

ABSTRAK

TINGKAT PENCEMARAN PERAIRAN PANTAI CEMARA, DESA MERAK BELANTUNG, KECAMATAN KALIANDA, LAMPUNG SELATAN BERDASARKAN KOMUNITAS MAKROZOOBENTOS

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Pantai Cemara yang terletak di Dusun Kenjuru, Desa Merak Belantung, Kecamatan Kalianda, merupakan salah satu destinasi wisata pantai di Kabupaten Lampung Selatan. Aktivitas wisata bahari dan kegiatan antropogenik di kawasan tersebut berpotensi menurunkan kualitas air serta mengganggu fungsi ekologis perairan. Makrozoobentos merupakan salah satu indikator biologi yang digunakan untuk menilai kualitas lingkungan karena kepekaannya terhadap perubahan kondisi perairan. Penelitian ini bertujuan untuk mengetahui tingkat pencemaran perairan Pantai Cemara berdasarkan komunitas makrozoobentos sebagai bioindikator. Penelitian dilaksanakan pada bulan Mei hingga Juni 2025 di tiga stasiun dengan karakteristik berbeda, yaitu kawasan *hatchery*, wisata, dan dermaga. Metode pengambilan sampel menggunakan *purposive sampling* dengan tiga kali pengulangan. Analisis dilakukan terhadap parameter biologi, fisika, dan kimia air. Analisis statistik menggunakan metode *principal component analysis* (PCA) dan kurva *K-Dominance*. Hasil penelitian menunjukkan terdapat 20 spesies makrozoobentos dari enam kelas dengan kelas Gastropoda sebagai kelompok paling dominan. Nilai keanekaragaman (H') berkisar 0,9–1,8 (sedang), keseragaman (E') berkisar 0,6–0,9 (tinggi), dominansi (C) berkisar 0,2–0,5 (rendah), sedangkan hasil kurva *K-Dominance* mengindikasikan kondisi perairan *moderately disturbed* atau mengalami gangguan sedang. Aktivitas antropogenik seperti wisata, *hatchery*, dermaga, dan limbah rumah tangga diduga menjadi penyebab utama penurunan kualitas perairan. Secara keseluruhan, perairan Pantai Cemara tergolong dalam kategori tercemar sedang, namun masih mampu mendukung kehidupan biota bentik.

Kata Kunci: Kualitas Air, Makrozoobentos, Pantai Cemara, Pencemaran

ABSTRACT

THE POLLUTION LEVEL OF CEMARA BEACH WATERS, MERAK BELANTUNG VILLAGE, KALIANDA DISTRICT, SOUTH LAMPUNG, BASED ON THE MACROZOOBENTHOS COMMUNITY

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Cemara Beach, located in Kenjuru Hamlet, Merak Belantung Village, Kalianda District, was one of the coastal tourist destinations in South Lampung Regency. Marine tourism activities and anthropogenic influences in the area had the potential to decrease water quality and disrupt the ecological functions of the aquatic environment. Macrozoobenthos were used as biological indicators to assess environmental quality due to their sensitivity to changes in aquatic conditions. This study aimed to determine the pollution level of Cemara Beach waters based on macrozoobenthos communities as bioindicators. The study was conducted from May to June 2025 at three stations with different characteristics, namely the hatchery, tourism, and harbor areas. Sampling was carried out using a purposive sampling method with three replications. Analyses were performed on biological, physical, and chemical parameters of the water. Statistical analyses employed Principal Component Analysis (PCA) and the K-Dominance curve. The results showed 20 species of macrozoobenthos from six classes, with Gastropoda being the most dominant group. The diversity index (H') ranged from 0.9 to 1.8 (moderate), evenness index (E') ranged from 0.6 to 0.9 (high), and dominance index (C) ranged from 0.2 to 0.5 (low). The K-Dominance curve indicated that the waters were moderately disturbed. Anthropogenic activities such as tourism, hatchery operations, harbor activities, and domestic waste were suspected to be the main causes of water quality degradation. Overall, the waters of Cemara Beach were classified as moderately polluted but still capable of supporting benthic life.

Keywords: Cemara Beach, Macrozoobenthos, Pollution, Water Quality