

**SPATIAL ANALYSIS OF LAND USE CHANGES OF PADDY FIELDS IN  
WEDOMARTANI VILLAGE NGEMPLAK SUB-DISTRICT SLEMAN  
REGENCY YOGYAKARTA SPECIAL REGION**

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**ABSTRACT**

The need for land for infrastructure development (roads, industry and offices), housing and residential areas is increasing. This causes the conversion of agricultural land, especially paddy fields. This research was conducted in Wedomartani Village, Kapanewon Ngemplak, Sleman Regency, Special Region of Yogyakarta. The purpose of this study was to determine: (1) changes in the use of paddy fields in Wedomartani Village in 2012, 2016 and 2021 (2) factors that cause changes in the use of paddy fields in Wedomartani Village. The basic research method is descriptive. Data collection techniques using observation and interviews. Selection of sources in this study using the method *purposive sampling*. To obtain data on changes in paddy fields for the 2012-2021 period, a Geographic Information System (GIS) analysis technique was carried out in the form of *overlay* on the land use maps for 2012, 2016, and 2021. The results showed a decrease in the area of paddy fields in the 2012-2016 period by 17.03 ha and in the 2016-2021 period by 42.75 ha. The average shrinkage of paddy fields into mixed gardens or settlements in the Wedomartani Village in the 2012-2021 period is 6.4 ha/year. The factors causing land conversion in Wedomartani Village are the location of Wedomartani Village which is around the campus area, the selling price of land is high, and there is no next generation of farmers.

Keywords: Spatial Analysis, Paddy Field, Geographic Information System, Land use change