WATER QUALITY INDEX OF THE WAINGANGA RIVER, BHANDARA MAHARASHTRA, INDIA

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ABSTRACT

The present paper keenly deals with the water quality index assessment of River Wainganga, a tributary of Godavari System was evaluated by Water Quality Index (WQI) technique. The surface water quality index assessment of River Wainganga is analyzed according to the procedure provided by Bureau of Indian standards, Union Health Ministry, Government of India & Indian Council of Medical Research. Eighteen numbers of samples were collected from drainage and sub-drainage of River Wainganga. Water quality affects the quality of potable water and the aptitude of the water body to support healthy ecosystems. An endeavor has been made to develop water quality index, using eight water quality parameters Iron, Color, pH, EC, Turbidity, Alkalinity, TDS and Total Hardness measured at two different stations along the river from September 2010 to May 2011. The utmost denote concentration of Iron 169.2 mg/l was observed. The most significant parameter is Iron were detected extremely higher than the acceptable limit for the samples. The deadlier diseases like Parkinson's, cancer, edema of eyelids, tumor, congestion of nasal mucous membranes and pharynx, stuffiness of the head and gastrointestinal, muscular, reproductive, neurological and genetic malfunctions caused by iron have been documented by many researchers. Brown WQI method was used to find overall WQI along the river. The present study is aimed to calculate WQI in order to assess the suitability of water for drinking purposes. The results obtained on WQI from different sampling stations were found to be varied from 8741.1 to. 30246.51.

KEYWORDS: Assam Public Health Engineering Department (APHED), Bureau of Indian Standards (BIS), Indian Council of Medical Research (ICMR), Water Quality Index (WQI), Water Quality Status (WQS)