

## Land Use/Cover Changes in Puncak Area (Upstream of Ciliwung River)

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Ciliwung River is one of two major rivers that pass through Jakarta City. The river flows from its source Puncak Area on the highlands of Mount Pangrango, Bogor District, West Java. The Ciliwung river is heavily polluted and very frequently contibuted on flood evidences in Jakarta City as well as other factors such as land subsidence, sea tide, and poor drainage system. The lack of spatial planning systems in this region results on poor land use dynamics control. This study analyze the impact of land use/cover change in Puncak Area as the upstream of Ciliwung River Watershed to the dynamics of floods along the river areas. Satelite images of 1990, 2000 and 2010 have been analyzed to describe the land use/cover changes. Daily precipitation data from three stations located in Puncak area and daily river discharge data recorded at Katulampa station during the period of 1990-2011 were collected. The study shows the impact of land use/cover changes on the increasing of vulnerability to flood, especially due to the increase of settlement areas and the decrease of forest cover and agroforestry activities. This land use/cover changes with one-day extreem precipitation, and one-week continuous high precipitation have significant impacyt on flood evidences.

Keywords: land use/cover changes, upstream of Ciliwung watershed, flood dynamics, Jakarta City