

LITERATURE SURVEY

The available water resources are getting depleted and water quality is deteriorated due to the rapid increase in population and need to meet demands of human beings for agriculture, industrial, and personal use. The quality of ground water is also affected by pesticides and insecticides. The rivers in India are getting polluted due to industrial waste and discharge of untreated sewage. In order to eliminate problems associated with manual water quality monitoring, CPCB has planned to go hi-tech and plans to establish 'Real Time Water Quality Monitoring (WQM) Network' across Ganga Basin. Stephen Brosnan, 2007 [3] investigated a wireless sensor network (WSN) to collect real time water quality parameters (WQP).

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The top-10 important water quality parameters affecting freshwater biodiversity . Based on occurrence frequencies, the top-10 critical parameters are listed consisting of 3 physical and 7 chemical parameters. The physical parameters include temperature, EC (electrical conductivity), and TSS (total suspended solids). Seven chemical parameters are frequently emphasized in a large body of literature, including DO (dissolved oxygen),² Reference list can be referred to the supplementary material [Online]. NO₃-N, PO₄, NO₂-N, pH, NH₃-N, and BOD₅ (5-day biological oxygen demand). Total nitrogen (TN) was classified into its main forms: NH₃-N, NO₃-N, NO₂-N [13, 14]. Total phosphorus (TP)

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Quio Tie-Zhn, 2010 [4] developed online water quality monitoring system based on GPRS/GSM. The information was sent by means of GPRS network, which helped to check remotely the WQP. The remote sensor was based on ZigBee network. WSN tested WQP and sent data to Internet using GPRS. With the help of Web, information was gathered at remote server. Kulkarni Amruta, 2013 [8] created solar powered WQM utilizing remote sensor network. The Base station (BS) gathered information from distant remote sensors. The BS associated with ZigBee module was powered by sunlight baseboard (Energy harvesting).