

ABSTRAK

PERTUMBUHAN LAMUN *Enhalus acoroides* YANG DI TRANSPLANTASI DENGAN METODE *SPRIG ANCHOR* PADA PERAIRAN PANTAI PULAU PAHAWANG, KABUPATEN PESAWARAN, LAMPUNG

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Perairan Pulau Pahawang merupakan salah satu destinasi wisata di Provinsi Lampung yang memiliki ekosistem lamun dengan keadaan yang terus menurun seiring meningkatnya aktivitas manusia. Oleh karena itu, perlu dilakukan upaya restorasi kondisi ekosistem lamun, salah satu cara merestorasinya dengan melakukan transplantasi lamun menggunakan metode *sprig anchor*. Penelitian ini bertujuan menganalisis tingkat kelangsungan hidup dan laju pertumbuhan lamun serta mengkaji keefektifan transplantasi lamun menggunakan metode *sprig anchor* terhadap lamun *Enhalus acoroides* di perairan Pulau Pahawang menggunakan analisis statistika uji *Friedman* dan uji *Multiple Comparisons Between Group or Conditions*. Penelitian ini dilakukan setiap 2 minggu sekali selama 16 minggu, dilaksanakan pada bulan November 2023 s.d. Maret 2024, pada Stasiun 1 merupakan daerah pemukiman, Stasiun 2 pariwisata, Stasiun 3 mangrove yang dipilih berdasarkan tingkat kerusakan ekosistem lamun. Hasil penelitian menunjukkan tingkat kelangsungan hidup lamun sebesar 60% (Stasiun 1), 78% (Stasiun 2), 56% (Stasiun 3) dan laju pertumbuhan lamun 0,120 cm/h (Stasiun 1), 0,123 cm/h (Stasiun 2), 0,118 cm/h (Stasiun 3). Nilai rata-rata parameter fisika kimia perairan masih dalam kisaran nilai parameter lingkungan perairan laut mendukung pertumbuhan lamun *Enhalus acoroides*, antara lain suhu sebesar 28°C, kecerahan sebesar 54 cm, kedalaman sebesar 54 cm, kecepatan arus sebesar 0,32 m/s, salinitas sebesar 30‰ dan pH perairan sebesar 7,42, oksigen terlarut sebesar 5,96 mg/L, nitrat sebesar 2,99 mg/L, fosfat sebesar 0,27 mg/L, sedimen dasar pada stasiun 1 dan 2 pasir berlempung, dan stasiun 3 lempung berpasir. Kesimpulan dari penelitian ini yaitu terdapat perbedaan pada tingkat kelangsungan hidup dan laju pertumbuhan lamun yang disebabkan oleh perbedaan substrat pada tiap stasiun, serta transplantasi lamun menggunakan *sprig anchor* tergolong efektif.

Kata kunci: restorasi, kualitas air, lamun, *sprig anchor*, Pulau Pahawang

ABSTRACT

GROWTH OF SEAGRASS *Enhalus acoroides* TRANSPLANTED USING THE SPRIG ANCHOR METHOD IN THE COASTAL WATERS OF PAHAWANG ISLAND, PESAWARAN REGENCY, LAMPUNG

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Pahawang Island is one of the tourist destinations in Lampung Province that had a seagrass ecosystem, which had been deteriorating due to increasing human activity. Therefore, restoration efforts for the seagrass ecosystem were necessary, and one way to restore it was through seagrass transplantation using the sprig anchor method. This study aimed to analyze the survival rate and growth rate of seagrass and evaluate the effectiveness of seagrass transplantation using the *sprig anchor* method for *Enhalus acoroides* in the waters of Pahawang Island, using *Friedman* statistical analysis and the Multiple Comparisons Between Groups or Conditions test. The study was conducted every two weeks over a 16-week period, from November 2023 to March 2024, at Station 1 (a residential area), Station 2 (tourism area), and Station 3 (mangrove area), which were selected based on the level of seagrass ecosystem degradation. The results showed that the survival rate of seagrass was 60% (Station 1), 78% (Station 2), and 56% (Station 3), while the growth rate was 0.120 cm/h (Station 1), 0.123 cm/h (Station 2), and 0.118 cm/h (Station 3). The average values of the water quality parameters were still within the range of values that supported the growth of *Enhalus acoroides*, including a temperature of 28°C, transparency of 54 cm, depth of 54 cm, current velocity of 0.32 m/s, salinity of 30‰, pH of 7.42, dissolved oxygen of 5.96 mg/L, nitrate of 2.99 mg/L, phosphate of 0.27 mg/L, with sediment types of silty sand at Stations 1 and 2, and sandy clay at Station 3. The conclusion of this study was that there were differences in the survival rate and growth rate of seagrass, which were caused by the differences in substrate at each station. Furthermore, the seagrass transplantation using the sprig anchor method was considered effective.

Keywords: restoration, water quality, seagrass, sprig anchor, Pahawang Island