

## **ABSTRACT**

*The river is a very important source of water to support human life. The current state of river water is very concern, some problems that occur because of the habit of people throwing garbage in rivers and also industrial waste disposal. The Citarum River has been reduced to the river water quality. Based on this, it created a system that can be able to make a quality level of river water with the creation of websites that can read sensors and display data in real time.*

*The final task is made with the concept of the Internet of Things, the principle of work there are 3 sensors and 1 LoRa which are stored on the Antares platform and connected by calling the sensor API so that the data can be displayed on the Website via the Internet. The Website and the tool will be connected using a Longe Range (LORA) technology as a gateway.*

*The result of a tool test consisting of 3 sensors and 1 LoRa obtained the following results. With the result delay starts data transmitted from Antares until data is received and displayed on the website with an average of 0.315 milisecond, Throughput value obtained 5,416 Bytes/s and Packet lost 0.16.*

**Keywords:** *Water Quality, IoT, LoRa, Web Server, API, Antares, QoS*