KAJIAN MANAJEMEN RISIKO
PENGENDALIAN BANJIR SUNGAI CITANDUY

Marwansyah
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Telah dipertahankan di depan Dewan Penguji
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ABSTRACT

The Citanduy River Flood Control Systems that protect the Citanduy River Basin with 4588 km^2 area in 1985 could minimize flood/inundation area from 20700 ha to 2000 ha. As result of population and society economic growth and change in demography and physic, the condition of vulnerability to flood also increased so that the current flood risk area become 15263 ha.

Research of risk management in controlling flood of Citanduy River was conducted in two phases, risk assessment and risk mitigation. In phase of risk assessment, the magnitude of hazard was analyzed by estimating characteristics of flood, using HEC-RAS 4.1.0; then vulnerability was analyzed. Based on the result of hazard analysis and vulnerability analysis, risk rate of flood was estimated in each area and furthermore the risk parts were mapped. Further step was to analyze the structural mitigation of risk.

The results of research indicated that area having high risk degree of flood was Sub-district of Pataruman, City of Banjar; whereas, areas having medium risk degrees of flood were Sub-district of Wanareja, Regency of Cilacap; sub-district of Lakbok, regency of Ciamis; sub-district of Padaherang, regency of Ciamis; sub-district of Kedungreja, regency of Cilacap; sub-district of Kalipucang, regency of Ciamis; and sub-district of Patimuan, regency of Cilacap. Structural mitigation of risk using normalization could reduce elevation of flood surface until 2 m so that downstream area did not experience overflow. Raised dike still caused overflow in the Regencies of Wanareja and Lakbok in some points. However, combination of increased capacity and reservoir did not make the Citanduy River overflow.

Keywords: *condition of vulnerability to flood, research of risk management, mitigation.*