

Kajian Rehabilitasi Lahan Dengan Aplikasi Analisa Citra Satelit dan GIS untuk Mitigasi Bencana

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Abstract

Land rehabilitation is the reconstruction of the disaster areas to support disaster mitigation, can be carried out by the method of vegetative soil conservation. Rehabilitation and management of sloping lands by means of utilizing the right plants as a means of conservation, according to the geographical and topographical conditions. This could be an alternative for land rehabilitation Glagahwero sub watershed area, Panti district, Jember regency, which in 2006 experienced flash floods. From the study before are known, flooding is caused due to erosive soils and land use change. The purpose of this study was to determine the suitability of the area function and physiological condition of the plants for support the rehabilitation process.

Primary data used is the 2008 Aster satellite imagery and other supporting data, such as soil type maps, slope maps, maps of erosion, rainfall data and others. Analysis performed with Geographic Information Systems (GIS). The results of the study are known, the protected forest area, covering an area of 1,000 ha that potentially critical and annual crop cultivation area covering 4200 ha, 50% is potentially critical. Rehabilitation efforts must be made, by vegetative conservation methods, the plant is adapted by the area function and physiological conditions.

The study showed that, as erosion control on protected forest areas can be selected sengon laut and kemlandingan. Teak, mahogany and sono keling for buffer zones and plant coffee, cacao, rambutan, durian, avocado, jackfruit, interspersed with salam and mahogany, for annual cultivation area. As for the edge of the river, as the amplifier terrace, can be planted with bamboo, salak and kaliandra.

Keywords : Citra Satelit, GIS, Mitigasi Bencana, Rehabilitasi Lahan

Pendahuluan

Pada Januari tahun 2006, di Kabupaten Jember, tepatnya di Daerah Aliran Sungai (DAS) Bedadung, Sub DAS Glagahwero kecamatan Panti, telah terjadi banjir bandang yang mengakibatkan kerusakan yang parah pada prasarana jalan, jembatan, bangunan pengairan dan daerah pemukiman (Kompas, 3 Januari 2006), terutama pada lokasi dengan keadaan topografi, geologi, morfologi, hidrologi dan klimatologi yang kurang menguntungkan. Menurut penelitian yang dilakukan Wiwik (2008), kondisi topografi, klimatologi, jenis tanah, tata guna lahan dan karakteristik pada Daerah Aliran Sungai (DAS), Sub DAS Glagahwero cenderung bersifat erosif. Pada

tahun 2009 Nurul, dkk melakukan penelitian dan menemukan perubahan pada kondisi topografi, tata guna lahan dan karakteristik Daerah Aliran Sungai (DAS), sub DAS Glagahwero serta beberapa titik longsor. Saran dari Nurul, dkk untuk segera mengupayakan rehabilitasi lahan guna memperbaiki kondisi lingkungan di sekitar DAS dan sub DAS sebagai upaya pencegahan agar bencana itu tidak terjadi lagi. Sri (2012) juga sudah mengkaji kondisi subDAS sebelum banjir tahun 2006. Menurut Sri, banjir bandang terjadi karena lahan kritis, meski fungsi kawasan sudah ditanami dengan tanaman yang sesuai.