**ABSTRACT**

The degradation of water resources and air pollution has become a common problem. The conventional methods of monitoring involve the manual collection of water and air sample from different locations. These samples are tested in the laboratory using the rigorous skills. Such approaches are time consuming and are no longer to be considered to be efficient. Moreover, the current methodologies include analyzing various kinds of parameters of quality such as physical and chemical. The old method of quality detection and communication is time consuming, low precision and costly. Therefore, there is a need for continuous monitoring of water quality and water leakage and contamination detection in real time. By focusing on the above issues, a low cost monitoring system is using that can monitor water quality and leakage, and contamination in real time using IoT. Each device has a unique identification and must be able to capture real-time data autonomously. Basic building blocks of IoT consist of sensors, processors, gateways, and applications. In the system, water quality parameters are measured by different sensors such as pH, turbidity, dissolved oxygen, temperature, CO2 level for communicating data onto a platform via microcontroller based system.