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QUALITY ASSESSMENT OF DEEP GROUND WATER

IN

MONARAGALA DISTRICT

A THESIS PRESENTED

BY

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Abstract

In order to provide safe drinking water to the rural community in Monaragala district, this study was basically carried out to identify the locations having unsafe deep ground water. Prior to this study, the rural community was using these deep bore hole (hand pump) wells for drinking and other purposes, and were considered as safe drinking water extracting points.

This study was under taken to make scientific approach to determine the quality of water with different factors. The number of wells selected from the study area is five hundred and thirty five. Water samples collected from each well were analyzed chemically using standard methods. Water quality maps were prepared using Arcview GIS soft ware, with the help of some other available software's.

The analytical results indicate that only twenty percent of deep bore hole wells are not suitable for drinking and the water quality is not within the WHO permissible levels of drinking water standards.

The water quality maps clearly indicate that there are no relationships between the soil types and land-use pattern with the deep ground water quality.

The results of the study further revealed that the geology of the area and the rainfall pattern directly affects in the chemical quality of deep ground water and also that excessive Fluoride and Iron in twenty percent of wells are due to geological and climatic factors.

