

**THE SOIL ERODIBILITY VALUES WERE MEASURED ON DIFFERENT
LAND USES AND SLOPE GRADIENTS IN KALURAHAN
NGLANGGERAN KAPANEWON PATUK GUNUNGKIDUL REGENCY**

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ABSTRACT

Nglanggeran Village was located in the Baturagung Zone with sloping terrain conditions. Land use in the hilly areas was affected by the soil erodibility values. This research aimed to determine the soil erodibility values for different land uses and to identify the factors that most influenced the soil erodibility values. The method used in this research was a survey with sample points determined using purposive sampling and laboratory analysis with soil erodibility values determined using Wischmeier and Smith (1978). Sample points were obtained from an overlay of slope maps and land use maps, resulting in 16 land map units (LMU). Soil sampling was conducted on disturbed and undisturbed soil samples. The parameters analyzed included soil structure, which was directly analyzed in the field, as well as soil texture, soil permeability, and soil organic matter, which were analyzed in the laboratory. The results showed that the highest soil erodibility value was found in dryland agriculture on moderately steep slopes, at 0.37, classified as moderately high. The lowest soil erodibility value was found in forest land use on moderately steep slopes, at 0.03, classified as very low. The factor that most influenced soil erodibility values was soil texture, at 76.13%; the larger the M value, the higher the soil erodibility. The factor that did not significantly affect soil erodibility was soil structure, as seen from the negligible differences.

Keywords: Land Use, Soil Erodibility, Soil Texture