

## PROBLEM STATEMENT

The need for effective and efficient monitoring, evaluation and control of water quality in residential areas has become more demanding in this era of urbanization, pollution and population growth. Ensuring safe water supply of drinking water is a big challenge for modern civilization. Traditional methods that rely on collecting water samples, testing and analyses in water laboratories are not only costly but also lack capability for real-time data capture, analyses and fast dissemination of information to relevant stakeholders for making timely and informed decisions.

Our proposed idea is a sensor-based water quality monitoring system. The main aim here is to develop a system for continuous monitoring of 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 parameters that are analysed to improve the water quality. This system measures water parameters such as pH, dissolved oxygen, turbidity, conductivity, etc using available sensors at remote places, collects data from various sensor nodes and sends it to the base station by wireless channel and simulates and analyzes quality parameters for quality control.