

**KAJIAN KONSERVASI TANAH KRITIS BERDASARKAN SATUAN LAHAN DI DAERAH TANGKAPAN AIR
SEMPOR KABUPATEN KEBUMEN
(STUDY OF CRITICAL SOIL CONSERVATION BASED ON LAND UNIT ON SEMPOR'S
CATCHMENT AREA, KEBUMEN REGENCY)**

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ABSTRACT

This research aims to predict critical soil and soil erosion level of Sempor's Catchment Area and to recommend the management according to soil conservation.

This is an explorative descriptive research based on environment data. The data are obtained from field observation and result of laboratory analysis of soil samples taken from field survey. Furthermore, the data are classified based on critical soil classification to get critical soil map. The data also are calculated based on USLE to get soil erosion prediction. The results of soil erosion prediction are grouped based on erosion hazard levels and result of soil erosion mapping. After knowing critical soil and soil erosion level in each land unit, recommendation is made to manage land according to soil conservation.

The result shows that on observation area with total extent 4,333.68 ha there are critical soil about 1,373.68 ha (31.70 %), semi critical about 2,164.54 ha (49.95 %), potentially critical about 440.46 ha (10.16 %) and the others are about 355.00 ha (8.19 %) in the form of settlement and reservoir located at the outside of the observation area. The soil erosion predicted on observation area are divided into 6 classes, those are very low erosion class at about 103.90 ha (2.40 %), low erosion class at about 332.00 ha (7.66 %), moderate erosion class at about 953.78 ha (22.01 %), high erosion class at about 247.53 ha (5.71 %), very high erosion class at about 2,108.50 ha (48.65 %), acute erosion class at about 232.96 ha (5.38 %) and the others are out of observation area. Topography and land management are factors that have the most dominant influence to soil erosion prediction. Total soil erosion on observation area is about 320,958.016 tons/ha or soil erosion average about 74.061 tons/ha/year. The recommendation is to restore critical and erosion through some actions such as reboization or planting with annual crop, vegetation nursery, adding organic matter via organic fertilizer or organic mulches, making and maintaining of terrace and ditches, and agroforestry.

Keywords: *critical soil, erosion, Sempor, soil conservation*