

INTISARI

Penelitian ini dilakukan di Kecamatan Tugu dan Ngaliyan Kota Semarang Jawa Tengah. Penelitian bertujuan: (a) mengetahui kelas kesesuaian medan untuk permukiman di daerah penelitian, (b) mengevaluasi medan lokasi perumahan di daerah penelitian berdasarkan kesesuaian medan untuk permukiman, dan (c) menentukan variabel dominan yang berpengaruh terhadap kelas kesesuaian medan untuk permukiman.

Satuan medan sebagai satuan analisis dibuat berdasarkan hasil tumpang-susun (*overlay*) antara peta geomorfologi, geologi, kelas lereng dan tanah. Metode survei dilakukan pada satuan medan terpilih berdasarkan pada tanah yang sama, sedangkan karakteristik fisik selengkapannya dianalisis berdasarkan variabel pada satuan medan lainnya, seperti : bentuklahan, batuan dan kemiringan lereng. Parameter kesesuaian medan untuk permukiman di daerah penelitian, telah ditentukan sebanyak 17 variabel, yakni meliputi : kemiringan lereng, daya dukung tanah, aktivitas lempung, panjang pengerutan tanah, indeks plastisitas, tekstur, indurasi batuan, indeks keausan batuan, bahan kasar, drainase permukaan, permeabilitas, tahanan geser tanah, erosi, kerapatan alur, kedalaman alur, air tanah dan banjir. Untuk mengetahui kelas kesesuaian medan digunakan teknik pengharkatan pada setiap variabel yang ada di setiap satuan medan, kemudian dibuat peta kesesuaian medan untuk permukiman. Dalam melakukan evaluasi medan pada lokasi perumahan di daerah penelitian dilakukan teknik tumpang-susun peta antara peta kesesuaian medan untuk permukiman dan peta lokasi perumahan di daerah penelitian menggunakan Sistem Informasi Geografi (SIG) dengan media komputer berperangkat lunak Arc Info dan Arc View, sedangkan untuk mengetahui faktor dominan yang mempengaruhi kelas kesesuaian medan untuk permukimannya dianalisis dengan statistik (regresi ganda) menggunakan komputer berprogram SPSS 7,5

Hasil penelitian menunjukkan bahwa: (a) di daerah penelitian hanya terdapat dua variasi kualitas medan yang tercermin pada kesesuaian medan kelas sedang (SD) yang teragihkan pada areal seluas 54,0524 km² (72,33 %) dan kelas buruk (BR) teragihkan pada areal seluas 20,6822 km² (27,67 %). Hipotesis yang menyatakan "sebagian besar satuan medan pada bentuklahan Perbukitan Struktural Terdenudasi memiliki kelas kesesuaian medan untuk permukiman yang buruk" ditolak, (b) lokasi perumahan umumnya terdapat pada satuan medan dengan kelas sedang (SD) mencakup wilayah seluas 354 ha atau 79,37 % dari seluruh lokasi perumahan di daerah penelitian. Hipotesis yang menyatakan "lokasi perumahan di daerah penelitian sebagian besar menempati satuan medan dengan kelas kesesuaian medan untuk permukiman yang buruk" ditolak, dan (c) unsur medan yang berupa kemiringan lereng merupakan faktor yang tidak mempengaruhi kelas kesesuaian medan untuk permukiman di daerah penelitian, sehingga hipotesis yang menyatakan "unsur medan yang berupa kemiringan lereng sangat berpengaruh terhadap kelas kesesuaian medan untuk permukiman di daerah penelitian" ditolak.

Kata kunci : satuan medan, evaluasi medan, kesesuaian medan permukiman

ABSTRACT

The study was done at Tugu and Ngaliyan District, Semarang City, Central Java. The aim of study (a) to find out the terrain suitability classes for settlement in the research area, (b) to evaluate the terrain for a settlement site (in this case for housing) in the research area based on their terrain suitability for settlement, and (c) to determine the dominant variables influencing the different classes of terrain suitability for settlement.

The terrain units as analyse units were established based on the results of maps overlayed of the geomorphological map, the geological map, the slope steepness map and the soil type map. The soil sample method was used for the selected terrain units based on the same soil type. The physical characteristics of the terrain units were analyzed based on the variables of other terrain units such as the landform, rock and slope steepness. The parameters on terrain suitability for settlement, consisted 17 variables have been established : they were slope steepness, soil strength, activity of clay, soil liner shrinkings, index of plasticity, soil texture, force induration of rock, index of rock abbrasiveness (exfoliation), rough material, drainage, soil permeability, shear strength, erosion, flood, ground water, density and dept of the gully. In order find out the classes of terrain suitability, each variable in each terrain units had been constructed by rating technique, will made a map of terrain suitability for settlement. To evaluate the terrain on housing locations, a map of terrain suitability for settlement was overlayed with a housing sites map on research area by using computer-based Geographical Information System (GIS) aided by Arc Info and Arc View software. In order to find out the dominant influence variables to the different levels of terrain suitability for their settlement had been analyzed with statistical (multiple regression) were conducted using a computer program of SPSS 7.5

The result, of the study indicate that : First, there are only 2 variations in the terrain qualities being studied, these are reflected by medium level (medium class) of terrain suitability for an area of 54.0524 square kilometers or 72.33 % of the total area and low level (bad class) of terrain suitability for an area of 20.6822 square kilometers or 27.67 % of the total area. The hypothesis that "terrain unit on the landform of denuded structurally hill will have low level (bad class) of terrain suitability for settlement sites" was rejected. Second, The housing sites being studied are generally located in the terrain units with medium levels (medium class) for an area 354 hectares or 79.37 % of the total housing sites (location of housing) on the research area. The hypothesis that "most of the housing sites in the area being studied, are located in terrain unit with low levels (bad class) of terrain suitability for settlement" was rejected. Third, the slope steepness is not the dominant variables influencing the levels terrain suitability for settlement. Therefore, the hypothesis that "the terrain attribute of the slope steepness is the dominant variable influencing the levels terrain suitability for settlement" was also rejected.

Key word : terrain units, terrain evaluation, terrain suitability for settlement