Impact of land use changes on the water availability in Ciwulan watershed, West Java

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Abstract	The purpose of this study was to see the impact of land use changes in the Ciwulan watershed on river water populations, especially during the dry season for drying. The physical hydrological model was based on Shetran's physical use by utilizing hydro-climatological data obtained from remote sensing observations from 2001 to 2017. The input data are data on changes in land use and cover, digital elevation models, rainfall data and evaporation as well as land data via HWSD. The most significant land use change occurred in the agricultural land category with an annual increase of 7% from an area of 12 km(2) in 2001 to 40.5 km(2) in 2017. Land changes with a decreasing trend in area was forest areas with 1% decrease annually, from the initial area of 2001 of 462.5 km(2) to 403 km(2) in 2017. The smallest change occurs in urban land which tends to be stable in the range of 24 km(2). The decline in the water catchment area has an impact on decreasing water availability in the Ciwulan river, especially during the dry season. River discharge during the dry season tends to decrease from over years.
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