

ANALISIS EROSI PADA LAHAN TEGALAN DI DESA PENIMBUN KECAMATAN KARANGGAYAM KABUPATEN KEBUMEN PROVINSI JAWA TENGAH

Nikolas Nugroho Surjobasubro

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Telah dipertahankan di depan Dewan Penguji
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Pembimbing Utama

Dr. Ir. Fatchan Nurrochmad, M.Agr

Pembimbing Pendamping

Dr. Ir. Bambang Agus Kironoto

Anggota Dewan Penguji Lain

Prof. Dr. Ir. Djoko Legono

ABSTRACT

Soil erosion and flow discharge on the upstream of Kalong Sub-sub Watershed has been seriously increasing recently as a result of forest conversion into intensive cultivated area. They have been concerned as major causes of river sedimentation, lessened river capacity, increase of river water level, and flood at river peak discharge. Refer to such conditions; a study is required to analyze erosion and the influence of actual factors at Kalong Sub-sub Watershed which are susceptible for erosion sources.

This research is conducted to recognize sheet erosion caused by rainfall on the 6x15x11x11.5 m cultivated land field plot set up on the slope > 15°. Erosion rate prediction is calculated based on measurement and calculation by using Erosion Velocity Equation developed by Suwartha (2005).

Analysis result reveals that erosion process might occur at average soil water content of 44.87 % which is caused by cumulative rainfall of 2.17 mm. Calculated erosion rate, which is computed by using Erosion Velocity Equation (Suwartha, 2005) and laboratory cohesion value, and measured erosion rate are 0.00056 cm/minute and 0.00058 cm/minute respectively. Calculated erosion rate which is computed by using Erosion Velocity Equation and cohesion value that is calculated using Cohesion Equation is 0.00044 cm/minute. Further study needs to be executed periodically to get results which will describe the real condition better. The results of this analysis are expected to become a reference on land management based on local condition.

Key words : *rainfall, water content, cohesion, erosion rate*