

Analisis Kondisi Tutupan, Bentuk Koloni, dan Kesehatan Terumbu Karang dengan Metode Underwater Photo Transect (UPT) di Pulau Pramuka, Kepulauan Seribu = Analysis Condition of Coral Cover, Lifeform, and Coral Health using Underwater Photo Transect (UPT) Method in Pramuka Island, Seribu Island

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Abstrak

Keberadaan ekosistem terumbu karang berperan penting secara ekologis karena menjadi sumber kehidupan bagi berbagai biota laut. Penurunan kualitas ekosistem terumbu karang di Indonesia, disebabkan oleh aktivitas manusia dan pengaruh alam. Penelitian dilakukan di empat stasiun Pulau Pramuka, Kepulauan Seribu (Utara, Timur, Selatan, dan Barat). Penelitian ini bertujuan untuk menganalisis kondisi kesehatan terumbu karang dengan mengetahui persentase tutupan dan warna terumbu karang, mengidentifikasi bentuk koloni terumbu karang, serta menganalisis dominansi, keanekaragaman dan keseragaman karang. Metode yang digunakan yaitu metode Underwater Photo Transect (UPT) dan dianalisis menggunakan software CPCe (Coral Point Count with Excel extension), lalu metode CoralWatch (CW) dengan Coral Health Chart, serta perhitungan indeks dominansi (Simpson), keanekaragaman (Shannon-Wiener), dan keseragaman (E). Analisis CPCe menunjukkan bahwa tutupan persentase terumbu karang berada pada kategori sedang (30,87-42,20%). Analisis CoralWatch menunjukkan Stasiun 1, 2, dan 4 mayoritas terumbu karangnya mengalami stres dengan persentase karang sehat masing-masing sebesar 29,36%, 9,23%, dan 15,22%, sedangkan Stasiun 3 memiliki proporsi karang sehat lebih tinggi (35.65%). Ditemukan 10 bentuk koloni karang, Coral Massive mendominasi di Stasiun 1 (50), Stasiun 2 (69), dan Stasiun 3 (19). Stasiun 4 di dominasi oleh Coral Foliose (34). Hasil analisis indeks biodiversitas terumbu karang berada pada kategori dominansi rendah (0,25), keanekaragaman sedang (2,47), dan keseragaman rendah (0,36).

.....The existence of coral reef ecosystems plays an important role ecologically because it is a source of life for various marine biota. The quality of coral reef ecosystems in Indonesia can decline, due to human activities and natural influences. The research was conducted at four stations on Pramuka Island, Seribu Islands (North, East, South and West). This research aims to analyze the health condition of coral reefs by knowing the percentage of coral cover and color, identifying the shape of coral reef lifeform, and analyzing coral dominance, diversity and uniformity. The method used is method Underwater Photo Transect (UPT) and analyzed using CPCe software (Coral Point Count with Excel extension), method CoralWatch (CW) with Coral Health Chart, as well as calculation of dominance (Simpson), diversity (Shannon-Wiener) and uniformity (E) indices. CPCe analysis shows that the percentage cover of coral reefs is in the medium category (30.87-42.20%). CoralWatch analysis shows that Stations 1, 2, and 4 have the majority of coral reefs experiencing stress with healthy coral percentages of 29.36%, 9.23%, and 15.22%, respectively, while Station 3 has a higher proportion of healthy corals (35.65%). About 10 lifeform were found, Coral Massive are dominating at Station 1 (50), Station 2 (69), and Station 3 (19). Station 4 is dominated by Coral Foliose (34). The results of the coral reef biodiversity index analysis are in the categories of low dominance (0,25), medium diversity (2.47), and low uniformity (0.36).