ARAHAN TEKNIS REKLAMASI LAHAN BEKAS TAMBANG TANAH URUG BERDASARKAN KESESUAIAN LAHAN HUTAN PRODUKSI TERBATAS DI DUSUN SEKARBOLO, DESA JIWO WETAN, KECAMATAN WEDI, KABUPATEN KLATEN, PROVINSI JAWA TENGAH

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INTISARI

Aktivitas penambangan tanah urug yang dikerjakan di Dusun Sekarbolo, Desa Jiwo Wetan, Kecamatan Wedi, Kabupaten Klaten, Provinsi Jawa Tengah belum terlihat adanya kegiatan reklamasi seperti adanya tebing sisa penambangan yang tinggi dan terjal dan tidak adanya Sistem Penyaliran Air. Jika hal tersebut tidak dilaksanakan maka terjadi dampak negatif terhadap lingkungan berupa kerusakan lahan, erosi, dan beberapa bencana yang akan terjadi salah satunya adalah gerakan massa tanah. Penelitian ini bertujuan untuk mendapatkan hasil kesesuaian lahan peruntukan Hutan Produksi Terbatas pada lahan bekas tambang tanah urug di daerah penelitian dan Menentukan perencanaan teknis reklamasi yang sesuai pada lahan bekas tambang tanah urug.

Metode yang digunakan adalah (1) metode survei dan pemetaan, (2) metode *purposive sampling* berdasarkan satuan lahan, (3) metode analisis laboratorium, dan (4) metode *weight factor matching*. Evaluasi kesesuaian lahan memiliki beberapa parameter yaitu: temperatur(t) 25,4˚C, ketersediaan air (w) (curah hujan 2135,6 mm; jumlah bulan kering 2 bulan), media perakaran (r) (kedalaman efektif 0 - 3,15 m; drainase tanah baik; dan tekstur lempung berpasir), retensi hara (f) (pH H_2O 6,43; KTK tanah 24,82 Cmol/kg; dan C-Organik 0,61%), hara tersedia (n) (P_2O_5 tersedia 4,26 mg/100g; K_2O tersedia 2,23 mg/100g; dan N total 0,19%), penyiapan lahan (p) (persen batuan permukaan 3 - 47% dan persen singkapan 3,33% - >80%), dan tingkat bahaya erosi (e) (persen lereng 0% - > 65%).

Berdasarkan hasil kesesuaian lahan terdapat tiga kesesuaian lahan yaitu kesesuaian lahan (Nnp), (Nrnp) dan (Nrnpe) dengan faktor pembatas media perakaran (r), hara tersedia (n), penyiapan lahan (p), dan bahaya erosi (e). Rekayasa yang akan dilakukan untuk perbaikan lahan adalah rekayasa teknik dengan cara pembuatan jenjang dengan tinggi jenjang 6 meter, teras jenjang 9 meter, kemiringan lereng 45˚, kemiringan jenjang 60˚, dan backslope 3˚. Pembuatan saluran penyaliran air di setiap teras, setiap jenjang dan di lantai dasar. Pengembalian tanah pucuk dengan metode sistem pot dikarenakan terbatasnya tanah pucuk di lokasi penelitian. Selain rekayasa teknis, rekayasa vegetatif dengan cara penanaman sengon dengan sistem pot sebanyak 1.406 lubang tanam dan ketela pohon dengan system pot sebanyak 214 lubang tanam.

Kata Kunci : Reklamasi; Lahan Bekas Tambang; Kesesuaian Lahan

TECHNICAL DIRECTION FOR RECLAMATION OF FORMER LANDFILL MINING LAND BASED ON THE SUITABILITY OF LIMITED PRODUCTION FOREST LAND IN SEKARBOLO HAMLET, JIWO WETAN VILLAGE, WEDI DISTRICT, KLATEN REGENCY, CENTRAL JAVA PROVINCE

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ABSTRACT

Land mining activities carried out in Sekarbolo Hamlet, Jiwo Wetan Village, Wedi District, Klaten Regency, Central Java Province have not seen any reclamation activities such as the existence of high and steep mining residue cliffs and the absence of a water drainage system. If this is not implemented, there will be a negative impact on the environment in the form of land damage, erosion, and several disasters that will occur, one of which is the movement of soil masses. This study aims to obtain the results of the suitability of land for the allocation of Limited Production Forest on the land of the former land mine in the research area and to determine the appropriate technical planning for reclamation on the land of the former land mine.

The methods used are (1) survey and mapping method, (2) purposive sampling method based on land units, (3) laboratory analysis method, and (4) weight factor matching method. The evaluation of land suitability has several parameters, namely: temperature (t) 25.4°C, water availability (w) (rainfall 2135.6 mm; number of dry months 2 months), rooting medium (r) (effective depth 0 - 3.15 m; good soil drainage; and sandy clay texture), nutrient retention (f) (pH H2O 6.43; soil KTK 24.82 Cmol/kg; and C-Organic 0.61%), available nutrients (n) (P2O5 available 4.26 mg/100g; K2O is available at 2.23 mg/100g; and N total 0.19%), land preparation (p) (percent of surface rocks 3 - 47% and percent of outcrops 3.33% - >80%), and erosion hazard level (e) (percent slope 0% - > 65%).

Based on the results of land suitability, there are three land suitability, namely land suitability (Nnp), (Nrnp) and (Nrnpe) with limiting factors of root media (r), available nutrients (n), land preparation (p), and erosion hazard (e). The engineering that will be carried out for land improvement is engineering by making a level with a level height of 6 meters, a terrace level of 9 meters, a slope slope of 45°, a slope of 60°, and a backslope of 3°. The creation of water drainage channels on every terrace, every level and on the ground floor. The return of topsoil by the potting system method is due to the limited topsoil at the research site. In addition to technical engineering, vegetative engineering by planting sengon with a pot system of 1,406 planting holes and cassava trees with a pot system of 214 planting holes.

Keywords: Reclamation; Former Mining Land; Land Suitability