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Sea cucumber ranching program for sustainable aquaculture and community welfare

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Tropical sea cucumber *Holothuria scabra*, commonly known as sandfish has a high market demand for their high protein and bioactive substances which exhibit the antibacterial, antifungal and anticancer properties. The increasing demand however, has led to the over-fishing of this species and sandfish has also been listed as endangered species by the International Union for Conservation of Nature and Natural Resources (IUCN). Sandfish is one of the most widely cultured sea cucumber species in the Indo Pacific regions. Unfortunately, most of the sandfish farmer relies almost entirely on the wild seeds. For sustainable aquaculture, seed production at the hatchery is necessary to ensure a continuous supply of seeds for farming as well as for wild stock restoration. This program that involved environmental survey, breeding and ranching were initiated through the organizational structure of the local community in the northern tip of Borneo. A series of training workshop on the seed production technique via artificial spawning was conducted to teach farmers and fishermen of both genders from all over the state of Sabah. A simple but practical ocean hatchery powered by solar energy was built on the water at the farming site to ease the release of the hatchery produced juvenile directly into the sea. For the sustainability of the program, the facilities established were maintained by the committed community members with continuous expert support from the institution and other government agencies. This project requires a cooperative effort for a long-term program for community welfare.

Biography

Sitti Raehanah Muhamad Shaleh has completed her PhD at the age of 34 years from the Universiti Putra Malaysia and postdoctoral studies from Scripps Institution of Oceanography, UCSD, La Jolla California USA. She is the deputy director for research and innovation at the Borneo Marine Research Institute, a center of excellence in Universiti Malaysia Sabah. He has published more than 35 papers in reputed journals in aquaculture field and microalgae study. She also conducted research on the impact of harmful algal blooms on the aquaculture industry. Apart from doing research, she also supervises postgraduate students and teaches undergraduate subjects such as seaweed farming, fish handling and processing etc.

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