Pengaruh Perubahan Tutupan Lahan terhadap Perubahan Debit Banjir di Sub-DAS Cisangkuy, Kabupaten Bandung = The Influence of Land Cover Change on Changes in Flood Discharge in the Cisangkuy Sub-watershed, Bandung Regency

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Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh perubahan tutupan lahan terhadap perubahan debit banjir di Sub-DAS Cisangkuy, dengan fokus pada debit banjir di outlet hilir, yaitu Kelurahan Andir, selama periode 2010- 2022. Model hidrologi HEC-HMS digunakan untuk memodelkan debit banjir dengan mengintegrasikan faktor faktor hidrologi seperti curah hujan dan periode ulangnya (2, 5, 10, dan 25 tahun). Selain itu, dilakukan identifikasi pola perubahan tutupan lahan dan perhitungan perubahan nilai curve number yang berdampak pada perubahan debit banjir. Analisis data dilakukan menggunakan analisis komparatif deskriptif dan analisis statistik deskriptif. Hasil penelitian menunjukkan adanya peningkatan debit banjir pada tahun 2010-2014, namun pada tahun 2014- 2018 dan 2018-2022 terjadi penurunan debit banjir. Perubahan debit banjir ini diiringi dengan kenaikan dan penurunan nilai kurva aliran, dengan perubahan tutupan lahan yang menjadi faktor penting dalam mempengaruhi perubahan debit banjir di Sub-DAS Cisangkuy.

.....This study aims to analyze the influence of land cover change on changes in flood discharge in the Cisangkuy Sub-watershed, with a focus on flood discharge at the downstream outlet, namely Andir Village, during the period 2010-2022. The HEC-HMS hydrological model was used to model flood discharge by integrating hydrological factors such as rainfall and its return period (2, 5, 10, and 25 years). In addition, identification of land cover change patterns and calculation of changes in curve number values that have an impact on changes in flood discharge were conducted. Data analysis was conducted using descriptive comparative analysis and descriptive statistical analysis. The results showed an increase in flood discharge in 2010-2014, but in 2014-2018 and 2018- 2022 there was a decrease in flood discharge. This change in flood discharge is accompanied by an increase and decrease in the value of the flow curve, with changes in land cover being an important factor in influencing changes in flood discharge in the Cisangkuy Sub-watershed.