

INTISARI

Penelitian ini berkaitan dengan pemanfaatan teknik penginderaan jauh untuk kajian kerusakan lahan dan penentuan daerah prioritas penanganan lahan di Sub DAS Tjeleng Kabupaten Bantul D.I.Yogyakarta. Tujuan penelitiannya adalah mengetahui kemampuan foto udara untuk menyadap parameter fisik lahan yang digunakan untuk menilai kerusakan lahan ditinjau dari aspek erosi dan koefisien aliran permukaan serta menentukan daerah prioritas penanganan lahan berdasarkan erosi dan koefisien aliran permukaan dan pertimbangan nilai tekanan penduduk terhadap lahan pertanian.

Penelitian ini termasuk ke dalam metode survei. Bahan yang digunakan foto udara pankromatik hitam putih skala 1:30000, tahun pemotretan 1992. Teknik penelitiannya interpretasi foto udara, halmana datanya dari foto udara dan dilengkapi yang diperoleh dari interpretasi peta-peta tematik, data sekunder, serta pengamatan dan pengukuran di lapangan. Satuan lahan digunakan sebagai satuan pemetaan dan satuan analisis. Pengambilan sampel dilakukan secara stratified purposive sampling. Perhitungan besarnya kehilangan tanah (erosi) dilakukan dengan metode USLE dan besarnya koefisien aliran permukaan dihitung dengan metode Cook, sedangkan tekanan penduduk dihitung dengan menggunakan rumus dari Otto Soemarwoto.

Ketelitian hasil interpretasi foto udara terhadap parameter fisik lahan daerah aliran sungai adalah (1) bentuklahan dengan ketelitian 81,25%, (2) kemiringan lereng (83,33%), dan (3) penggunaan lahan (83,87%). Parameter erodibilitas tanah, infiltrasi tanah dan rotasi tanaman, komposisi tanaman serta praktek konservasi diperoleh dari kerja lapangan. Parameter erosivitas hujan dan tekanan penduduk diperoleh dari data sekunder.

Hasil evaluasi tingkat erosi di Sub DAS Tjeleng adalah kelas I (sangat ringan) seluas 799,334 Ha, kelas II.(ringan) seluas 304,041 Ha, kelas III(sedang) 511,242 Ha, kelas IV(berat) 504,762 Ha dan kelas V(sangat berat)152,045 ha. Hasil evaluasi kelas koefisien aliran di Sub DAS Tjeleng adalah kelas II seluas 105,260 Ha, kelas III 1221,811 Ha, kelas IV(tinggi) 560,141 Ha dan kelas V(sangat tinggi) 384,212 Ha. Hasil evaluasi terhadap tekanan penduduk terhadap lahan pertanian di Sub DAS Tjeleng adalah bahwa pada semua wilayah mempunyai nilai tekanan penduduk lebih dari satu.

Penyusunan daerah prioritas penanganan lahan di Sub DAS Tjeleng dilakukan dengan metode skoring terhadap ketiga variabel yang digunakan yaitu tingkat erosi, nilai koefisien aliran dan nilai tekanan penduduk. Pada penelitian ini, penyusunan prioritas penanganan lahan ditujukan pada pemilihan lokasi/daerahnya saja, bukan kepada alternatif/cara penanganannya. Hasil penelitian menunjukkan bahwa seluas 145,910 Ha (6,4%) daerah penelitian menempati prioritas pertama unatuk segera ditangani, 1362,160 Ha (60%) diurutan kedua dan 763,354 Ha (33,6%) diurutan ketiga. Dari 145,910 Ha tersebut, prioritas penanganan ditujukan pada area dengan penggunaan lahan tegalan seluas 111,06 Ha, permukiman vegetasi jarang seluas 24,68 Ha, kebun campuran seluas 7,78 Ha dan sawah tadah hujan seluas 1,78 Ha.

This research concern with the use of remote sensing technique to lesson the damage of land and to determine the land handling priority area in Tjeleng sub watershed in Bantul regents in D.I.Yogyakarta provence. The aim of this research is to know the capability of aerial photographs to extracted the land physic parameter that used to evaluate the damage of land seen from erosion aspect and surface run off coefficient and to determine the land handling priority area according to the erosion and surface run off coefficient and consideration of demographic pressure evaluation to the agriculture land.

This research is included in survey method. The material that used is the black/white panchromatic aerial photographs with the scale of 1:30000, the year of photo is 1992. The technique of the research is the aerial photographs interpretation, which the data taken from the aerial photographs that completed with data that got from the thematic maps interpretation, secondary data, and also from the field research and measurement. Land unit used as mapping unit and unit of analysis. Sampling was done by the stratified purpose sampling way. The calculation of the soil losses (erosion) was done by the USLE method and the surface run off coefficient calculated by the Cook method, and the demographic pressure calculated by the Otto Soemarwoto's formula.

The accuracy of the aerial photographs interpretation to the land physic parameter in watershed are (1) landform with the accuracy of 81,25 %, (2) slope steepness (83,33 %) , and (3) land use (83,87%). Parameter of soil erodibility, soil infiltration and plantation rotation, plantation composition and also conservation practice got from the field work. The rain erositivity parameter and the demographic pressure got from the secondary data.

The evaluation result of the erosion degree in Tjeleng sub watershed are: I (first) class with the wide of 799,334 Ha, II (second) class with the wide of 304,041 Ha, III (third) class with the wide of 511,242 Ha, IV (fourth) class with the wide of 504,762 Ha and V (fifth) class with the wide of 152,045 Ha. The evaluation result of surface run off coefficient class in Tjeleng sub watershed are II (second) class with the wide of 105,260 Ha, III (third) class with the wide of 1221,811 Ha, IV (fourth) class with the wide of 560,141 Ha, and V (fifth) class with the wide of 384,212 Ha. Evaluation result of the demographic pressure to the agriculture land in Tjeleng sub watershed is that in all areas have the demographic pressure more than one.

The arrangement of the land handling priority area in Tjeleng sub watershed done with scoring methods of three variable that used they are erosion degree, surface run off coefficient value and the demographic pressure value. In the research, arrangement of the land handling priority was aimed to the location selection only, not to alternative or the way to handle. The result of the research shows that about 145,910 Ha (6,4%) of the research area placed the first priority of immediately handling, 1362,160 Ha (60%) in second place and 763,354 Ha (33,6) in third place. From the 145,910 Ha, priority of handling was aimed to the area that used as dry land agriculture with the wide of 111,06 Ha, the rare vegetation residential with the wide of 24,68 Ha, mixed garden 7,78 Ha and rice field dependent on rain 1,78 Ha.