

Abstract

The Community-Based Learning Center of Ban Pred Nai is a form of community-based organization that was initiated by the community leaders and members. Its function is to support community knowledge management in order to keep track of the learning about the problems in investigating the underlying causes and identifying innovative options for appropriate and compatible solutions responsive to community's needs.

The Ban Pred Nai Community-Based Learning Center Development Project (2012-2013) is the collaboration between the Good Governance for Social Development and the Environment Institute (GSEI) and its academic institution network with the financial support from the Thai Health Promotion Foundation (ThaiHealth) and the Thailand Research Fund (TRF). The project applies a strategy to integrate scientific knowledge with the local wisdom through knowledge management. It aims to strengthen the community in natural resource and environmental management, particularly on mangrove ecosystem management, coastal erosion and marine resource, and renewable energy.

The project implementation over the past 2 years (2012-2013) has presented the success of Community-Based Learning Center in scientific knowledge and local wisdom integration through the cooperation between the community and the academics. Each party contributes and shares their knowledge to cultivate an innovative concept that is responsive to both academic questions and community solutions to resource and environmental challenges. The integration of academic knowledge to the needs of communities and society is a key towards sustainable resource conservation and utilization. Another factor of success is that Ban Pred Nai community members are highly aware and conscious over the conservation of resource base for common benefits. Thence, this is an important driving force for Pred Nai members to continue searching and developing their knowledge. Many progresses have been made under the activities of the Community-Based Learning Center. The main results in each aspect of the projects are:

1. Community's Renewable Energy: Pred Nai Community has previously received budget support to form its energy committee, campaign for alternative energy source and distribute solar panels among the households. After the initial phase of the previous project implementation, the target on energy transition has not reached the expected outcome. This is because the community members lack knowledge and understanding on energy as well as the relation gap between the government and community. The activities on energy knowledge generation conducted by Ban Pred Nai Community-Based Learning Center Development

Project have presented both theoretical and practical information. The community members who were hesitant to participate in energy-related activities have therefore changed their attitude. Having joined the training and field visit on biogas, solar and wind power, Pred Nai community members have been equipped with knowledge on alternative energy and many relevant technologies. As indicators of success, the community gains more interest in utilizing the resources found within the community as the energy source. A community energy committee and a community energy strategic plan were established. Biogas stoves were produced and distributed to some community members. Ban Pred Nai School has become a pilot center for energy by installing solar panels and producing biogas from food waste.

2. Mangrove Ecosystem Management: Study was conducted on mangrove forest resources in Ban Pred Nai. However, this data was not sufficient for the community to make the decisions on mangrove ecosystem management. Although many government and non-government agencies are interested in this issue and have conducted several researches, no systematic compilation of the studies has been made. As a result, the available data has not contributed to the decisions and planning in mangrove ecosystem management. Ban Pred Nai Community thence formulated a community-based mangrove plan with participatory approach in monitoring the biophysical and environmental changes of its mangrove. Given the collaboration with the community, the taxonomy of mangrove plant genetics and key aquatic species is produced, together with a permanent exhibition of knowledge on mangrove forest resource management at the Ban Pred Nai Community-Based Learning Center.

3. Coastal erosion mitigation and coastal resource management: The community researchers in collaboration with researchers of the project have studied the causes of coastal erosion in Ban Pred Nai Community and identified the community-based solutions. They have evaluated the effectiveness of tyre dice in reducing the tidal energy, increasing sedimentation behind the dice line, and raising the amount of aquatic creatures along the coast. The bamboo stick can be arranged in a combination with tyre dice in the mangrove area to test and seek the methods of improved effectiveness of tyre dice in coastal erosion mitigation.

The activities composed of joint field survey between the project and community researchers, the effectiveness improvement of tyre dice, and knowledge base compilation with the community. The output was produced in a form of community researchers' knowledge base on coastal resource state such as phytoplankton, zooplankton, benthic animals, and other economic aquatic creatures in demonstration area, including the trial on bamboo stick set-up along the tyre dice trail at the mouth of canal 7 and 8.

4. Community-Based Learning Center Management: The operation of Community-Based Learning Center has concrete accomplishments which are the formation of management structure, the creation of community researchers with the understanding and capacities to integrate local wisdom with scientific knowledge. Nonetheless, the limitations exist in terms of budget administration to regularly and sustainably organize its activities, lesson learnt extraction and transfer by the community researchers and other staff of the Learning Center to extend the learning to a wider circle.

However, the implementation of the 3 key aspects of natural resource and environmental management, including the extension of Learning Center's work to a network of surrounding communities have not yet reached the expected objectives. The academic capacity enhancement for Ban Pred Nai community researchers and an integration of scientific knowledge and local wisdom require rather long period of time for them to adapt and foster mutual trust and understanding so that community researchers are equipped with skills and familiar with research process and instruments.

Hence, the activities should be continued for another phase in support of Ban Pred Nai Community Learning Center under the frame of an improved management structure which can move forward and has an increasing capacity to conduct activities initiated in the first phase on its own. In addition, this should enhance the activities on the 3 key aspects of natural resource and environmental management that have enlightened the thought and encouraged community members to seriously commence the project implementation on community energy, mangrove forest, and coastal erosion mitigation. The concrete success from the project leads to community-based solution, the sustainability of community resource base, and the well-being of all community members.

Keywords The Community-Based Learning Center, Ban Pred Nai, local wisdom, Mangrove Ecosystem, Coastal erosion, Community's Renewable Energy