

ABSTRACT

THE ANALYSIS OF THE LAND USE CHANGE TO HYDROLOGIC CHARACTERISTIC OF BULOK WATERSHED

By

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Land use is one of the factors that have an effect on water system function of a watershed. The characteristic of hidrological condition at Bulok Watershed was degraded. This reaserch was carried out by analyzing data of rainfall, stream discharge, observation land use map, fluctuations of stream discharge and coefficient runoff at 2001, 2006, and 2011. The results of analysis were linked tabulated results with land use in descriptively. The results of this research showed by land use change, which were decreasing forests and mixed dryland farming area, increasing residential area and dryland farming area, which were decreasing forests and mixed dryland farming area, increasing residential area and dryland farming area was caused that the fluctuatoin of stream discharge in 2001 was to 12,45 and increased in 2006 was 51,27 and more increased in 2011 was 129,96. The coefficient runoff of Bulok Watershed has increased in 2001 was to 6% and increased in 2006 was 35% and more increased 2011 amounted to 41%. The increased fluctuation of stream discharge and coefficient runoff 2001-2011 showed that Bulok Watershed was degraded.

Keywords : hydrologic characteristic, land use, watershed

ABSTRAK

ANALISIS PERUBAHAN PENGGUNAAN LAHAN TERHADAP KARAKTERISTIK HIDROLOGI DI DAS BULOK

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Penggunaan lahan merupakan salah satu faktor yang berpengaruh terhadap fungsi tata air suatu daerah aliran sungai (DAS). Kondisi hidrologi DAS Bulok saat ini telah mengalami degradasi. Penelitian ini menganalisis curah hujan, debit sungai, perubahan penggunaan lahan, fluktuasi debit dan koefisien aliran permukaan. Analisis perubahan penggunaan lahan terhadap karakteristik hidrologi digunakan metode analisis deskriptif dan tabulasi. Hasil penelitian menunjukkan telah terjadi perubahan penggunaan lahan DAS Bulok meliputi penurunan luas hutan dan pertanian lahan kering bercampur semak, serta peningkatan luas pemukiman dan pertanian lahan kering. Hal tersebut berpengaruh terhadap debit sungai dan koefisien aliran permukaan. Fluktuasi debit Way Bulok tahun 2001 sebesar 12,45 tahun 2006 menjadi 51,27 dan tahun 2011 menjadi 129,96. Koefisien aliran permukaan DAS Bulok tahun 2001 sebesar 6% tahun 2006 menjadi 35% dan tahun 2011 sebesar 41%. Peningkatan fluktuasi debit sungai dan aliran permukaan tahun 2001-2011 menunjukkan DAS Bulok telah mengalami degradasi.

Kata kunci: daerah aliran sungai, karakteristik hidrologi, perubahan penggunaan lahan