Kuantifikasi Karakteristik Morfometrik untuk Prioritasi Sub-DAS di DAS Tembesi, Provinsi Jambi = Quantification of Morphometric Characteristics for Prioritization of Erosion Prone Sub-Watersheds in Tembesi Watershed, Jambi Province

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Abstrak

Erosi sebagai salah satu dampak turunan dari perubahan iklim telah menciptakan krisis multidimensional, salah satunya keberlangsungan ekologis di daerah aliran sungai Tembesi. Tercatat sepanjang tahun 2020, setidaknya telah terjadi 83 kali kejadian bencana hidrometeorologis yang telah menimbulkan kerugian materil dan imateril. Pengelolaan daerah aliran sungai yang berkelanjutan telah menjadi salah satu fokus dalam studi ekologis. Salah satu metode yang dapat ditempuh adalah analisis karakteristik morfometri Daerah Aliran Sungai. Penelitian ini bertujuan untuk melakukan analisis morfometrik guna memprioritaskan sub-DAS yang rentan terhadap erosi di DAS Tembesi, Provinsi Jambi. Variabel utama yang digunakan meliputi karakteristik morfometri, perubahan iklim yang direpresentasikan oleh curah hujan, dan tutupan lahan yang mencakup indeks vegetasi. Metode analisis mencakup pemeringkatan fitur indikator sampai dengan weighted sum analysis (WSA). Mengenai karakteristik morfometri, hasil penelitian menunjukkan keseragaman dalam aspek areal di DAS Tembesi. Adapun, penelitian menunjukkan prioritisasi sub-DAS berada pada tingkat “Sedang“ atau sejumlah 41% dari 13.260 km2 luas keseluruhan wilayah. Hal ini menunjukkan urgensi untuk melakukan pengelolaan DAS Tembesi secara komprehensif dan berkelanjutan guna meminimalisir dampak erosi, terutama di wilayah hilir.

.....Erosion as one of the derivative impacts of climate change has created a multidimensional crisis, one of which is ecological sustainability in the Tembesi Watershed. Recorded throughout 2020, at least 83 hydrometeorological disasters have occurred which caused material and immaterial losses. Sustainable watershed management is one of the focuses in ecological studies. One of the ways that can be taken is by analyzing the morphometric characteristics of the watershed. This study aims to conduct morphometric analysis to prioritize sub-watersheds that are vulnerable to erosion in the Tembesi watershed, Jambi Province. The main variables used include morphometric characteristics, climate change represented by rainfall, and vegetation cover which includes vegetation index. The analysis method used includes ranking of indicator features to weighted sum analysis (WSA). Regarding morphometric characteristics, the results showed uniformity in terms of area in the Tembesi watershed. Meanwhile, the results showed that the priority of sub-watersheds was at the "Moderate" level or 41% of the total area of 13,260 km2. This shows the urgency to conduct comprehensive and sustainable management of the Tembesi watershed to minimize the impact of erosion, especially in the downstream area.