

Background and Project Proposal of Locally Based Coastal Resources Management in Pathew District, Chumporn Province (LBCRM-PD)



Southeast Asian Fisheries Development Center



Department of Fisheries Thailand



Background and Project Proposal of Locally Based Coastal Resources Management in Pathew District, Chumporn Province (LBCRM-PD)

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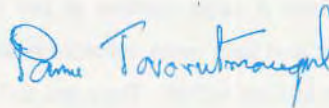
**Collaborative Project Between
Southeast Asian Fisheries Development Center
and
Department of Fisheries, Thailand**

PREFACE

Southeast Asian Fisheries Development Center (SEAFDEC) incorporates with Association of Southeast Asian National (ASEAN) to adopt Fisheries Consulting Group (FCG) Scheme. This scheme would promote coastal resource management for sustainability to the Southeast Asian region.

Department of Fisheries collaborates SEAFDEC/Training Department to formulate the 5 Year Locally Based Coastal Resource Management Project in Pathew District, Chumporn Province. The Japanese Government arranges "Japanese Trust Fund" to support the project implementation.

SEAFDEC/Training Department would transfer and disseminate implication of the project implementation, strategies and information to other member countries through the SEAFDEC mechanism.



(Panu Tavarutmaneeagul)

Secretary-General

Southeast Asian Fisheries Development Center

PREFACE

This volume contains the basic information on the collaborative project between SEAFDEC/ Training Department (TD) and the Department of Fisheries (DOF) in Thailand, under the title "Locally Based Coastal Resource Management in Pathew District, Chumporn Province" (LBCRM-PD). This project is under the Fisheries Consulting Group (FCG) scheme of the ASEAN-SEAFDEC mechanism.

As in all other parts of Southeast Asia, marine fisheries in Thailand struggle with over-capitalization, over-fishing and severe depletion of marine resources. Establishing a workable and sustainable framework of marine resource management is an urgent need. The coastal fisheries sectors, in which most of fishers are classified, have severe dilemmas as regards the sustainable use of coastal resources. They are in a vulnerable position vis-à-vis commercial and capital-intensive fisheries. Under a de-facto open-access regime of marine resource utilization, coastal and small-scale fishers face stiff competition in their own fishing grounds. A large number of big fishing vessels illegally encroach near shore, destroy small-scale fishing gear and take away valuable resources. On the other hand, coastal fishers fight among themselves and others in their vicinity. They are still challenged by the first-come-first-served principle in capture fisheries. Everyone may know that these lead fishers to an ever increasing catch effort and investment to survive, as a result they tend to fall in a vicious circle of resource deterioration and increasing poverty.

Encouragement in responsible fishing and aquaculture is one realistic way, but there should be many institutional and administrative arrangements that support self-knowledge and self-regulatory activities of fishers and all other stakeholders. The community-based fisheries management (CBFM) approach has generated a number of successful pilot projects in many parts of Thailand. It is time to develop this approach into a more systematic and applicable one that can easily transfer experiences and lessons learned through the implementation of the pilot projects in other parts of the country. The LBCRM-PD is a challenging project focusing on a direction of effective institutional linkage between resource users and local administrative agencies, while adopting a conventional CBFM approach.

The content of this volume is divided into two parts. The first describes the background of the LBCRM-PD and the detailed outline of the five-year project proposal. We stand at a transitional point in various aspects. The decentralization of fisheries administration is being designed, and the amendment of the fisheries act and regulation is still under consideration. Decisive factors to affect the project goals remain uncertain. Nevertheless, in a final section of the first part, a possible direction of a decentralized fisheries management system will be discussed and proposed. In addition, any analytical description here is ascribable to the author (Yamao) alone.

The second part of this volume is the five-year project proposal, which was approved by the Director General of the DOF and the Chief of Training Department/SEAFDEC on 9 November 2001.

Before TD/SEAFDEC joined, the DOF had started with a project design and budget allocation. The DOF had already decided the location and target activities of a project. Since the end of July 2001, the TD working group, headed by Dr. Yamao, M. (JICA Expert), began to make a final project proposal. The group consisted of Dr. Suanrattanachai, P., Ms. Ruangsivakul, S., Ms. Longmanee, P., and Mr. Saraphaivanich, K. (Staffs of the Research Division, TD). Our counterparts at the DOF being

Mr. Chullasorn, S (Senior Marine Fisheries Specialist), Mr. Thubtimsang, W (Chief of Fisheries Information Sub-Division), Mr. Sungkasem, P (Director of the Chumporn Marine Fisheries Development Center), Mr. Aimrod, S (DOF's Chumporn Provincial Office) and other staff.

Making any proposal for local-oriented development projects takes much time and passes through a long process. At present, great emphasis is placed on the people's participation not only in the implementation of the project, but also in the process of making the proposal. Taking the necessity of the participatory approach into account, we might be in a great hurry to conclude a final draft of project proposal. Our procedures and methods were no longer enough to match the demand coming from the local people and their organizations. As a result, the decision-making cost was by far cheaper than that in the case that would adopt a participatory approach. However, the implementation cost may be much higher than we presently forecast.

The DOF's counterparts provided the basic information on geography, resources, environmental and socio-economic conditions. Members of the TD working group observed the project site several times and interviewed local people and stakeholders. We set up a number of internal meetings at the TD, to identify overall goals, project objectives, practical approaches, and activities. Prior to preparing draft project design matrixes (PDM) and participatory analysis methods were presented at these meetings. We wished local people, stakeholders and local government agencies could have joined in these processes. At the earliest stage of the project's implementation, they would assess our project proposal and revise it according to their own will and decisions.

The TD working group's members came to the conclusion that a comprehensive and integrated approach should be proposed as a coastal resource management project in Tambol Pakklong, Pathew District, Chumporn Province. We drafted many versions of the proposal and revised them through discussion with counterparts at the DOF. Ultimately, on October 5, 2001, both parties agreed to finalize a proposal and propose it officially to the DOF and the TD.

Six months have passed since we finally obtained official approval. During this period, the project group has planned and conducted a wide variety of activities in collaboration with the people, other government agencies and NGOs. Not only the target people, but also the project staff recognize the necessity of revising the project proposal to fit more appropriately with local reality and to steer it to a locally-oriented, proper direction. In the process of community-based training programs, the present contents will be reconsidered and revised.

Fortunately, an increasing number of people at the project site enthusiastically join the project activities, and all institutions other than the core implementing agency and the TD kindly cooperates with the project staff. On behalf of all the project staff, I give special thanks to all.

YAMAO, MASAHIRO (JICA'S EXPERT)

SUANRATTANACHAI, PHATTAREEYA (SEAFDEC)

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PART I

BACKGROUND OF THE PROJECT

BACKGROUND AND OUTLINE OF THE PROJECT PROPOSAL

I

PURPOSE OF THE CHAPTER

This chapter has three main purposes, divided into three parts.

Firstly, this chapter describes the background of making the project proposal, to help gain a better understanding of the project's overall goal, objective and the approach adopted. Major focuses will be on any substantial factors that affect our planning and decision-making of the project proposal. At present, the DOF reconsiders the past and present policy for coastal fisheries development and coastal fisheries management. The DOF's strategic approach toward community-based fisheries management (CBFM) brings successful outcomes and bitter failures. Lessons and practices through both experiences should be extended throughout the country under a new regime of fisheries management. The DOF's policy for coastal fisheries management has arrived at a turning point, which becomes a very important factor in making a project proposal.

Secondly, the outlines and content of the project proposal will be explained in depth. The project proposal simplifies itself as regards explanation and description on the content of the project activities, to enable easy understanding. This is because, with a greater participation of the target people, they can modify the present proposal, develop it more appropriately and effectively, and add new objectives and activities according to their changing needs. Given the conditions under which the DOF has already decided the project location and the project activity framework with a budget allocation, major concerns among the TD working group's members were how to design a proposal applicable to local reality, and how to meet the people's demands. Therefore, this project proposal is still tentative.

Finally, the sequence and tentative plan for a "Locally Based Coastal Resource Management (LBCRM)" framework will be proposed and discussed. Policy and political situation surrounding the amendment of the present fisheries laws is as yet uncertain, whereas, the local government administrative system in Thailand has been in the process of decentralization. The central government begins to push forward with devolution as a complete entity; it vests more and more responsibility for social and economic development to local levels. Considering such remarkable trends of localization and devolution, the DOF attempts to create viable models on coastal fisheries resource management. Technologies, knowledge, and lessons learned through the implementation of a pilot project will be generalized and transferred to other areas.

In addition, this chapter and this book will not include socio-economic and environmental surroundings at the project site, or refer to any theoretical framework of the coastal resource management approaches that have been experienced in Southeast Asia. The TD staff members will prepare another series of publications that analytically describe the socio-economic and environmental backgrounds at the project site.

1 The DOF's Initial Plan

Joining with the Royal Project

The DOF decided to conduct a coastal fisheries management project in Chumporn Province. There were several alternative sites in the province, but finally the DOF chose Tambol Pakklong, Pathew District, as the site. This is mainly because the Royal Project Council planned to implement comprehensive development projects there in three different fields, agriculture, forestry and fisheries.

Under the Royal Project Scheme, agricultural improvement is conducted mainly in the wastelands covering an area of 448 rai (62.7ha) that are Royal property. However, fisheries and forestry projects should be planned and managed to cover the whole area of Tambol Pakklong. This is simply due to the geographic and environmental conditions. The wasteland faces the beach and has a length of 1.2 km, which is part of a sand-dune area. There is no fishing community and no housing plot in the proximity to the wasteland. Fisheries and forestry resource users live in other parts of Tambol Pakklong.

The DOF became the leading department in the fisheries field. Under the Marine Resource Rehabilitation Program implemented by the DOF (Marine Fisheries Division), a project was planned to establish a workable framework of sustainable fisheries resource management in the seas in front of Tambol Pakklong. In addition, mangrove reforestation activity would be a task of the Royal Forestry Department (RFD), Ministry of Agriculture and Co-operatives. (MAC)

Planned As A Fishing Rights Project

Before TD joined, the DOF had initiated a project with the title "Establishment of Fishing Rights in Coastal Fisheries", modeled on a challenging project that had been conducted in Bang Saphan and Bang Saphan Noi Districts, Prachuab Khiri Khan Province. This project would have focused on the introduction of a particular legal framework, which was close to territorial use rights in fisheries (TURFs). In actuality, however, this could be started by banning some destructive types of fishing gear in a defined zone, like trawls and luring light purse seines using less than 2.5 cm. mesh size.

In line with the concept of fishing rights in the same way, as did the DOF in Prachuab Khiri Khan Province, it began to arrange a project proposal. This proposed to introduce the idea of CBFM at the project site and to create practical management methods and encourage the participatory approach. This would include a series of activities and investments that were conventional comprehensive methods adopted for the development of fishing community and small-scale fisheries.

In Tambol Pakklong, on 11 August 2000, fishers, stakeholders and DOFs officials met to discuss a demarcated zone. They agreed to mark off Zone I in the sea in front of the areas covering Baan Numpu (Community No.5) and Baan Thumthong (Community No.3). The Royal property is located between both communities. This demarcated zone was lined up with 3 km distance from the beach, and is approximately 105 square km. The operation of destructive fishing gear like trawls, push nets, cockle cast nets and

anchovy purse seine & falling net during night time would be prohibited in Zone I.

On 5th June 2001, the DOF's provincial officers proposed to expand the demarcated zone toward the south of Tambol Pakklong. The new zone to be set up would be from Baan Thumtong (Community No.3) to Baan Tungmaha (Community No.6), with coverage of 40 square km. The great majority of fishers and stakeholders voted to agree that all fishers stop using trawls, push nets, cockle cast nets and anchovy fishing at night within the new demarcated zone (Zone II). The people decided to demand that the DOF should proclaim the prohibition of using these fishing gears within the Zones I and II. This was the start point of the project. The Chumporn Provincial Office of Fisheries slightly revised the boundaries of the demarcated areas so that fisheries clearly recognize the areas, by drawing straight lines between points.

However, at last, the project proposal does not advocate any activity related to the introduction of exclusive fishing rights in the Zones I and II. There would be little possibility to introduce exclusive use rights under the present framework of the fisheries laws and regulations. This resulted from a long discussion on the framework of the project.

As A Small-scale Fisheries Development Program

The Cabinet approved the DOF's initial purpose, together with the allocation of a budget. Shown by the DOF's tentative schedule of five years, the installation of artificial reefs was given the first priority in terms of budget allocation with fishing gear improvement being the second priority. It would seem that the provision of artificial reefs and gear to fishing communities would be a major objective in the fisheries field. Practically, the DOF had a plan to conduct a survey on resources, environment and the socio-economic aspects, releasing fingerlings, fishing gear development and organizing groups. As far as the allocation of budget and target activities were concerned, the project proposal was nothing but a Small-scale Fisheries Development Scheme (SFDC).¹

Adding to the improvement of marine capture fisheries, the DOF was ready to transfer the technology of marine aquaculture with the provision of materials and fingerlings. The target species could be sea bass, grouper, red snapper etc. Promotion of marine aquaculture would be a part of the process of creating alternative job opportunities. Extending shell culture was planned as a component of another job-creation-oriented activity. These processes might offer additional income sources, and reduce the present amount of catch effort put into adjacent fishing grounds.

Lessons From The Past Experiences: In Phannga Bay

The construction of fisheries-related infrastructures like artificial reefs, the provision of fishing techniques, the establishment of local fishers' groups, the promotion of marine fish culture and shell culture are conventional ways the DOF has adopted so far. A number of coastal communities in many parts of the coastal provinces have practiced such conventional programs. On the other hand, the project would apply the CBFM approach in the same way, as did other pilot projects.

The DOF implemented various patterns of CBFM projects, designed to enhance awareness building of the resource environment, discourage the use of destructive fishing gear and encourage self-

regulatory fishing activities. Preparation and provision of educational and training courses became an essential part of these CBFM projects. It is noteworthy, however, that there has been no attempt made to build a legal framework that allows local communities and fishers to manage their own territories.

In Phannga Bay, in 1996, the DOF and the Bay Of Bengal Program (BOBP) started collaborative projects focusing on the enhancement of awareness building for responsible fishing. Supported by the DOF's officers and NGOs, local fishers and stakeholders joined training programs and exchanged information on fisheries management (Suanrattachai, 2001). They actively discussed some topics like banning trawls and push net within 3 km, adoption of selective fishing gears, feeding of crab in stock cages, mangrove reforestation and so on. The projects successfully aroused the fishers' awareness about the sustainable use of coastal resources.

Because of religious and geographic conditions in Phannga Bay, the cohesion and uniformity among local people were very strong, which led to their active participation in the DOF-BOBP projects. Experience on the participation and operation of community-based activities has spawned several cooperative economic activities at the project sites. Mangrove reforestation made rapid progress, increasingly attracting foreign tourists to join eco-tourism and environmental friendly tourism at the project sites (Yamao, 2001). Those fishers involved in the operation of passenger boats have established their own association that ensures lucrative boat fares and advertisements. "Central Markets" managed by fishers groups have appeared in three Moobaans (communities), so that fishers can sell mainly shrimp at much higher prices than before. Three small markets rotate shrimp collection and auction. Local fish dealers usually buy shrimp at auction.

Despite many successes in cooperative businesses, not much progress has been made in fisheries resource management. There are several major reasons. Firstly, this project originally intended to create awareness building on the sustainable use of coastal resources. Secondly, very few legal frameworks have existed, which are supportive to the participatory approaches that fishers and stakeholders would adopt. Thirdly, illegal fishing conducted by trawls and push net operators still damages coastal resources, although small-scale fishers at the project sites continue to demand control and supervision by the DOF. They seriously doubt the enforcement of laws and regulations.

It is noteworthy that few pilot projects on coastal resource management would have succeeded without effective legal frameworks and support.

Challenging Approach to "Fishing Rights"

The Fishing Right Pilot Project (FRPP) in Bang Saphan and Bang Saphan Noi Districts may be the only full-scale projects based on the concept of CBFM. Even at present, this project is considered as the most challenging among the pilot projects.

There are seven fishers' groups in the two districts. The DOF guided the target people to establish groups. Their main function is the operation of micro financing, relying on the DOF's subsidies. The groups also function as a unit of a management body for the demarcated zones defined by the DOF. The FRPP could start by banning some destructive fishing gear, like trawls and luring light purse seine using less than 2.5 cm. mesh size in the zones. This is because the concept of fishing rights was against

the National Constitution and the Fisheries Act.² The fishers' groups should enhance their members' awareness of responsible fishing and take charge of obtaining a consensus among them at Moobaan (communities) and district levels. Coordination and adjustment between different groups of fishing gear are an important task for the groups.

The DOF's project office often holds public hearings and gives necessary information on the management procedures of the demarcated zones. Fishers and stakeholders are encouraged to become involved in the management of the zones and to monitor illegal fishing inside the zones. Unfortunately, before the FRPP started, the concept of fishing rights had misled fishers and stakeholders. They feared a great economic disadvantage resulting from the establishment of territorial use right in fisheries (TURFs). They thought that their fishing activities would be confined within the demarcated zones, excluding them from outside their own territories (Terao, Anuchiracheeva and Ruangsivakul, 2000).

The FRPP is a pioneer in coastal fisheries management. Local small-scale fishers are encouraged to share part of the responsibility for regulating their own territory. They actually have a higher priority in claiming utilization of fisheries resources in the demarcated zones, by excluding local and non-local commercial fisheries engaged in particular types of fishery. However, the fishers' misunderstanding about "fishing rights" has caused confusion and amplified their distrust of the project. Moreover, the enforcement of fisheries laws and provincial ordinances is still very weak. The local fishers are disappointed with the weak institutional and legal support given to the FRPP. Both small-scale and commercial fishers find great difficulty in adjusting conflicts between them.

Without a consensus between local fishers, and between local and non-local fishers, any pilot project would hardly succeed in introducing fishing rights. Without appropriate legal support enforcing laws and regulations, any pilot project could rarely survive. These two lessons are the most important ones, leading to the success of a pilot project for coastal resource management.

Yet another factor to lead to failure is the lack of a workable network between management units (fisher' groups and Moobaans). This network would be a body of coordination and adjustment at two district levels.

Locally Based Coastal Resource Management Stands Between Both

The LBCRM is not a new approach, and stands mid-way between the DOF-BOBP collaborative projects in Phannga Bay and the FRPP in Prachuap Khiri Khan Province. The LBCRM adopts the community-based participatory approach, as far as the objectives are concerned. This encourages the people to join in a decision making process of coastal fisheries management at local level, by providing a wide variety of opportunities for training and education programs.

On the other side, the LBCRM is modeled on the FRPP, as regards setting up a demarcated fishing zone in which particular types of fishing gear are prohibited. The main purpose of the LBCRM is to search for an effective way in which to make rules on the sustainable use of coastal fisheries resources in the demarcated zones. It will propose an acceptable framework that can regulate and manage the people's fishing operations on a formal basis, through experiments and practices.

However, the LBCRM differs in several ways from the FRPP. Any attempt to introduce whatever

type of fishing rights will not take place, as long as the Thai government does not amend the present fisheries act and regulations. A fishing rights project seems very challenging, but is no doubt reckless at this time. Without any tradition and understanding among the people, exclusive territorial use within a defined area would hardly be adopted at the Tambol Pakklong project site.³ Another difference is that the LBCRM pays more attention to the role and function of local government than the FRPP, as will be discussed later. New trends in the decentralization program have been planned and conducted by the Thai government make the LBCRM become a practical and acceptable system of coastal resource management.

As a whole, the LBCRM picks up some substantial essences from both earlier pilot projects.

2. The New Trends of Decentralization and the New Fisheries Act

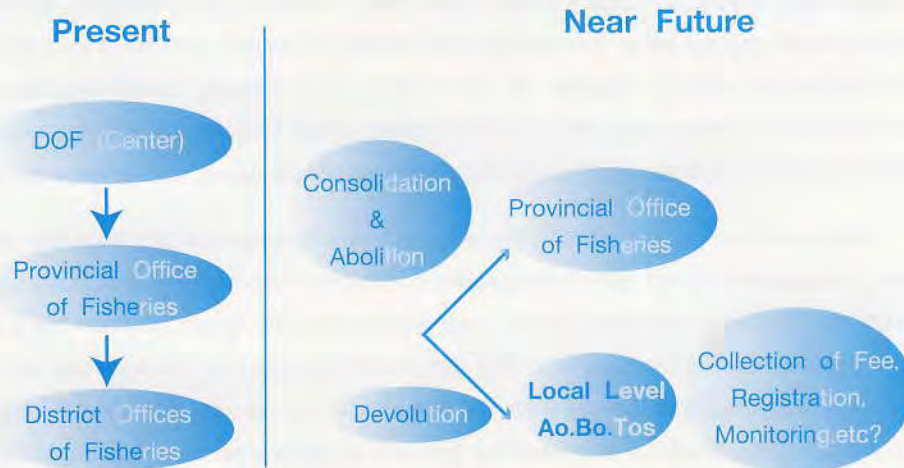
Decentralization and the Sub-District Administrative Organization

Decentralization has become a most important issue of Thai politics since the mid 1980s. One highlight of the decentralization is the establishment of the Sub-District Administrative Organization (Ao.Bo.To) in 1994. The conventional top-down local administrative mechanism, consisting of Province (Changwat), District (Amphur) and Sub-District (Tambol), begins to move toward localization and devolution. Members of Ao.Bo.To councils are elected from the people in the Moobaans, who hold great responsibility for community development and the people's welfare. The Ao.Bo.To council members elect a president, who manages the administrative work on a daily basis in collaboration with the Ao.Bo.To secretary and managerial staff. The Ao.Bo.To gradually grows into an independent entity with functions of taxation and budget allocation, taking over several administrative functions from the district office.

Thai local administration holds the district office fully responsible for local security, community development, and people's welfare. The Ministry of the Interior appoints a district head (Nai Amphur) from government officials. Its staff members belong to the administrative lines of different ministries (and/or departments) through a Provincial Office. In the case of fisheries management, a District Office of Fisheries (Pramong Amphur) takes charge in fisheries and aquaculture registration, planning and extension activities under the supervision of the Provincial Office of Fisheries (Pramong Changwat). As well as the agriculture and forestry fields, fisheries registration and management at local level are the authority of such hierarchical and strengthened administrative mechanisms.

Generally speaking, the local administrations currently existing move quickly towards a process of polarization. This movement is still uncertain in the political aspect, but we may soon get a picture of decentralization and de-officialization. Obviously, some roles and functions that a district holds will be absorbed both into the operations of the Provincial Office and Ao.Bo.Tos (see Chart 1). Uniting district offices into a provincial office is one remarkable trend. On the other hand, at primary level, Ao.Bo.Tos are likely to share a greater responsibility for the community development fields and various sorts of administrative work. Local people have more opportunities for participation in the planning and implementation of social and economic development programs, with more access to funds and sources for the improvement of living and producing conditions. In coastal and small-scale fisheries, too, Ao.Bo.Tos (and their networks) may become a management body for local fisheries and coastal resource management, guided and supervised by the Provincial Office of Fisheries.

Chart 1 Devolution of district Function



* At the time TD and the DOF made a project proposal in 2001, the government had not yet defined a direction of decentralization in agriculture, fisheries, and forestry.

In other words, any pilot project on coastal resource management in Thailand should consider such on-going processes of decentralization, although there may be unforeseen changes.

Toward The New Fisheries Laws

In Thailand, the central government still keeps the majority of authority to control licensing and manage fishing activities in territorial waters. The present fisheries act and regulations,⁴ do not have any specific issue on the mechanism and procedure of localized coastal fisheries management that allows for the participation of fishers and stakeholders. The legal framework currently existing does not contain issues on devolving management functions and roles to local governments. Of course, many provisions of these acts and regulations have been revised from time to time. They empower Provincial Governors, the Minister of Agriculture and Cooperatives, and the Director General of the DOF to control and manage fishing and aquaculture activities to some extent.⁵ However, both commercial and coastal fisheries can neither co-exist nor accord themselves with old-fashioned and non-systematic legal and administrative frameworks. Conflicts between highly intensive and small-scale fisheries, and among small-scale fisheries, should be reduced in accord with appropriate legal procedures.

The Thai Government is considering amending the Fisheries Act, B.E. 2490 (1947) in all aspects. A new act is already in the process of amendment, even if it has to pass through several stages. The DOF proposes new approaches and frameworks, with reference to coastal fisheries management.⁶ Firstly, Thai territorial marine waters are divided into two zones, i.e., "The Commercial Marine Fishery Zone" and "The Coastal Marine Fishery Zone." Although there may be disagreement over a definition of a coastal zone with distance from the high water mark, the zones preserved for coastal fisheries will be further expanded. Secondly, a "designated community" becomes a primary management body in coastal fisheries.⁷ A "designated community fishery area" means a specific geographic area set up by the Minister or the

Director General of the DOF, in which the designated community will be delegated rights and responsibilities regarding the management and implementation of appropriate measures for sustainable use of aquatic resources. Thirdly, a “Local Fishery Committee” functions as a management and coordination body within certain defined areas. Its membership consists of fishers, communities, the public, provincial and local authorities, working together for the purpose of managing, conserving and developing the aquatic resources in defined areas. Given by the Minister or the Director General, the local committee has the exclusive authority to issue local fishing permits for particular areas, and to issue written permissions.

Along with such new concepts, the proposed new fisheries act describes the issues of community-based management. It will give a designated community responsibility and mandate to control and manage fishing activities in a certain defined zone. Members of the community can join a decision-making process of coastal fisheries management. The community develops its management and implementation functions while law enforcement takes places. It is necessary to discuss the adjustment and coordination as regards sharing responsibility and interlinks between a designated community and local fishery committee.

Elements of LBCRM

The project proposal for LBCRM-PD does not describe what function and authority a LBCRM will have in Tambol Pakklong. This is because the completion of proclaiming a new fisheries act takes much time and sequential steps for adjustments and compromises among the stakeholders. Before the contexts of the new act are settled, we cannot establish a community-based management body with the exclusive right to control fisheries activities in the demarcated zones.

Though having not yet proclaimed a new fisheries act, a new regime of coastal fisheries management contains two factors: a designated community becomes a primary unit of management, while a local fisheries committee has functions like information, consultation and coordination at local and/or regional levels. Moreover, the government puts forward a decentralization program of local administration and development with empowerment of Ao.Bo.Tos and people’s organizations. Management and conservation of local resources and the environment are the main tasks in the Ao.Bo.To (or networks of Moobaans).⁸ Considering both elements of decentralization and new fisheries act, we should design an appropriate LBCRM in Tambol Pakklong.

3. Toward Locally Based Coastal Resource Management

In the process of making a project proposal, staff members of TD recognized that small-scale and coastal fisheries reached a stage of high mobility. In actuality, a series of socio-economic and landing surveys conducted show that a large number of small-scale fishers conduct fishing operation far beyond their nearby areas on a daily basis. It seems hard to define the economic and social characteristics of these fishers by using traditional concepts of small-scale and coastal fisheries.

The conventional concept of community-based management, having been widely acknowledged in Southeast Asia, may not match the reality of fisheries development in Tambol Pakklong, Pathew District. As the draft of the new fisheries act indicates, a “local fishery committee” or “appropriate locality” might be a more suitable concept. A Moobaan may provide a basis for a management unit of fishers at

primary level, and several Moobaan-based units should be built to form a network at Tambol (Sub-district) level. It is practical to establish such a network that covers a wider area rather than to place emphasis on the intimacy and uniformity of a Moobaan-based unit. Moreover, this network has to extend its membership and functions over the adjacent areas to Tambol Pakklong.⁹

In this regard, the FRPP is also considered in the same category of a pilot project whose purpose is to create a management body controlling fishing activities over a wider area, far beyond "communities". We would re-define that the FRPP has the purpose to establish local networks consisting of Moobaan-based, Tambol-based and/or groups with membership being specified into particular types of fishing gear. Both the FRPP and the LBCRM-PD are distinguishable in terms of coverage areas and complexities of approach from the past experiences of CBFM projects.

There are two other differences between the LBCRM-PD (and the FRPP) and conventional pilot projects. Firstly, a new project should prepare a clear-cut policy for sharing responsibility among all participating agencies in fisheries management. The agencies are like the Province and District Offices of Fisheries, Ao.Bo.To, primary management units, its networks, and local NGOs. Of course, a procedure of sharing responsibility between these agencies accords with the legal frameworks legitimizing and defining their activities and organization. In other words, the LBCRM-PD and the FRPP are attuned to the greater importance of creating adjustment and coordination functions among the participating agencies, while securing fishers and stakeholders' participation. Secondly, a project with coverage of a wider area requires flexibility in its organization and activity. As the currently proposed new fisheries act describes, there are a wide variety of local fishery committees, as regards coverage areas, fisheries being pinpointed, participating agencies, and even the management approach. As well as in the Philippines, Thai fisheries management may have reached a critical point at which a wide variety of models on local fishery committees are experienced and then proposed.

In addition, we consider the fact that the Philippines fisheries management regime has already evolved into a "municipally-based" stage from a "community-based" one. Having passed through the long and complex processes of decentralization in local administration and fisheries management, the Philippines municipal fisheries developed into a new phase of management. As the Bureau of Fisheries and Aquatic Resource (BFAR) reports, a number of projects have started with building fisheries management networks of municipal governments (BFAR, 2000). In actuality, many municipalities are trying to proclaim ordinances together with neighboring municipalities and to manage the common waters they define (Yamano, 2000). Given different cultural and political backgrounds, we cannot adopt the Philippines recent experiences directly to Thai projects; however, no doubt, they give a hint to a direction of conventional community-based approach in Thailand.

III THE OUTLINES OF THE PROJECT PROPOSAL

1 Project Purpose and Activities

Project Purpose

The overall objective is the expected effect on the target fields when a project is successfully achieved. It is a direction that the project should take as a next step. The LBCRM-PD has three overall objectives. Firstly, sustainable fisheries management with a participatory approach should be established. Secondly, the rehabilitation of coastal fisheries resources should be achieved. Over-fishing and over-capitalization are likely to lead the depletion of coastal marine resources. Fishers, local communities and government agencies concerned should adopt appropriate measures to rehabilitate coastal marine resources. Thirdly, poverty alleviation is the most basic strategy toward establishing sustainable use of coastal resources. Successful pilot projects of CBFM in Thailand as well as in other parts of the Southeast Asia indicate that they devote much effort to reduce the poverty of poor small-scale and coastal fishers, which leads to their survival without using destructive fishing gear.

The Project purpose is the objective that is expected to be achieved by the time the project is completed. In general, the project purpose should be described as a specific benefit or impact given to, or on, the target group. It is ideal that a project proposal calls for only one purpose that may be efficiently achieved within the project duration (FASID, 2001). The purpose of the LBCRM-PD is to establish a practical framework for locally based coastal resource management through the encouragement of fishers and resource user participation. To achieve this purpose effectively, the project will emphasize the creation of alternative job opportunities outside capture fisheries, in Tambol Pakklong.

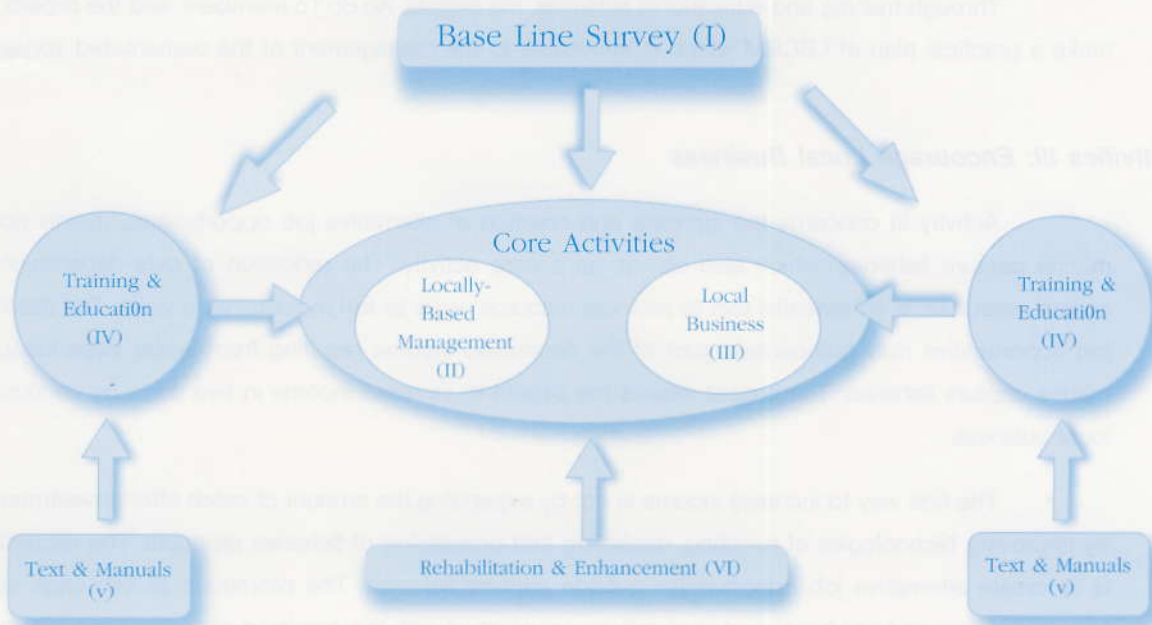
The completion of the project's implementation will bring four results. Firstly, the people successfully establish a LBCRM in Tambol Pakklong and it works. Secondly, the people's production and living conditions improve. Thirdly, the people and organizations enhance their capability in resource management and community development. Finally, practices and lessons learned through the implementation of the project will be encapsulated into DOF policy on coastal resource management.

The Project Activity and Its Core

The project has six main activities, i.e., 1) Base line survey (Activity I), 2) Extend and encourage LBCRM (Activity II), 3) Encourage local business (Activity III), 4) Enhance human resource capability and participation (Activity IV), 5) Develop extension methodologies and strengthening the extension system (Activity V), 6) Rehabilitate and enhance coastal resources (Activity VI). As Chart II shows, Activity II and Activity III are at the core of the project activities (*see Chart 2*).

Activity I: Base Line Survey

Activity I is the base line survey, to obtain the necessary information and data both for the establishment of sustainable coastal resource management and for community development. The project staff conduct a series of scientific surveys according to their own programs. They need a feasibility study

Chart 2 Six Project Components

in depth, to plan the local-demand project activities. The participation of resource users and stakeholders is an essential factor to lead to the success of the research activities. The survey consists of socio-economic, oceanographic, environmental and fishing technology aspects. Some basic indicators and figures are regularly collected. The survey also includes some particular topics like soliciting the people's ideas on management aspects, their demand for the project activities, and identifying a beneficiaries group of supporters or those negatively affected.

As a pilot project, an ongoing process of the LBCRM-PD is checked and monitored to modify the project proposal and any action plan if necessary. Therefore, the base line survey includes the collection of figures for the monitoring and evaluation of the project's activities as designed. Taking "input" and "external" conditions into account, a series of monitoring surveys keeps the project on the right track for success.

The results of the survey and analysis should be given to the people and communities at every opportunity including training, seminars and advertising campaigns. Fishers and stakeholders are eager to obtain the results of interviews and responses.

Activity II: Establish and Extend LBCRM

As already mentioned, contexts and contents of the LBCRM cannot yet be explained in detail. The people, local communities, and the project staffs understand that an LBCRM means a workable framework to promote sustainable resource utilization in the demarcated zones (Zone I and Zone II). This framework secures a participatory approach for coastal resource management, and brings about a decentralized fisheries management system based upon Tambol administration. This project becomes the first pilot project to build a Tambol-based management framework. The project staff and Ao.Bo.To

members plan to experiment with practical management and registration methods, like adopting the form and procedure of fishing boats, gear, and registrations.

Through training and educational activities, the people, Ao.Bo.To members, and the project staff make a practical plan of LBCRM which is applicable to the management of the demarcated zones.

Activities III: Encourage Local Business

Activity III concerns the increase and creation of alternative job opportunities, mainly outside marine capture fisheries, which also stands as a core activity. The reduction of over-dependence on coastal resources is an essential tool to promote resource users to fish in sustainable ways. The alternative job opportunities may compensate part of the decreased income resulting from lesser dependence on marine capture fisheries. The project assists the people to increase income in two ways by encouraging local business.

The first way to increase income is not by expanding the amount of catch effort investment, but by improving technologies of handling, marketing and processing of fisheries products. The second way is to create alternative job opportunities outside capture fisheries. The promotion of fish cage culture (mainly grouper and sea bass) and shell culture are planned with the provision of appropriate information on carrying capacity and the timing arrangement of training courses. The development of value added fisheries products is an effective tool to increase income, since there are many kinds of traditional fisheries products that are possibly commercialized on local-wide networks. Women have a vital role in encouraging such small-scale local business. Many of them are active members of community-based saving and financing groups, so that they have access to a source of micro finance. Marine eco-tourism is also a target activity in that a bungalow village has gradually expanded its capacity, attracting an increasing number of tourists.

Any activities categorized into the Activity III will support the "One Tambol (Village), One Product" scheme that Thai government has initiated so far. In collaboration with Ao.Bo.To and other local agencies, the project plans to give necessary technology and marketing information to the targeted people.

Activity IV: Enhance Human Resource Capability and Participation

The Activity IV concerns the matters of training and education. At the first phase of the project, most of the project activities are related to education and training. They are the most basic activity leading to the full success of this project. Participatory training courses are planned and conducted. Subjects and topics of the training courses focus mainly on the Activity II and the Activity III. Such selective topics as local- and people-demanded may increasingly attract the target group of people to involve in the project' activities.

For the Activity II, training courses contain topics on resource management in the demarcated zones, responsible fishing and aquaculture operation, participatory coastal resource and ecosystem assessment, and any knowledge about sustainable use of coastal resources. Participatory training courses will be arranged to prompt participants to step toward the next activities.

For Activity III, the project staff arrange a series of courses that provide technology and marketing information on small-scale local business. The first priority may be given to the processing of value added fish processing and the technology transfer of fish and shell culture. Demand for fish processing seems very strong. Although fishers have abandoned catching squid, anchovy and other species adequate for processing, not much progress has been made in fish processing at the project site. The project staff realize a large potential and demand for the development of fish processing. Meanwhile, the amount of investment in fish cage culture in the demarcated zone is rapidly increasing. People require both economic effective and environmental friendly technology. They also desire to set up agreements and rules about the utilization of aquaculture grounds on a sustainability and equality basis, because the potential areas for aquaculture are not so wide. Training courses give incentive to aquaculture development, and provide a wide variety of opportunities for gaining a consensus among aquaculturists.

The project will plan other special topics on local business occasionally, according to the people's demand. Marine and eco-tourism possibly become matters of training for better investment and exploring environmental-friendly tourist routes. Management methods of cooperative groups are conventionally important in that most of government- and NGO-based assistance for small local business require people's cooperation. The people may have diversified training programs, which the CMFDC and TD are not always satisfied with. The project staffs will connect the people to other training institutions if necessary.

Three types of training programs arranged. The first type targets the project staff from the CMFDC, the Provincial and District Offices of Fisheries, and TD. In the early stages of the project, the staff devote themselves to improve their capacity in conducting activities. The second type targets community leaders, fisher's group leaders, women's group leaders, and Ao.Bo.To council members. They will take leadership in planning and implementing the project's activities, and gradually take over the duties from the project staff. These leaders have a vital role in extending the idea and methods of sustainable resource utilization to the community people. Fishers, resource users and the people are the third target group of training program. Supported by the second target group, the project staff will arrange on-site and practical courses on whatever topics.

Activity V: Develop Extension Methodologies and Strengthen Extension System

This activity is not directly related to the target people and communities, but the manuals, texts and any visual methods are useful to enhance better understanding of the idea and framework of the project's activities. The CMFDC has a role of organizing community development programs in the Upper South facing the Gulf of Thailand. As a regional training center, some staff members are assigned to create useful texts and manuals for future planning and implementation of coastal resource management projects. Through their practices and experiments in Tambol Pakklong, they will develop various kinds of extension methodologies. The TD also organizes international training courses that provide basic knowledge and visual methods technologies to trainees from the SEAFDEC member countries.

For enhancing awareness building for the sustainable use of coastal resource management, the project staff design and produce campaign materials like posters, brochures, project manuals, and films. They also arrange collaborative advertising campaigns for the conservation of mangrove and coastal fisheries resources with local schools and NGOs. At the project site, schools' enthusiasm for environmental

education is remarkable. School children and teachers are becoming strong supporters of sustainable utilization and conservation of coastal resources.

Activity VI: Rehabilitate and Enhance Coastal Resources

This activity is planned and implemented by the DOF. The DOF has allocated a certain amount of budget for the installation of artificial reefs (ARs) around the demarcated coastal zones. Locations and sites will be decided through consultation with fishers and stakeholders. Small-scale fishers request the installation of ARs not only for enhancing coastal resources but also for preventing commercial-scale fishing boats from encroaching upon the demarcated zones. Setting up sustainable management and utilization of resources around the areas of deployed ARs will be target activities grouped into the Activity II. Releasing fingerlings is also planned by the Coastal Aquaculture Center (in Prachuab Kiri Khan and in Chumphon).

2. Sequence Plan for the Project Activities

Two Phases of the Project Activities

The duration of the project is five years, which is divided into two phases. The period from October 2001 to December 2003 is the first phase, in the 1st and 2nd year. The second phase consists of the period from the 3rd to the 5th years.

In the first phase, the project staff plan to conduct activities related to Activity I and Activity IV. In particular, the first year activities will be done in two ways. Firstly, capacity building of Ao.Bo.To members and community leaders should be undertaken before anything else, encouraging them to take the lead in the operation of the project activities.

Secondly, great emphasis is placed on achieving a consensus among resource users on the current situation of coastal resources and environment, by adopting appropriate methods of improving awareness building. Sharing common problems and interests among them is a first step to finding solutions and actions.

In Activity I, the project staff will make much effort to collect basic information and data on households, occupations, fishing boats & gear, fishing and aquaculture operations and so on. Such census methods will be adopted in that exact figures are lacking at the project site. The exact estimation of catch effort leads to adequate management methods. Simultaneously, oceanographic and fishing ground surveys on a regular basis provides scientific data and information to the people and communities.

In the second phase, the project concentrates on the establishment and functioning of a LBCRM framework and the promotion of alternative job opportunities in more practical ways. During this phase, the project staff will phase out their involvement in the project activities, while fishers, their groups and Ao.Bo.To will increase their contribution to planning and implementing the project activities.

Monitoring, Mid-Term Evaluation and Re-planning

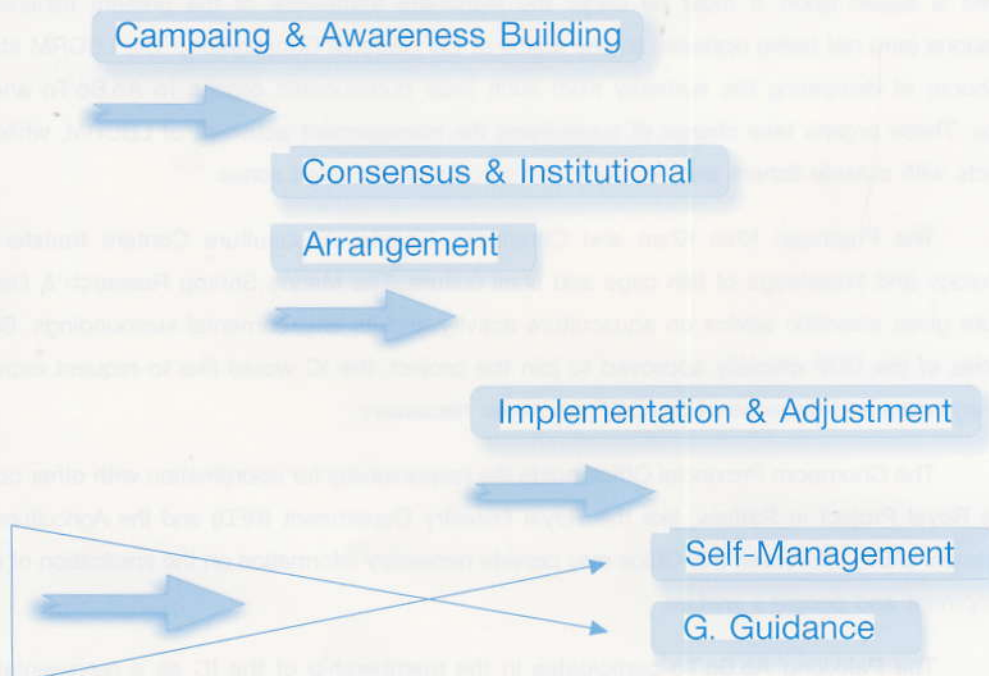
In the transitional stage from the first to the second phase, the mid-term evaluation investigates the degree of achievement of outputs in the project's activities. It indicates at least five evaluation criteria, efficiency, effectiveness, impact, relevance, and sustainability. The outcomes of the project and the project design will be compared according to the figures of the evaluation criteria. Monitoring (ongoing basis) during the implementing stage is obviously important. The project staff should check the project operation and management process on a regular basis with the appropriate figures prepared.

In the first phase, we plan to have a workshop in collaboration with fishers, community leaders, Ao.Bo.To council members, and local government agencies. The main purposes of this workshop are to restore the results of the scientific analysis by a base line survey of them, and to make the people re-focus on their own demands for the project and re-design of the project activities.

Step-by-Step Policy for the Establishment of LBCRM

It is ideal that a LBCRM in Tambol Pakklong evolves into the category of self-management while reducing government intervention. The project has a clear-cut policy for gradually stepping toward the establishment of a LBCRM (see Chart 3). The project predicts three development stages. In the first stage, the main activities are to spread the concept and idea of sustainable coastal resource management with a campaign using posters, brochures, and any effective advertising methods. Education and training are the primary energy of enhancing awareness about the project and its purpose. Finding problems and solutions is a major concern.

Chart 3 LBCRM : Sequence Plan for Establishment



In the second stage, fishers and stakeholders should achieve consensus and agreement on how to manage the demarcated zones in front of their communities. These have to pass through formal procedures that the people's acknowledge. Community-based management units (CBMUs) and their networks create their own institutional arrangements, in collaboration with Ao.Bo.To, the Provincial and District Offices of Fisheries. In the third stage, a further development of self-regulatory activities with a monitoring function will be achieved. By the end of the project, the fishers and resource users can to steer a direction of LBCRM. Along with the development of a LBCRM framework, the project staff phase out and encourage the people to increase their own role in coastal resource management.

3. Implementing Agencies and Organizational Structure

Implementing Agencies

As the project plan describes, the major implementing agencies are the DOF and the TD. Fishers, resource users, people's groups and Ao.Bo.To will join in full partnership with these agencies. In the actual implementation stage, staff members from the CMFDC have major roles in both research and training fields, as it consists of the Chumporn Raw Fisheries Materials Inspection Unit and the Fishermen Training Center. The research topics are on marine life history, population analysis and stock assessment, fishing ground development, and marine fisheries environment. The Training Center arranges training courses for technological improvements, responsible fishing and the conservation aspects. The CMFDC covers three provinces in the upper western coast of South Thailand, namely Prachuab Khiri Khan, Chumporn, and Surathani. The staffs are to guide fishers and their family to manage community development programs, together with local government offices of fisheries.

The Provincial and District Offices of Fisheries become another core agencies, for generating an LBCRM and developing them in collaboration with the people. Whatever the people's agreement the LBCRM is based upon, it must be under the legitimate framework of the present fisheries act and regulations (and not being opposed to any article of the National Constitution). The LBCRM stands upon the course of delegating the authority from such local bureaucratic organs to Ao.Bo.To and people's groups. These organs take charge of supervising the management activities of LBCRM, while adjusting conflicts with outside-fishers and resource users in the demarcated zones.

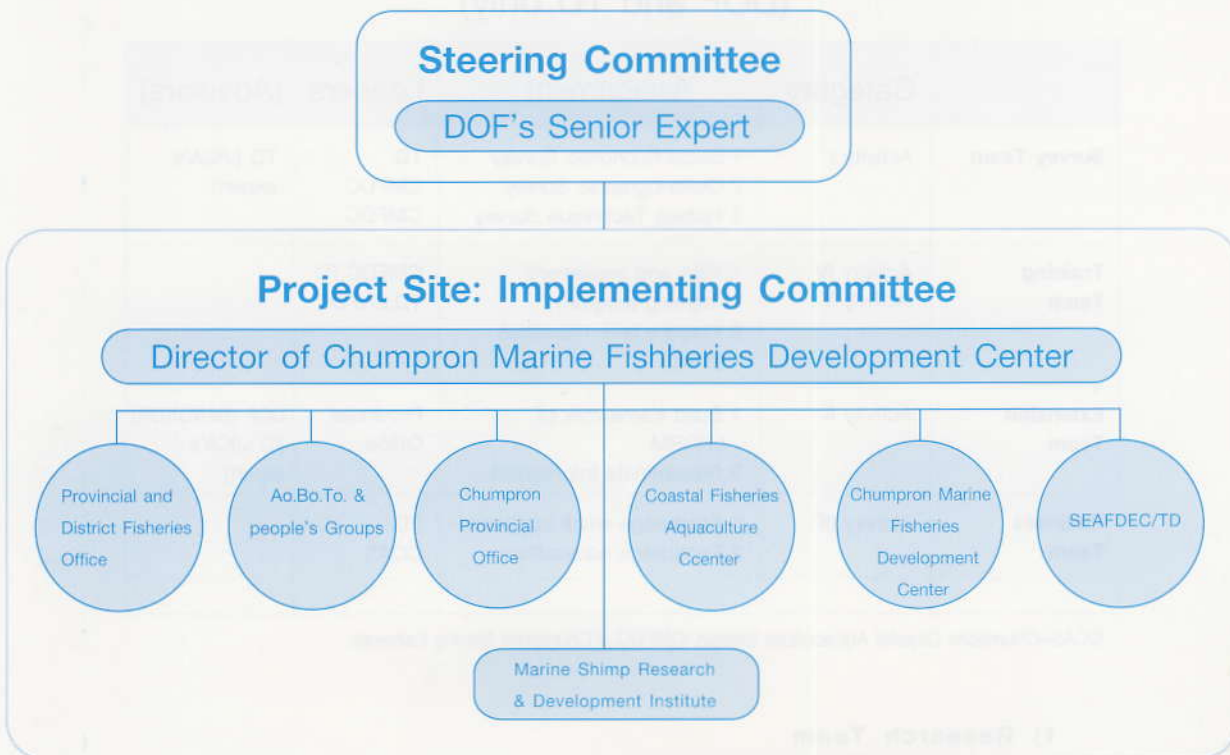
The Prachuab Khiri Khan and Chumporn Coastal Aquaculture Centers transfer adequate technology and knowledge of fish cage and shell culture. The Marine Shrimp Research & Development Institute gives scientific advice on aquaculture activity and its environmental surroundings. Besides the agencies of the DOF officially approved to join the project, the IC would like to request expertise from other agencies and divisions of the DOF whenever necessary.

The Chumporn Provincial Office holds the responsibility for coordination with other components of the Royal Project in Pathew, like the Royal Forestry Department (RFD) and the Agriculture Extension Department (AED). Moreover, this Office may provide necessary information on the implication of community development and people's welfare.

The Pakklong Ao.Bo.To participates in the membership of the IC as a representative of the people at the project site for the time being. The Ao.Bo.To and representatives of the people's organizations

involved will increase their participation and shared tasks at a later stage, and at the final stage of the project they will have full responsibility for planning and implementation (see chart 4).

Chart 4 Organization Chart of the Project



Team-Based Management of the Project

A number of staff members from government-based agencies will participate in the project activities in different fields. Prior to designing and finalizing the project proposal, the staff members worked together to gain a common understanding and recognition of the current situation at the project site. This was thought to be a factor leading to the success of the project. Once the project started with diversified objectives and activities, the IC should establish sub-teams consonant with the major components of the project activities. Setting aside the Ao.Bo.To and people's groups in Pakklung, the members of TD and DOF have taken particular parts in the project activities.

To effectively implement the project's activities, the Director of CMFDC, the coordinator of the DOF, and the SEAFDEC/JICA expert agreed to build a team-based structure. Under the inspection of the Director of CMFDC, all staff members of DOF and TD involved in the project belong to one or two teams. They are assigned particular tasks and responsibilities, being grouped into four teams, i.e. Survey Team (Activity I), Extension Team (Activity II and V), Local Business Team (Activity III), and Training Team (Activity IV and V). Such team-based structures do not include Activity VI, as the DOF has a special team with experts on artificial reefs.

The four-team-based structures will be flexibly changed, if the project's activities diversify or diminish in a process. Members move from one team to another, if they complete their assignment and/

or are awarded new tasks. Teams must work together whenever their activities overlap. The CMFDC, the Provincial and District Offices of Fisheries, and TD allocate staff members to teams, as Table 1 indicates.

Table 1 Structure of Project

(DOF and TD only)

	Category	Assignment	Leaders	(Advisors)
Survey Team	Activity I	1 Socio-Economic Survey 2 Oceanographic Survey 3 Fishing Technique Survey	TD CMFDC CMFDC	TD (JICA's expert)
Training Team	Activity IV Activity V	1 Plan and implement training program 2 Prepare text, manuals & others	CMFDC, TD TD, CMFDC	
Extension Team	Activity II	1 Build framework of LBCRM 2 Disseminate information	Provincial Office	DOF (BANGKOK) TD (JICA's expert)
Business Team	Activity III	1 Encourage small business 2 Encourage aquaculture	TD CCAS	

CCAS=Chumporn Coastal Aquaculture Station, CMFDC = Chumporn Marine Fisheries

1) Research Team

The research team consists of three sub-teams, i.e. 1) socio-economic, 2) oceanography & environment, and 3) fishing technique research.

2) Extension Team

The extension team is involved in Activity II, with campaigns on the sustainable use of coastal resources. The central focus of the team is to build an LBCRM framework in collaboration with fishers' and resource groups (CBMUs and Ao.Bo.To). Provincial and district officers initiate planning and implementation and the research team provides the basic information and results of the survey. The extension team acts as a conduit, standing between the implementing committee and the people targeted at the project site.

3) Local Business Team

There will possibly be two fields that the business team encourages in accord with the alternative livelihood approach. The aquaculture business is one target. Staff from the Chumporn Coastal Aquaculture Station (CCAS) will provide technical assistance, while the research team prepares basic scientific data and information. Another task is to promote fish processing and fisheries-related business activities. The team encourages women to establish cooperative groups and introduce processing technologies with the provision of the necessary marketing knowledge.

4) Training Team

The chief of the training division in the training unit of the CMFDC heads the training team. The

IC organizes a special working group for publishing textbooks and manuals. Academics, DOF officials and NGOs staff are invited to be members of the group. The matters of training activities are in a very close relationship with the other categories of the project activities. All teams should work together to improve training activities.

The membership of each group is flexible, and staff members of DOF and TD change their responsibility and tasks if the implementing committee allows. Leadership is an important factor in the success and the effective operation of team activities. Sharing information and knowledge, both among the team members and among all teams, is another important factor. Advisors are required to actively involve in the real implementation of the project's activities as much as possible. The highlight of this project is the establishment of self-regulatory management within the legal framework of the present fisheries laws. Expertise and adequate judgement are essential factors to avoid friction and confusion on the process of any legal actions on coastal fisheries management.

IV TOWARD THE ESTABLISHMENT OF LBCRM: Pilot Decentralization Program on Coastal Fisheries Management

1. The Creation of a Viable Model of A Decentralized System Within the Context of a Community-Based Approach

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As has been earlier mentioned, the LBCRM-PD adopts the conventional approach of CBFM that has been implemented by the DOF and NGOs in various parts of the Thai coastal areas and on some islands. The community-based approach has succeeded in enhancing awareness building, establishing fishers' groups to meet members' economic demands, although the people do not always make progress in the sustainable use of coastal resources. An attempt to introduce the concept of fishing rights has not yet been successful in the FRPP. At the project site, which has two districts, the fishers and the people organize community-based (Moobaan) groups to conduct economic activities like micro financing and store operation. Some groups have achieved great success in meeting members' economic needs. Therefore, the application of the CBFM approach to the LBCRM-PD to a large extent seems rational and practical.

Roles and Functions of Ao.Bo.To

The on-going process of decentralization, headed by the Ministry of Agriculture and Cooperatives, will definitely have effect on the creation of a viable model of decentralized coastal fisheries management. Although the process is still uncertain, Ao.Bo.To will become a primary unit to which district offices devolve several administrative functions. The Ao.Bo.To and its administrative system should work together with local resources users.

The Royal Project Committee and related government agencies selected a project site in

Tambol Pakklong. As a result, project activities are confined within the area of Pakklong Ao.Bo.To. The demarcated zones do not extend their neighboring Tambols and Moobaans, restricted to the sea in front of Tambol Pakklong. Tambol is regarded as a basic, administrative and socio-economic uniformity, regardless of whether or not such a selection method of a project site might not fit in with the reality of people's living and producing conditions inside and outside the Tambol.

Under such circumstances, we attempt to explore a Tambol-based coastal resource management system in which Ao.Bo.To would have following three functions.

1) Administrative unit of fisheries management

Generally speaking, Provincial and District Offices of Fisheries plan to delegate some functions and issues to Ao.Bo.Tos (they may manage registration and issuing licenses to fisheries activities). As the first step of decentralization, the Ao.Bo.Tos assist a development of registration of fishing gear, fishing boats, aquaculture ponds, and so on. In collaboration with staff from the Pakklong Ao.Bo.To, the project identifies selective functions that the Ao.Bo.To and coastal resource users can take over from the Provincial and District Office of Fisheries. The project will then explore a Tambol-based fisheries registration system and develop it. However, this attempt will be done on a voluntary basis by the time of the completion of amendment of the fisheries act and regulations.

2) Support resource users' activities on coastal resource management

To achieve consensus and agreement on the sustainable use of the demarcated coastal zones, the Ao.Bo.To supports fishers' and resource users' activities in various ways. Establishing and managing users' groups are core activities. The Ao.Bo.To encourages the people to join the groups, and involve themselves in resource management.

3) Legitimate resource users' decisions and agreements

The Pakklong Ao.Bo.To may find difficulty in extending its function to the management of local resources and environment because of a lack of personnel and budget. However, the Ao.Bo.To enables legitimate resource user decisions and their agreements. It is an autonomous administrative organ in political and budgetary terms, whose council members are elected from the public through democratic voting procedures. At the last stage of decision-making as regards the management of the demarcated zones, the Ao.Bo.To council allows rules and regulations with the consensus of the people.

There may arise some doubt and disagreement over whether an Ao.Bo.To can mature enough to take charge of coastal resource management. It has just started with development at a gradual pace. In actual implementation, fishers and resource user organizations -of whatever type - should be the foundation of the self-regulatory management regime of demarcated coastal zones.

2. Community-Based Management Unit and Its Functions

The highlight of the Activity II initially in the first phase is to encourage the people to establish a community-based management unit (CBMU). It is ideal that the CBMU becomes a primary unit at Moobaan level, with membership drawn from the majority of fishers and stakeholders. The CBMU is expected to function in at least six roles, as follows.

Table 2 Roles of Community-Based Management Unit (CBMU)

Role	Actions
1. Representative	Act as representative of and unify resource users in the primary unit
2. Consensus	Organize a process of gaining consensus among resource users.
3. Suggestion	Suggest directions of coastal resource management and community development to Ao.Bo.To (and local government agencies)
4. Implementation	Undertake any conservation and management activities in line with the people's consensus and agreement.
5. Enforcement	Enforce laws, monitoring and controlling irresponsible production activities within the primary unit
6. Adjustment	Adjust interests between areas and reduce conflicts.

CBMUs act in detecting problems and finding solutions on coastal resource management at both Moobaan and Tambol levels. They provide a wide variety of opportunities whereby the people obtain consensus on how to regulate fishing and aquaculture operation in the demarcated coastal zones. According to any agreement that the people reach, the CBMUs extend their own rules and enforce them. Adjusting and coordinating to reduce conflict in the demarcated zones are the responsibility of the CBMUs. They represent a formal and core organization of fisheries and resource users in their immediate vicinity.

Apparently, this is a tentative description about the CBMU's role. Establishing the CBMU and functioning it effectively should be a longer process.

Several Issues to be discussed on CBMUs

What is the most important is not organizing a CBMU, but creating an effective institutional arrangement to push fishers and resources users forward realizing these objectives at local levels. The following issues on the organization and activities of CBMUs should be considered in depth:

1) Moobaan-based Organizations with open membership

A CBMU is designed as a Moobaan-based organization. Under the present local administrative lines, the Moobaan functions as a primary administrative unit standing between the people and Ao.Bo.To, and covers a wide range of local concerns. Naturally, the Moobaan administrative unit must open its membership to all residents. Geographically, in Tambol Pakklong, some Moobaans become an actual unit of people's life and production. They provide political and economic cohesion. Therefore, a Moobaan-based framework of resource management encourages greater participation of the fishers and resource users in a decision-making process.

2) Adding resource management functions, transforming the currently existing groups, or newly establishing ones?

If a Moobaan administration secures people's participation in coastal resource management, it may not be necessary to organize any new management units. Just adding several functions of resource management to the Moobaan administration will be very cost-effective, particularly in cases where the

majority of households are engaged in fisheries activities.

In other cases, fishers and resource users transform the fishers' groups currently existing into a management unit, which also seems more rational and cost-effective rather than newly establish resource users' groups. However, we should consider the fact that the fishers' groups currently existing at the project site are likely to close their membership.¹⁰ Without open-access to membership for all fishers and resource users, these groups would not function as a management unit.

3) Coverage area of CBMU

A CBMU does not need to restrict its membership and activities within one Moobaan, if several Moobaans have geographic, environmental and socio-cultural aspects in common. They should be grouped into the one management unit. Organization and membership should be flexibly changed.

4) Combination with Fishing Gear Groups

We assume that a primary management unit (CBMU) is area-based membership, not an occupationally based (fishing gear) one. However, this no longer means that it would be unnecessary to organize any occupationally based body. Those engaged in fish cage culture would possibly establish a group holding responsibility for the management of cage culture grounds, whose membership extends over the whole area of the Tambol. Anchovy and squid fisheries may also be grouped into occupationally based bodies. Those fishers who share the same interest or face conflicts among themselves are also part of the membership and activity of the bodies. Area-based and fishing-gear-based management bodies will coexist and work together to solve many different problems. They reciprocally support, as each type has both advantages and disadvantages.

There may be much argument on organizational principles and activity guidelines that will eventually be adopted at the project site. The results of the socio-economic research of the base line survey will bring fundamental suggestions on the issues.

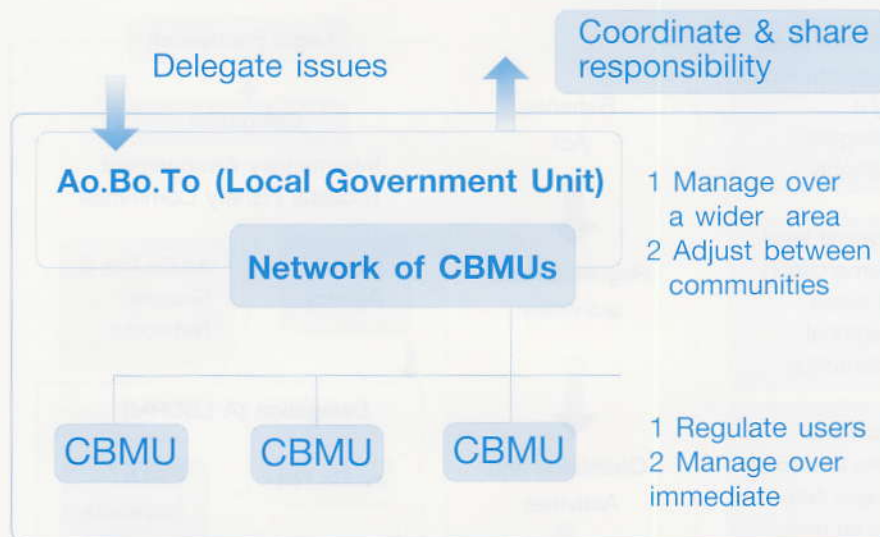
3 Perspective of Decentralization: From the Viewpoint of LBCRM

LBCRM: As A Total System with a CBMUs Network

As has already been described, decentralization of fisheries management becomes a very important issue in bureaucratic reform. No doubt, Ao.Bo.Tos are to share, to some extent, the authority of fisheries registration and management devolved by the central government, provincial and district offices. In Thai local administration, the Ao.Bo.To system has just begun to develop with the concessive support of government, so that it is still weak. It is unrealistic to hold the Ao.Bo.To fully responsible for coastal fisheries management from an early stage, although we expect that the Ao.Bo.To will increase its function and role of local resource and environmental management. Even after the Ao.Bo.To will have matured enough to manage local resource utilization, it has to depend upon the people's enthusiastic participation and involvement.

As illustrated in Chart 5, a LBCRM contains three substantial elements, that is, Ao.Bo.To, CBMUs and a network of CBMUs. In actual implementation of coastal fisheries management at the project site,

Chart 5 Framework of LBCRM



CBMU = Community- based Management Unit

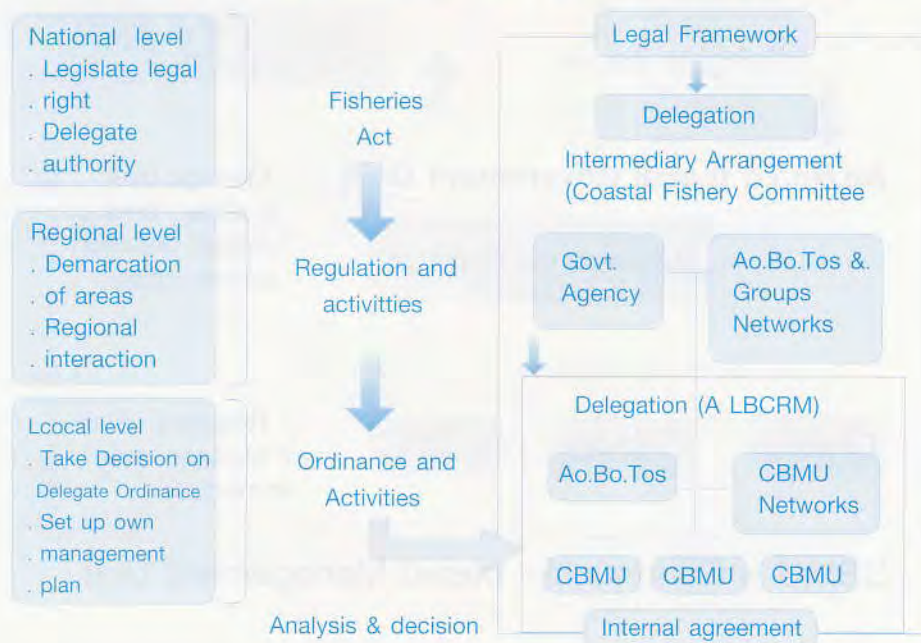
the network that all CBMUs join will stand at the center. The purpose of establishing such a network is to arrange and conduct self-regulating activities at Tambol level. It resolves conflicts between communities, and between different types of fisheries. Sharing responsibility between the Pakklong Ao.Bo.To and the network will change flexibly, according to the level of people's participation and involvement. In any case, a LBCRM plans to work as a holistic management body covering the area of the project site. This should be a formal institutional arrangement. Otherwise, there would arise confusion and a struggle for legitimacy of consensus and agreement among the people.

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For the implementation of a pilot project, we tentatively propose that a LBCRM constitutes the Pakklong Ao.Bo.To and CBMUs whose membership is limited to the Tambol Pakklong area. This does not mean that such a LBCRM framework is confined to its mandate and control over only one sole Tambol. Given different geographical, resource environments, and socio-economic surroundings, there may be an enormous number of variations of the LBCRM framework. Even in Tambol Pakklong, different patterns of LBCRM could be proposed, when considering the fact that those outside residential fishers usually encroach upon the demarcated coastal zones to fish. Through experiments in this project, we would search for a more adequate model of LBCRM fitting with the reality of coastal resource utilization.

It is not always rational that a local fisheries management body should be established in line with the local administrative system currently prevailing. Under *de-facto* open access to coastal resource, fishers and resource users more freely and flexibly explore aquatic resources far beyond their own residential areas. CBMUs and their networks flexibly extending their organization and activity over Tambols will be more effective and realistic than if local administrative and bureaucratic lines restrict them. In other words, the CBMUs and the networks should steer in any direction of LBCRM instead of local administration.

Chart 6 Mechanism of Decentralization



LBCRM Will Stand as the foundation of A Decentralized System

We predict one possible mechanism of decentralized coastal fisheries management regime, shown in Chart 6.¹¹ This chart illustrates just one process of how to devolve central authority to the local level stage by stage. According to the draft of the new fisheries act, the “local fishery committee” may stand between the central government and local levels. The committee holds great responsibility for adjustment and coordination among different areas and among different types of fisheries. The coverage area of the fisheries committee is far beyond that of an LBCRM unit. The committee may function as a provincial and regional management body, consisting of a number of LBCRM units.

An LBCRM is a primary management unit in a decentralized coastal fisheries management regime, standing between the local fishery committee and local communities. Whatever the type, an intermediary and regional institution will be required to achieve effective and sustainable management of coastal resources. The committee may partly contain an assembly of LBCRM units within a defined locality, while government fisheries agencies, provincial and district offices instruct the committee's activities.

V

CONCLUSIONS: Community-Based Approach Toward an LBCRM Approach

The LBCRM-PD is the first challenge in the establishment of decentralized fisheries management, keeping pace with the decentralization programs in local administration. There have been a number of pilot projects focusing on CBFM within a narrow locality. Passing through these successful experiences and practices, more attention should be given on how to build a workable mechanism of local fisheries management in a wider locality. This new mechanism, after being modified and simplified, will be extended to other areas of the country.

The LBCRM-PD will provide one experience only. Obviously, it is hard to generalize on one pilot project. Under such different surroundings as geography, types of fisheries, and socio-economics, LBCRM frameworks would exist in different forms and develop in different directions.

Nevertheless, the LBCRM-PD may provide a profound insight into a future direction of the decentralization program planned by the DOF. This is chiefly because the project relies on the currently existing local administrative system, which has been standardized throughout the whole country. This is in great contrast to the many pilot projects adopting the CBFM approach, in that their success and/or failure are deeply affected by the level of people's awareness and self-consciousness, and by any other socio-economic factors rather than institutional and legal matters. In the CBFM approach, generalization of successful experiences is a very difficult task.

Of course, the LBCRM-PD also depends greatly on the people's awareness and self-consciousness on the sustainable use of coastal resources, but not entirely stuck to their self-encouraging and self-regulatory behavior. One goal of the project is to search for a workable and cost-effective mechanism on coastal resource management, through which energetic effort put in by both people and government can easily transfer.

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NOTES:

¹ The SFDS started in 1987 and ended in 1996, passing through the Sixth and the Seventh National Social & Economic Development Plans. During the Eighth National Social & Economic Development Plan (1997-2001), the DOF arranged another series of projects entitled the "Rehabilitation of Marine Resource Program". However, there was not much difference in terms of content between the latest scheme and the former ones.

² On 19 October 1999, the provincial ordinance, entitled the "Regulation of fishing gear that are prohibited in some areas of Prachuap Khiri Khan", was proclaimed. This ordinance presents the legal framework of the FRPP.

³ This does not mean any existence of traditional and customary exclusive use right of coastal resources. On the Andaman side, there are a number of communities where the people set up their own boundaries and coordinate with neighboring communities. They are not always traditional, but based upon the consensus that has been recently obtained between the people, and between communities. There are some augments over the legal validity of setting up such exclusive use rights.

⁴ The main laws and regulations are as follows: 1) The Fisheries Act, B.E. 2490 (1947), 2) The Act Government the Right to Fish in Thai Fisheries Water, B.E. 2482 (1939), 3) The Thai Vessels Act, B.E. 2481 (1938).

⁵ If necessary, these authorities should proclaim provincial regulations, ministry regulations, and

department regulations, respectively.

- ⁶ The discussion hereafter will be based on "Fisheries Act, B.E. 25---(Draft)", which is discussed in public.
- ⁷ "Designated community" means the persons who have the right to harvest aquatic resources within a designated community fishery area or have been given the authority to manage and implement measures related to aquatic resources within a designated community fisheries area.
- ⁸ There is much disagreement over whether the Ao.Bo.To and/or local communities become owners of local resources. In the recent development of the reforestation program since the 1990s, the concept of social forestry has developed and is widespread through the North and the Northeast, recently. However, agreement has not come yet as regards the common property right of forestry resources. This is a very controversial issue.
- ⁹ Many fishers in Bang Sapan Noi and Bang Saphan Districts undertake fishing operations inside and outside the demarcated zones, on a daily basis.
- ¹⁰ These groups have dealt in the provision of micro finance to their members, with the DOF's subsidy to lending funds.
- ¹¹ This chart and the description here are not based upon any official statement, but based upon the author's (Yamamoto's) personal view. The author assumes full responsibility for illustrating this chart and the description.

REFERENCES

Bureau of Fisheries and Aquatic Resources (BFAR) *Fisheries Resource Management Project (Annual Report 2000)*, Manila: BEFAR, 2000, 52 pp.

Foundation for Advanced Studies on International Development (FASID) *Project Cycle Management: Monitoring and Evaluation Based on the PCM Method*, Tokyo:FASID, March 2000, 74 pp.

Suanrattanachai, P. *Coastal Fisheries Management and Community Development for Small-Scale Fisheries: Lessons Gained through Case Studies on Pilot Projects in Thailand*, Kagoshima: Doctorate Thesis Submitted to The United Graduate School of Agricultural Science, Kagoshima University, 2001, 126 pp.

Terao, T., Anuchiracheeva, S. & Ruangsivakul, S. *Preliminary Study Report on the Fishing Right Pilot Project in Bang Saphan Bay*, Bangkok: SEAFDEC/TD, December 2000, 105 pp.

Yamamoto, M. "Local Resource Management and People's Participation", *Food and Agricultural Product in Asia*, edited by Mikuni, H. Tokyo: Otsuki Shoten, 2000, pp.163-196.

Yamamoto, M. *Marine Tourism and Its Impact to Fishing Community*, Hiroshima: Hiroshima University, 2001, 106 pp.

PART II
PROJECT PROPOSAL

PROJECT PROPOSAL FOR LOCALLY BASED COASTAL RESOURCE MANAGEMENT IN PATHEW DISTRICT, CHUMPNORN PROVINCE (LBCRM-PD)

I. BACKGROUND

1.0 DOF Initiative

1.1 The Department of Fisheries (DOF), Thailand, has decided to conduct a Royal Project in Pathew District on behalf of His Majesty the King, and has drawn up a five-year plan for its implementation. This project is a part of the "Rehabilitation and Management of Marine Fisheries Project", too. The plan proposes to introduce the idea of community-based coastal resource management at a defined project site and to implement practical management methods. The DOF will also start a series of small-scale fisheries development programs at the site.

1.2 The project site is located in Tambol (Sub-district) Pakklong, Pathew District, Chumporn Province (see MAP). The Royal Project consists of three different fields, agriculture, forestry and fisheries. Agricultural improvement will be conducted mainly in wasteland covering an area of 448 rais. As there is no fishing community in the wasteland at the Royal Project area, the fisheries improvement program will cover all coastal communities of Tambol Pakklong.

1.3 Tambol Pakklong is under the governance of Pathew District, Chumporn Province. Its total area is 117 square km, and the population is 4152. This Tambol is composed of 7 villages and the total number of households is 879. Local residents engage in capture fisheries, coastal aquaculture and agriculture. Rubber, coconut and palm are major income sources in agriculture. Local residents engage in capture fisheries using large (squid) cast nets, fish gill nets, blue swimming crab gill nets, squid traps and various kinds of small-scale fishing gear. Some engage in fish cage culture and shrimp pond culture.

1.4 As shown in Tables 1 and 2, the DOF has set a tentative schedule of five years for the implementation. The installation of artificial reefs and fishing gear improvement are given higher priority in terms of budget allocation. The deployment of artificial reefs is a major objective in the fisheries field. Practically, the DOF has a plan to conduct a survey on resources, environmental and the socio-economic aspects, releasing fingerlings, instituting fishing gear development and organizing groups.

1.5 Adding to the improvement of marine capture fisheries, the DOF is ready to transfer technology in marine aquaculture and the provision of productive materials. Promotion of marine aquaculture is a part of the process of alternative job creation. Extending shellfish culture may be another job-creation-oriented activity. These processes may create additional income sources for local communities and may reduce the present amount of catch effort put into adjacent fishing grounds.

1.6 The project that the DOF has proposed places emphasis on promoting the sustainable use of coastal resources by territorializing a demarcated area preserved for small-scale fisheries. Through a consensus among local fishers, the DOF has proclaimed the demarcation of coastal fishing grounds. The project includes management of the demarcated zone where particular types of fishing operations are prohibited.

1.7 By applying the present fisheries act and regulations, trawls, push nets, blood cockle cast nets and anchovy fishing at night time will be banned within an area of 3 km from the coastline in Tambol Pakklong. The DOF and local fishers have agreed that two defined areas would be managed to prohibit the foregoing types of fishing operation. Both parties reached complete agreement on effective enforcement and monitoring of illegal operations in Zone I, covering an area of 46 square km. The majority of fishers and stakeholders have agreed a further expansion of the demarcated area to the south of Tambol Pakklong, setting up Zone II of 70 square km.

1.8 The DOF encourages the people and communities to enhance their management capability and develop methods to the sustainable use of coastal resources in the demarcated coastal areas. This is a very effective approach toward the expansion of comprehensive community development programs.

2.0 SEAFDEC Joining in the Project

2.1 Under the Fisheries Consulting Groups (FCG) scheme adopted by the Southeast Asian Fisheries Development Center (SEAFDEC), the Training Department (TD) collaborates with the DOF to implement a coastal resource management program. In this program, Thailand (DOF) acts as the lead country among the ASEAN-SEAFDEC member countries and TD will be the lead implementing department of the SEAFDEC. The DOF and the TD have reached agreement that both parties will be involved in the King's project in Tambol Pakklong under the FCG scheme. Technologies, knowledge and lessons learned through the implementation of this project will be transferred to member countries through the SEAFDEC information transfer mechanism.

2.2 To transform the project proposal planned by the DOF into a collaborative project, the DOF and the TD have agreed to minor changes in the framework of the project's implementation and have added some new activities. This is the project proposal for the further development of coastal resource management project, although the basic concept and methodologies adopted are the same as the DOF's initial proposal. The budget allocation having been approved by the Cabinet of Thailand is not a matter for change.

2.3 As the DOF and TD have developed this collaborative project, it is entitled "LOCALLY BASED COASTAL RESOURCE MANAGEMENT IN PATHEW DISTRICT, CHUMPORN PROVINCE" (LBCRM-PD).

II. OBJECTIVES

1.0 Overall Objective

1.1 Through the implementation of this project, Thai coastal fisheries will develop into a new era. This project has three overall objectives.

- 1) The establishment of sustainable coastal resource management at local levels
- 2) The rehabilitation of coastal resources
- 3) The alleviation of poverty in coastal fishing communities

1.2 Community-based fisheries management (CBFM) and co-management (CM) are workable frameworks for coastal resource management. Local government agencies, fishers and any stakeholders are encouraged to participate in the decision-making processes of coastal resource management, employing their own sustainable fishing methods in their immediate coastal areas.

1.3 While establishing sustainable fisheries management with a participatory approach, the rehabilitation of coastal resources should be adopted through appropriate measures. Rehabilitation will be feasible through enhancing awareness building among resource users and adopting conservation measures.

1.4 Alternative job opportunities should be created outside capture fisheries to engender the alleviation of poverty, so that small-scale fishers can survive and reduce over-dependence on coastal resources. Successful pilot projects of CBFM in the Southeast Asian region indicate that much effort to reduce poverty in local communities leads to a reduction in the use of destructive fishing gear.

2.0 Project Purpose

2.1 The project purpose is to:

Establish a practical framework for locally based coastal resource management (LBCRM) through the encouragement of fishers' participation, supported by the creation of alternative job opportunities in coastal fishing communities.

2.2 A practical framework for LBCRM consists of CBFM and CM. LBCRM is a system at the center of which stands local government agencies like a Sub-district Administrative Organization (Ao.Bo.To.) and a network of community-based management units, taking charge of coastal resource management in the demarcated zones. Resource users and any stakeholders are encouraged to join in coastal resource management through a LBCRM mechanism.

2.3 Success or failure of this project will also depend upon how successfully alternative job opportunities are created. The project should be designed to generate alternative job opportunities outside capture fisheries, to reduce the peoples over dependence on coastal fisheries resources.

3.0 Outputs

3.1 Four results from the implementation of this project are expected.

Locally Based Coastal Resource Management (LBCRM) in Pathew District, Chumphon Province

3.2. With LBCRM working effectively, resource users and any stakeholders will be able to use coastal fisheries resources in sustainable ways. They participate in the decision-making process of coastal resource management and share responsibility with local government agencies. The destructive fishing operations including trawls, push nets, blood cockle cast nets and anchovy fishing at night time, being prohibited in the demarcated zones, are monitored and eliminated.

People's production and living conditions improve

3.3 An integrated approach toward the establishment of LBCRM will bring an improvement

in production and living conditions. Solutions to over-fishing and over-capitalization lead to more stable social and economic surroundings for resource users and their families. Diversification of income sources reduces over-dependence on coastal fisheries resources.

Local government, people and organizations enhance their capability in community development.

3.4 Local government, people and any participatory organizations, having joined in the project, will be capable of conducting resource management and community development activities. This project is to overcome institutional weaknesses both in coastal resource management and in community development. Strengthening such institutional arrangements stipulates that the people and local governments must be involved in self-help economic and social activities.

Practices are converted into the DOF's policy on coastal resource management

3.5 The project involves a process of converting the practices undertaken in Pathew District into the policy of the DOF on coastal fisheries management.

III APPROACHES AND ACTIVITIES

1.0 The Project Approaches

1.1 The project purpose can be achieved by adopting substantial approaches. Practically and realistically, the following three approaches will be applicable, namely, (1) A CBFM and CM approach, (2) A resource enhancement approach, (3) A job creation approach. The first approach consists of participatory management and institutional strengthening methods.

1.2 This project covers the locality defined by DOF, being located in Tambol Pakklong (Sub-district) area. So that the implementing agencies are DOF (Bangkok), the Provincial and District Office of DOF, Chumporn Marine Fisheries Development Center (CMFDC), Sub-district Administrative Organization (Ao.Bo.To.), SEAFDEC/TD and other supporting agencies, the project may diversify its approaches to some extent.

2.0 Major Activities

2.1 The project will consist of six major activities.

2.2 Base Line Survey (Activity I)

2.2.1 To achieve overview information and a database to delineate proper activities for sustainable coastal resource management and community development, the local demand-led project needs a feasibility study in depth. The base line survey includes topics that rely on people's idea on management aspects and/or their demand for the proposed activities of the project. The survey identifies a beneficiaries group, supporters and those negatively affected, etc. in the project implementation.

Data collection on a regular basis in coastal areas of the project site

2.2.2 Data collection at coastal areas of the project site that relies on technological, biological, ecological and oceanographic aspects will be carried out as a regular basis survey during the period of the project. A Socio-economic survey should also be regularly conducted to understand the social and economic status of the project site. The regular surveys provide indicator identification for monitoring and evaluating the project.

Survey of particular topics and subjects

2.2.3 The base line survey includes particular topics and subjects related to the themes of the major activities. The results of the survey will be the basis for providing a training course and technology transfer.

The results of the analysis should be given to the people and the community, and adapted into a proposal and recommendations

2.2.4 The results of the analysis of all data and other information will be presented to the people and communities of the project site. This will consist of part of a proposal and recommendations for setting up an LBCRM with sustainable use of resources and an improvement in the quality of life.

2.3 Encourage and Extend LBCRM (Activity II)

2.3.1 Evaluating the present framework of fisheries management and referring to the past experience of CBFM projects, the project will conduct three kinds of activity through the consensus of users and stakeholders, and/or will propose applicable models to coastal resource management at the project site.

Encourage fishers' self-regulating activities in the demarcated coastal zones

2.3.2 The project will encourage fishers' responsible fishing and aquaculture operations and their participation in the management of the demarcated zones. By providing information and data vital to responsible fishing and aquaculture operations, the project will enhance users' consensus on the self-regulatory use of coastal resources and on the reduction of conflict between resource users. Any technical advice and training courses will be prepared by the project according to the demand of users and stakeholders.

Establish community-based management groups

2.3.3 The project will advise and assist resource users to organize community-based management groups of whatever type. They are expected to work as a unit of management. By the users' active participation in the groups, there will be a network of groups within the project site. For the groups and network to undertake self-management in the demarcated coastal areas, the project gives necessary advice and technology transfer.

Enhance local government's ability in coastal resource management

2.3.4 Strengthening the institutional framework at the project site is a substantial factor

for the establishment of LBCRM. To achieve this objective, the project will transfer information and give advice to the Ao.Bo.To in Tambol Pakklong, to take part of the responsibility of management. By building the awareness of local officers and community leaders, the Ao.Bo.To will develop a workable management system in collaboration with the resource users and stakeholders (and their groups), and with the DOF.

2.4 Encourage Local Business (Activity III)

2.4.1 To reduce over-dependence on coastal resources, the project encourages and enhances local businesses outside capture fisheries at the project site. The project assists people to increase household income in two ways. The first is by improving the technologies of handling, marketing and processing fisheries products. The second is to create alternative job opportunities inside and outside the fishing communities.

Improve post-harvest technology and introduce new value-added fisheries products

2.4.2 In collaboration with the private sector and government agencies concerned, the project will improve post-harvest technologies and introduce new value-added fisheries products. Introduction to the preservation of fresh products with good quality and good prices will be carried out. Provision of training and information on new processing will be targeted at women's groups particularly.

Introduce alternative job opportunities and support "One Tambol, One Product" activity.

2.4.3 Promotion of fish and shell culture will be incorporated into this activity. The project provides aquaculture technology and information. The project supports "One Tambol (Village), One Product" activities conducted by the Ao.Bo.To and other local government agencies. As well as the processing of fisheries products, other local businesses are encouraged by the project. Women have a vital role in job creation with the promotion of small-scale local business. Necessary training programs including micro credit schemes will be prepared for the women as the target groups.

2.5 Enhance Human Resource Capability and Participation (Activity IV)

2.5.1 Enhancement of human resource capability is the most basic activity leading to the full success of this project. Building awareness and consensus is the first step to achieving smooth and effective objectives of the project activities. Building awareness and consensus will be realized through appropriate educational and training programs. People can generate a self-regulatory management framework and organize community-based development projects on their own.

Training and education for enhancing awareness of the sustainable use of coastal resources

2.5.2 The project conducts activities to enhance awareness on the sustainable use of coastal resources and the objectives of resource management in coastal zones of the project site. Preparation of a series of training and educational courses should be considered concerning the purpose and framework of resource management, responsible fishing and aquaculture operations. The project targets its training and educational activity, not only toward resource users, stakeholders and local

government officers, but also toward youth and schoolchildren.

Plan and prepare to organize group activities and encourage local business

2.5.3 Participatory training and educational courses will be planned and prepared for organizing and managing group activities. While achieving leaders' capacity building, the project encourages the peoples' participation in group activities. The topics of the courses are also concerned with creating diversified business activities including fisheries and in other fields. The project will arrange a training course to make a business plan to diversify the people's economic activities. Target groups are broadly based, but are particularly women.

2.6 Develop Extension Methodologies and Strengthening the Extension System for Sustainable Use of Coastal Resources (Activity V)

2.6.1 The project develops extension technology and methodologies to help resource users understand the need for coastal resource management. It will include some kinds of experimental activities on strengthening the extension system through participatory methods. The project explores new approaches to enhance peoples' self-regulation on fishing activities and participation in community development.

Develop text, manuals and any visual methods

2.6.2 Text, manuals and any visual methods through experiments on extension and training activities should be prepared and developed by the project. These methods should make resource users and stakeholders understand the content of fisheries laws and the framework of resource management and encourage peoples' participation in the management. The project must also create a series of campaigns on its objectives and activities for the people.

Explore approaches to enhance resource users' participation

2.6.3 To provide motivation on the sustainable use of coastal resource is very important. The project will introduce and prepare participatory methods like participatory resource assessment and mapping.

2.7 Rehabilitate and Enhance Coastal Resources (Activity VI)

2.7.1 The project will involve itself in rehabilitation and enhancement of coastal resources. The DOF will start with the deployment of artificial reefs and the release of fingerlings.

Deployment of artificial reefs

2.7.2 In the fishing grounds of the project site, the DOF plans to deploy artificial reefs. The DOF, the project counterpart agencies and the people should join together to participate in the decision making process of selecting the areas for artificial reef placement.

Release of fingerlings

2.7.3 The release of fingerlings is an activity to enrich fisheries resources. The DOF

plays a role as fingerling provider. The people are expected to join in the release of fingerlings. Participatory resource assessment is an approach to achieve this activity in the right habitat and the right season.

IV THE DURATION OF THE PROJECT AND THE FIVE-YEAR PLAN

1.0 Duration

1.1 As regards the time schedule of the Thai budget year, the duration of the LBCRM-PD is five years, starting in October 2001 with expected completion in September 2006. The TD will join the project in January of 2002.

2.0 The Five Year Plan for Main Activities

2.1 The Two Phases of Project Implementaion

2.1.1 The project has a five-year plan to effectively achieve the project purposes. Table 3 shows the outline of the yearly planned activities. The duration of the project will be divided into two phases in practice, although the division of the period is not strict. The process of developing the LBCRM framework may consist of three sequential stages.

The First Phase

2.1.2 The first phase, consisting of the first and second year, will focus mainly on the activities of a base line survey and training matters with a campaign for enhancing awareness building. Rehabilitation activities of coastal resources will be started during the first phase.

2.1.3. During the first phase, the base line survey (Activity I) concentrates on identifying resource environmental conditions and socio-economic surroundings, to comprehend the characteristics and problems at the project site. Analysis and results of the surveys will form the basis for developing LBCRM, and other activities. The project prepares for the implementation of coastal resource managemnet activities in the demarcated coastal zones and for the development of local business enterprises.

The Second Phase

2.1.4 After the two year implementation period, the project activities will be evaluated and the original plan will be reviewed. The base line survey functions as a monitor on the progress of the project.

2.1.5 During the second phase, the project concentrates its activities on establishing and the functioning of the LBCRM framework and promoting of the creation of alternative job opportunities.

Sequence Plan for Developing and Extending LBCRM

2.1.6 The project creates a sequence plan for encouraging and extending the LBCRM framework. Three development stages are prepared, to achieve the objective of this activity. The main activities on the first stage are the expansion of a comprehensive coastal management campaign using posters and pamphlets, and providing programs of education and training to enhance awareness building.

2.1.7 In the second stage, resource users and stakeholders are encouraged to develop their own regulating activities. The Ao.Bo.To and community-based management groups should obtain a consensus on self-regulatory resource utilization. A further development of self-regulatory activities with a monitoring function will be in the third stage. By the end of the project, LBCRM is scheduled to work well.

V. ORGANIZATION CHART OF THE PROJECT

1.0 Role of the Steering Committee (SC)

1.1 The DOF should officially take full responsibility for its implementation under the scheme of a Royal Project in Pathew District on behalf of His Majesty the King. At the same time, the LBCRM-PD will be carried out as a collaborative project between the DOF and the TD under the FCG scheme. For achieving the project purpose, this project will establish a steering committee (SC) that consists of representatives of the DOF and SEAFDEC (see Chart 4, in Part I).

1.2 The SC takes charge of the following:

- 1) To guide policy and direction of the project implementation
- 2) Review the implementation plan of the project and budget allocation
- 3) Monitor and evaluate the implementation of the project
- 4) Coordinate between all institutions involved in the project

1.3 The membership of the SC is as follows:

- 1) DOF's Senior Expert on Marine Fisheries (Mr. Somusak Chullasorn)
- 2) JICA's expert dispatched to SEAFDEC/TD (Dr. Masahiro Yamao)
- 3) Director of Marine Fisheries Division, DOF
- 4) Representative of the Rehabilitation and Management of Marine Fisheries Project
- 5) Representative of the SEAFDEC/TD
- 6) Representative of the SEAFDEC Secretariat
- 7) Chief of Fisheries Information Sub-Division, Marine Fisheries Division (Mr. Wannakiat Thubthimsang), Coordinator

1.4 DOFs' expert on Marine Fisheries, nominated by the Director General of the DOF, takes charge as chairperson.

2.0 Functions of Implementing Committee (IC)

2.1 Under the control of the SC, the Implementing Committee (IC) will be established for the daily operation of the project. This committee consists of the Chumporn Marine Fisheries Development Center (CMFDC), the Provincial and District Offices of Fisheries, the Ao.Bo.To in Tambol Pakklong, and the implementing group of the TD.

2.2 The IC has the following operational functions:

- 1) Make a demand-led work plan of the project together with a budget allocation
- 2) Manage and coordinate any administrative affairs among the agencies involved
- 3) Review and self-evaluate the implementation of the project
- 4) Prepare annual progress reports of the projects from the technical, financial and administrative aspects.

2.3 The IC is to act as a conduit between the project site and the DOF. In the latter stages of the project implementation, lessons learned through LBCRM-PD will be proposed as recommendations for the further development of coastal resource management projects.

2.4 The membership of the IC consists of:

- 1) Director of the CMFDC (Mr. Panit Sangkasem)
- 2) Representative of the Chumporn Provincial Office of Fisheries
- 3) Representative of the Pathew District Office of Fisheries
- 4) Representative of the Pakklong Sub-District Administrative Office (AoBoTo)
- 5) Representative of the Chumporn Provincial Office
- 6) Representative of the Coastal Fisheries Aquaculture Center, Prachaup Kirikan
- 7) Representative of the CMFDC
- 8) Representative of the TD

2.5 The Director of CMFDC is the chairperson, and the secretariat is located in the CMFDC under his or her direction.

3.0 Functions of the Field Office

3.1 During the first phase of the project, the project sets up a field office at the site with functions to:

- 1) Establish two way contact between the IC and the target people and groups,
- 2) Assist staff of the IC to conduct activities at the project site

The Field Office leads to the appropriate implementation of demand-led activities. It will phase out its roles, and the Ao. Bo.To and the people's groups will take its place during the second phase.

4.0 Sharing Responsibility between Implementing and Participating Agencies

4.1 There are several agencies and groups joining the LBCRM-PD. To coordinate and share responsibility among participants in the project, a work-sharing plan will be made. The Implementing agency means the one which is directly involved in the project activities. Several agencies will simultaneously be in charge of implementation, among which, one or two agencies will take leading positions.

Supporting agencies are those that assist whatever implementing agency is involved in that particular activity of the project.

4.2 The TD contribution to the project is through a function mainly on the research, training and advisory aspects.

4.3 The SC and the IC are fully responsible for the coordination of how to share responsibility between the participants in the project.

Given such different conditions as the degree of people's awareness and level of local organizations' capability, the project will be flexible enough to arrange a new framework of shared responsibility among the participants. Encouraging the targeted people and their groups to take an increasing responsibility is one major objective.

VI INPUTS

1.1 The DOF and the TD provide major inputs for the project. The DOF prepares the major inputs including a mix of machinery, equipment and skilled human expertise, according to the budget allocation plan as approved by the Cabinet. The TD will share the inputs.

1.2 Both the DOF and the TD will provide in-kind and manpower contributions.

VII FUNDING

1.1 The DOF has a budget plan for the five-year implementation of the project, the total being estimated at 15.20 million baht. The SEAFDEC/TD provides financial assistance to the project, depending mainly on a source coming from "Japanese Trust Funds" donated by the Government of Japan.

1.2 The yearly plan of budget allocated by Japanese Trust Funds will be discussed before the start of a budget year.

** It should be noted that the costs calculated in this table include SEAFDEC/TD's own activities under the FCG scheme, which budget plan must be approved by the Fisheries Agency (the Government of Japan) on a yearly basis.*

1.3 If any re-allocation of the funds for the project is needed, the SC and the IC will discuss new breakdowns of the budget and settle them, taking due regard of the progress and achievements of the project activities.

VIII MONITORING AND EVALUATION

1.1 The IC will monitor the progress of the project on a regular basis, and report to the SC on a yearly basis. The base line survey includes inquires with the people and leaders of the communities about impact, efficiency and sustainability of the project. Participatory approaches are adopted to the monitoring and evaluation processes.

1.2 Based upon the regular monitoring and evaluation activities, the yearly plan of the project activities will be revised if necessary.

IX SPECIAL CONDITIONS

1.1 As a leading country under the FCG scheme of SEAFDEC, the DOF will contribute technological transfer with lessons and suggestions for new approaches to coastal resource management and make efforts to disseminate their experiences to member countries through the SEAFDEC mechanism.

1.2 The TD will also prepare for technological transfer. The TD organizes seminars and workshops on important topics on locally-based coastal resource management and a decentralized management framework with a participatory approach and of a comprehensive community development program.

Location of Tambol Pakklong, Pathew District, Chumporn Province

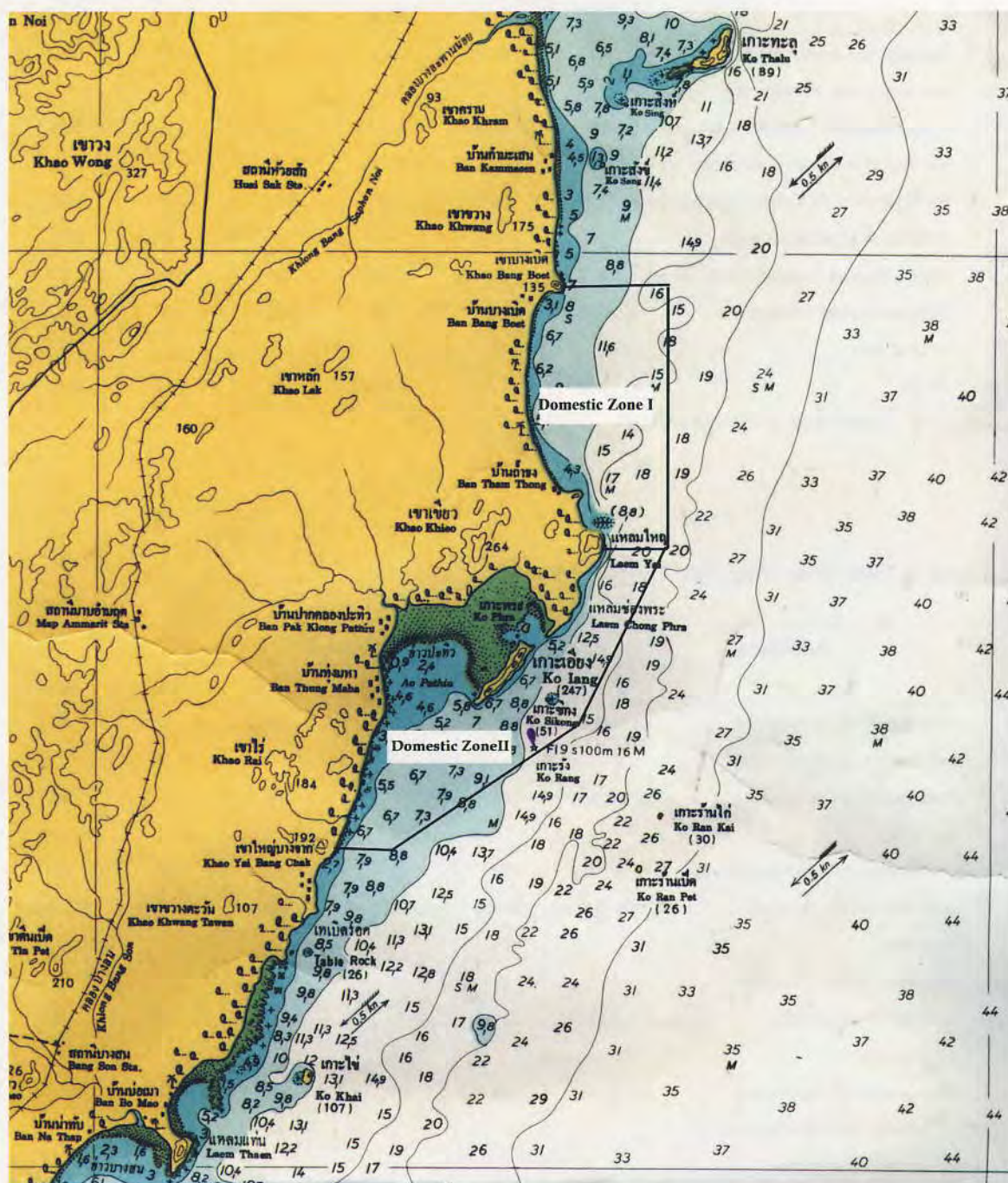


Table 1 Five Year Plan Proposed by DOF(Budget)

Activities	Budget (Million Baht)					
	2002	2003	2004	2005	2006	Total
1. Investigation on qualities of sea water and environment	0.12	0.12	0.12	0.12	0.12	0.60
2. Investigation on fisheries resources	0.12	0.12	0.12	0.12	0.12	0.60
3. Investigation on socio-economic	0.12	0.12	0.12	0.12	0.12	0.60
4. Rehabilitation on fisheries resources	0.20	0.20	0.20	0.20	0.20	1.00
5. Installation of Artificial reefs	-	6.00	-	-	-	6.00
6. Formulation of fisheries communities	0.20	0.30	0.30	0.30	0.30	1.40
7. Management of destructive fishing gear	1.00	1.00	1.00	1.00	1.00	5.00
Total	1.76	7.86	1.86	1.86	1.86	15.20

Source: Department of Fisheries (DOF)

Table 2 Five Year Plan for Target Activities

Activities	Target					
	2002	2003	2004	2005	2006	Total
1. Investigation on qualities of sea water and environment	12 (times)	12	12	12	12	60
2. Investigation on fisheries resources	12 (times)	12	12	12	12	60
3. Investigation on socio-economics	12 (times)	12	12	12	12	60
4. Rehabilitation on fisheries resources	100,000 (fishes)	100,000	100,000	100,000	100,000	500,000
5. Installation of Artificial reefs	-	2	-	-	-	2
6. Formulation of fisheries communities	1 (group)	1	1	1	1	5
7. Management of destructive fishing gear by the introduction of responsible fishing gear, aquaculture and processing	60 gears	60	60	60	60	300

Source: Department of Fisheries (DOF)

Table 3 Main Activities: Five Year Plan

Activities	Year 1	Year2	Year3	Year4	Year5
	Phase I		Mid-plan Evaluation	Phase II	Final Evaluation
1 Base Line Survey					
1) Data collection on regular basis in demarcated coastal zones	←				→
2) Survey of particular topics and subjects	↔	↔			↔
3) Result of analysis restored to people and the community, and adapted to a proposal and recommendation		↔	↔		↔
2 Encourage and Extend locally-based Coastal Resource Management					
1) Encourage fisheries self-regulating activities, and reduce conflicts between resource users		←			→
2) Establish community-based fisheries management group	←	→			
3) Enhance local government's ability	←	→			
3. Encourage Local Business					
1) Improve post-harvest technology and introduce new value added products	←	→	←	→	
2) Introduce alternative job opportunity and support "One Tambol, One Product"		←			→
4. Enhance Human Resource Capability and Participation					
1) Training and education for enhancing awareness on the sustainable use of coastal resources	↔	↔	↔	↔	↔
2) Plan and prepare to organize group activities and encourage local business		↔	↔		
5. Develop Extension Methodologies and Strengthening Extension System for Sustainable Use of Coastal Resources					
1) Develop text, manual and visual methods	←	→			
2) Explore approaches to enhance resource users motivation	←	→			
6. Rehabilitate and Enhance Coastal Resources					
1) Deploy Artificial Reefs		←	→		
2) Release of fingerings	←				→

APPENDIX I

Appendix 1 Participation and Responsibility

Activities	DOF	DOF Provincial Office	DOF District Office	Chumpon Marine Fisheries Development Center	Ao Bo To	Fishers & Groups	Other Local Institutions	SEAFDEC/ITD	District Office
1 Base Line Survey 1) Data collection on regular basis in coastal zones 2) Survey of particular topics and subjects 3) Result of analysis restored to people and the community, and adapted to a proposal and recommendation		I I I	I I I	I I I	S	S S S		I I I	
2 Encourage and Extend locally-based Coastal Resource Management 1) Encourage fisheries self-regulating activities, and reduce conflicts between resource users 2) Establish community-based fisheries management group 3) Enhance local government's ability	I	I I I	I I I	I	I T	T T I	S S S	I(S) I(S) I(S)	S S S
3 Encourage Local Business 1) Improve post-harvest technology and introduce new value added products 2) Introduce alternative job opportunity and support "One Tambon, One Product"		S S			I I	T T	I I	S S	S S
4 Enhance Human Resource Capability and Participation 1) Training and education for enhancing awareness on the sustainable use of coastal resources 2) Plan and prepare to organize group activities and encourage local business		I I	S	I I	S, T S, T	T T		I I	S
5 Develop Extension Methodologies and Strengthening Extension System 1) Develop text, manual and visual methods 2) Explore approaches to enhance resource users' motivation	S			I I		S		I I	
6. Rehabilitate and Enhance Coastal Resources 1) Deploy Artificial Reefs 2) Release of fingerlings	I I	I I	I I	I I	S S	S S		S S	

* Other local institutions include government agencies and schools.
 ** This table does not include the department responsible for joining the King's project.
 *** This plan is a tentative one.

I=Implementing Agencies
 F=Funding Agencies
 S=Supporting Agencies

(I means leading agency)
 T=Target Group
 I(S)= Implementing and Supporting Agencies

unborn children



APPENDIX II

Base Line Survey in Pathew District, Chumporn Province



Fish Processing Training for Women in Pathew District, Chumporn Province



Training and Delivery Poster, Notebook to Students in Pathew District, Chumporn Province



WORKING GROUP

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Ms.Jirapa Kamhongsai	Fishery Biologist
Ms.Laddawan Nupankao	Fishery Biologist
Mr.Boonyarit Panutnachee	Fishery Biologist
Mrs.Pamornpun Ooiprasit	Fishery Biologist
Ms.Kwanrathai Chaikaew	Fishery Biologist
Mr.Chaiyan Kaeyai	Fishery Biologist
Mr.Boonyarit Charoensombat	Fishery Biologist
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6. Ms.Pattarajit Kaewnuratchadasorn	Oceanographic Researcher
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