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Evaluation of the effectiveness of mangrove rehabilitation sites using commercial and non-commercially important crab species

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Statement of the Problem: Mangrove rehabilitation projects in the Philippines serve as coastal protection and restore ecological functions. Thus mangrove planting activities of mono- genus stands in the tropical cyclone prone area are increasing, however, this may not warranty as formerly diverse mangrove forests. Considering the vast ecological services the mangrove forest that has to offer, few studies were conducted on the effectivity of mangrove rehabilitated sites using indicator species. The abundance of commercially important blue swimming crab, *Portunus pelagicus* was used as an indicator of ecological function of mangrove rehabilitated site. To represent the non-commercially important species, the relative abundance of *Thallamita crenata* was used as in the present study.

Methodology & Theoretical Orientation: This study was conducted along the coastal areas of Olango Island and Banacon Island, part of central Visayas. Total of four sites (two sites in each island) were selected to represent the rehabilitated sites in Olango Island and Banacon Island. These sites were predominantly mangrove replanted of *Rhizophora* spp. Catch per unit effort (CPUE) was used to estimate the abundance and relative abundance gathered from the traditional crab pot used by the locals to catch crabs. The soft substrata in the mangroves serve as ideal habitat and spaces between its roots supports as shelter and food for crabs, prawns and fishes.

Findings: The mangrove rehabilitated site in Banacon Island showed a higher abundance of *P. pelagicus* as compared to Olango Island. The relative abundance of this commercially important species revealed to be equal in both Olango and Banacon. Low densities of *P. pelagicus* were also showed in both mangrove rehabilitated sites due to limited recruitment and higher abundance of non-commercially important species.

Conclusion & Significance: The present study suggests mono-genus planting is still an effective method of restoring commercially important species such as the blue swimming crab *P. pelagicus*. This will provide baseline information to policy makers for sustainable mangrove ecosystem management.

Biography

Jean R Calapuan completed her Bachelor's degree in Zamboanga State College of Marine Sciences and Technology in Marine Biology majoring in Phycology. She worked as a Research Assistant at Department of Environment and Natural Resources (DENR) R9, Philippines. She also became Research Assistant in different projects while studying in University of the Philippines, Visayas until she became a Graduate Scholar of Department of Science and Technology-Accelerated Science and Technology, Human Resources Department Program (DOST-ASTHRDP). She finished her Master of Science in Fisheries majoring in Fisheries Biology in last June 11, 2014 at the University of the Philippines - Visayas. She is currently working as a Junior Project Coordinator in Corporate Social Responsibility (CSR) Department in Japanese Company. She is also a part-time Dive Instructor and Research Consultant. She took opportunity to travel in different places while successfully attending and presenting research papers. Currently, she's doing mangrove rehabilitation projects in partnership with local government units in Central Visayas.

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