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Marine Learning Center dengan Pendekatan Regenerative Design di Pulau Parang, Karimunjawa
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ABSTRAK

Pulau Parang sebagai bagian dari kawasan Taman Nasional Karimunjawa memiliki potensi ekosistem laut yang tinggi, khususnya pada wilayah barat yang didominasi ekosistem terumbu karang dan aktivitas perikanan masyarakat. Namun, tekanan lingkungan akibat penangkapan ikan, serta keterbatasan fasilitas edukasi dan riset kelautan menyebabkan perlunya pendekatan yang tidak hanya berorientasi konservasi, tetapi juga regenerasi. Perancangan *Marine Learning Center* di Pulau Parang mengusung konsep *Self Healing Marine System*, yaitu pendekatan arsitektur regeneratif yang memperkuat kemampuan alami ekosistem laut untuk memulihkan dan menyeimbangkan dirinya melalui intervensi berbasis edukasi, riset, dan partisipasi masyarakat.

Metode perancangan menggunakan prinsip *regenerative design* dengan pendekatan *place and potential*, *partnering with place*, *progressive harmonization*, dan *regenerative capacity* guna menciptakan hubungan timbal balik antara manusia dan lingkungan laut. Fasilitas yang dirancang meliputi ruang pameran interaktif, laboratorium riset, area rehabilitasi terumbu karang, dek observasi, serta ruang edukasi berbasis komunitas. Diharapkan *Marine Learning Center* ini mampu menjadi katalis penguatan kapasitas ekologis dan sosial masyarakat pesisir, serta mendukung transformasi ekonomi biru menuju visi Indonesia Emas 2045.

Kata kunci : *Marine Learning Center*; *Self Healing Marine System*; Arsitektur Regeneratif; Ekosistem Laut; Pulau Parang; Ekonomi Biru

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ABSTRACT

Parang Island, part of Karimunjawa National Park, possesses significant marine ecosystem potential, particularly in its western area which is dominated by coral reef ecosystems and local fisheries activities. However, environmental pressures from fishing practices, and the limited availability of marine education and research facilities highlight the need for an approach that goes beyond conservation toward regeneration. The proposed Marine Learning Center in Parang Island adopts the Self Healing Marine System concept, a regenerative architectural approach that strengthens the natural capacity of marine ecosystems to recover and rebalance through education-based, research-driven, and community-participatory interventions.

The design method applies regenerative design principles through place and potential, partnering with place, progressive harmonization, and regenerative capacity approaches to establish a mutually beneficial relationship between humans and the marine environment. The proposed facilities include interactive exhibition spaces, research laboratories, coral rehabilitation areas, observation decks, and community-based educational spaces. This Marine Learning Center is expected to function as a catalyst for strengthening ecological and social capacities of coastal communities while supporting the blue economy transformation toward Indonesia Emas 2045 vision.

Key words : Marine Learning Center; Regenerative Design; Self Healing Marine System; Marine Ecosystem; Blue Economy