

Participation and Awareness-Building in Mangrove Forest Restoration in Tha Sak Subdistrict, Mueang District, Nakhon Si Thammarat Province

The Marine Science Program of the Faculty of Science, Walailak University, led by Assistant Professor Jantira Rattanarat in collaboration with the students of the Marine Conservation Club, has initiated a significant project to restore and conserve the mangrove forests in Tambon Thasak, Mueang district, Nakhon Si Thammarat province. This project aims to instill environmental awareness among the youth and promote understanding of the importance of mangrove ecosystems. Researchers have collected data and studied the natural environment, history, and land use in Tambon Thasak to understand the problems such as coastal erosion and mangrove loss that significantly affect the local ecosystem and community.

Tambon Thasak was once affected by severe coastal erosion. Most of the coastal area was used for aquaculture and there were no mangrove forests to act as natural barriers. A 2013 report by the Department of Marine and Coastal Resources shows that Tambon Thasak had one of the highest coastal erosion rates of more than 5 meters per year between 2007 and 2012.

To address this problem, the local community and government authorities worked on a mangrove restoration project. In the first phase, bamboo poles were planted to reduce wave energy and create a basic protective barrier. As sediment accumulated behind the bamboo, the community planted mangrove trees, mainly *Rhizophora apiculata* (commonly known as mangrove), which are well adapted to the local conditions. Planting activities were carried out regularly on special occasions and supported by external organizations.

As a result of these joint efforts, the area of mangrove forest in Tambon Thasak has increased significantly since 2007. The restored mangrove forest has effectively prevented coastal erosion, solving the severe erosion problem that once plagued the area.

In the past, it was mainly the local fishing communities that took care of the protection of marine and coastal resources in Tambon Thasak. These communities showed a strong commitment to conservation, as evidenced by their efforts to establish crab banks, plant bamboo stakes to mitigate wave erosion and reforest mangrove areas.

However, conservation efforts in Tambon Thasak have expanded considerably in recent years. A wider range of community groups have become involved, including the local fishing community, the coastal fishing community in Village 9, the Pak Phaya Community-Based Conservation Tourism Enterprise, the Ban Na Sarn Processing Group and the Park Run Thailand Club. All these groups have contributed to the conservation and restoration of the mangrove ecosystem.

The project has successfully implemented a series of engaging activities aimed at promoting environmental awareness among youth. The program, which primarily targets Grade 6 students at Ban Pak Phaya School (41 students and 11 teachers), was supported by 31 student mentors from the Marine Conservation Club and members of the teaching staff.

A series of activities were carried out to increase understanding of the importance of mangrove ecosystems. These included educational sessions on mangrove ecology, marine pollution, and waste segregation, presented in interactive formats such as games to encourage student engagement and retention. Workshops were also held to promote critical thinking and problem-solving skills.

A highlight of the project was the planting of 1,500 mangrove seedlings in Village 6, which was supported by the Tambon Thasak Administrative Organization and Marine and Coastal Resources Office 5. This activity not only increased the area of the mangrove forest, but also gave the students first-hand experience in conservation. In addition, the release of mud crab larvae in the mud crab bank in Village 6 contributed to the restoration of the mangrove ecosystem.