

**PENERAPAN METODE *ANALYTICAL HIERARCHY PROCESS* (AHP)  
UNTUK PEMETAAN KERAWANAN LONGSORLAHAN  
DI SUB-DAS SAMIN KABUPATEN KARANGANYAR**

**INTISARI**

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Selama ini identifikasi longsorlahan di Indonesia telah banyak dilakukan, mengingat bencana longsorlahan merupakan bencana yang cukup sering terjadi di Indonesia. Kegiatan alih fungsi lahan terutama pada wilayah Daerah Aliran Sungai (DAS) menyebabkan terjadinya degradasi lahan yang dapat memicu terjadinya longsorlahan.

Penelitian ini dilakukan di wilayah Sub DAS Samin Kabupaten Karanganyar tahun 2015. Variabel yang digunakan dalam penelitian, yaitu bentuklahan, kemiringan lereng, curah hujan, jenis tanah, penggunaan lahan, dan jenis batuan. Metode yang digunakan dalam penelitian ini adalah dengan mengkombinasikan metode Analytical Hierarchy Process (AHP) dan Sistem Informasi Geografi (SIG). Metode AHP digunakan dalam pembobotan setiap variabel yang digunakan dalam penelitian. Variabel yang dianggap berpengaruh terhadap tingkat kerawanan longsorlahan diberikan bobot terbesar. Pembobotan dilakukan secara matematis dengan mempertimbangkan pemikiran yang logis, kondisi lapangan, dan penelitian-penelitian sebelumnya. SIG dalam penelitian ini digunakan untuk analisis spasial tingkat kerawanan longsorlahan.

Hasil yang didapatkan adalah wilayah Sub DAS Samin di Kabupaten Karanganyar memiliki 3 kelas tingkat kerawanan longsorlahan, yaitu tidak rawan seluas 15040.79828 Ha (80,4%) dan rawan seluas 2678.22261 Ha (14,3%) yang berada di Kecamatan Tawangmangu, serta sangat rawan seluas 979.05493 Ha (5,2%) yang berada di Kecamatan Matesih, Jumapolo, Jumantono, Jatiyoso, Karanganyar, dan Karangpandan. Penelitian yang dilakukan memiliki akurasi yang cukup baik, yaitu sebesar 86,2%.

**Kata kunci:** *Analytical Hierarchy Process*, Kerawanan Longsorlahan, Sub DAS Samin

***APPLICATION OF ANALYTICAL HIERARCHY PROCESS (AHP) METHOD  
FOR A VULNERABILITY OF LANDSLIDE MAPPING  
IN SAMIN WATERSHED, KARANGANYAR REGENCY***

***ABSTRACT***

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*During the identification of landslide land in Indonesia has been widely applied. Moreover, it considering with landslide disaster that occurred oftentimes. Land conversion activities, especially happened in area of DAS caused the land degradation. Land degradation could be a triggering factor for landslide in those area.*

*This research is conducted in Sub DAS Samin Karanganyar, on 2015. Variables that was used in these study were landform, slope, rainfall, soil, land use, and rock. The method that was used in these research was to combine the Analytical Hierarchy Process (AHP) and Geographic Information System (GIS). The AHP was used in the weighting of each variable studied. Variables that were considered influential on the level of vulnerability for landslides was given by the greatest weighting. The weighting, mathematically was done by considering the logical thinking, field conditions, and previous studies. GIS in these study was used for spatial analysis of the level of landslides vulnerability.*

*The results of these research that were Sub DAS Samin in Karanganyar had 3 classes of landslide vulnerability, like as (1) area that is not vulnerable included 15040.79828 Ha (80.4%), (2) vulnerable area included 2678.22261 Ha (14.3%) that were located in District Tawangmangu, (3) extremely vulnerable area included 979.05493 Ha (5.2%) that was located in District Matesih, Jumapolo, Jumantono, Jatiyoso, Karanganyar, and Karangpandan. The conclusion of this research showed that it had a good accuracy because the value was up to 86.2%.*

***Keywords:*** *Analytical Hierarchy Process, Landslides Vulnerability, Sub DAS Samin*