Perbandingan Tingkat Bahaya Erosi Berdasarkan Model Erodibilitas di DAS Cirasea, Citarum Hulu = Comparison of Erosion Hazard Levels Based on Erodibility Model in Cirasea Watershed, Upper Citarum

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Abstrak

Tingkat erosi tanah di muka bumi dipengaruhi oleh banyak faktor, diantaranya adalah erodibilitas (K) atau kepekaan tanah terhadap erosi. Nilai erodibilitas ditentukan oleh sifat fisik karakteristik tanah dan sangat bervariasi secara spasial. Tujuan penelitian ini adalah memetakan bahaya erosi menggunakan persamaan USLE dengan tiga metode perhitungan erodibilitas yang berbeda. Dalam studi ini, data fisik tanah mencakup tekstur, struktur, bahan organik dan permeabilitas tanah dihasilkan melalui uji laboratorium dari 60 sampel tanah yang ditentukan dengan metode stratified random sampling. Tiga model perhitungan erodibilitas yang digunakan adalah model Wischmeier & Smith (E-WiSm), Sharply & Williams (E-ShWi) dan erodibilitas berdasarkan jenis tanah (E-JT). Hasil penelitian menunjukkan wilayah erodibilitas yang mendominasi adalah erodibilitas rendah yang dominan di tanah asosiasi andosol coklat & regosol coklat dengan model E-WiSm, erodibilitas sedang dominan di tanah andosol coklat dengan model E-ShWi dan erodibilitas sedang dominan di tanah asosiasi andosol coklat & regosol coklat dengan model E-JT. Luas wilayah dengan tingkat bahaya erosi sangat berat menggunakan model erodibilitas berdasarkan jenis tanah lebih luas (2.936 Ha) dibandingkan dengan model Sharply & Williams (2.024 Ha) dan model Wischmeier & Smith (1.062 Ha). <hr /> Level of erosion in the earth influenced by many factors between is erodibility (K) or soil sensitivity to erosion. Erodibility values are determined by the physical characteristics of soil and various in many spatial. The purpose of this study is to map erosion hazard using the USLE equation with different erodibility calculation methods. In this study, soil physical data is texture, structure, organic matter and soil permeability are get from laboratory tests of 60 soil samples determined by stratified random sampling method. The three erodibility calculation models using Wischmeier & Smith (E-WiSm) model, Sharply & Williams (E-ShWi) and erodibility based on soil type (E-JT). The results of this study showed erodibility dominant is low erodibility dominant in the association of brown andosols and brown regosols soil with E-WiSm model, medium erodibility dominant in brown andosols soil with E-ShWi and medium erodibility dominant in the association of brown andosols and brown regosols soil with E-JT model. Large of very severe erosion hazard levels use erodibility models based on soil type wider (2.936 Ha) compare with Sharply & Williams (2.024 Ha) and Wischmeier & Smith (1.062 Ha).