



## Intisari

### Kelimpahan dan Pola Distribusi *Sargassum* di Pulau Kemujan Kabupaten Jepara Jawa Tengah

*Sargassum* merupakan makroalga yang banyak ditemui di perairan Indonesia seperti Pulau Kemujan Kabupaten Jepara Jawa Tengah. Daerah subtidal Pulau Kemujan memiliki substrat batuan dan karang sehingga *holdfast Sargassum* dapat menempel dengan erat. Penelitian ini bertujuan untuk mengetahui kelimpahan dan persentase tutupan serta pola distribusi dan hubungannya dengan kualitas air di Pulau Kemujan. Penelitian dilakukan di Pantai Ambar, Pantai Batulawang, dan Pantai Barakuda pada Oktober 2025. Metode sampling yang digunakan pada penelitian ini adalah metode transek kuadran, sedangkan analisis data dilakukan dengan ANOVA satu arah. Nilai persentase tutupan menunjukkan variasi tidak signifikan ( $p > 0,05$ ) sedangkan nilai kelimpahan menunjukkan hasil signifikan ( $p < 0,05$ ). Nilai rata-rata persentase tutupan dan kelimpahan *Sargassum* di Pulau Kemujan yang diperoleh secara berturut-turut adalah 31,41% dan 33,93 ind/m<sup>2</sup>. Berdasarkan jaraknya, persentase tutupan menunjukkan variasi yang tidak signifikan ( $p > 0,05$ ) sedangkan kelimpahan menunjukkan variasi yang signifikan ( $p < 0,05$ ). Nilai persentase tutupan dan kelimpahan tertinggi berada pada jarak 170 m dari garis pantai dengan rata-rata 34,22% dan 42,67 ind/m<sup>2</sup>. Kualitas air di Pulau Kemujan menunjukkan dinamika, dengan kisaran suhu 24,95–26,22°C, salinitas berada di rentang 33,06–34,28 ppt, pH berada di rentang 7,13–7,26, fosfat berada di rentang 0,17–0,19 mg/L, dan nitrat  $< 0,05$  mg/L. Nilai persentase tutupan dan kelimpahan berkorelasi positif dengan suhu, salinitas, dan pH serta berkorelasi negatif dengan fosfat.

Kata kunci: kelimpahan, persentase tutupan, pola distribusi, makroalga, alga cokelat



### *Abstract*

#### Abundance and Distribution Pattern of *Sargassum* on Kemujan Island Jepara Regency Central Java

*Sargassum* is a macroalga commonly found in Indonesian waters, such as those around Kemujan Island in Jepara Regency, Central Java. The subtidal zone of Kemujan Island consists of rocky and coral substrates, allowing *Sargassum* holdfasts to attach firmly. This study aims to determine the abundance and coverage percentage, as well as the distribution patterns and their relationship with water quality on Kemujan Island. The research was conducted at Ambar Beach, Batulawang Beach, and Barakuda Beach in October 2025. The sampling method used in this study was the quadrant transect method, while data analysis was performed using one-way ANOVA. Coverage percentage values showed no significant variation ( $p > 0.05$ ), while abundance values showed significant results ( $p < 0.05$ ). The average values of *Sargassum* coverage percentage and abundance on Kemujan Island, obtained in sequence, were 31.41% and 33.93 ind/m<sup>2</sup>. Based on distance, the percentage of coverage showed no significant variation ( $p > 0.05$ ), whereas abundance showed significant variation ( $p < 0.05$ ). The highest values for percentage of coverage and abundance were found at a distance of 170 m from the shoreline, with averages of 34.22% and 42.67 ind/m<sup>2</sup>. Water quality on Kemujan Island exhibited dynamic variations, with a temperature range of 24.95–26.22°C, salinity ranging from 33.06–34.28 ppt, pH ranging from 7.13–7.26, phosphate ranging from 0.17–0.19 mg/L, and nitrate <0.05 mg/L. Coverage percentage and abundance values were positively correlated with temperature, salinity, and pH, and negatively correlated with phosphate.

**Keywords:** abundance, coverage percentage, distribution pattern, macroalgae, brown algae