PENGENDALIAN DAERAH RAWAN LONGSOR BERDASARKAN KESESUAIAN LAHAN KAWASAN PERMUKIMAN DI PADUKUHAN GEDANG, KALURAHAN SAMBIREJO, KAPANEWON PRAMBANAN, KABUPATEN SLEMAN, DAERAH ISTIMEWA YOGYAKARTA

Oleh:
Salma Rosikhatul Muniroh
114180071

INTISARI

Penelitian ini didasarkan pada isu lingkungan daerah rawan bencana longsor di Kapanewon Prambanan dan informasi dalam RTRW Kabupaten Sleman 2011-2031 yang berdampak terhadap pengembangan kawasan permukiman di daerah tersebut, oleh karena itu perlu dilakukan analisis kemampuan lahan di Padukuhan Gedang dan sekitarnya. Tujuan dari penelitian ini untuk menganalisis kemampuan lahan kawasan permukiman berdasarkan Permen Pekerjaan Umum Nomor 20 tahun 2007, menganalisis kesesuaian lahan berupa rasio tutupan lahan kawasan permukiman, dan menentukan rekomendasi kesesuaian lahan kawasan permukiman daerah rawan longsor di Padukuhan Gedang, Sambirejo.

Metode yang digunakan adalah pengharkatan dan pembobotan untuk analisis spasial, serta analisis deskriptif kualitatif dengan parameter yang digunakan sesuai Peraturan Menteri Pekerjaan Umum No 20 Tahun 2007. Analisis kemampuan lahan meliputi Satuan Kemampuan Lahan (SKL) morfologi, kemudahan dikerjakan, kestabilan lereng, kestabilan pondasi, ketersediaan air, drainase, erosi, pembuangan limbah, dan bencana alam. Analisis kesesuaian lahan berupa rasio tutupan lahan berupa bangunan permukiman didapatkan dari perbandingan luas lahan terbangun suatu kelas dengan luas kelas kemampuan lahan terkait. Rekomendasi kesesuaian lahan mempertimbangkan hasil kemampuan dan kesesuaian lahan daerah penelitian.

Hasil penelitian menunjukan daerah penelitian memiliki kelas kemampuan lahan yaitu kelas kemampuan lahan B pengembangan rendah, dan C sedang. Analisis kemampuan lahan tersebut dipertegas dengan hasil perhitungan nilai Faktor Keamanan lereng dan erosi aktual di daerah penelitian. Nilai FK yang didapatkan yaitu sebesar 0,691 yang termasuk kategori tidak stabil pada lereng satu di bagian selatan, FK 0,695 pada lereng tiga di bagian barat, dan 1,835 yang termasuk kategori stabil pada lereng dua di bagian utara. Erosi aktual yang telah diukur mendapatkan hasil sebesar 9.862,12 ton/ha, 4.966,13 ton/ha, 8.646,41 ton/ha, 2.306,25 ton/ha dan 2.164 ton/ha pada SKL terhadap erosi sedang. Persentase maksimal tutupan lahan bangunan pada kelas B yaitu 10%, dan 20% pada kelas C. Hasil kesesuaian lahan berupa rasio tutupan lahan permukiman pada kemampuan lahan kelas B, daerah yang dapat dilakukan pengembangan seluas 7,06 Ha (4,6%) dari luas kelas B 153,5 Ha, dan pada kelas C seluas 3,30 Ha (63%) dari luas kelas C 52,5 Ha, hasil tersebut tidak melampaui batasan maksimal dan termasuk layak untuk dikembangkan pada kelas C. Pengembangan di daerah tersebut boleh dilakukan dengan bersyarat karena faktor pembatas yang berupa rawan bencana longsor. Arahan pengelolaan pada daerah yang berpotensi longsor dapat berupa pembuatan penahan lereng, perubahan geometri lereng, melakukan penampungan air hujan, pembuatan saluran air, dan penanaman vegetasi penutup lahan yang beraturan.

CONTROL OF LANDSLIDE PRONE AREAS ACCORDING TO LAND SUITABILITY IN SETTLEMENT AREAS AT GEDANG AREA, SAMBIREJO VILLAGE, PRAMBANAN SUBDISTRICT, REGENCY OF SLEMAN, SPECIAL REGION OF YOGYAKARTA

By:
Salma Rosikhatul Muniroh
114180071

ABSTRACT

The study was based on environmental issues in landslide prone areas in Kapanewon Prambanan and information by RTRW of Sleman Regency 2011-2031 which has an impact for the regional development of settlement areas in the future. Therefore it needs an analysis of the land capability in Padukuhan Gedang, Kalurahan Sambirejo, Prambanan, DIY. The purpose of this study was to discover the potential of settlement areas according to Ministry of Public Works No. 20 2007, to analyze land suitability in the form of land cover ratio for settlement areas, and determine recommendations for land suitability for settlement areas prone to landslides in Padukuhan Gedang, Sambirejo.

The methods used were scoring and descriptive-qualitative analysis within the parameters used according to Ministry of Public Works No. 20 2007. The land-capability analysis covers the units of morphological land capability, land level of ease to work, slope stability, foundation stability, the availability of water, drainage, erosion, waste disposal, and natural disasters. Analysis of land suitability in the form of settlement land cover ratio obtained from the comparison of the built-up land area of a class with the land area of the corresponding land capability class. Land suitability recommendations consider the results of the land capability dan suitability in the research area.

Research shows that the study area had a classes of land capability with classification including class B land capability or low development capability, and class C or rather moderate development capability. The analysis of land capability is enhanced by data of the calculation results of the slope safety factor and actual erosion in research area. The score result of safety factors was 0.691 which was included in the unstable category on slope 1 in the south area, SF was 0.695 on slope 3 in the west area, and 1.835 which was included in the stable category on slope 2 in the north area. The result of the actual erosion that had been measured is 9,862.12 tons/ha, 4,966.13 tons/ha, 8,646.41 tons/ha, 2,306.25 tons/ha and 2,164 tons/ha in units of land capability against moderate erosion. The maximum percentage of building land cover in class B is 10%, and 20% in class C. The results of land suitability in the form of settlement land cover ratio on land capability class B area that can be developed are 7.06 Ha (4.6%) of the total class B area of 153.5 Ha, on class C are 3.30 Ha (6.3%) of the total class C area of 52.5 Ha, these results are not exceed the maximum limit and still considered feasible for develop. The development may be carried out conditionally due to the limiting factor of the area being prone to landslides. Management directions for potential landslide areas can be in the form of slope retaining, changes the slope geometry, rainwater harvesting, water channeling, and planting of regular cover crops.