

ABSTRACT

INFORMATION SYSTEM OF RIVER WATER QUALITY ON RIVER BASIN AT LAMPUNG PROVINCE

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Information technology is a effective and efficient media for communication between the management water resources agency and communities in water quality monitoring activities. Lampung Province is divided into 3 River Basin according to Presidential Decree No 12, 2012. They are: Seputih – Sekampung River Basin, Mesuji - Tulang Bawang River Basin, and Semangka River Basin.

In this research, analysis have been conducted using Water Quality Index (WQI) of WQI – DOE Malaysia method, and Water Pollutant Index (WPI) of Storet method and Pollution Index (PI) method on Seputih Sekampung River Basin (33 locations) and Mesuji - Tulang Bawang River Basin (19 locations) inside. The results of the research will be managed using Website Information System to give interactive information for all stakeholder and communities on water resources management process.

The analysis of WQI and WPI based on laboratory test data for year period 2011 to 2013 used parameters such as pH, DO, BOD, COD, TDS, DHL, AN, Arsen, Selenium, Flouride, Oil and Total Coliform. Result of water quality index calculation result at Seputih Sekampung River Basin indicate of clean, slightly polluted and moderate polluted status. On the other hand Mesuji - Tulang Bawang River Basin has status of water quality of clean, slightly polluted,

moderate polluted and very polluted condition. Information for analysis result of Water Quality Index (WQI) and Water Pollutant Index (WPI) for river on Seputih Sekampung River Basin and Mesuji - Tulang Bawang River Basin can be accessed at the address <http://kualitas-air.bl.ee/kualitas-air/home> .

The results of the research showed that water quality conditions in general are influenced by land use. Seputih Sekampung River Basin has large agricultural areas and some swamp land. The decline trend in water quality in this area occurs in the wet season. Swamp land have the opposite condition, the water quality will improve in the wet season due to decreased levels of the acid by rain water. Mesuji Tulang Bawang River Basin consist of cultivation land and some swamp land. Decrease trend of water quality conditions for the cultivation of land has the same condition as Seputih Sekampung River Basin.

Keywords: Seputih Sekampung River Basin, Mesuji - Tulang Bawang River Basin, WQI – DOE Malaysia Method, Storet Method, Pollution Index (PI) Method, Website Information System