Penataan Ruang Kawasan Agropolitan di Kabupaten Semarang dengan Metode Artificial Neural Network

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ABSTRACT

Bandungan and Sumonowo Districts are areas in Semarang Regency which are designated as Agropolitan areas. Some development activities in the district have a negative impact on the quantity and trends of the agricultural system. The decline in the spirit of global and national agriculture also worries many parties about the future of agriculture. The decline in the spirit of global and national agriculture also worries many stakeholders about the future of agriculture.This study attempts to map spatial planning objectively with Artificial Neural Network methods in the agropolitan area. Where the relationship between spatial objects is calculated the potential for changes in two different spatial data tempos. The results obtained that the objective simulation with the ANN method on the spatial data of the classification results using the minimum distance method obtained min validation error 0.0656. The validation results are also quite good, namely obtaining the truth percentage 85.3% and the kappa index 0.80. The simulation map is produced until 2021. From the simulation map, knowledge is gained that the open farming system will continue to grow positively in the range of 0.015%. The closed farming system will continue to decline in the range of 0.01%. This knowledge can be an alternative solution in considering the implementation of spatial and regional plans in the region.

Keywords: *spatial, artificial neural network, agropolitan, simulation.*