

Trend and statistical analysis water quality of Karun River in Mollasani hydro station

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Abstract

The rivers are one of the most important sources of surface water to provide the expenses of the drinking and agriculture used. The research in the Mollasani hydro station verification Karun's, done in the period of 49 years. The goal is trend analysis of TH, EC and TDS and establish new equations for these parameters with regression method and compare results with ROC curve. Results with area under curve more than 0.8 for TDS and more than 0.9 for TH showed that results have high accurate. In statistical duration trends of TH, EC and TDS have increase according to Kelly ratio is 0.98 therefore water quality is within boundary between safe and unsafe. Mg hazard ratio is determined 17.82% therefore water quality is good totally with respect a collection of precautions and considerations can be used Mollasani of Karoon range.

Keywords: Trend analysis, Karun, water quality, ROC curve, Kelly ratio.