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Seasonal water quality analysis of Chittar stream

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Chittar stream is a major stream flanking Kanjirapally which flows west to join the Manimala River at Karimbukayam. In this study the physio-chemical water quality of Chittar stream, Kanjirapally, Kerala, is determined for various seasons. A total stretch of about 17.2 km is considered for study and the flow along two routes are considered: Route 1 (Thottumukam-Karimbukayam, 8.3 km) and Route 2 (26th mile-Karimbukayam, 8.8 km). The Chittar stream is the major source of water for domestic purposes in and around Kanjirapally. There is a surfeit discharge of organic and inorganic matter to the stream system. This leads to bio contamination with bacteria and viruses and physical and chemical contamination due to decomposition of various inorganic matter expelled into the stream. This assessment of water quality focuses on indicators that integrate the effects of physical and chemical contamination. Therefore, in this study the pH, TDS, COD, BOD, DO, turbidity, chloride content at eleven points are measured during various seasons to determine and specify the level of pollution in the river. The samples are collected at an interval of two weeks. Two prominent sources of pollution were identified. The CPCB classification of the river was done to assess the suitability of water throughout the season.

Biography

Annie Maria Issac has completed her BTech in Civil Engineering from M.A. College of Engineering, affiliated to M. G. University Kerala, in 2008 and ME in Water Resources and Environmental Engineering from Indian Institute of Science, Bangalore in 2013. Currently she is working as Assistant Professor in Amal Jyothi College of Engineering, Kanjirapally, Kerala. Ground water modelling, river water quality assessment and climate change studies are her general areas of interest.

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