

ANALISIS KINERJA PENGENDALIAN BANJIR SUNGAI JAMPUE KABUPATEN BARRU PROPINSI SULAWESI SELATAN

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ABSTRACT

Floodings are common problems that occur in most parts of Indonesia, especially in urban areas. Jampue river is one of rivers in Barru regency that flow across the central of regency. Floods that occur every year causing damage of houses, public facilities, rice field, even cause fatalities. Flood that occurred on January 5, 2010 is an interesting case for research to find the flood control alternatives.

The research simulate flood control alternatives, examine flood control alternatives and analyze the election of the most optimal of flood control alternatives. The research uses hydrology and hydraulic approach by performing the application of Hydrologic Engineering Center-River Analysis System (HEC-RAS) Version 4.0 and application of Decision Support System with Analytical Hierarchy Process (AHP) model to determine the sequence of flood control alternatives. Assessment of alternative combines the relative valuation of all respondents to the social criteria, economic criteria and environmental criteria with absolute assessment of the physical criteria of flood control alternatives of Jampue River.

The results shows that the best alternative is normalization/NS with a value of (0,258), the combination of normalization and levees/NSTS is second rank with a value of (0,224). The third rank is levees/TS with a value of (0,205) and the retention ponds/KR with a value of (0,113) is the fourth rank. The fifth rank is combination of normalization and retention ponds/NSKR with a value of (0,106) and the last one is combination of levees and retention ponds/TSKR with a value of (0,094).

Keyword : *flood control alternatives, hydraulics modeling, AHP*