

ANALISIS KINERJA BANGUNAN SABO DAM DALAM MENGENDALIKAN SEDIMEN, STUDI KASUS CHECK DAM PU-D2 DAN PU-D1 DI KALI PUTIH KABUPATEN MAGELANG

Eka Sukarna

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ABSTRACT

Putih river is one which spring in Mount Merapi, the river flows to the west through in Magelang regency Central Java Province and the length \pm 23 Km which elevation \pm 1.356 m sea mean level. We use Sabo technology by making Sabo dam along Putih the river to save Magelang town from the flood to have the catchment area 25,88 Km². Up to now we have built fourteen Sabo dams with the highest position is dam Putih number 5 (PU-D5) and so on Sabo dams.

This research study case is conducted to predict the volume level of sediment transport in the flood one and analysis to control sediment, and to vomit it when the water debit is low to downstream (low peak of discharge). So this study the volume of sediment transport by comparing with sand mining production in Kali Putih with the maximum daily rain for return periods, and the maximum volume sediment transport analysis per year using Sabo Engineering method by comparing Meyer-Peter & Muller (MPM) method.

Based on analysis result in check dam PU-D1 and PU-D2 could control 23,57% and 95% of sediment with to open return to use so on debris flow 21 days. On analysis result the volume level of sediment transport in the flood one with the maximum daily rain for return period 2,5,10,20,50 and 100 year to compare sand mining in Kali Putih, so the sand mining could loose in 9 until 29 days. Also analysis result the volume level of sediment transport per year using Sabo Engineering and MPM method different.

Key words : *Mount Merapi, Debris flow, Sabo dam.*