

KEANEKARAGAMAN VEGETASI DAN KARAKTERISTIK TANAH GAMBUS DI BERBAGAI TIPE PENGGUNAAN LAHAN

INTISARI

Ekosistem lahan gambut memiliki berbagai fungsi lingkungan seperti penyimpan cadangan karbon (C), reservoir air, dan penyimpan keanekaragaman hayati. Perubahan tipe penggunaan lahan gambut dari hutan alam mejadi tipe penggunaan lain yang makin sering terjadi berpotensi menyebabkan kerusakan pada ekosistem lahan gambut, diantaranya penurunan keanekaragaman vegetasi dan penurunan kualitas tanah gambut. Penelitian ini bertujuan untuk mengetahui dan membandingkan keanekaragaman vegetasi dan karakteristik tanah gambut di berbagai tipe penggunaan lahan gambut serta mengetahui dampak perubahan karakteristik tanah gambut terhadap kondisi vegetasi di atasnya.

Pengambilan data dilakukan dengan mengambil sampel tanah gambut dan data vegetasi pada 6 (enam) tipe penggunaan lahan gambut yang berbeda, yaitu Hutan Alam Sekunder (HA), Hutan Monokultur (HM), Agroforestri (AF), Kebun Karet (KR), Kebun Kelapa Sawit (KS), dan Lahan Kritis Pasca Kebakaran Hutan (KH). Karakteristik tanah yang diuji adalah kandungan karbon organik tanah (KOT), pH, daya hantar listrik (DHL), *water holding capacity* (WHC), berat volume (BV), nilai N, P, dan K tersedia, kapasitas pertukaran kation (KTK), kadar asam humat dan asam fulvat, serta warna tanah. Penilaian keanekaragaman vegetasi juga dilakukan menggunakan perhitungan indeks diversitas *Shannon-Wiener*.

Hasil penelitian menunjukkan bahwa Hutan Alam Sekunder (HA) merupakan tipe penggunaan lahan gambut yang memiliki keanekaragaman vegetasi paling tinggi dan karakteristik tanah yang cenderung stabil dibanding tipe penggunaan lahan gambut lain yang telah mengalami lebih banyak intervensi manusia. Untuk itu, perlu adanya upaya untuk mempertahankan tipe penggunaan lahan Hutan Alam Sekunder (HA) untuk mempertahankan keanekaragaman vegetasi serta potensi simpanan karbon organik yang ada di dalam tanah. Adapun karakteristik tanah seperti berat volume (BV), *water holding capacity* (WHC), dan ketersediaan unsure hara merupakan karakteristik yang paling terpengaruh oleh adanya perubahan tipe penggunaan lahan gambut dan memicu terjadinya penurunan kesuburan tanah. Dengan demikian, pengelolaan lahan gambut perlu lebih diperhatikan untuk mencegah penurunan kesuburan tanah pada lahan gambut.

Kata kunci : gambut, keanekaragaman vegetasi, lahan gambut tropis, perubahan tipe penggunaan lahan, tanah gambut.

VEGETATION DIVERSITY AND PEAT SOILS CHARACTERISTIC IN VARIOUS TYPES OF LAND USE

ABSTRACT

Peatland ecosystem has many environmental functions such as carbon storage (C storage), water reservoir, and biodiversity storage. Change of land use types from natural forest into another land use happen frequently and potentially caused damage in peatland ecosystem, such as decreasing of vegetation diversity and decreasing of peat soils quality. This research is aimed to identify and compare vegetation diversity and peat soils characteristic in various types of peatland use and also to identify the effect of changes in peat soils characteristic to the condition of vegetation above it.

The data were collected by taking peat soils sample and data of vegetation in 6 (six) different types of peatland use, that is Secondary Natural Forest (HA), Monoculture Forest (HM), Agroforestry (AF), Rubber Plantation (KR), Palm Oil Plantation (KS), and Critical Land of Post Forest Fires (KH). Soil characteristics which were tested are soil organic carbon (SOC) content, acidity level, electrical conductivity (EC), water holding capacity (WHC), bulk density (BD), values of N, P, and K available, cation exchange capacity (CEC), humic acid and fulvic acid levels, and soil color. Vegetation diversity assessment also done by calculation of Shannon-Wiener diversity index.

The result of research show that Secondary Natural Forest (HA) is the type of peatland use which have the highest values of vegetation diversity and have the most stable soil characteristic compared by another land use types which have more human intervention. So, it needs effort to maintain land use types of Secondary Natural Forest (HA) to maintain vegetation diversity and potential of carbon storage inside the soils. Soil characteristic such as bulk density (BD), water holding capacity (WHC), and nutrient availability is characteristics which most affected by the change of peatland use type and these trigger the decrease of soil fertility. Therefore, peatland management needs more attention to prevent the decreasing of soil fertility on peatland.

Keywords : peat, vegetation diversity, tropical peatland, change of land use types, peat soils.