

***STUDY OF INFILTRATION RATE IN DIFFERENT LAND USE IN MUNTUK  
VILLAGE DLINGO DISTRICT BANTUL REGION***

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**ABSTRACT**

Infiltration as a factor in the hydrological cycle plays an important role in absorbing water into the soil which affects the availability of water in the soil and run off. This study aims to determine the infiltration rate on different land uses and the factors that influence the infiltration rate in Muntuk Village, Kapanewon Dlingo, Bantul Regency. The location of sampling points was carried out in paddy fields, dry fields, shrubs, gardens, forests, and settlements. The research method used is survey method with analysis of infiltration rate in the field using a double ring infiltrometer and taking soil samples for laboratory analysis. Determination of sample points in this study using a purposive sampling method based on a land use map of 1: 25,000 by deliberately selecting a representative part of the land and then conducting laboratory analysis on each type of land use. The results showed that the infiltration rate for various land uses showed different values for each type of land use. On forest land it is 3.52 cm/hour (Medium); residential area of 0.65 cm/hour (Rather Slow); dry land of 1.27 cm/hour (Rather Slow), 2 cm/hour (Moderate), 1.02 cm/hour (Rather Slow), and 0.74 cm/hour (Rather Slow); paddy fields of 1.53 cm/hour (Rather Slow) and 0.69 cm/hour (Rather Slow); scrub land of 0.90 cm/hour (Rather Slow) and 3.17 cm/hour (Moderate); garden area of 6.79 cm/hour (Rather Fast), 3.75 cm/hour (Moderate), 1.07 cm/hour (Rather Slow), 2.70 cm/hour (Medium), and 0.31 cm /hour (slow) which is strongly influenced by physical characteristics and land cover due to the presence of vegetation which assists in the process of water absorption and the slope of the slope which affects the rate and amount of surface runoff on land use.

**Keywords: slope, infiltration rate, land use, physical properties**