SURFACE & GROUNDWATER QUALITY OF BADULUOYA BASIN

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by

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Abstract

Assessment and mapping of groundwater and surface water is an important quantity because the physical and chemical characteristics of ground and surface water determine its suitability for agricultural, industrial and domestic usages.

Present work deals with the assessment of physico-chemical parameters of ground and surface water samples of BaduluOya basin. Water samples are collected from different sources of BaduluOya basin in dry season from March 2013 to May 2013. Water samples are tested for physico-chemical parameters following the standard methods and procedures. The parameters like Temperature, pH, Conductivity, Turbidity, TDS, Alkalinity, Chloride, Sulphate, Nitrate, Phosphate, Fluoride, Calcium, Magnesium, Sodium, Potassium, Iron and Manganese are tested in order to assess the water quality index.

Statistical studies have been carried out by calculating correlation coefficients between different pairs of parameters and t- test applied for checking significance. The observed values of various physico-chemical parameters of ground and surface water samples were compared with standard values recommended by WHO & SLS for drinking and the extent of deterioration. Stiff diagrams were drawn for the major ground water constituents at each sampling areas of the basin.

Key words: Groundwater, Surface Water, Physico-chemical parameters, Statistical analysis, t- test, WHO, SLS, Stiff diagrams