

Evaluasi Rencana Tata Ruang Wilayah (RTRW) Kawasan Terdampak Bencana Erupsi Gunungapi Semeru

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INTISARI

Gunungapi Semeru mengalami erupsi pada 4 Desember 2021. Erupsi ini mengakibatkan 3 Desa mengalami kerusakan, yaitu Desa Oro-Oro Ombo, Desa Supiturang dan Desa Sumberwuluh. Berdasarkan pengamatan dari Pos Pantau Gunung Semeru (ESDM, 2021), Kerugian yang ditimbulkan yaitu 51 orang tewas, 169 orang terluka dan 22 orang hilang serta 45 orang mengalami luka bakar karena erupsi tersebut (BPBD Kab. Lumajang). Rencana Tata Ruang Wilayah (RTRW) Kabupaten Lumajang sudah mencantumkan kawasan yang rawan terhadap bencana erupsi, namun belum mempertimbangkan risiko bencana yang ditimbulkan oleh bencana erupsi Gunungapi Semeru. Penelitian ini bertujuan untuk mengidentifikasi tingkat kerusakan lahan akibat bencana erupsi Gunungapi Semeru, melakukan identifikasi tingkat kerusakan lahan berdasarkan peta kawasan rawan bencana (KRB) dan melakukan evaluasi terhadap rencana tata ruang (RTRW) Kabupaten Lumajang akibat erupsi Gunungapi Semeru.

Metode yang digunakan berupa analisis *Normalized Difference Vegetation Index* (NDVI) untuk menentukan luasan terdampak erupsi dan skoring serta overlay. Parameter yang digunakan dalam menentukan tingkat kerusakan lahan mencakup luasan vegetasi, kerusakan bangunan, korban jiwa dan tingkat kedalaman endapan. Evaluasi keselarasan hasil analisis tingkat kerusakan lahan dilakukan dengan cara tumpang tindih (overlay) peta hasil tingkat kerusakan kawasan terdampak erupsi dengan peta pola ruang RTRW. Arahan dibuat berdasarkan rencana pola ruang dan hasil analisis tingkat kerusakan serta peraturan perundang-undangan yang berlaku.

Kerusakan penggunaan lahan akibat erupsi Gunungapi Semeru terbagi menjadi tiga klasifikasi, yaitu tingkat kerusakan rendah, sedang dan tinggi. Tingkat kerusakan rendah sebesar 2,43 %, tingkat kerusakan sedang 95,02 % dan tingkat kerusakan tinggi sebesar 2,55 %, total luas wilayah terdampak 2.331,34 ha. Arahan penyempurnaan pola ruang RTRW kawasan pada lokasi terdampak erupsi adalah : 1) kawasan sempadan sungai dikembalikan sebagai kawasan konservasi tidak ada aktivitas pertambangan baik secara illegal 2.) Kawasan pertanian berkelanjutan dipertahankan dengan pemanfaatan sesuai syarat tertentu 3.) Kawasan permukiman yang berada di dukuh curahkoboan, sumbersari, kajarkuning dijadikan sebagai kawasan hutan produksi atau konservasi dan kawasan permukiman di dukuh kamarkajang dan kampung renteng dijadikan sebagai kawasan sempadan sungai, perlu dibangun tanggul untuk menahan banjir lahar. Seluruh permukiman wajib direlokasi ketempat yang aman, tidak ada bangunan permanen di kawasan terdampak erupsi.

Kata kunci : tingkat kerusakan erupsi, NDVI, Gunungapi Semeru

***Evaluation of the Regional Spatial Plan (RTRW)
for Areas Affected by the Semeru Volcano Eruption***

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ABSTRACT

Mount Semeru erupted on December 4 2021. This eruption damaged 3 villages, namely Oro-Oro Ombo Village, Supiturang Village and Sumberwuluh Village. Based on observations from the Mount Semeru Monitoring Post (ESDM, 2021), the losses incurred were 51 people were killed, 169 people were injured and 22 people were missing and 45 people suffered burns due to the eruption (BPBD Lumajang Regency). The Regional Spatial Plan (RTRW) for Lumajang Regency has included areas that are prone to eruption disasters, but has not considered the disaster risks posed by the Semeru Volcano eruption disaster. This study aims to identify the level of land damage caused by the eruption of Mount Semeru, determine the typology of disaster-prone areas of Mount Semeru and evaluate the spatial plan (RTRW) of Lumajang Regency due to the eruption of Mount Semeru.

The method used is an analysis of the Normalized Difference Vegetation Index (NDVI) to determine the area affected by the eruption and scoring and overlay. The parameters used in determining the level of land damage include the extent of vegetation, damage to buildings, casualties and the depth of sediment. Evaluation of the alignment of the analysis results of the level of land damage is carried out by overlapping the map of the results of the level of damage to the area affected by the eruption with the spatial pattern map of the RTRW. Directions are made based on the spatial pattern plan and the results of the damage level analysis as well as the applicable laws and regulations.

Damage to land use due to the eruption of Mount Semeru is divided into three classifications, namely low, medium and high levels of damage. The low damage level was 2.43%, the moderate damage level was 95.02% and the high damage level was 2.55%, the total area affected was 2,331.34 ha. The directions for improving the spatial pattern of the RTRW area at locations affected by the eruption are: 1) River riparian areas are returned as conservation areas with no illegal mining activities 2.) Sustainable agricultural areas are maintained with utilization according to certain conditions 3.) Residential areas located in the Bulakkoboan Hamlet , Summersari, Kajarkuning are used as production or conservation forest areas and residential areas in the Kamarkajang Hamlet and Renteng Village are used as river border areas, embankments need to be built to withstand lava floods. All settlements must be relocated to a safe place, there are no permanent buildings in the eruption-affected area..

Keywords: *level of eruption damage, NDVI, Semeru Volcano*