ANALYSIS OF TUBAN, EAST JAVA COASTLINE CHANGE USING EMPIRICAL ORTHOGONAL FUNCTION (EOF)

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ABSTRACT

This study aims to know dominant pattern of variations coastline change of Tuban, expressed by Empirical Orthogonal Function (EOF). The equation that requires data input coastline two-monthly results using oneline model. EOF analysis validation results with map 2011 shows changes on cell 1-30, cell 31-60, cell 61-90, cell 91-120, and cell 121-150. Changes occur on cell 31-60 of 0.0005%, while on the other cell for 0-0.0001%. Most remain stable if the pias compared with shoreline early in 2005. After that, the eigenvalue of the EOF analysis results associated with the parameter near the coast. Then from the results of the analysis of the larger eigenvalue is generated then the greater the value of the wave energy wave (E), stepness (Ho/Lo), cross shore wave energy (Fx) or longshore (Fy), leading to a straight comparison. As for the eigentemporal c (t), where the larger the angle the wave energy wave (E), stepness (Ho/Lo), cross shore wave energy (Fx) or longshore (Fy) it would be worth getting smaller, leading to a comparison that is reversed.

Key Words : EOF Analysis, eigenfunction, eigenvalue, coastline change.