

Penelitian ini bertujuan untuk: mengevaluasi kemampuan lahan, menentukan indeks bahaya erosi, dan menyusun arahan dan prioritas konservasi berdasarkan kemampuan lahan dan indeks bahaya erosi di daerah penelitian. Penelitian ini mengambil lokasi di DAS Celeng Kabupaten Bantul.

Penelitian ini menggunakan satuan lahan sebagai unit untuk analisis kemampuan lahan sedangkan penentuan indeks bahaya erosi menggunakan macam tanah. Peta satuan lahan dibuat berdasarkan tumpang susun dari peta bentuklahan, peta lereng, peta tanah, dan peta penggunaan lahan. Pengambilan sampel dilakukan dengan metode *stratified random sampling*. Klasifikasi kemampuan lahan dilakukan dengan metode *matching* menggunakan perangkat lunak LCLP (*Land Classification and Landuse Planning*).

Daerah penelitian tersusun atas 54 satuan lahan. Hasil analisis dengan LCLP menunjukkan kemampuan lahan daerah penelitian terdiri atas: kelas II seluas 240,6 Ha atau 10,6%, kelas III seluas 477,7 Ha atau 21%, kelas IV seluas 986,9 Ha atau 43,3%, dan kelas VI seluas 571,7 Ha atau 25,1%. Faktor pembatas yang mempengaruhi kemampuan lahan yaitu erosi (e), lereng (t), bahan kasar dan atau kedalaman tanah (s), serta drainase dan permeabilitas (w). Indeks bahaya erosi daerah penelitian diperoleh dengan membandingkan erosi potensial tiap satuan lahan dengan erosi terbolehkannya. Indeks bahaya erosi di daerah penelitian berkisar antara 1,01 sampai 442,85 dengan sebaran harkat indeks bahaya erosi sedang seluas 207 Ha atau 9,1%, tinggi seluas 271,3 Ha atau 11,9%, dan sangat tinggi seluas 1.798,5 Ha atau 79%.

Arahan konservasi lahan yang meliputi arahan penggunaan lahan dan arahan metode konservasi lahan disusun berdasarkan kelas kemampuan lahan dan macam faktor pembatas sedangkan prioritas konservasi disusun berdasarkan kemampuan lahan dan indeks bahaya erosi. Prioritas konservasi lahan daerah penelitian dibagi menjadi prioritas konservasi I, prioritas konservasi II dan prioritas konservasi III. Prioritas konservasi I seluas 247,8 Ha atau 10,9%, prioritas konservasi II seluas 916,5 Ha atau 40,3%, dan prioritas konservasi III seluas 459,3 Ha atau 20,2%. Sementara itu seluas 653,2 Ha atau 28,7% lahan tidak dikonservasi karena digunakan sebagai lahan permukiman.

Kata kunci: satuan lahan, kemampuan lahan, indeks bahaya erosi, arahan konservasi lahan, prioritas konservasi lahan

ABSTRACT

The aims of this research are to evaluate land capability, to determine erosion hazard index, and to arrange land conservation direction and land conservation priority based on land capability and erosion hazard index at research area. This research was carried out in Celeng Catchment Area, Bantul Regency.

This research used land unit in land capability analyse while the determination of erosion hazard index used soil subgroup. The establishment of land unit map was made based on the overlay from landform map, slope steepness map, soil map, and land use map. The samples were collected by stratified random sampling method. Land capability classification was done based on matching method used in LCLP (Land Classification and Land use Planning) software.

The research area is constructed by 54 land units. The result of land capability analyse shows that the land capability at the research area consist of: class II about 240,6 Ha or 10,6%, class III about 477,7 Ha or 21%, class IV about 986,9 Ha or 43,3%, and class VI about 571,7 Ha or 25,1%. The limitation factors that influence land capability are: erosion (e), slope steepness (t), soil depth and rough materials (s), and drainage and permeability (w). The erosion hazard index at the research area are obtained by comparing the potential erosion of each land units with its tolerable erosion. Erosion hazard index at the research area is between 1,01 to 442,85 classified into: medium class about 207 Ha or 9,1%, high class about 271,3 Ha or 11,9%, and very high class about 1.798,5 Ha or 79%.

Land conservation direction which include land use direction and land conservation method direction, was arranged based on land capability class and type of limitation factors while land conservation priority was arranged based on land capability and erosion hazard index. Land conservation priority at the research area was divided into 1st priority, 2nd priority, and 3rd priority. The 1st priority about 247,8 Ha or 10,9%, 2nd priority about 916,5 Ha or 40,3%, and 3rd priority about 459,3 Ha or 20,2%. Meanwhile, about 653,2 Ha or 28,7% land is not conserved because it was use for settlement area.

Key words: land unit, land capability, erosion hazard index, land conservation direction, land conservation priority