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**Analisis Water Holding Capacity di Lahan Budidaya pada Longsor Aktif dan Dorman di Kalijambe, Bener,
Purworejo**
ELGIVA PRISKILANNA STAKHIS, Prof. Dr. rer. nat. Junun Sartohadi, M.Sc.; Ir. Suci Handayani M.P.
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INTISARI

ANALISIS *WATER HOLDING CAPACITY* DI LAHAN BUDIDAYA PADA LONGSOR AKTIF DAN DORMAN DI KALIJAMBE, BENER, PURWOREJO

Penelitian mengenai karakteristik fisik tanah di daerah rawan longsor sudah banyak dilakukan, tetapi kajian yang secara khusus membahas *water holding capacity* (WHC) pada morfologi longsor masih terbatas. Penelitian ini bertujuan untuk: (1) menghitung *water holding capacity* di lahan budidaya longsor aktif dan longsor dorman, (2) menilai karakteristik fisik tanah di daerah penelitian, (3) mengkaji hubungan antara nilai water holding capacity dengan klei sensitif, (4) menyusun rekomendasi konservasi dalam mengoptimalkan lahan budidaya bekas longsor. Penelitian diawali dengan pengumpulan data yang dilakukan melalui survei lapangan dan analisis laboratorium. Penentuan titik sampel ditetapkan berdasarkan tingkat keaktifan longsor aktif dan dorman. Pengambilan sampel tanah dilakukan di bagian mahkota, badan dan kaki longsor pada setiap aktivitas longsor pada penggunaan lahan tegalan dan kebun campur. Sampel tanah yang diambil adalah sampel tanah tak terusik dan sampel tanah terusik. Data hasil pengukuran dianalisis melalui *Microsoft Excel* dan disajikan dalam bentuk tabel dan gambar. Hasil data pengamatan, pengukuran dan pengujian lapangan maupun laboratorium dibahas secara deskriptif kualitatif. Hasil penelitian menunjukkan bahwa terdapat perbedaan nilai WHC pada longsor aktif dan dorman. Longsor aktif memiliki nilai WHC yang tinggi. Beberapa sifat fisika tanah mempengaruhi, terutama tekstur klei dan kandungan klei sensitif yang ditemukan pada longsor aktif. Terdapat hubungan yang kuat antara nilai WHC dengan keberadaan klei sensitif dengan nilai R^2 sebesar 0,6819. Untuk mengoptimalkan lahan budidaya, diperlukan manajemen yang komprehensif antara pengelolaan tanah, air, dan tanaman.

Kata kunci: *water holding capacity,* lahan budidaya, longsor aktif, longsor dorman, klei sensitif.

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ABSTRACT

WATER HOLDING CAPACITY ANALYSIS IN CULTIVATED LAND AFFECTED BY ACTIVE AND DORMANT LANDSLIDES IN KALIJAMBE, BENER, PURWOREJO

Research on the physical characteristics of soil in landslide-prone areas has been widely conducted; however, studies specifically addressing water holding capacity (WHC) in landslide morphology remain limited. This study aims to: (1) calculate the water holding capacity in actively and dormant landslide-prone cultivation areas, (2) to evaluate the physical characteristics of soil in the study area, (3) to examine the relationship between water holding capacity values and sensitive clay, and (4) to construct conservation recommendations to optimize the cultivation of former landslide-prone land. The research was started by collecting data through field surveys and laboratory analysis. Determination of sample points is determined based on the activity level of active and dormant landslides. Soil sampling was carried out at the crown, body and foot of the landslide at each landslide activity on upland farming and mixed garden land uses. The soil samples taken were undisturbed and disturbed soil samples. Measurement results data were analyzed through Microsoft Excel and presented in the form of tables and figures. The results of observational data, measurements and field and laboratory tests are discussed in a descriptive qualitative manner. The results of the study indicate that there is a difference in WHC values between active and dormant landslides. Active landslide has a high water holding capacity. Several soil physical properties influence this, particularly clay texture and the presence of sensitive clay found in active landslides. There is a strong correlation between WHC and the presence of sensitive clay, with an R^2 value of 0,6819. To optimize cultivation land, comprehensive management of soil, water, and plants is required.

Keyword: *water holding capacity, active landslides, dormant landslides, cultivation land, clay sensitive.*