ABSTRACT

ANALYSIS METEOROLOGICAL DATA FOR PREDICTING DROUGHT USING DECISION TREE CLASSIFICATION METHOD AND SEASONAL AUTOREGRESSIVE INTEGRATED MOVING AVERAGE (SARIMA) FOR FORECASTING

By
YASNITA
NIM: 1202164387

Drought is a natural event that is often encountered in Indonesia. However, the last two years (2018-2019) drought in Indonesia increased and became a major factor causing forest and land fires. In 2019, there were 1,529 cases of drought in various regions in Indonesia which affected 3,712,602 people. The Center for Weather Modification Technology (BBTMC) exists to resolve hydrometeorological problems such as drought and forest fires. By forecasting, BBTMC can make efforts to reduce the effects of drought and arrange strategies for managing water resources in the atmosphere. Forecasting is done using the Seasonal ARIMA (SARIMA) method of meteorological data. From the result of the classification using the decision tree algorithm obtained rules in classifying drought. The rule is used to classify the results of forecasts. After implementing both of methods, the result of drought forecasting shows possibly of drought will happen in 2020 on July to November, in 2021 on June to November, and in 2022 on June to November.

Keywords: *drought,* analysis, *prediction*, *forecasting*, *decision tree*, *SARIMA*, *meteorological*.