

ABSTRACT

FORECASTING THE AVAILABILITY OF GREEN OPEN SPACE IN BANYUMAS CITY USING CHEN'S FUZZY TIME SERIES METHOD

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Reports from the International panel on climate change, 2007 and 2023 that there will be a temperature increase from 1850-2005 of 0.60°C and in 2023 of 1.5°C. Forecasting is a method used to predict uncertainty in the future in an effort to make better decisions. Fuzzy time series is a new concept used to forecast problems where historical data is formed in linguistic values and produces accurate forecasting. This study discusses Chen's fuzzy time series method developed by Chen (1996) to forecast the availability of green open space. In this study, the processed data was sourced from the website of the Central Bureau of Statistics Banyumas which amounted to 81 total data, from 27 cities in the range of 2018 to 2020. The process of acquiring data from historical RTH is integrated with the system built. This data acquisition process uses technology in the form of fuzzy forecasting applications that are sent and stored in the form of an online database on a web server. RTH data is used as material for online predictions. In this study, the processed data was sourced from the website of the Central Bureau of Statistics Banyumas which amounted to 81 total data, from 27 cities in the range of 2018 to 2020. Based on chen's fuzzy time series method with interval determination based on historical data, forecasting the availability of green open space in Banyumas City from 2018-2020 obtained forecasting results for Lumbir in 2018 with historical data of 7266 ha of 5711 ha, for Wangon in 2019 with historical data of 3396 ha of 3118 ha and for Ministry of General in 2020 with historical data of 3401 ha of 2600 ha. From the results of forecasting tests that have been determined using an absolute mean percentage error of 17, 91% are in the Good category.

Keyword : Open Green Space, Forecasting, Fuzzy, Time series, Fuzzy Chen