

ABSTRACT

In this modern era, humans often ignore the importance of preserving the surrounding environment. Water is a source of life for both humans, animals and plants. Lack of education on the environment has made people often throw garbage into rivers, oceans and ditches. It makes the ecosystem in the environment polluted. Bad environment will have an impact on humans themselves such as lack of clean water, and reducing food sources in the area. A system is needed to be able to monitor the state of the water to determine whether the water is fit for consumption or not.

In this study, the authors designed a tool for monitoring water conditions by visualizing the results on the internet. The design of this tool consists of a pH sensor, a turbidity sensor and a conductivity sensor. Arduino Uno and NodeMCU were used as microcontrollers. To take measurements the author takes some fluid to tested. Sensors will undergo a detection process. The data obtained will be sent to the Thingier.io website. The system will send notification on registered email. Testing aims to find the accuracy of sensor readings with proven tools. From the test results monitoring water automatically, the average level of accuracy when testing is 97.676% for the pH sensor, for the conductivity sensor is 91.186%, and the turbidity sensor is 81,7%. Hopefully this tool can be used for rural and urban communities. In order to keep the spring water clean.

Keywords: Conductivity, pH, Turbidity, Monitoring, IoT, Clean Water