

**PENDUGAAN LAJU EROSI TANAH UNTUK ARAHAN KONSERVASI  
DI SUB DAS SUMITRO KABUPATEN KULONPROGO  
DAERAH ISTIMEWA YOGYAKARTA**

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**ABSTRAK**

Pemanfaatan Daerah Aliran Sungai (DAS) yang tidak sesuai dengan kaidah konservasi tanah dapat menimbulkan kerusakan tanah salah satunya erosi tanah. Sub DAS Sumitro merupakan salah satu Sub DAS yang ada dalam DAS Serang yang termasuk DAS prioritas I yang memiliki permasalahan erosi yang cukup tinggi. Penelitian ini bertujuan untuk mengetahui laju erosi dan menentukan tingkat bahaya erosi agar didapat arahan konservasi tanah. Penelitian dilakukan dengan survei untuk mengetahui kondisi wilayah dan pengambilan sampel tanah menggunakan Metode *Purposive Sampling* dengan mempertimbangkan faktor tutupan lahan, jenis tanah, dan kemiringan lereng yang berupa peta kemudian dilakukan *overlay* dan didapatkan 18 titik sampel. Laju erosi dihitung berdasarkan Rumus USLE (*Universal Soil Loss Equation*) sedangkan penentuan Tingkat Bahaya Erosi (TBE) dengan cara membandingkan nilai laju erosi dengan kedalaman solum. Hasil penelitian menunjukkan bahwa di Sub DAS Sumitro memiliki nilai laju erosi sebesar <15 ton/ha/th seluas 43,924 ha, luas wilayah dengan erosi 15-60 ton/ha/th seluas 1086,724 ha, luas wilayah dengan erosi sebesar 60-180 ton/ha/th seluas 1625,132 ha, luas wilayah dengan erosi 180-480 ton/ha/th seluas 820,83 ha, dan luas wilayah dengan erosi >480 seluas 1125,176 ha. Sebaran tingkat bahaya erosi di Sub DAS Sumitro dikategorikan dalam tiga kelas yaitu sedang seluas 1452,579 ha yaitu (23,94%), berat seluas 1710,647 ha (33,38%), dan sangat berat 1539,135 ha (27,89%). Arahan konservasi yang dapat dilakukan yaitu penanaman tanaman penutup tanah, pola tanam tumpang sari, perbaikan teras bangku dan penambahan bahan organik.

Kata Kunci : Sub DAS Sumitro, Erosi, Tingkat Bahaya Erosi, *Universal Soil Loss Equation* (USLE), Arahan Konservasi Lahan

**PREDICTION OF SOIL EROSION RATE FOR LAND CONSERVATION  
RECOMMENDATION IN SUMITRO SUB WATERSHED  
KULONPROGO REGENCY SPECIAL REGION OF YOGYAKARTA**

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**ABSTRACT**

Utilization of watersheds that is not in accordance with soil conservation principles can cause soil damage, one of which is soil erosion. The Sumitro sub-watershed is one of the sub-watersheds in the Serang watershed which is included in the priority watersheds in Indonesia which has quite high erosion problems. This research to determine the rate of erosion and determine the level of erosion hazard in order to obtain soil conservation recommendation. The research was conducted with a survey to determine the general condition of the area and soil sampling using purposive sampling method based on the limiting criteria of land cover, soil type and slope in the form of maps was then overlaid and 18 sample points obtained. The erosion rate was calculated based on the USLE (Universal Soil Loss Equation) formula, while the Erosion Hazard Level was determined by comparing the value of the erosion rate with the depth of solum. The results shows in Sumitro Sub Watersheds is an erosion rate of <15 tons/ha/th covering an area of 43.924 ha, areas with erosion of 15-60 tons/ha/th covering an area of 1086.724 ha, areas with erosion of 60-180 tons/ha/th covering an area of 1625.132 ha, areas with erosion of 180-480 tons/ha/th covering 820.83 ha, and areas with erosion >480 tons/ha/th covering 1125.176 ha. The distribution of erosion hazard levels in the Sumitro Subwatershed is categorized into three classes: moderate covering 1452.579 ha (23.94%), heavy covering 1710.647 ha (33.38%), and very heavy 1539.135 ha (27.89%). Land conservation recommendation that can be implemented include planting ground cover crops, intercropping systems, repairing bench terraces and addition of organic materials.

**Keywords : Sumitro Sub Watershed, Erosion, Erosion Hazard Levels, Universal Soil Loss Equation (USLE), Land Conservation**