DESIGNING MARITIME WEATHER PREDICTOR USING FUZZY LOGIC METHOD TO IMPROVE THE FORECAST COVERAGE: CASE STUDY OF SHIPPING SURABAYA - BANJARMASIN

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Abstract
Sea Transportation is strongly influenced by maritime weather. Weather and climate patterns are not uniform will disrupt marine transportation. The frequency of wind disturbance / storm winds west and east wind which turns the traffic likely to disturb the seas and transportation between islands. In this study, Sugeno fuzzy logic method used to predict weather in the maritime shipping route Surabaya-Banjarmasin. The data taken from Climatology Meteorology and Geophysics Agency (BMKG) in the range of 5 years from 2006 to 2010, and the data in January 2010 to September 2010 used for validation of 6552 data. The data used as inputs of fuzzy logic which consists of three variables and one output for each of the fuzzy logic of the current speed or wave height. In the test results predicted 1 hour ahead of the current velocity at the point of shipping lines Surabaya-Banjarmasin validation membership function is 71.28% with an average error 0.0035, and wave height at the point of shipping lines Surabaya-Banjarmasin validation membership function average of 80.26% with an average error of 0.0012.

Key Words: Fuzzy Takagi-Sugeno, current velocity, wave height.
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