

## **Hydro-Chemical analysis of the ground water of the Basaltic Catchments: Upper Bhatsai Region, Maharashtra.**

### **ABSTRACT**

Water being an excellent solvent tends to dissolve the minerals in the geological system. The chemical nature of the ground water is influenced by several factors such as chemical weathering of the country rocks and interaction with the country rocks. The importance of the hydrochemical analysis underlies the fact that the chemistry of the ground water can directly be related with the source of water, climate, and geology of the region. In this paper chemical analysis of the ground water has been carried out for upper Bhatsai region in Maharashtra. There are eight water quality variables ( $\text{SO}_4^{2-}$ ,  $\text{Na}^{++}$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{NO}_3^-$ , TH, and pH) and the specific Conductance and Total Dissolved Solids were selected for this analysis. In this paper a) The values of water quality parameters were analyzed using statistical methods, b) the existence of trends and the evaluation of the best-fitted models were performed in order to classify the quality of the ground water. The geochemical analysis of the water samples has shown that it is free from certain anomalies and the water is suitable for human and cattle consumption. However, the presence of certain degree of anions indicates that the ground water in the study area is facing stress which could change the quality of the water in the near future.

**Keyword:** Ground water analysis; Hydro-chemical; Bhatsai region; India.