

Dear Editor-in-Chief, Jurnal Riset Akuakultur

We wish to submit an original research article entitled “Water Quality Changes in the Coastal Area Before and After the Operation of an Intensive Whiteleg Shrimp Brackishwater Pond Aquaculture” (**DESIGN AND CONSTRUCTION OF WATER QUALITY FILTERING AND MONITORING TOOLS IN IOT-BASED FISHERIES CULTIVATION SYSTEMS**) for publication consideration in the Jurnal Riset Akuakultur.

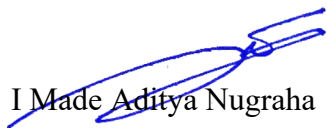
We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

This article discusses the design and development of a filtration device and water quality monitoring system based on the Internet of Things (IoT) in a fish farming system. This study aims to improve the efficiency of water management by integrating several sensors (pH, turbidity, Total Dissolved Solids/TDS, and ultrasonic) controlled by Arduino Uno and ESP32 microcontrollers. This system allows real-time water quality monitoring through an Android application, providing automatic alerts when water parameters are not up to standard. Test results show high sensor accuracy and improved water quality after filtration, including a decrease in turbidity of up to 40% and a decrease in dissolved substance content of 30%. The advantages of this system compared to manual methods are higher efficiency in water management, automation of pumps and filtration, and potential savings in operational costs. Further developments proposed include the addition of dissolved oxygen and ammonia sensors, as well as integration with artificial intelligence (AI) for more in-depth water quality analysis.

Therefore, we believe this manuscript fits the focus and scope of your journal.

25 March 2025

Sincerely,  
Corresponding Author



I Made Aditya Nugraha