

# **AWARENESS BUILDING AND PARTICIPATORY APPROACHES IN ONGOING PILOT PROJECTS FOR COMMUNITY-BASED FISHERIES MANAGEMENT IN THAILAND**

by

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## **ABSTRACT**

The problem of fisheries regulation is essentially one of assigning property right to a scarce resource. Community-based, self-regulatory management regimes based upon exclusive use rights accorded to artisanal fishermen are regarded as a key factor in this search for an effective, more sustainable natural resource utilization in Thailand. Community-based Management (CBM) as strategy emphasizes the significance of considering or specify a particular local or setting where people-resources interaction takes place. This paper describes the substantial factors that influence the fishermen's awareness toward the new regime of the coastal fisheries management, and the advance and difficulties of operational methods in ongoing pilot projects for promoting CBM in the coastal fishing communities.

## **1. Introduction**

As fisheries were developed over the last four decades in Thailand, most policies increased the role of national government in managing fisheries; the role of local level control through traditional management and control has correspondingly diminished. The effort to integrate traditional management into resource management regimes has not been successful since it could not be completely applied. Therefore, the policies of nationalization could not solve the problems of deterioration and over-exploitation of resources. At present, more attention is drawn to the development of Community-based Fisheries Management (CBFM) and its application to coastal fisheries management in Thailand.

CBFM is an effective and fair management system. It is also beneficial to economic administration and makes monitoring and enforcement more effective than central government management system. Fisheries Community-based management leads to responsibility and awareness building of fishermen as the resource owner which bring about longer utilization of resources. Awareness building on the obedience of rules and regulations which are regarded as a part of community culture would be useful for individual fishermen as well as the community as a whole. CBFM also provides an opportunity for communities to develop strategies of management which are consistent with community conditions and need because fisheries

communities are regarded as mechanism and tool of management measures which is more acceptable and easier to monitor and evaluate. CBFM is a method which fully utilizes traditional local knowledge and skill so that basic resource information can be used together with biological information in management. Moreover, the method can reduce social conflict and keep society in the communities united.

## **2. Awareness Building and Participatory Approaches**

Community awareness building and participation in problem solving are essential fundamental factors in community-based management especially in coastal fisheries resource management which requires community-wide awareness building that leads to more participation in fisheries management.

### Awareness Building

Awareness building encourages people to have intention to, pay attention to a knowledge about and be sensitive to something. Awareness building is a process of creating requisites in a person or community. If such requisites do not exist, they must be created by systematic planning.

Awareness building enables fisheries communities to clearly understand the need for greater equity of access to fishery resource which is consistent with community socio-economic desirability. In addition, all parties in the fishery industry and trade including policy makers, scientists, technicians and consumers must get involved in the awareness because they all benefit from resource management.

The objectives of awareness building in resource management are as follows:

1. To encourage the modification and improvement of existing formats, processes and policies which may be harmful to long-term sustainable development of fishery resource.
2. To improve and procure the knowledge, criterion and regulations which can provide strong support to coastal resource management process.
3. To initiate and search for new policies and plans which can help making decisions of any fishery management plans.
4. To motivate the officials or concerned parties to appreciate the community need for participation in management.
5. To improve resource management initiatives which are consistent with the community need.

6. To search for the process of developing the moral initiatives and norms which can provide strong incentives to the obedience of community regulations.

An important factor in awareness building for management is the stakeholders who are government officials and NGOs concerned with fisheries sector and have different skill and implementation method. However, different levels of the officials and colleagues will be adjusted by using inter-disciplinary approach which employs different forms such as conference or seminar and necessary instruments which can be used as tools for awareness building.

The result of awareness building will benefit all parties concerned with fishery. Therefore, awareness building is the process of gathering the brave which are now lack of. Facilitators in awareness building and the leaders have to work specifically in awareness building by using new techniques which is less available in Thailand.

Other parties other than the government officials have to play an important role. In Thailand, NGOs have already worked closely with fisheries communities. They specialize in community organization and motivation. This can be the means of initiating awareness building for resource management. However, these organizations will require assistance in terms of equipment for specific task. Such assistance could be supported by government organizations and international bodies.

However, the creation of resource management facilitators should be done by training new young people who are willing to work in the rural area with fishermen and can also play an effective coordinating role between stakeholders.

Meanwhile, government organizations should adjust their role and responsibility by shifting form development-mode to management-mode and modifying official training courses to be consistent with management approach.

### Participatory Approach

From the result of fisheries development in the past, it indicates close relationship between people and natural resource which was often seen as a barrier or source of conflict which took place in each levels of fisheries production in the coastal fishery. This relationship between people and natural resource leads to higher level of technology employed and deterioration of the resources too. However, current management approach takes into account the relationship between communities, fisheries resources and ecosystem which they relate to in order to lessen the use of technology and place more emphasis upon the institutional and regulation arrangements to raise the level and quality of management participation. Only such involvement can create the requisite conditions to ensure that the fisheries occupation is survived and the resource is sustained by allocating rights and responsibilities to all parties concerned.

## 1. Pre-condition for Participation

Participation does not occur autonomously. It is a behaviour which has to be created or pushed. Participation process in fisheries resource management may be easily established in some communities and not in the others. Therefore, certain pre-conditions for participation are:

- 1.1 Physical features: communities located on small bays may be more open to participatory process than those scattered along a long open beach.
- 1.2 Size of community: small communities can be more easily and effectively encouraged to participate than large villages.
- 1.3 Social homogeneity: communities exhibiting greater social and cultural homogeneity tend to exhibit greater affinity towards community participation. Leadership: communities with able leaders can be mobilized more easily.
- 1.4 Presence of facilitators: the existence of creative facilitators, such as NGOs, with a history of involvement in the community can accelerate the participatory process.
- 1.5 Enabling government: the government should not threaten or interrupt the participatory process but it should provide great impetus to participation.

## 2. Level of Participation

In application of participation process to coastal fisheries resource management, a study must be conducted and a spectrum of participatory approach must be visualized which is indicative of the range of possibilities that can be adopted in new coastal fisheries management. It depends on ecosystem, socio-economic and political conditions which vary from country to country. This spectrum can commence with consultation, then move towards involvement and end at empowerment which can be explained as follows:

- 2.1 Community consultation relates to management since it promotes the respect of each other. It also helps to remove the barriers of mistrust and suspicion which exist between communities and government organizations.
- 2.2 Involvement of the community in the planning and implementation of management measures ensures resource sustainability.
- 2.3 Empowerment of the community to manage the resource will contribute to a more realistic, cost-effective and decentralized

management regime in which rights and responsibilities are allocated such that it becomes cooperation between stakeholders which is a pre-requisite of management. It is a so-called co-management, the creative partnership in which rights, aspirations, knowledge, resources and responsibilities of all parties in the partnership can be fully respected and enhanced.

### **3. The Case Study**

In implementing community-based fisheries management in Thailand, pilot projects are undertaken in the coastal areas of the Andaman Sea and the Gulf of Thailand. The result of the experiment will be used for adjusting management methods and regulations to determine future fisheries management plans. The pilot project in Sikao Bay in Trang province is the case study for examining the differences and the difficulties of awareness building and participation of the communities which are the fundamental factors or essential conditions in community-based fisheries management.

#### State and Problem of Resource Utilization in Sikao Bay Area

Sikao Bay in Sikao district of Trang province is the location of traditional fisheries communities which engage in fish catching and aquaculture. The communities comprise of 14 villages, 1,790 households and 9,099 people. Previously, fishery was the main occupation of these communities using simple own-made fishing gears. Fisheries resources were plentiful since there were numerous mangrove forests. Sea grass and coral reef were also in good condition. Most fisheries output were used for household consumption and the rest were processed and bartered for agricultural products from nearby communities.

The transition of resource management can be summarized as follows:

First period: Prior to the second World War, Chinese people who migrated from Malaysia set up a business for exporting mangrove bark which create the need for labour employment. The fishermen were motivated to be hired labour for peeling of the mangrove bark. This business was shut down when the second World War had taken place.

Second period: After the year 1941, National Forestry Act was promulgated and mangrove foresting was permitted. There were concessions for foresting in Sikao Bay area which create labour employment for cutting wood to serve charcoal industry. Fishermen were then turned to be hired labour in charcoal factory.

Third period: During the year 1982-1986, the depletion of mangrove forests, which leads to the decrease in woods for charcoal industry, and the establishment of fish traders, who provide credits on fishing gears and equipment to the fishermen, motivated the fishermen back to fisheries.

At the time when the fishermen got back, the fisheries resources were no longer plentiful because the coastal mangrove forests were deteriorated after the concession. Meanwhile, coastal fisheries resources were also destroyed by illegal fishing, for examples, using fishing gears such as push net and small trawler in restricted area, the area within 3 kilometers from the shore, or using explosive or poison which substantially decrease the number of coastal marine animals to critical level. As a consequence, fishermen had to modify their fishing gears efficiently and sail further away from the shore which causes daily fishing time to increase. Finally, most fishermen inevitably had liabilities to fish traders and had no freedom in decision making. These direct impacts from the deterioration of coastal resources occurred in almost every coastal communities in Trang province especially fisheries communities in Sikao Bay area which engage in fisheries only.

### Starting Point of Awareness and Participation in Resource Management

During that period, the NGOs came in and played an effective role as advisor and coordinator between government organizations and communities. It created the confidence of the communities on problem solving by their own. Prior to the year 1985, some communities in Sikao Bay attempted to conserve coastal resources including fisheries resources, mangrove forests, sea grass and coral reef since they realized that destructive use of resources would cause long-term problems to individual and communities. Resource problems motivated conservation awareness and participation in resource management. Therefore, most fishermen in the communities refused to use destructive fishing gears and started to resist those within or outside the communities who use such fishing gears.

Community awareness motivated the communities to manage the resources in Sikao Bay area by their own commencing from the conservation of mangrove forest in surrounding areas which was done by cooperating between community religion leaders, forestry officers and foresting concession beneficiaries. Until the year 1984, most forests were exploited and rapidly deteriorated leading to the intrusion to restricted forests. The protection and suppression induced the killing of a community leader so the forest conservation had to be ceased. Meanwhile, coastal resource conservation was operated by campaigning, begging, prohibiting and constructing sea to prevent coastal fishing by trawlers.

The community effort to conserve the resources was not successful due to some difficulties. Firstly, the communities had no legal rights to protect or manage the forests since the foresting was legally conceded to the private. Secondly, the law is not effectively enforced in some respects, for examples, there are illegal wood cutting in the conceded area and illegal fishing in the restricted area. Thirdly, the community organizations have not yet been strengthened so their bargaining power is not recognized. Moreover, some people in the communities still exploit the resources or protect the interest of the groups outside the communities so the community resolution about resource conservation is not unanimous and the communities operation is on their own without support.

## An Adjustment of Community Participation Process for Coastal Resource Conservation

Having experience from resource conservation in early stages, the community leaders can visualize the root of problems so they adjust their operation process in order to get more realistic solutions. The NGOs start implementing community development extension activities in 7 fisheries communities in Sikao Bay.

At the beginning, the emphasis is placed upon the establishment of community groups to solve specific problems such as powered boat acquiring group to assist fishermen in owning factor of production, fish culturing group to increase fishermen income and oil trading group to reduce oil price and other product price in the village. The concrete results make the role of community leaders more acceptable. The groups of community leader are then gradually developed to be community organizations having meeting and activities regularly.

In 1991, NGOs extended the operation to another areas in Trang province with the support from government organizations in the province and the central administration. The discussion and exchange experience between community leaders of Sikao Bay area and the extended area enable people in the extended area to quickly understand the problems and solutions and then participate in coastal resource conservation. The outstanding activities are as follows.

### 1. Community Mangrove Forest Management

Commencing from a village with the area 587 rai, the project is extended to another 6 villages during the year 1990-1992. The extension of community mangrove forest is initiated from the consultation of people in the communities. In fact, every village would like to have their own community mangrove forest but only 6 villages are implemented. According to the community leaders, the problems are the unclear government policy and the government regulations which discourage people to conserve the forest. However, after the seminar between community leaders from 75 villages, forestry officers, NGOs and government officials from the province and central administration, there is an agreement that forestry officers will cooperate in verifying mangrove forest for the villages who would like to have community forest. Meanwhile, Trang Provincial Office will incorporate the agreement to provincial development plan and NGOs, together with other concerned organizations, will cooperate in implementation which consistent to people demand.

### 2. Sea Grass and Fishing Ground Conservation

For the rehabilitation of fishing ground to be complete, sea grass, situated next to mangrove forest, has to be rehabilitated too. This is because sea grass is depended on by marine animals and it is also a fishing area. At that time, sea grass has been widely destroyed by trawler and push net. Initiated by the fishing communities surrounding Sikao Bay, sea grass conservation activities are then organized during the year 1991-1992 with the support from various organizations

including educational institutions and government organizations such as the Royal Forestry Department, the Department of Fisheries and various foundations. To conserve sea grass, fisheries using trawl net, push net, lift net, block net and surrounding net must be completely prohibited within 3 kilometers from the shore. In addition, the villagers must be empowered to manage the village territorial water so that they can supervise along the seacoast effectively.

Since 1991, Sikao Bay and nearby areas have been free from destructive fishing gears. Even though there are some fisheries using push net, lift net and block net, the situation is under control. Meeting and discussion between communities are conducted regularly. There are several concrete results from the conservation such as the recovery of sea grass, the increase in the number of coastal marine animals, the increase in the number of simple traditional fishing gears resulting from the alternation of fishing gear size. Finally, coastal villager thought of sustainable fisheries become more distinct.

### Changes after Co-Management

#### 1. Physical Change

There are concrete results from the conservation during the last few years. Firstly, the expansion of sea grass area for more than 100 rai in Sikao Bay alone and more than 50 rai in nearby areas. Secondly, the number of community mangrove forest increases from 1 forest covering the area 587 rai in 1989 to 6 forests covering the area 3,057 rai in 1993. There are also the potential areas for another 65 community forests covering the area 27,163 rai. Lastly, the number of coastal marine animals increases including Swimming Crabs, Squids, Breems, Sergestid Shrimps, Grouper and Snappers which are available along the coast and can be caught by simple fishing gears such as hand line, trap, crab hook and scoop net.

#### 2. Income Distribution

More fertility of the sea enhances more caught fishes, lower fishing costs and higher income. It provides an incentive to people who are never interested in resource conservation to get involved since they realize the benefits from participation. The results are concretely visualized and beneficial to all parties concerned.

#### 3. Democratic Process at Community Level

Conservation awareness and working experience including discussion, exchange of ideas, sharing the responsibilities, connection between coastal communities to protect the territorial water obviously demonstrate community power and role in public interest protection. In addition, the success of community-initiation and self-reliance operation draws more attention of government organizations to community development.



#### 4. Cooperation and Learning Mean

Coastal resource conservation activities are mean of cooperation and learning between government and private operation and coastal fisheries communities. It encourages understanding and trust and could be a mean of continuous cooperation in the future.

#### 5. Policy Responses

Sustainable coastal fisheries community development is recognized and utilized as a model for another communities in the province. The province sets up plans and budget for conservation of several coastal resources including mangrove forest, sea grass and coral reef.

In addition, the province supports the fishermen in the area by strictly suppressing the violation of fishery law. Trang Provincial Fisheries Office prohibits some more fishing gears in response to people demand. Government organizations provide more cooperation to the communities, for example, the establishment of additional village patrol.

#### 4. Conclusions

The result from awareness building which brings about the participation in coastal resource conservation of fisheries communities in Sikao Bay and nearby areas in Trang province has been successful locally. The advice and consultation from NGOs and the involvement of government agencies from different sectors contribute to the success of conservation and resource management activities to some extent. Nevertheless, the essential successes which are the prerequisites of community-based management are 1) the awareness of fisheries communities as the owner of coastal resources including forestry and fisheries resources which makes them realize that the resources will be longer utilized if they are properly managed and 2) the establishment and development of community organizations.

The operation mentioned above is only a part of essential conditions which must be established within the communities by the cooperation between the government and NGOs. Moreover, the government must take part in decentralization and law amendment so as to empower the communities to manage the resources. Regulations on resource management within communities must be initiated by the communities. The regulations should be flexible so that they can be modified according to the situation with minimum complexity of legal process.

Therefore, the implementation of community-based fisheries management should follow the project in Sikao Bay area but it has to be adjusted according to the geographical condition, fisheries resource status and socio-economic condition of the area. The government should support from the beginning in terms of budget, equipment, facilities and academic advice for the success of the project and the maximum achievement of the objectives.

## 5. References

- Kurien, J. 1994. Awareness Building and Participatory Approaches for Integration of Coastal Fisheries Management into Coastal Area Management Plans, p.90-94. In Proceedings of the IPFC Symposium held in conjunction with the Twenty-fourth Session of IPEC Bangkok, Thailand, 23-26 November 1993.
- Office of Environmental Policy and Planning. 1994. The Study on Carrying Capacity for Development of Coastal Resources and Environment in Trang. Ministry of Sciences Technology and Environment.
- Pomeroy, R.S. and M.J. Williams. 1994. Fisheries Co-management and Small-scale Fisheries: A Policy Brief. International Center for Living Aquatic Resources Management, Manila. 15p.
- Rain Drop Association. 1994. Deterioration and Recovery of Coastal Ecosystem : A Case study of Trang Province, p. 45-67. In Taksin Study Gazette, Vol. 3, No.2, October 1993 - January 1994.