

Pemetaan Aktivitas Masyarakat dan Dampaknya Terhadap Faktor Biotik Dan Abiotik di Kawasan Cagar Alam Pulau Sempu

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Intisari

Cagar Alam Pulau Sempu (CAPS) merupakan salah satu kawasan suaka alam yang memiliki kekhasan tumbuhan, satwa, dan ekosistem yang perlu dilindungi agar perkembangannya berlangsung secara alami. Letak cagar alam yang berdekatan dengan wisata pantai Sendangbiru menyebabkan masyarakat dapat masuk dengan mudah dan melakukan aktivitas di dalam kawasan cagar alam. Penelitian ini bertujuan untuk mengetahui karakteristik aktivitas masyarakat, pola persebaran aktivitas masyarakat, dan dampak yang ditimbulkan oleh aktivitas masyarakat terhadap faktor biotik dan abiotik di kawasan CAPS.

Identifikasi karakteristik aktivitas masyarakat dilakukan dengan wawancara kepada responden yang ditentukan secara *accidental sampling* selama 2 minggu dari pukul 06.00-17.00 WIB. Pemetaan lokasi aktivitas masyarakat dilakukan di Pantai Waru-waruu, Teluk Semut, dan Laguna Segara Anakan dengan menggunakan GPS. Data hasil wawancara dilakukan analisis komparatif dan deskriptif, sedangkan data sebaran aktivitas masyarakat diolah dengan bantuan *software Arc GIS 10.3*. Dampak aktivitas masyarakat terhadap aspek biotik meliputi dampak terhadap keanekaragaman jenis vegetasi dan burung. Dampak aktivitas masyarakat terhadap vegetasi dan burung diukur dengan Indeks Diversitas Shannon-Wiener yang kemudian dilakukan analisis komparatif, pengklasifikasian status perlindungan spesies vegetasi dan burung, dan analisis deskriptif. Selain itu, dampak terhadap aspek abiotik berupa timbunan sampah yang dianalisis dengan menghitung volume dan berat timbunan sampah.

Hasil penelitian menunjukkan bahwa dari 225 responden yang dijumpai terdapat 12 jenis aktivitas yang dilakukan di CAPS, yang dibagi menjadi aktivitas wisata dan aktivitas non wisata. Aktivitas wisata yang dominan adalah berfoto dan bersantai di pantai, sedangkan aktivitas non wisata yang dominan adalah masyarakat yang bersiap melaut (melaut). Pola persebaran aktivitas di cagar alam secara mengelompok didominasi di Pantai Waru-waruu dengan akses yang paling sering dilalui oleh pengunjung yakni melalui pintu masuk wisata Sendangbiru. Aktivitas pengunjung yang menginjak-injak semai dan tumbuhan bawah menimbulkan dampak langsung pada keanekaragaman dan pemerataan vegetasi pada tingkat semai dan tumbuhan bawah yang selanjutnya berdampak secara tidak langsung terhadap keanekaragaman dan pemerataan burung. Selain itu, aktivitas pengunjung juga berdampak terhadap faktor abiotik dimana jumlah pengunjung berbanding lurus dengan jumlah berat timbunan sampah yang ditemukan. Hasil penelitian ini mengindikasikan bahwa adanya aktivitas di kawasan CAPS telah menimbulkan dampak terhadap faktor biotik dan abiotik kawasan. Apabila kondisi ini tidak dikendalikan, maka akan berdampak lebih serius terhadap kelestarian kawasan CAPS.

Kata kunci: CA Pulau Sempu, Pemetaan, Aktivitas Masyarakat, Dampak Biotik, Dampak Abiotik.

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Mapping of Community Activities and Their Impact on Biotic and Abiotic Factors in Sempu Island Nature Reserve

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Abstract

Sempu Island Nature Reserve (CAPS) is a nature reserve area which has characteristics of plants, animals, and ecosystems that need to be protected so their development takes place naturally. The location of the nature reserve which is close to the Sendang Biru beach causes people to easily enter and carry out activities in the nature reserve area. This research aims to investigate the characteristics of community activities, the pattern of distribution of community activities, and the impact of community activities on biotic and abiotic factors in the CAPS area.

Identification of the characteristics of community activities was carried out by interviewing respondents who were determined by accidental sampling for 2 weeks from 06.00-17.00 WIB. Mapping of the location of community activities was carried out at Waru-warung Beach, Semut Bay and Segara Anakan Lagoon by using GPS. The data from the interviews were analyzed using comparative and descriptive analyzes, while the data on the distribution of community activities were processed with the help of Arc GIS 10.3 software. The impacts of community activities on biotic aspects were on the diversity of vegetation and bird species. The impact of community activities on vegetation and birds was measured by the Shannon-Wiener Diversity Index, which was then carried out by comparative analysis, classification of the protection status of vegetation and bird species, and descriptive analysis. In addition, the impact on the abiotic aspect in the form of waste generation is analyzed by calculating the volume and weight of waste generation.

The results showed that from 225 respondents found there were 12 types of activities carried out at CAPS, which were divided into tourist activities and non-tourism activities. The dominant tourist activities were taking pictures and relaxing on the beach, while the dominant non-tourism activities were preparing to go to sea (sailing). The pattern of distribution of activities in the nature reserve as a group was dominated at Waru-warung Beach with the most frequent access by visitors through the entrance of Sendang Biru beach. The activity of visitors trampling on seedlings and understory had a direct impact on the diversity and evenness of vegetation at the seedling and understory level which in turn had an indirect impact on the diversity and evenness of birds. In addition, visitor activity also had an impact on abiotic factors where the number of visitors is directly proportional to the weight of the waste generation found. The results of this study indicated that the activity in the CAPS area has had an impact on biotic and abiotic factors in the area. If this condition is not controlled, it will have a more serious impact on the preservation of the CAPS area.

Keywords: Sempu Island Nature Reserve, Mapping, Community Activities, Biotic Impact, Abiotic Impact.

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