality.

Key words: Water Quality, Water Utilization, Geostatistics, Groundwater and Surface Water

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