

ABSTRAK

Gunung Merapi berada di wilayah dua Propinsi, Jawa Tengah (Kab. Magelang, Kab. Boyolali dan Kab. Klaten) dan DIY (Kab. Sleman) merupakan Gunungapi paling aktif di Pulau Jawa. Kejadian erupsi Merapi tahun 2010 merupakan letusan besar dengan eksplosivitas index (VEI) IV, dengan mengeluarkan material vulkanik 130 juta m³ yang tersebar di seluruh wilayah Gunung Merapi. Material halus berupa abu, pasir dan lapili banyak tersebar di lereng Barat – Barat Daya Gunung Merapi di wilayah Kab. Magelang. Tebalnya endapan abu disertai kejadian hujan pada bulan November – Desember 2011 memicu terjadinya banjir lahar di wilayah Kabupaten Magelang – Jawa Tengah. Kerugian akibat kejadian ini berupa rusaknya fasilitas infrastruktur, permukiman penduduk, ekonomi produktif, dan lintas sektor. Kejadian banjir lahar rentang waktu November 2010 – April 2011 di wilayah Kabupaten Magelang telah menimbulkan kerusakan fasilitas infrastruktur Sabo Dam sebagai penahan aliran lahar sebanyak 77 bangunan Sabo Dam rusak/hilang dari jumlah total 244 buah. Lahar mengerosi secara vertikal dan lateral sehingga membawa material lama hasil erupsi sebelumnya, dimana selama dekade 30 tahun kebelakang arah erupsi dominan kearah Barat - Barat Daya menghasilkan volume endapan material potensi lahar yang sangat besar. Metode penelitian dilakukan dengan melakukan kombinasi cek lapangan dan pekerjaan studio. Pekerjaan lapangan dilakukan untuk mengetahui kondisi morfologi sungai dan volume material endapan hasil erupsi di alur sungai, sedangkan pekerjaan studio berupa perkiraan delineasi area terdampak banjir lahar yang didapatkan dengan melakukan pemodelan spasial lahar. Dari penelitian ini hasil yang ingin didapat adalah mengetahui wilayah terdampak lahar berdasarkan pemodelan lahar menggunakan software LAHAR-Z dan penilaian tingkat kapasitas pelaku penanggulangan bencana di tingkat desa dengan metode survey kuesioner.

ABSTRACT

Merapi volcano located in two provinces, Central Java (Magelang, Boyolali, Klaten Districts) and Yogyakarta (Sleman District) is the most active volcano on the island of Java.. Merapi eruption in 2010 was a gigantic one with an Index of Explotion (VEI) IV, it ejected 130 million cubic meter of volcanic materials spreading in the whole surrounding area of Merapi volcano. Fine materials consisting of ash, sand and lapili were dispersed to the Western – Southwest slopes in the area of Magelang district. The thickness of ash dep`osit followed by heavy rains in the month of November – December 2011 triggered the occurred of lahar in the district of Magelang, Central Java. Losses as the results of devastated infrastructure facilities, people residential, productive economy across the sectors were enormous. The occurance of lahar in the period of November 2010 up to April 2011 in the district of Magelang inflicted considerable damages to sabo dam infrastructure as a defend against lahar. There were 77 sabo dam constructions destroyed or missing from the total 244 constructions. Lahar eroded river vertically and laterally carrying old materials derived from previous eruption, where in the period of 30 decades back, the eruption directed dominantly to the West and Southern West produced a considerable volume of deposits materials to become a potential lahar. The experimental methods were carried out by combining field observations with studio works. The field works were carried to investigate the morphological condition of rivers and volume of doposit materials generated by eruption in the river flow, while studio works with estimating deliniation of area impacted by lahar obtained through spacial modelling of lahar. From these research works the results wished to be obtained was to know areas impacted by lahar based on lahar modelling using software LAHAR-Z and the evaluation of capacity degree of disaster-elevation actor at village level with questionnaire of methodological survey.

