

# BAN NONG BUA -KHAO SAMPHAO KHUAM

**Ban Nong Bua  
(Khao Samphao  
Khuam):  
A Green Space  
for Sustainable  
Coastal Resource  
Conservation**

## Problems of the Area

Ban Nong Bua has faced severe coastal degradation, with more than 0.5 hectares of mangrove forest degraded due to natural disasters and encroachment. Marine debris from nearby tourist destinations has accumulated extensively, while the seawater is polluted and unsuitable for aquaculture. These conditions reduce the efficiency of blue swimming crab hatcheries and directly affect the coastal ecosystem and local livelihoods

## Participatory Approach

The project was implemented through a participatory approach. University students and faculty collaborated with the community to survey and analyze problems, return the findings, and co-design solutions. These processes were integrated into teaching and research while linking partnerships with government agencies, the private sector, and academic organizations. The outcomes were synthesized and further developed into community-driven innovations.

## Key Activities

Innovations were created by repurposing marine waste. Bamboo tubes collected as marine debris were used as mangrove seedling containers, reducing the use of plastic bags, simplifying planting processes, and increasing seedling survival rates. Plastic bottles from the sea were recycled into walking-path panels to improve public spaces in the community. These activities helped address environmental problems, generated supplementary income, and opened the community as a learning and CSR site that integrates with university teaching, research, and outreach.

## Achieved Results

The project successfully restored an average of 0.16 hectares of mangrove forest per year and released approximately 100 million juvenile crabs into the sea annually. More than 1,000 students and 5,000 external participants joined the activities each year. The community generated an average annual income of 150,000 THB, received over 2 million THB from private sector sponsorship, and secured a five-year development plan worth 24 million THB. Furthermore, the community established self-management systems and developed sustainable local innovations.

## Project Impacts

The initiative has been recognized as the “Samphao Khuam Model”, expanding to networks of coastal communities in 17 provinces along the Gulf of Thailand. It has gained support from government, private, and academic sectors, positioning Ban Nong Bua as a model site for coastal conservation and community-based learning. This achievement reflects the leadership role of Rambhai Barni Rajabhat University in integrating education, research, and academic services to drive sustainable community development.

