

Spatial Modeling Of Sedimentation On the Interface Region Watershed and Coastal Area : Case Study On Baubau District Southeast Sulawesi Indonesia

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Abstract: Population dynamics and living in coastal areas have a direct impact on urban land use. In addition, changes in land-uses in the upper watershed resulted in environmental degradation, especially the increased rates of erosion and sedimentation. This study aims to analyze the form of land-use study area and synthesize its influence on erosion and sedimentation, and synthesize various alternative engineering strategies to control sedimentation chamber the study was Baubau interface Southeast Sulawesi. The research design was exploratory using survey methods. The analyze used the equation USLE (Universal Soil Loss Equation) to estimate the rate of erosion and SDR equation (sediment delivery ratio) for the calculation of the amount of sediment transported. As for the scenario assumed by the model additional vegetative green open space of 10%, 20%, and 30% to reduce the rate of sedimentation. This scenario models analyzed spatially using satellite imagery and Geographic information system. The result of analyze show that 30% of model additional vegetative will reduce the rate of sedimentation.

Key word : Erosion, Sedimentation, vegetative scenario, spatial