



SDG REPORT

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Not only about Restoration: Blue Swimming Crab Project Striving for BCG Economic Model-based Development

Walailak University Lecturer and Director of Walailak University Blue Crab Bank project presents the project's success scheme, as a model research project, under the title "Creating the Blue Crab Bank Network for BCG Economic Model-based development" in a national research congress, the NRCT Open House 2021. The project has expanded its impact scope from biological resource restoration to tourism and other aspects capitalizing on the cultural uniqueness of Nakhon Si Thammarat and all is to empower economic progress using innovations and technologies as proposed by the BCG Economic Model. It was spearheaded by Asst. Prof. Dr. Amonsak Sawusdee, Director of Blue Crab Bank Project with the mission to restore blue crab resources in coastal fishery communities of Nakhon Si Thammarat and Surat Thani. Testifying its success, the project had earlier earned several national recognitions – Excellence Award for Learning Center of the Blue Crab Bank project, Excellence Award in Thailand Research Expo, and recently Excellence Award in Economic Agritech – from Agritech and Innovation Center Nakhon Si Thammarat, and later nationally across the Agritech category.

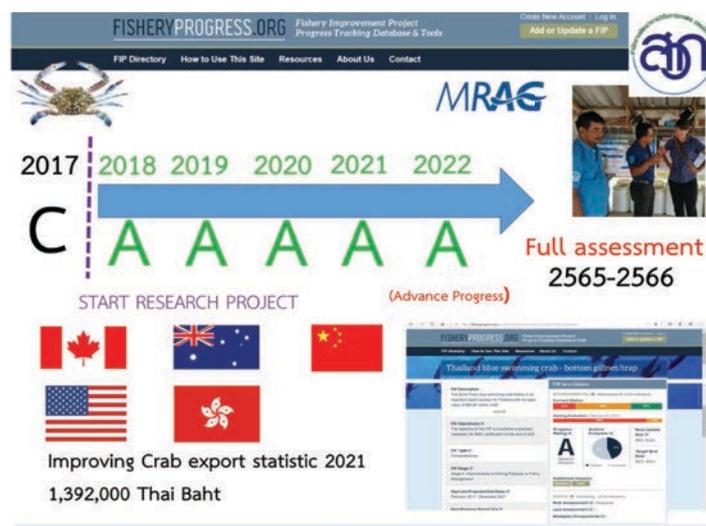
Among the 12 institutes implementing the project, Walailak University has operated large-scaled producing the outcome in line with several global indicators i.e., the United Nation's SDGs (Goal 14: Life below water) and BCG Economic Model. In order to be recognized as a model project by the NRCT, two major criteria must 1) generate tangible impacts on the economy, society, and environment and 2) prioritize outcome – practical application of the project – rather than the outputs measured by prescribed key indicators. As for the economic flow, the Blue Crab project succeeded in multiplying blue crab resources, 10-15 kilograms caught in one day, in the addressed maritime zones in Nakhon Si Thammarat and Surat Thani. There was also the conception of Saving cooperatives as well as new jobs being created to meet unprecedented labor demands, particularly shelling crabs.



Also, local fishery communities were educated about sabotaging behaviors and saving crabs with fertilized eggs. Over the period, locals could associate the promising outcomes with approaches and take actions themselves as proved by the local-preserved areas, 300 -500 meters from the shore, as aquatic nurseries. As for the environment, aquatic nurseries have become a self-owned measure practiced by locals when were then announced Fishery Refugia by the Department of Fisheries. All in all, what matters the most is that the fishery community has learned to conduct responsible fishery translated into the Fishery Improvement Project (FIP) score.

Thailand was leveled as a C in 2017. With the project being conducted, the scale rose to A in from 2018 to 2022. This improvement earns and sustains the country's seafood export on a global scale because, nowadays, more and more international buyers pay attention to the FIP score.

National Research Council of Thailand (NRCT) organizes the Open house as a platform for recognized researchers to share success stories on studies on economic animals in Thailand. The presentation of success stories is aimed to disseminate the results of research and innovations in knowledge management, research and transfer for utilization, and the utilization of 4D Key measures including stability in the social community, Developing a self-reliant community according to the royal initiative, and public policy Including the creation of professional researchers who can create a body of knowledge and produce high-quality work at an international level, as well as support the expansion of high-performing research networks.





Cleaning and Restoring Coral Reef Ecosystem

Marine is the world's largest ecosystem with abundant terrestrial and aquatic ecosystems. Coral is an integral part of the Marine ecosystem because it serves as a home for living things, and it is a diverse food chain. As fishing and tourism activities generally disturb the coral ecosystem, the Center for Scientific and Technological Equipment Walailak University has cooperated with several partners to generate worthwhile projects. Those supportive partners included the National Marine Interest Center (SRC) Division 2, the Diver team from Marine Rangers, the Marine Protection Team Nakhon Si Thammarat Province, Laytrang Diving, Lotus Diving, Phangan Sea Guardian, Marine and Coastal Resources Conservation Division 5, Marine and Coastal Resources Research and Development Center, Lower Gulf of Thailand and PTT Exploration and Production Public Company Limited. Collaboratively, the vast network generated an ambitious project to restore marine ecosystems and pristine coral reefs at Koh Kra, Pak Phanang District, Nakhon Si Thammarat Province. A total of 12 divers and two security guards as a team traveled together in HTMS Ravi ship, a submarine base ship, to recover fishing nets and repair damaged coral reefs around Kra Island. As the marine ecosystem is important not only to biodiversity aspects but also to food security, Walailak University by the School of Science has an annual plan to recover and clean vulnerable habitats in order to increase the complexity of the marine ecosystem.



Building Fish uses for Improving Ecological Complexity and Sustaining Food Security



The Center for Academic Services, Walailak University, annually runs an artificial fish habitat project. In 2021, it partnered with the Department of Fisheries and the Department of Marine and Coastal Resources. The project areas cover Tha Sala District, Hua Sai District, Nakhon Si Thammarat Province, and Tha Chana District, Surat Thani areas, which are the public areas. Artificial fish habitat is the activities to build a fish house and improve indigenous knowledge to serve as fish nurseries and habitats, maintain and extend biodiversity and food chain, especially in the coastal ecosystem.

The idea behind building the fish house is to provide habitats for the fish. The constructed materials, such as coconut huts, bamboo, and coconut leaves, were natural. From the survey, there are a large number of small fish living in the constructed fish house. Therefore, the fishermen believed that artificial fish houses could improve abundance and biodiversity, which benefits local fishermen. The process of building the fish house is to pitch the bamboo on the ground at sea with the fisherman's hands. Next, use fresh and dry coconut leaves attached to the pavilion. Additionally, fish houses have a little channel for juvenile and baby animals to stay inside to grow up and hide from predators.

