ABSTRACT

Rivers are one of the main water sources for the Indonesian people, although they are the main water sources, rivers in Indonesia have problems with water quality. Usually, to determine the value of the Water Quality Index, researchers take data samples and examine them in the laboratory so they cannot monitor the Water Quality Index directly. In this study, a monitoring device was created that functions to monitor the river's Water Quality Index. The research location was carried out on the Kamal Tambakdahan river. This monitoring device uses a pH sensor and an Electrical Conductivity sensor. Data from the sensor is converted by the microcontroller into the value of the Water Quality Index. The results showed that local rain and water delivery from the Macan Dam greatly affect the water quality of the Kamal Tambakdahan river. When there is no local water delivery and rain, the water quality of the Kamal Tambakdahan river has a Water Quality Index value range of 0.7 and when there is local water delivery and rain, the water quality of the Kamal Tambakdahan river has a range of 1.5 Water Quality Index values. Based on the Water Quality Index table, a value of 0.7 is included in the clean category and a value of 1.5 is included in the lightly polluted category.

Keywords: Internet of Thing, pH sensor, EC sensor, microcontroller, Water Quality Index.