

ABSTRAK

ESTIMASI CADANGAN KARBON PADA BEBERAPA TIPE TUTUPAN LAHAN DI KPH BATUREGI, KABUPATEN TANGGAMUS, PROVINSI LAMPUNG

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Perubahan iklim menjadi salah satu masalah lingkungan, salah satu faktor penyebabnya yaitu pemanasan global akibat efek gas rumah kaca. Peran hutan sebagai penyerap karbon dengan komposisi di dalamnya, baik itu pohon, pancang, tiang, dan semai bahkan bagian yang mati. Estimasi cadangan karbon dan distribusinya di berbagai ekosistem penting untuk memahami tingkat karbon yang dialokasikan ke komponen yang tidak stabil dan stabil. Tujuan penelitian ini yaitu menganalisis indeks nilai penting setiap fase tumbuh, nilai keanekaragaman, kemerataan, dan kekayaan, serta jumlah cadangan karbon di lahan hutan, agroforestri, dan monokultur. Penelitian dilakukan bulan September 2023 di Desa Datar Lebuay, Kecamatan Airnaningan, Kabupaten Tanggamus. Metode dalam penelitian ini menggunakan teknik *purposive sampling* dengan model persamaan alometrik. Hasil penelitian ini menunjukkan terdapat 731 individu dengan INP di lahan hutan pada fase pohon sebesar 44,41%, fase tiang sebesar 38,62%, fase pancang sebesar 54,91%, dan fase semai sebesar 46,89%, lahan agroforestri pada fase pohon sebesar 75,73%, fase tiang sebesar 66,41%, fase pancang sebesar 191,77% dan fase semai sebesar 112,86%, serta di lahan monokultur fase pohon sebesar 38,07%, fase tiang sebesar 82,14%, fase pancang sebesar 218,99%, dan fase semai sebesar 150,88%. Keanekaragaman jenis (H') di hutan sebesar 3,08, agroforestri sebesar 2,10, dan monokultur sebesar 2,04, kemerataan jenis (E) di lahan hutan sebesar 0,87, agroforestri sebesar 0,71, dan monokultur sebesar 0,75, kekayaan jenis (R) pada lahan hutan sebesar 6,25, agroforestri sebesar 3,12, dan monokultur 2,69. Rata-rata cadangan karbon yang tersimpan di ketiga lokasi penelitian yaitu pada lahan hutan sebesar 143,91 tonC/ha, agroforestri sebesar 78,79 tonC/ha, dan monokultur sebesar 47,92 tonC/ha.

Kata kunci : Cadangan karbon, indeks nilai penting, keanekaragaman, hutan

ABSTRACT

ESTIMATION OF CARBON STOCKS IN SEVERAL LAND COVER TYPES IN BATUREGI KPH, TANGGAMUS DISTRICT, LAMPUNG PROVINCE

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Climate change is one of the most significant environmental issues of our time. One of the primary causes is global warming, which is a consequence of the greenhouse effect. The forest plays a role in carbon absorption due to its composition, which includes trees, poles, posts, seedlings, and even dead parts. Estimating carbon stocks and their distribution across different ecosystems is important for understanding the level of carbon allocated to unstable and stable components. The objective of this study is to analyze the critical indices of each growth phase, including diversity, evenness, richness, dominance, and the carbon stock in forest, agroforestry, and monoculture lands. The study was conducted in September 2023 in Datar Lebuay Village, Airnaningan District, Tanggamus Regency. The research employed a purposive sampling technique with an allometric equation model. The results of the study indicate that there are 731 individuals with IVI in forest land at the tree stage (44,41%), pole stage (38,62%), sapling stage (54,91%), and seedling stage (46,89%), and at the tree stage (75,73%) in agroforestry land. The results also indicated that the percentage of individuals in the seedling phase was 191,77% higher in agroforestry than in monoculture, while the percentage of individuals in the juvenile phase was 218,99% higher in agroforestry than in monoculture. The diversity index (H') in the forest is 3,08, while in agroforestry it is 2,10 and in monoculture it is 2.04. The evenness index (E) in forest land is 0,87, in agroforestry it is 0,71, and in monoculture it is 0,75. The diversity index (R) for the forest land was 6,25, for agroforestry it was 3,12, and for monoculture it was 2,69. The mean carbon stock in the three study sites was 141,94 tonsC/ha in forest land, 78,79 tonsC/ha in agroforestry, and 47,92 tonsC/ha in monoculture.

Keywords : *Carbon reserves, index value importance, biodiversity, forests*