

BAB 5

KESIMPULAN DAN SARAN

Berdasarkan hasil penelitian Mengenai Struktur Komunitas Ikan Karang Di Daerah Transplantasi Terumbu Karang Pulau Pagang dan analisis data yang telah dilakukan, maka dapat ditarik kesimpulan dan saran sebagai berikut.

5.1 Kesimpulan

1. Struktur komunitas ikan karang pada area transplantasi menunjukkan kondisi yang lebih baik dibandingkan dengan area alami (kontrol). Hal ini ditunjukkan oleh jumlah spesies yang lebih tinggi (13 spesies), kelimpahan individu yang lebih besar (92 individu), serta nilai indeks keanekaragaman (H') sebesar 2,414 (kategori sedang). Selain itu, nilai indeks kemerataan (E) sebesar 0,941 mengindikasikan komunitas yang relatif stabil, serta nilai dominansi (C) sebesar 0,102 menunjukkan tidak adanya spesies yang mendominasi.
2. Pada area alami (kontrol), ditemukan hanya 7 spesies dengan total 48 individu. Nilai H' sebesar 1,858 (kategori sedang), indeks kemerataan (E) sebesar 0,955 (kategori stabil), dan indeks dominansi (C) sebesar 0,169 (tidak ada dominansi), yang mencerminkan komunitas ikan karang dengan keanekaragaman lebih rendah dan kestabilan ekosistem yang lebih lemah dibandingkan area transplantasi.
3. Perbandingan antara area transplantasi dan alami menunjukkan bahwa transplantasi terumbu karang berkontribusi positif terhadap pemulihan ekosistem. Kehadiran famili bioindikator (*Chaetodontidae*), herbivora (*Acanthuridae*, *Siganidae*), dan karnivora (*Haemulidae*) di area transplantasi menjadi bukti bahwa ekosistem hasil transplantasi mampu mendukung kehidupan ikan karang secara lebih beragam dan seimbang.

Dengan demikian, transplantasi terumbu karang di Pulau Pagang terbukti efektif dalam meningkatkan keanekaragaman, kemerataan, dan kestabilan komunitas ikan karang, sekaligus mengurangi dominansi spesies tertentu. Hal ini menunjukkan bahwa program transplantasi memiliki peran strategis dalam

mendukung keberlanjutan ekosistem terumbu karang dan pengelolaan sumber daya perikanan berbasis konservasi.

5.2 Saran

1. Bagi Pengelola dan Praktisi Konservasi: Mengingat keberhasilan metode ini, disarankan kepada Yayasan Terumbu Karang Sumatera Barat dan pihak terkait untuk melanjutkan dan memperluas program transplantasi terumbu karang ke titik-titik lain di perairan Pulau Pagang yang teridentifikasi mengalami degradasi.
2. Bagi Pemerintah dan Masyarakat Lokal: Perlu adanya dukungan kebijakan dari pemerintah daerah untuk menetapkan area transplantasi sebagai zona perlindungan terbatas guna mencegah kerusakan akibat aktivitas pariwisata, seperti lego jangkar. Sosialisasi kepada masyarakat dan pelaku wisata mengenai pentingnya area restorasi ini juga perlu ditingkatkan untuk menumbuhkan kesadaran dan partisipasi dalam menjaga kelestariannya.
3. Bagi Penelitian Selanjutnya: Disarankan untuk melakukan penelitian lanjutan yang bersifat jangka panjang (monitoring berkala) untuk mengamati laju pertumbuhan karang dan hubungannya dengan peningkatan biomassa ikan. Selain itu, penelitian mengenai peran area transplantasi sebagai daerah asuhan (*nursery ground*) bagi juvenil ikan, terutama yang bernilai ekonomis, dapat memberikan gambaran yang lebih komprehensif mengenai keberhasilan pemulihan fungsi ekosistem secara menyeluruh.

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