

DISPERSAL PATTERN OF CORAL LARVAE FOR SUSTAINABLE ECOSYSTEM MANAGEMENT IN KUANTAN COASTAL REGION

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ABSTRACT

Understanding the source and sink pattern of coral larvae among the key elements in designing effective marine protected area for sustainable ecosystem management. This study examined the dispersal pattern of coral larvae among three known inshore reefs (Pulau Ular, Balok Reef and Raja Muda reef) in Kuantan coastal region by simulating virtual larvae trajectories during spawning event in 2018. Pulau Ular has high larvae retention (70%) in which most of the larvae originated from the natal reef. Balok reef was the dominant source of larvae for Raja Muda reef. Results also indicated that patches reefs near Raja Muda was ideal sink site for coral larvae and should be prioritized for future ecosystem management action.

Keywords: Coral larvae dispersal, Source-sink dynamic, Ecosystem management

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