Problem And Solution

Team ID	PNT2022TMID47935
Project Name	Real-time river water quality monitoring and control system

REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

Problem Statement:

The environment around consists of five key elements e.g., soil, water, climate, natural vegetation, and landforms. Among this water is the utmost crucial element for human life. It is also vital for the persistence of other living habitats. Whether it is used for drinking, domestic use, and food production or recreational purposes, safe and readily available water is the need for public health. So, it is highly imperative for us to maintain water quality balance. Otherwise, it would severely damage the health of the humans and at the same time affect the ecological balance among other species. Water pollution is a foremost global problem which needs ongoing evaluation and adaptation of water resource directorial principle at the levels of international down to individual wells.

Proposed Solution:

The main aim is to develop a system for continuous monitoring of river water quality at remote places using wireless sensor networks with low power consumption, low-cost and high detection accuracy. pH, conductivity,

turbidity level, etc. are the limits that are analysed to improve the water quality. Following are the aims of idea implementation to measure water parameters such as pH, dissolved oxygen, turbidity, conductivity, etc. using available sensors at a remote place. To assemble data from various sensor nodes and send it to the base station by the wireless channel. To simulate and evaluate quality parameters for quality control. To send SMS to an authorized person routinely when water quality detected does not match the present standards, so that, necessary actions can be taken