

ABSTRAK

STRUKTUR DAN KOMPOSISI VEGETASI MANGROVE DI KAWASAN NUSA CENINGAN, DESA LEMBONGAN, KECAMATAN NUSA PENIDA, KABUPATEN KLUNGKUNG, BALI

Banyak populasi pesisir di negara beriklim tropis yang bergantung pada jasa ekosistem mangrove. Namun, mangrove saat ini berada di bawah bahaya di seluruh dunia karena campuran tekanan antropogenik dan lingkungan. Tujuan dari penelitian ini adalah untuk mengetahui struktur, komposisi, dan tutupan kanopi vegetasi mangrove di kawasan Nusa Ceningan. Stasiun lokasi penelitian ditentukan menggunakan *purposive sampling*. Analisis struktur vegetasi mangrove dilakukan menggunakan metode transek kuadran ukuran 1x1 m, 5x5m dan 10x10m. Untuk mengetahui tutupan kanopi mangrove digunakan metode *Hemispherical Photography*. Berdasarkan hasil penelitian, mangrove yang teridentifikasi sebanyak 4 jenis dari 2 suku. Komposisi tertinggi dimiliki oleh jenis *Rhizophora apiculata* yang terdapat pada seluruh stasiun penelitian. Indeks Nilai Penting (INP) tertinggi pada stasiun I dimiliki oleh jenis *Sonneratia alba*. Pada stasiun II INP tertinggi dimiliki oleh jenis *Rhizophora apiculata* dan pada stasiun III INP tertinggi dimiliki oleh *Rhizophora apiculata*. Indeks keanekaragaman (H') nilai tertinggi sebesar 1,1 (kategori tinggi) dimiliki oleh stasiun I, sedangkan nilai terendah sebesar 0 (kategori rendah) dimiliki pada stasiun III. Indeks keseragaman (J') tertinggi pada stasiun I sebesar 1,0 (kategori tinggi), sedangkan nilai terendah terletak pada stasiun III sebesar 0 (kategori rendah). Dominansi (D') tertinggi terletak pada stasiun III sebesar 1,00 (ada dominasi), sedangkan nilai dominansi terendah terletak pada stasiun I sebesar 0,4 (tidak ada dominasi). Nilai tutupan kanopi mangrove tertinggi terletak pada stasiun II sebesar 90,65% yang termasuk kategori baik. Informasi studi ini sangat penting untuk dapat meningkatkan keputusan otoritas terkait mengenai pengelolaan, pemenuhan masyarakat, dan mengurangi ancaman polusi pada kawasan mangrove di Indonesia.

Kata Kunci: Ekologi, Keanekaragaman Hayati, Nusa Ceningan, Mangrove, Tutupan kanopi.

ABSTRACT

STRUCTURE AND VEGETATION COMPOSITION OF MANGROVE ECOSYSTEM IN THE NUSA CENINGAN AREA, LEMBONGAN VILLAGE, NUSA PENIDA SUBDISTRICT, KLUNGKUNG REGENCY, BALI

*Many coastal populations in tropical countries depend on the ecosystem services of mangroves. However, mangroves are currently under threat worldwide due to a mix of anthropogenic and environmental pressures. The purpose of this study was to determine the structure, composition, and canopy cover of mangrove vegetation in the Nusa Ceningan area. The purpose of this research was to investigate the structure and vegetation composition of the mangrove ecosystem in the Nusa Ceningan area. Research locations were determined using purposive sampling. The analysis of mangrove vegetation structure was carried out using transect quadrats of sizes 1x1 m, 5x5 m, and 10x10 m. Hemispherical Photography was employed to assess the canopy cover of mangroves. Based on the results, four species from two families of mangroves were identified. The highest composition was found in the species of *Rhizophora apiculata*, which was present in all stations. The highest Importance Value Index (INP) for the species of *Sonneratia alba* was found at Station I, while at Station II and III, *Rhizophora apiculata* had the highest INP. The highest diversity index (H') value of 1.00 (high category) was observed at Station I, while the lowest value of 0 (low category) was observed at Station III. The highest evenness index (J') of 0.91 (high category) was found at Station I, whereas the lowest value of 0 (low category) was observed at Station III. The highest dominance index (D') was detected at Station III with a value of 1.00 (dominance present), while the lowest dominance value was at Station I with a value of 0.36 (no dominance). The highest canopy cover percentage was observed at Station II, which was 90.65%, classified as good. The information from this study is very important to be able to improve the decisions of the relevant authorities regarding management, community fulfillment, and reducing the threat of pollution in mangrove areas in Indonesia.*

Keywords: Ecology, Biodiversity, Nusa Ceningan, Mangrove, Canopy cover.