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INNOVATION

CATEGORY

IMPLIMENTATION OF SANATORI FOR DETECTOR OF CORAL REEF DESTRUCTION BASED ON ULTRASONIC

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The condition of coral reefs in Indonesia is currently damaged by 35, 15%, while coral reefs in good condition are only 6.39%. The damage is caused by several factor including, natural factor that occur due to rising sea water temperature due to the phenomenon of El-Nino weather anomaly, global warming, pollution and human factor. The efforts that have been made are conservation and restoration using the Line Intercept Transect (LIT) and Sediment Trap methods. However, the method used still has weakness, including requiring a long time, not a small amount of costs, and driver, and can damage the ecosystem and break coral reefs. Based on this problem, innovative Technology SANATORI (Smart Automatic Sonar Technology and Restoration) is created as portable detector of coral reef. It is the innovative solution using an ultrasonic sensor integration with the internet network and equipped with web and applications (APK) in android to simplify data processing, monitoring, and knowledge of coral reef. Research methods have done are (1) literature study, (2) design and analysis, (3) creating SANATORI web, (4) making SANATORI web, (5) SANATORI trials, (6) evaluation and improvement. The results is SANATORI tool that is able to detect damage to coral reef with the result data is standard deviation of 0.6172 and distance data of 98.5%, so it can be known how much damage to coral reef and mapping the condition of coral reefs. Other than that, SANATORI has been cooperating with the conservation of coral reefs in the coast of Pearls, Prigi, Trenggalek, East Java and has been published in various media. SANATORI has the potential to be commercialized, because SANATORI is more effective and efficient.

Key words: Coral reef, ultrasonic sensor, SANATORI.



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