

**PEMILIHAN ALTERNATIF
PENGENDALIAN BANJIR SUNGAI BRANG REA
KABUPATEN SUMBAWA BARAT
PROPINSI NUSA TENGGARA BARAT**

Ardiyanto
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ABSTRACT

In 2000 the flood disaster caused by Brang Rea River overtopping happened in Taliwang City. The flood made loss impact to resident who lived around Brang Rea River. The management policy which represent many sides namely resident as policy user, the institution related to both Brang Rea River management is necessary to anticipate the occurrence of similar disaster.

Analysis which is done in this study is to gain the best management alternative as a decision support system in arranging the management policy. The method which used to analyze the selection of flood disaster management policy alternative is AHP model. The study begins with investigation surface water condition Brang Rea River by using HEC – RAS software, built up decision hierarchy consistency test and determine the rank of flood management alternatives. The proposed of 3 management action alternatives flood dike (alternative I), normalisation of river and flood levee (alternative II) and short cut (alternative III) evaluated by criterias of technical aspect, social aspect, economical aspect and environmental aspect.

The result of this study shows that the social aspect criteria value of 0,2987 is the most important point that should be considered in flood disaster management, and followed by technical aspect value of 0,2711 environmental aspect value of 0,2246, and economical aspect value of 0,2056. Alternatif II normalisation of river and flood levee has got first priority value of 0,4295 of the overall priorities, alternatif I flood levee has got second priority value of 0,3262 and short cut has got third priority value of 0,2243.

Key word : *flood, decision support system, management alternative.*