

**PENGAJIAN SISTEM PRAKIRAAN
DAN PERINGATAN DINI TERJADINYA BANJIR LAHAR
DI DAERAH GUNUNG MERAPI
(Studi kasus Kali Boyong)**

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ABSTRACT

One of disaster caused by volcanic activity of Mount Merapi is secondary disaster. That disaster usually occurs after eruption, this volcanic activity produces volcanic and pyroclastic material deposit around the top of the mountain as a result of previous erupt ion. This material might collapse downward in the form of debris flow as it is affected by natural event such as high intensity rainfall. Therefore, a re search is needed to analyze whether existing forecasting and early warning system are capabl e to provide information for the people living in hazardous area before the debris flood occur.

This research is carried out using field survey, observation and interview method. Data analysis use qualitative desc riptive method by making description of actual condition of the researched location general condition and qualitative analysis of telemetry syst em installed on Mount Mer api. The qualitative analysis of telemetry system covers: network, har dware, software, powe r supply, security system, operation and maintenance, and human resources. Research analysis use primary and secondary data.

Research results reveal that average rainfall intensity above of 60 mm/hr might trigger debris flood. Early warning should be given at the rainfall intensity level of 50-55 mm/hr, and debris flood time travel from the top of Mount Merapi down to observed location of Pulowatu Village is 45 minute. Based on the analysis of the present forecasti ng and early warning system supporting equipments it is known that some of t hose equipments are not well function, so that debris flood cannot be predicted and de tected. This is caused by lack of human resource quality of the officers in operating and maintaining the equipments. Concerning that matter, it is necessary to conduct some improvement due to have better and mo re accurate forecasting and early warning system in order to give informati on before the occurrence of debris flood.

Keywords : *telemetry system, rainfall in tensity, information spreading*