

**CONTROL OF SEDIMENTATION AND TRIVIALISATION THE RIVER IN
THE AREA OF PRONE TO FLOODING ON THE VILLAGES OF
SAWANGAN, VILLAGES OF SELILING AND VILLAGES OF SUROTRUNAN
ALIAN SUBDISTRICT, KEBUMAT DISTRICT**

**By :
NDENDIK HERMAWAN
114.130.131**

ABSTRAK

Overflowing of several rivers in Kebumen Regency has caused flooding in at least five villages in Kebumen Regency. High intensity rain is the main factor causing flooding. Other than rain intensity another factor causing flooding is the decrease of river capacity due to the silting of the river due to the proses of sedimentation. The purpose of this research is to predict the rate of sedimentation in Kedungbener River and to know the factors and causes of flood in order to determine the river management techniques in Kedungbener Sub DAS to reduce the level of trivialisation of the river at the research site.

Determination of sediment sampling location is determined based on river condition and flow pattern. Sediment sampling was performed using depth integrating technique then laboratory analysis was done to determine sedimentation rate calculated using some empirical formula (Meyer-Peter). One of the causes of flooding is the rate of erosion can be predicted using MUSLE (Modification of Universal Soil Loss Equation) method by direct observation of surface flow, soil erodibility, slope, land use and land management which will then be calculated using the formula. The extent of the distribution of areas affected by the floods can be identified by field surveys and interviews of the communities in the study areas. Determination of appropriate management directives for the control of sedimentation and silting of the river is done by considering the condition of the land, river condition and the rate of erosion and sedimentation at the study site.

The result of total discharge of sediment load in Kedungbener River is 50,61968 ton/day for floating sediment and 980,697 m³/day for basic sediment. The occurrence of floods at the study site due to the silting of the river caused by the rate of erosion in the study area with the result of 2.108,965 tons/year. Management directives for the control of sedimentation and trivilisation of the river are done by normalizing the river in the form of river dredging, the construction of sabo dam and land conservation in the form of a bench terrace combined with a vegetation filter.

Keywords : *Flood, Sedimentation, Erosion, River Conservation*