ABSTRACT

THE ANALYSIS OF DAM EROSION AND SEDIMENTATION
(A Case Study of Way Jepara Dam in East Lampung Regency)

By

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One of realizations of public structures in Lampung province is Way Jepara dam and irrigation network functioned to serve irrigation in Way Jepara region.

Currently the Way Jepara irrigation system does not function optimally anymore, because the catchment areas to receive rainfall are destructed by numerous forest logging by public, so that it results in increasing erosion rate into the dam and finally dam sedimentation is enormous.

One of efforts to optimize dam function is by conducting a research on existing erosion and watershed and the huge of sedimentation inside the dam.

This research used parametric prediction model with Universal Soil Loss Equation (USLE); a method that enabled the planner to predict average of erosion rate in a certain measurement of land.

The analysis result showed that the total erosion (A) occurred in the catchment areas was 2,307.01 tons/year or 156.41 tons/ha/year and it belonged to erosion danger class II or middle classification. The highest erosion danger level occurred in Land Unit No. 107 located around Langkap Mountain (1,552.63 tons/ha/year) and it belonged to severe classification.

The analysis results of the basic problems were classified into two. They were conservation problem in the catchment areas to receive rainfall and technical problem of Way Jepara dam. The basic principle should be used in overcoming the problem was staying to refer the conservation efforts in the areas while maintaining and insuring the public welfare.

Keywords : catchment area, erosion, sedimentation, Way Jepara dam