

APPLICATION OF MULTIDIMENSIONAL SCALING ANALYSIS ON MAPPING CLIMATE ELEMENTS IN INDONESIA

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ABSTRACT

Climate change is a long-term change in temperature and weather patterns. Changes are caused by two factors: human factors and natural factors. Climate change can cause prolonged drought. Indonesia is a country that is vulnerable to climate change and global warming. To overcome this, Indonesia needs an environment that has many trees. The elements that affect weather and climate are air temperature, air pressure, air humidity, rainfall, wind, and sunlight. Indonesia's climate analysis aims to determine the potential of climate resources in Indonesia. The analysis method used is multidimensional scaling analysis. This analysis aims to determine the position of an object based on the assessment of its similarity through perceptual mapping visually in a multidimensional map. In the analysis, 4 groups of provincial mapping results were obtained in Indonesia based on climate elements in 2022. In addition, the STRESS value of 2.15% and R-square of 99.95% were also obtained, indicating that the multidimensional map very accurately represents the original data.

Keywords: Climate Change, Multidimensional Scaling, Perceptual Mapping

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