DESIGN OF PREDICTION SYSTEM OF SEA SURFACE TEMPERATURE USING ADAPTIVE NEURO FUZZY INFERENCE SYSTEM (ANFIS) ON MARITIME WEATHER STATION AT EAST JAVA SHALLOW WATERS

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Abstract

Sea Surface Temperature is an important parameter that can be used to determine quality of waters. Sea surface temperature data can be used to learn physics phenomenon at the sea. Prediction system of sea surface temperature at East Java Shallow Waters has been made. Several factors that can be used to predict sea surface temperature in this study are sun’s illumination length, sun light intensity, air temperature, wind speed. The method used to predict sea surface temperature in this study is Adaptive Neuro Fuzzy Inference System (ANFIS). Results from the software was validated with the real measurement of sea surface temperature. Parameters used in this study are RMSE and the accuracy rate. The result shows that RMSE values and the corresponding accurations are 0,810825 and 79,97601%, 0,810805 and 79,98082%, 0,811236 and 79,96716% for 1, 3, and 5 meter depth respectively.

Keywords : accuration level, air temperature, air velocity, ANFIS, Sea Surface Temperature, sun’s illumination length, sun’s intensity,