

# Lessons Learned from Coral Transplantation Techniques in Krabi Province, the Andaman Sea

Thamasak Yeemin<sup>1</sup>, Rattika Pettongma<sup>1</sup>

<sup>1</sup>*Department of Biology, Faculty of Science, Ramkhamhaeng University, Huamark, Bangkok 10240, THAILAND*

Correspondence: thamasakyeemin@yahoo.com

The coral reef surveys in Krabi Province revealed that there were a large amount of coral fragments in shallow areas heavily visited by tourists. Although corals can reproduce asexually, tiny coral fragments, or those scattered along the seafloor, were easily transported by currents and may not survive. Since 2004, a study on the development of proper rehabilitation techniques has been conducted in Krabi Province. Natural coral fragments found in the area, particularly those found along the sandy bottom, were used in the rehabilitation process, which included a combination of reattaching coral fragments to clusters of small cement blocks as well as increasing larval settlement surface. The growth and survival monitoring surveys revealed that 71% of the coral fragments, which were attached to cement blocks, were able to survive. These data were used in the decision-making process regarding the rehabilitation of coral reefs, which were destroyed by the tsunami of 2004. Rehabilitation of damaged *Acropora* spp. was conducted after the tsunami. It was observed that broken fragments of elkhorn corals were found scattered on the seafloor. Some were buried underneath the sand and had low survival rate. To aid recovery, these fragments were artificially attached to dead branching corals by means of plastic straps. A total of 335 fragmented coral pieces were reattached and were monitored for survival and growth. After a 1 year monitoring program, it was revealed that most of the reattached branches were able to survive and grow (64%). The present study provides basic information for further development of coral transplantation techniques and their application.

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