

Analisa Perubahan Penggunaan Lahan Di Daerah Aliran Sungai Serayu Hulu Dengan Pengginderaan Jauh dan Sistem Informasi Geografis

Analysis of Land Use Change in Upper Serayu Watersheds Using Remote Sensing and Geographic Information Systems

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Abstract: Globalization and the development of science and technology cause human needs increase. This has an effect on land use, especially in watershed areas. Serayu is one of watershed in Central Java which is have problems related to land use, which occurs in the upper of the watershed. Agricultural Intensification, deforestation, an increase in population are factors that drives land use change in the upper of Serayu watershed. Utilization of watershed areas that ignore spatial rules causes pollution and land degradation. That condition happened and this makes the Serayu watershed one of the priority watersheds for rehabilitation in Indonesia. Remote Sensing (RS) and Geographic Information Systems (GIS) are tools that used to analyze land use changes that occurred in 2009-2019. Land use classification is derived from the interpretation of Sentinel Image 2 and land use maps in 2009. Land use is classified into six classes; water bodies (rivers, lakes, ponds), built-up areas, shrubs, forests, agriculture (rice fields, fields), empty land.

Keywords: land use change, serayu, remote sensing, GIS, watershed

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