



KARAKTERISTIK SPASIAL EKOSISTEM TAMAN NASIONAL GUNUNG MERAPI PASKA ERUPSI 2010

INTISARI

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Meletusnya Gunung Merapi pada tahun 2010 mengakibatkan kerusakan pada kawasan TNGM berupa kerusakan penutupan lahan, kondisi habitat maupun ekosistemnya. Diperlukan data dan informasi terbaru mengenai kondisi kawasan untuk rencana pemulihan kembali kawasan. Penelitian ini bertujuan untuk (1) mengetahui kondisi penutupan lahan paska erupsi, (2) mengetahui karakteristik ekosistem paska erupsi (3) merumuskan arahan pengelolaan paska erupsi.

Metode penelitian untuk mengetahui penutupan lahan dilakukan dengan penafsiran serta survey lapangan dengan menggunakan citra Landsat ETM7+ liputan tahun 2011. Sedangkan untuk mengetahui karakteristik ekosistem dilakukan dengan analisis tumpang-susun peta berdasarkan hasil analisis kondisi keutuhan habitat, aktivitas masyarakat dan kerentanan kawasan.

Hasil penelitian adalah kondisi penutupan lahan setelah erupsi tidak seluruh areal mengalami kerusakan, masih terdapat areal yang mempunyai penutupan lahan berhutan seluas 2.906,89 ha dan tidak berhutan seluas 3.237,51 ha (52,69 %). Karakteristik spasial ekosistem diketahui areal-areal yang masih memiliki habitat utuh seluas 1.217,07 ha, aktivitas masyarakat seluas 47,22 ha dan areal yang mempunyai tingkat kerentanan kawasan rendah seluas 483,28 ha, tinggi seluas 3.290,24 ha dan sangat tinggi seluas 2.371,88 ha.

Rumusan arahan pengelolaan adalah *Arahan I* : (1) Memulihkan kondisi kawasan secara proses alami, (2) Perlindungan terhadap habitat satwa yang masih utuh, (3) Pengawetan keanekaragaman jenis tumbuhan dan satwa. (4) Monitoring jenis tumbuhan dan satwa, (5) Membatasi aktivitas masyarakat, seluas 1.217,16 ha. *Arahan II* : (1) Perlindungan kawasan berhutan, (2) Rehabilitasi kawasan yang berada hulu, (3) Rehabilitasi pada kawasan lereng curam dan sangat curam, (4) Membatasi aktivitas masyarakat, seluas 1.689,56 ha. *Arahan III* : (1) Pembatasan dalam pemanfaatan lahan, (2) Pengendalian dalam pemanfaatan sumberdaya alam, (3) Pemanfaatan secara lestari (4) Pemberdayaan masyarakat (partisipasi) dalam pengelolaan sumber daya alam, seluas 53,03 ha. *Arahan IV* : (1) Pemulihan kondisi kawasan rusak sedang, (2) Rehabilitasi / restorasi secara konvensional, seluas 1.149,63 ha. *Arahan V* : (1) Pemulihan kondisi kawasan yang rusak berat, (2) Rehabilitasi/ restorasi dengan inovasi yang efektif, seluas 2.036,02 ha.

Kata kunci : *Spasial*, Penutupan lahan, Karakteristik ekosisten, Habitat, Aktivitas Masyarakat, Kerentanan kawasan, Arahan pengelolaan.

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SPATIAL CHARACTERISTICS OF THE ECOSYSTEM IN MOUNT MERAPI
NATIONAL PARK POST ERUPTION 2010

ABSTRACT

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Eruption of Mount Merapi in 2010 resulted in the damaged land of Merapi Mountain Park area. The damage includes its land cover, habitat and ecosystem conditions. It needs the updated data and information regarding the condition of the area for the plan of recovery of the land. The purpose of this study is (1) to find out the condition of post eruption condition of land-cover, (2) to identify post eruption characteristics of ecosystem and (3) to formulate post eruption management direction.

The research uses the method of interpretation and field survey to find out the condition of land cover. It is carried out by using Landsat imagery ETM 7+ that is retrieved in 2011. While to find out characteristics of ecosystems, it is conducted by analysis of map overlay based on the analysis of intact habitat conditions, public activities and vulnerable areas.

The result of this study is that the post-eruption condition of land cover area is not all damaged. There are still some areas that have forested land cover of 2,906.89 ha (47.31%), and non-forested land cover area is of 3,237.51 ha (52.69%). According to spatial characteristics of the ecosystem, there are several areas that still have intact areas of 1,217.07 ha, public activities area is of 47.22 ha and area with low vulnerability level of 483.28 ha, the area with high vulnerability level of 3,290.24 ha and area with very high vulnerability level of 2,371.88 ha.

The formulation of management direction of Mount Merapi National Park post-eruption in 2010 is: The formulation of management direction is DIRECTION I: (1) Recovery of land condition by natural process, (2) Protection of the intact habitat of animals, (3) Preservation of variety of flora and fauna, (4) Monitoring of the variety of flora and fauna, (5) Limitation of public activity in an area of 1,217.16 ha. DIRECTION II: (1) Protection of forested land, (2) Rehabilitation of the land located in upper course, (3) Rehabilitation of the steep and very steep slope, (4) Limitation of Public activity in the area of 1,689.59 ha. DIRECTION III: (1) Limitation of land use, (2) Controlling of the utilization of nature resources, (3) Sustainable utilization, (4) Public empowerment (participation) in the management of nature resources in the area of 53.03 ha. DIRECTION IV: (1) Recovery of the condition of moderately damaged land, (2) Conventionally Rehabilitation/ restoration in the area of 1,149.63. DIRECTION V: (1) Recovery of heavily damaged land, (2) Rehabilitation/ restoration with effective innovation in the area of 2,036.02 ha.

Key words : Spatial, land-cover, ecosystem characteristics, habitat, public activities, land vulnerability, management direction.

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