

## **Chapter 5**

# **Rapid Coastal and Inland Community Survey**

## Chapter 5

# Rapid Coastal and Inland Community Assessment Survey

### 5.1 Background

As a main task in Phase I of the Study, the Study Team conducted data collection and analysis of existing conditions of communities in the Study Area from wide aspects of, such as, social, economical, and coastal environmental conditions and problems. To accomplish this task, the Study Team conducted a variety of data collection activities such as collection of the secondary data, interviews, and workshops. Rapid Community Assessment Survey was conducted to look into details of coastal community social-economical conditions and people's perceptions on coastal environmental problems, causes, and its solutions.

### 5.2 Objectives

Objectives of the Rapid Community Assessment Survey were as follows:

- to identify economic and social structure of communities. This is essential for proper formulation of intervention strategies
- to analyze the knowledge, attitude and perception of community people towards coastal resources use, and towards their inland activities which might be impacting the coastal resources.
- to gather baseline data of communities. This baseline data was used for analysis of coastal community's situations.

### 5.3 Methodology

The survey were based on Questionnaires (Quantitative) and Rapid Rural Assessment (Qualitative) methods. The quantitative survey aimed to obtain general information on villages and detailed socio-economic situation of villages. Qualitative survey aimed to

analyze the socio-anthropological aspect of people's behavior and perception by using focus group discussions.

Quantitative Survey

- a) Questionnaire survey
- b) Rapid coral reef survey
- c) Secondary data collection and analysis

Qualitative Survey

- a) Rapid Rural Appraisal (RRA), especially focus group discussion and resource mapping.

The Study Team subcontracted with the Faculty of Marine Science and Fisheries of Sam Ratulangi State University headed by Dr. Eddy Mantjoro, who supervised the survey team.

Assumptions

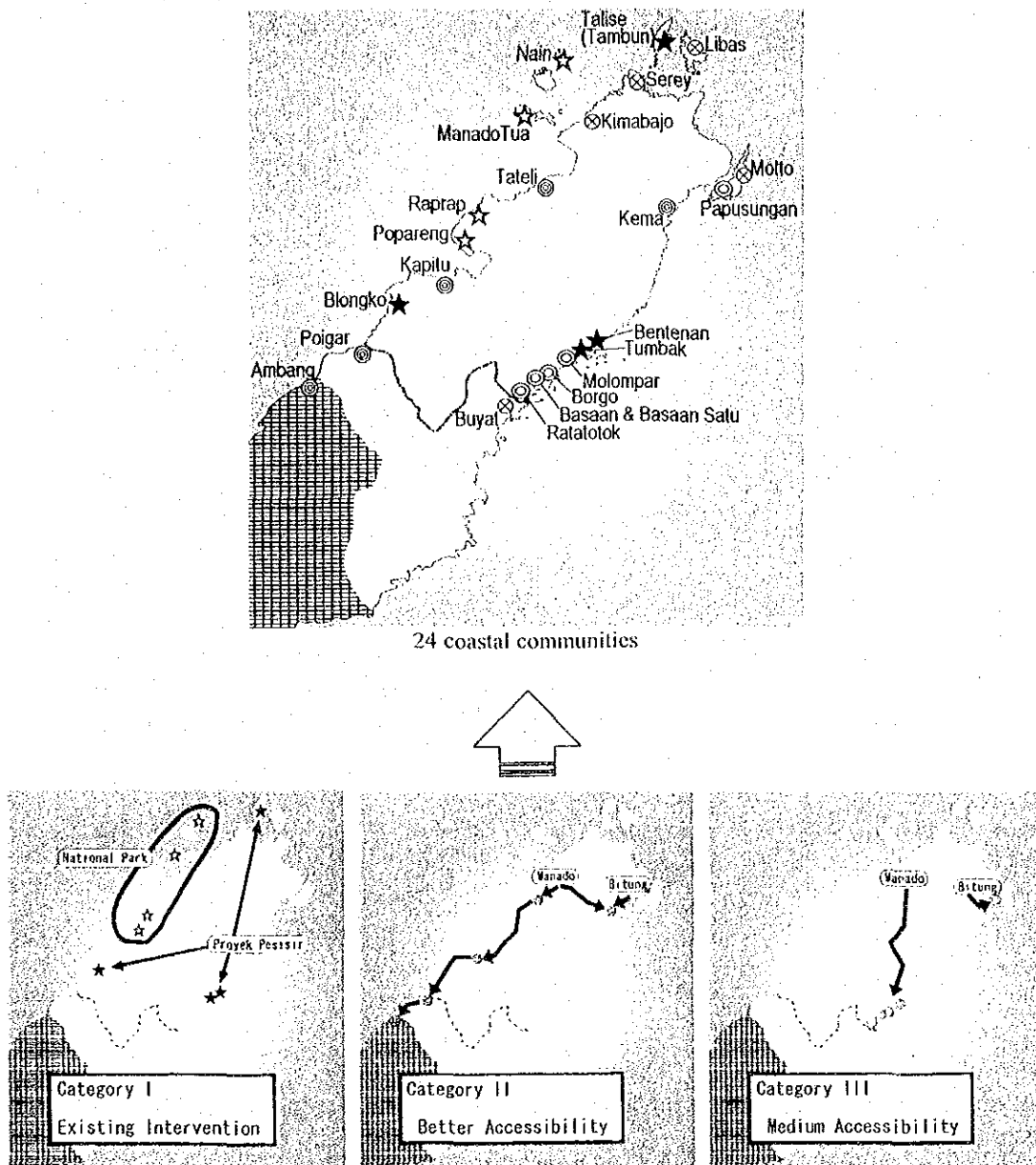
The assumption underlying this survey is the practice of coastal management was running well in some areas and remain lack in the others. Considering the fact which some communities are the sites of coastal management projects of the Bunaken national marine protected area, then the condition of coral reef would be the best in this area. While those villages within the USAID coastal resources management project would be the better condition of coral reef than those in the non-intervention villages. These non-intervention villages are supposedly in bad or even in worse condition.

This situation is mainly caused by the shortage of knowledge of community members on their ecosystem and lack of dissemination of information about the environmental law and regulation , and particularly weak enforcement of law.

The survey was conducted at 24 coastal communities and 5 inland communities in the Study area. As to coastal communities, target of communities were selected based on the following criteria:

- a) Geographical conditions including shoreline types
- b) Coral reef conditions
- c) Population size
- d) Ratio of number of fishermen and farmers
- e) Income level
- f) Accessibility

In the study, the Study Team defined *coastal community* as “Communities which directly have boundary with sea.” The number of coastal communities in the Study area by this definition was around 180 based on 1999 statistics, and its population is around 241,250 by the same statistics. However, the boundaries of communities are not clear in some areas due to separation of villages recently, therefore it is not an easy task to define the number of coastal communities. The population share of coastal communities in the Study area was only 15.9%, while inland community shares 50.8% and urban area shares 33.3%.



Source: JICA Study Team

Figure 5.1 Selected Criteria and Location of 24 Coastal Communities

As to inland communities six communities was selected namely Mahaliso, Tiniawanko, Toyopon, Tondey, Poniki, Tobabo, three in one watershed and the other three in other watershed. The three communities are situated in upper, middle, and lower reaches of a river. These communities are selected by considering their impacts on the coastal area examined from aerial photos.

#### 5.4 Work Period

After the preparations in July 2000, the field surveys were conducted from August to October 2000. Analysis by the Study Team was followed till November 2000.

Table 5.1 Schedule of Rapid Community Assessment Survey

Work Item	Jul.2000	Aug.	Sept.	Oct.	Nov.
<b>Coastal Community Survey</b>					
1. Questionnaire Survey and Focus Group Discussion					
- Preparation of Questionnaire	***				
- Selection of Village	***				
- Implementation		*	*****	*	
2. Rapid Coral Reef Survey		*	*****	*	
<b>Inland Community Survey</b>					
1. Questionnaire Survey and Focus Group Discussion					
- Preparation of Questionnaire				***	
- Selection of Village				***	
- Implementation				***	*

#### 5.5 Activities

##### 5.5.1 Questionnaire Survey

###### (1) Target of Sample and Sample Size

Target of Questionnaire Survey is communities which depend on the natural resources including coral reef. Sample size of each community is smaller numbers of either 30 samples or 15% of households.

###### (2) Method of Questionnaire Survey

Interviewers will ask questions to communities based on a questionnaire. Interviewees and communities selected should be typical ones from the viewpoint of fishing method, lifestyle, income level, and structure of family.

(3) Contents of Questionnaire

Contents of questionnaire shall include the following items:

*(For a chief of village)*

- a) The setting of village (Village history, Demography)

*(For each community-public)*

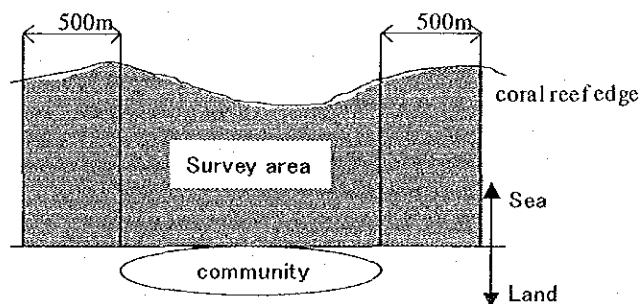
- b) Social conditions (Respondent status, Educational level, Health, Social organization, etc.)
- c) Economic conditions (Major income, Additional household income, Monthly average income, etc.)
- d) Knowledge on coral reef (Function, Technology, Regulation, etc.)
- e) Socio-cultural aspect (Tradition knowledge system, Community attitude on coastal resources, etc.)

5.5.2 Rapid Coral Reef Survey

Rapid coral reef survey aims to identify coral reef conditions and to understand the degree and the cause of the damage by communities in the coastal area. This result shall be used to analyze the relations of the communities' awareness for coral reef conservation.

(1) Survey Area

Survey was conducted in the sea area which had coral reef and was adjacent to target's communities.



Source: JICA Study Team

Figure 5.2 Survey Area for "Rapid Coral Reef Survey"

(2) Observation Items

Contents of rapid coral reef survey shall include the following items:

- a) Shoreline form (Mapping) :
  - sandy beach, rocky shore, mangrove forest, tidal flat, river mouth, etc.
- b) Coral reef conditions (Mapping):
  - distribution of coral reef area including percentage of dead coral ratio (if damaged and/or dead coral reef will be found, causes of damage shall be identified)
  - distribution of major sea grass bed and seaweed
- c) Coastal use conditions (Mapping):
  - structure (jetty, seawall, etc.), boat mooring area, seaweed/pearl farming

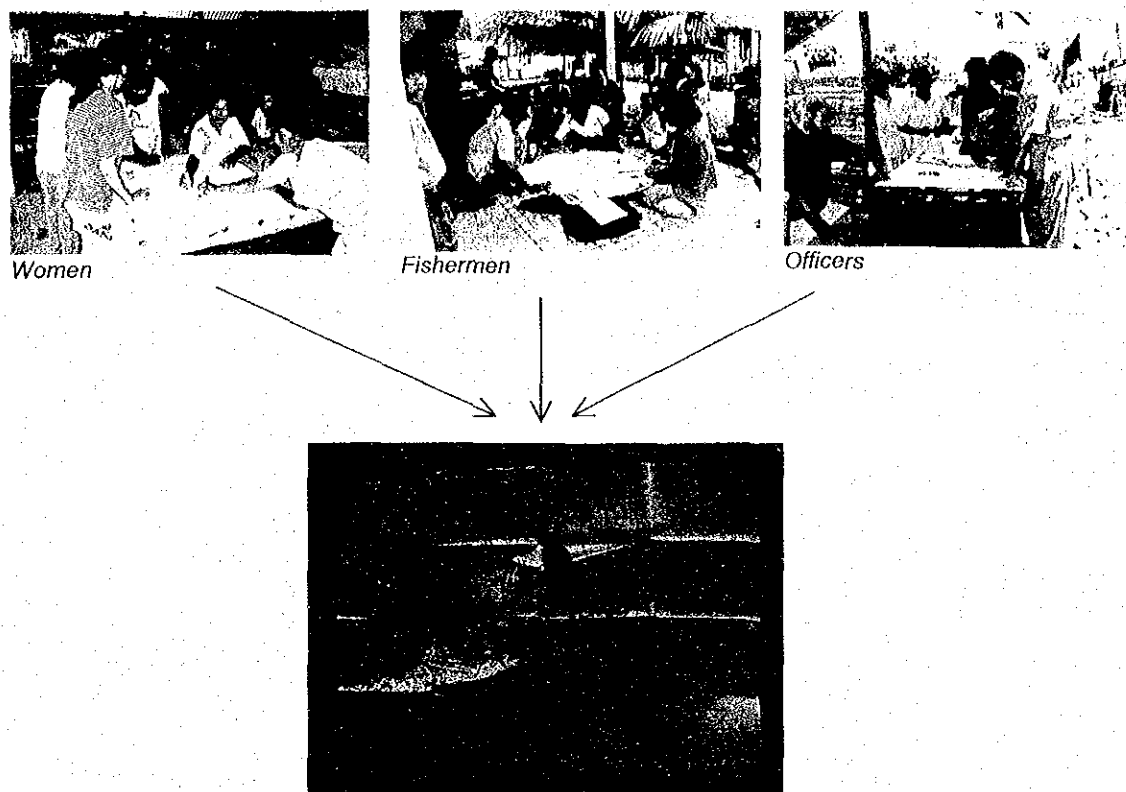
(3) Method of Survey

Shoreline forms and coastal use will be observed from the shore and boat. Coral reef conditions will be observed by manta-tow survey and spot observation survey.

### 5.5.3 Focus Group Discussion and Resource Mapping

Items of focus group discussion and resource mapping as qualitative survey were as follows;

- a) The condition of coastal (land) use and the history of coastal (land) use
- b) Coastal Community : The knowledge and perception of coastal resource use in coral reefs  
Inland Community : The knowledge and perception of soil loss, technology of preventing soil loss, the impact of their activities against coastal areas
- c) Making of Seasonal calendar
- d) Making of Resource map, Boundary map of their activities



Source: JICA Study Team

Figure 5.3 Making Resource Map

## 5.6 Some Result of the Survey

### (1) Review of Assumption

The assumption underlying this survey are; 1. The practice of coastal management is supposed running well in national marine park and USAID project area. Remain lack coastal management in terms of waster and faces disposal, coral reef mining and bomb fishing. 2. This situation is mainly caused by the shortage of knowledge of community members on their ecosystem, 3. Lack dissemination of information about the environmental law and regulation issued by the government, 4. Weak enforcement of law.

The result of study indicated that the first assumption is not valid. There are not much differences of social economic life style of the villagers in the already intervention and those of non-intervention area. In case of household waste and feces disposal for example,



Nain which locates in the national marine protected area, 26(86.6%) of the total 30 respondents said they treated the sea as the garbage disposal site. In Tumbak, which is USAID project site, 21 (100%) of the total 21 respondents using the sea as their garbage and waste disposal place. The same life style found in non-intervention area of Ranoiapo(80.9%), Molompar(100%), Borgo(100%), Basaan (100%), Ratatotok timur(90.4%),Serey(93.3%). Looking at the numbers of respondents using the sea as their toilet indicated that still almost half of the population is using the sea as their toilet. Nain(53.3%), Tumbak(66.6%), Tanoiapo(38.0%), Borgo(57.1%), Basaan(59.3%), Ratatotok timur(71.4%) and Serey(73.3%) are using sea as their toilet.

Knowledge of ecosystem such as the coral functions have no differences among three groups. In Nain, 25(83.3%) of the total 30 respondents said did not know about he ecological function of coral reef and 28(93.3%) of the 30 respondents did not know about he economical function of coral reef. Similar answers found in Tumbak(90.4%), Tateliwercu(100%), Borgo(100%), Serey(100%).

Lack of dissemination of information on the environmental law and regulation issued by the government has slight differences among three groups. 96.7% respondents in the national marine park area community , 96.1% respondents of USAID project area said they did not know about the government regulations, while almost 100% of respondents in the non-intervention area said they did not know the government regulations.

## (2) Social Structure

The social structure in this context referring to 1. Education level of community members, 2. Types of organization formed and available in the community, 3. Type of social-economic and cultural organization in which community members mainly participated, and 4. social interactions among the community members. These variables plans an important role in the penetration and adaptation of any new ideas that come from outside of the community. If the idea would be applying in the local community, it must be introduced through the existing social structure available in he community. Any trial to introduce a new idea by forming a new structure or new organization that bring from outside would lead to the failure due to nobody of the community members want to participate. Fisheries cooperative (*Koperasi perikanan*), fishers group (*Kelompok nelayan*) and other organization formed by the previous and existing coastal management

projects are among the examples which failed to attract the participation of local community.

The results of social structure in the sampled villages are relatively high in basic education . The better access area has relatively higher level of education(77.9% finished elementary level education), 65.8% in the medium access community, and 64.5% in the bad access of community. Types of organization formed and available in the community are; mutual aid association ( *Mapalus*) and money rotation group ( *Arisan*) . *Arisan* is quite common in the coastal communities and *Arisan* looks potential to be use as the instrument for introduction the new idea of the coastal management, although the size of the group is quite small and resource mobilization is quite limited. *Mapalus* is typical of farmer organization, therefore, there are not much *Mapalus* are seen in the coastal communities. Data on cultural organization in terms of traditional management system, traditional sea tenure, traditional fishing organization, music, and arts indicated that no traditional sea tenure system, traditional fishing organizations are available in the 24 villages. Musical organization fond only in some communities, 1 group in Talise, 1 in Tiberias, 2 goups in Kematiga, 4 in Papusungan, 2 in Borgo, 1 in Serey.

These facts indicated that the absence of these traditional organization in coastal communities might mean that it would be difficult to introduce any foreign idea of community based management system in the area. However, it should be kept in our mind that it is not right to conclude any social acceptability on new ideas by assessing the society in a very short period of time.

### (3) Economic Activities

There are 3 main types of marine economic activities namely; coral fishing, pelagic fishing, and seaweed culturing. Fishing gear used are Angling (*Noru*), Net ( gill net, *Pajeko*, *Darape*, *Pakapaka*, etc) and Trap ( *Bubu*, *Sero*, *Bangan*, etc). Mix activity of fishing and farming on land are common in all coastal villages.

The housewife of fishers mostly conducts fish training. Fish capture is done by their husband and wives sell out to the nearest market or traveling door to door in the neighbor

farming community. Trading of seaweed found only in Nain, Raprap, Tumbak, and Bentenan. Fish processing confined only to sun dry salt fish which mostly coral fishes, while smoke processing is performed for pelagic fish such as sardine mackerel, skipjack and Tuna. There are some more community who do not perform fish processing activity. Hiring labor are commonly found in the coastal community, this is because of fishing is an uncertain livelihoods due to rely upon the weather and season. Working on farming of land owner, on fishing boat, carpentry worker, and factory worker are among the economic activities of hiring labor. Saving habit vary from 20% in Tatiweru up to 90.4% in Kulu. Respondents who working beyond 20 days/month vary between 43.7% in Popareng and 100% in Blongko and Basaan. The productivity of fisher remain low as indicated by data of landed fish less than 50 kg per fishing trip.

# **Chapter 6**

## **Pilot Project**

## Chapter 6

### Pilot Project

#### 6.1 Background

Despite the fact that the North Sulawesi province has vast stretches of coastal area, and the utilization of the area is intensive, by existing stakeholders such as community people, fishermen, tourists, integrated coastal management in this area is almost absent. It is theoretically sound and more of critical to find a way to let users of coastal area to manage their area. For the actual implementation of coastal management, we do need to step-wise some strategies and approaches for North Sulawesi according to its situation and characteristics of the area.

The concept of Community Based Coastal Management (CBCM) is not new to the area. In the old time, coastal villages used to manage their natural resources by their own agreement, own ordinance and own monitoring. However, the knowledge of these traditional resource management skills has disappeared from people's memory as many social and economic conditions changed and as successors died out. Accordingly, a modern management system should be introduced before people exhaust and/or destroy their natural resources in the area.

Since the law No.22 of local government decentralization legislated in 1999, the movement of reforming of local government has been occurring at each level of local governments and the village government is not an exception. Village parliament, *Badan Perwakilan Desa*:BPD is now under formulation in each village which function is to strengthen village governmental autonomy and to apply democracy at village level. The momentum of community movement towards empowerment and development is definitely arising, therefore, it is just right moment for coastal management to be introduced to these coastal communities in order to make it possible for them to obtain sustainable resources use and also sustainable development in their area.

One of the outcomes of the master plan would be setting up the Community Based Management approach called Community Based Coastal Management (CBCM). However, the theoretical model sometimes would not work in the reality due to many hidden conditions of local situation. The Study, therefore, decided to implement pilot projects of CBM for coastal resources in the Study Area to find the most appropriate implementation mechanisms, and will reflect the result of pilot project to the master plan.

One of the most favorable facts in North Sulawesi is that integrated coastal management effort has been initiated by the Coastal Resources Management Project (CRMP), which local name is *Proyek Pesisir*, under the USAID-BAPPENAS Natural Resources Management Program II (NRMP II) since 1997. Recognizing their efforts and good practices for the coastal resource management, we keep it in our mind not to initiate a new set of CBM parallel to *Proyek Pesisir*, and to try enhancing governmental 'institutional memory' by adapting *Proyek Pesisir*'s methodology and sharing their experiences in the field.

Other favorable fact is that some local villages initiative on CBCM is happening in Minahasa region, e.g., Kulu village, which is responding to their coastal management problems such as high water by mangrove cutting. We analyzed their strategies and approaches as well, and considered in the pilot project. Our direction to introduce CBM in the area is to continue and develop such existing efforts and make their strategies and approaches to be more locally adaptable, affordable, and replicable for the local government agencies and communities in North Sulawesi.

## 6.2 Project Objectives

In order to plan a realistic and actionable, applicable, and replicable CBM of coastal management in the local situation of North Sulawesi, we hypothesize critical and important strategies for approaching community, which are based on lessons learned from existing CBM projects. The model CBM formulated by the Study Team is going to be tested out as a pilot project to see how things work in the North Sulawesi context, and the result are feedback to the master plan in order to shape the model CBM to be more realistic, actionable, applicable, acceptable, and replicable.

## 6.3 Work Period

The work period of the pilot project was from December 2000 to February 2002. However, the preparation was taken place from October to November, 2000.

Table 6.1 Working schedule in the first 7 months of the pilot project

Steps to start the Pilot projects	Year 2000			Year 2001					
	10	11	12	1	2	3	4	5	6
	← Preparation →			Implementation of pilot project →					
Selection of the Sites	*Steering Committee Meeting (3/10)								
Preparation -Meeting with KTF -Meeting with CRMP	• ( 20 & 26 ) • (?)		* *Preparation of training	*					
E.O - Selection - Prepare training - Training		↔ ↔ ↔							
Study Tour				↔					
Baseline Surveys				↔	↔				
Planning WS Preparing 2 days WS 1 day					↔ ↔	↔			
Community Meetings				← Problem Identification →			← Planning of Coastal Management →		
Supervision EO meetings			↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *

Source: JICA Study Team

#### 6.4 Methodological Approaches

In *Proyek Pesisir*, different planning approaches are developed and tested in three different project provinces; the North Sulawesi field program has been focusing on three specific community-based management approaches namely;

- Community based village level marine sanctuaries
- Community based village level integrated coastal management plan
- Community based village level ordinances and policies

In this master plan pilot project, however, we did not adopt “marine sanctuaries” as a mandatory strategy because although marine sanctuary is one of the effective strategies to protect coastal resources but is not always applicable to all places. However, the fact is that three out of four villages in the pilot project established marine sanctuary as their strategy to protect coastal resources. The specific community based management approaches in the pilot project are;

- Community based village level integrated coastal management plan, and

- Community based village level ordinances and policies

The conceptual framework for the community based planning and implementation process in the pilot project was adopted from *Proyek Pesisir* conceptual framework as follows.

1. Community identified
2. Communities oriented and prepared for the planning process
3. Baselines established ( Environmental and Social-Economical data)
4. Coastal management issues identified
5. Issues validated and prioritized
6. Management options developed
7. Management options selected and adopted
8. Implementation initiated
9. Review, evaluation, reflection and adaptation carried out.

## 6.5 Methodology

### (1) Selection of Communities

The sites for pilot project were decided and approved by the Provincial Steering Committee on the 3<sup>rd</sup> of October, 2001. The pilot project sites were selected based on the survey results that conducted in August 2000, covering 24 coastal communities and assessed its socio-economic aspects by the Study Team. Three selected project sites are Manado Tua Dua, Rap-rap, Basaan. Basaan was, however, separated into two communities in the recent past; Basaan and Basaan Satu, hence both communities were taken up as pilot project sites. The selection was done as follows.



Provincial Steering Committee,  
October 3, 2001

24 coastal communities in the survey were divided into 9 groups, or more likely into 6 groups in reality by some determinants which are suspected to be influencing the way community members to use coastal resources, the way they fish, and also the way they perceive coastal resources. According to the survey results, those determinants influencing people's resource use and perception seem two types of natural profiles of coastal villages; 1). Topographic profile, which shows development potential, 2). Shoreline type which shows natural resources potential. The characteristics of those types are described as in Table 6.2.



Table 6.2 Categories by Characteristics of Community

1. Topographic Profile	Description
Limited development space	<ul style="list-style-type: none"> <li>● Steep slope and limited arable land</li> <li>● Mixture of Coconut trees and extensive agriculture farms (shifting cultivation, bush or grass land)</li> <li>● Cultivation of maize and peanut on slope</li> <li>● Expanding grasslands in off-farm seasons</li> </ul>
Few development space	<ul style="list-style-type: none"> <li>● A few flat areas and steep or moderate slope</li> <li>● Non irrigated wet paddy field or in flat areas</li> <li>● In slope, mixture of coconut trees and extensive agricultural farms</li> <li>● Mixture of maize and peanut</li> </ul>
No development space	<ul style="list-style-type: none"> <li>● Very few arable areas (almost not existing)</li> </ul>
2. Shore Type	Description
Semi-Closed Type	<ul style="list-style-type: none"> <li>● Calm sea conditions</li> <li>● Shoreline form- coral reef, sand beach, tidal flat, salt march</li> <li>● Small size fishes</li> <li>● Potential mangrove forest +++</li> <li>● Potential sea grass +++</li> </ul>
Open Type	<ul style="list-style-type: none"> <li>● Wave, stream</li> <li>● Shoreline form – coral reef, sand beach, rocky shore</li> <li>● Migratory fishes</li> <li>● Potential mangrove forest ++</li> <li>● Potential sea grass ++</li> </ul>
Island Type	<ul style="list-style-type: none"> <li>● Wave, stream</li> <li>● Shoreline form – coral reef, sand beach</li> <li>● Migratory fishes, pelagic fishes</li> <li>● Potential mangrove forest +</li> <li>● Potential sea grass +</li> </ul>

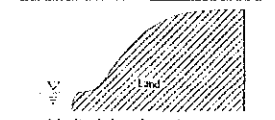


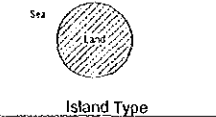
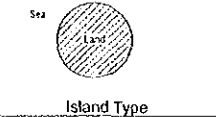
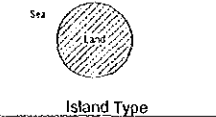
Note: +, ++, +++ show degree of potentiality

Source: JICA Study Team

All Villages in the study area can be divided into 9 groups as it is shown in Table 6.3, in reality most of villages fall into 6 groups in this area. Type A, B and C have limited development space along the coast and backside of communities. This topographic characteristic makes communities in these groups tend to depend more on coastal resources and most of community people fish as their livelihood due to limited space for agriculture. In these types of communities, farming is also their livelihood only for subsistence purpose and kinds of agriculture products are limited such as maize, cassava, vegetables and spices. Type D, E and F have more development potential space than Type A, B, and C, so that a community in this category tend to mix fishing and farming as their livelihood. Most of fishermen who normally fish sometimes go farming as well in the certain period of time when the weather does not suit for fishing. Communities that categorized into this type, they have more choices of economical activities and are economically more stable, so that the way of resource use tend to be mild than the Type A, B, and C. Most of communities in the study area categorized into this type of group: D, E, and F.

The pilot project sites were selected from the group D, E, and F which represent majority of coastal communities in the area. The cooperation of villages and the amount of coral reefs were considered for site selection. The committee excluded those villages that have already been implementing CBM project as *Proyed Pesisir* project sites; Talise, Blongko, Bentenan, and Tumbak.

Table 6.3 Type of Coastal Communities

Topographic Profile	Limited developed space				Few developed space				No developed space			
Shore Types	Name of Desa	Corp	Coral reef	Napo	Name of Desa	Corp	Coral reef	Napo	Name of Desa	Corp	Coral reef	Napo
	Serey				Kulu (a/l) Blongko Ratatok Basaari Buyal	G F F G	+++ +++ - +++	  ++ ++	Tumbak	P	++++	
	A				D				G			
	B	F	++++		Ambang II Tiberias Kapitu Tateli Poparen Raprap Molompar Kema Borgo Bentenan	F G F P F P F F F F F F	- ++ ++ ++ ++ +++ - + ++ ++ +++	+++   ++ ++   +	H			
	C	F G	++++ ++		Talise MandoTua II Popsugan Motto	G G F G	+++ ++++ + +		I			
	Nain (I) Libas (b/II)											
												

Source: JICA Study Team

(2) Extension Officers: Catalysts of integrated management

As of 10 months after the pilot project inaugurated, four pilot project villages are now to start implementation of their management plan. It took only very short period of time to orient communities and prepare the planning process in four villages because the pilot project adopted the strategy to have extension agent, which we call Extension Officer (EO) from *Proyek Pesisir* and modified as a paired EOs which works as a team. One EO was selected from village members according to a set of criteria and other EO was selected from existing



Extension Officer (EO) meeting

stakeholders outside of the village such as government officer and NGOs. Those paired EO worked together and have been maximizing their strongnesses and have been minimizing their weaknesses successfully.

At the result, we succeeded to shorten the time to reach the formulation of management plan in four villages. It took only 7 to 8 months for villages to finalize their management plan, whereas *Proyek Pesisir* project villages took almost two years to prepare their management plans. The other possible reason to shorten the period is the effect of *Proyek Pesisir* at village level. It would be true that the implementation of *Proyek Pesisir* in four villages ( Blongko, Talise, Bentenan, and Tumbak) has been giving positive impact to other villages to adopt the concept of CBCM.

Those EOs from communities work closely with village government (*BPD*) and the head of village and become a promoting force to adopt of management plan and to legalize village ordinance. From the view point of the adaptation of EO as a catalyst in a community and its effectiveness, we recommend to adopt this strategy to pair EO from inside and outside of a community in North Sulawesi CBCM.

The following is the task and training contents of EO decided in cooperation with Kabupaten Task Force Minahasa.

Table 6.4 Task and Contents of EO

1. Task	Contents
Collecting Data	<ul style="list-style-type: none"> <li>● Baseline survey</li> <li>● Monitoring</li> </ul>
Facilitator	<ul style="list-style-type: none"> <li>● Formulate "Management Group" for coastal management</li> <li>● Coordinate for making a village master plan for coastal management</li> </ul>
Mediator	<ul style="list-style-type: none"> <li>● Between village and other organizations such as JICA, KYF, District offices, and other villages</li> </ul>
Educator	<ul style="list-style-type: none"> <li>● For environment (resources, management, utilization)</li> </ul>
Reporter	<ul style="list-style-type: none"> <li>● Reporting/Documentation of village activities, problems, solutions, etc.</li> </ul>

2. Training	Training contents	Trainers
General Issues	<ul style="list-style-type: none"> <li>● Law and Regulations</li> <li>● Community Develop. Planning</li> <li>● Communication techniques</li> </ul>	BAPPEDA, BAPEDALDA PMD, BAPPEDA UNSRAT, Proyek Pesisir
Specific Issues	<ul style="list-style-type: none"> <li>● Concept of Integrated Coastal Management : ICM</li> <li>● Marine environment and resources</li> <li>● Environment. Sanitation and Health</li> <li>● Reporting/Documentation</li> <li>● Participatory Rural Appraisal</li> </ul>	Proyek Pesisir & Univ. of Rhode Island UNSRAT and Dinas Perikanan Dinas Perikanan PMD NGO (Kelola)

Source: JICA Study Team

(3) Supervision and support from outside

In pilot project, the involvement of local university (Faculty of Fisheries and Marine Science, UNSRAT) as technical support and supervision is determined as a critical element of CBCM. A supervisor from the university has been a key role to build capacities of EOs and village people. He also plays a role to be a catalyst between village and local government, organizes various technical meetings for village management groups together with local technical government officers to finalize village coastal management plan.



Supervisor from UNSRAT(Sam Ratulangi university)

The task of outside support is;

Technical Support	<ul style="list-style-type: none"> <li>● Technical support for baseline environmental survey</li> <li>● Technical support for village based monitoring</li> <li>● Capacity building for EOs by supporting their dairy activities</li> </ul>
Mediator	<ul style="list-style-type: none"> <li>● Mediator between community and local government offices, and other stakeholders</li> </ul>

(4) Management Plans and village ordinance

One of the strategic approach of CBCM in the pilot project is to establish community based village level integrated coastal management plan which is reflected each village's identified coastal problems. The management plan includes the general information of a community, the result of baselines survey of environment and social-economy, identified priority problems, their solutions, management groups, and schedule and budgets.

In pilot project, it took about 8 months to finalize the management plans from the beginning of the project. The last two months was used for finalizing more technical aspects of their plan. For example, one village wanted to have a break water facility, but *did not have technical knowledge of the facility*. Then the Study organized serious of technical meetings between the village and government office concerned.

Management plans are endorsed by village level ordinance which includes punishment by their communities. These village level ordinances are authorized by a head of district (*Chamat*) and are informed to neighboring villages in a district. These village level ordinances are normaly more realistic and clear to village people, so that the compliance of ordinance is higher than other government regulations.

#### (5) Management Groups

Other strategic approach of CBCM in the pilot project is to organize management groups for implementation of their each project in the master plans. In the pilot project, when each village finalized their master plan, they established management groups for each project and authorized by the head of village. Each management group normally consists of less than 10 people from each Hamlets (*Dusun*) and involves men and women, young and old. These management groups organize and coordinate their project activities for the rest of community people.



Management Group in Manado Tua

#### 6.6 Other Strategic Approaches

In the pilot project, other strategic approaches have been considered to enhance and extend CBCM in North Sulawesi. Those approaches are;

- Granting territorial boundaries and user rights in fisheries
- Deployment of artificial reefs for fish ground development
- Alternative livelihood activities such as marine culturing.

These are recognized as important strategic approaches for CBCM in North Sulawesi by the Study, as a result of analyzing social and economical aspect of coastal communities, coastal management issues and existing CBM in the area.

In North Sulawesi, the role of community level coastal resources management undermined due to diminishing of traditional management, and it has been replaced by open access regime, which is a free access for all with uncontrolled entry for resource use and gives the economic incentive to user, and encourages user to exploit as much of the resources as possible before others do. Introducing a new coastal management system in the area, open access regime has to be somehow limited in order to establish a sense that the user who manages the area will benefit the most. Especially granting territorial boundaries and use rights in fisheries are supposed to be needed for controlling entry and the form of those controlling entry system will require series of discussions with all stakeholders involved in coastal resources management in the area.

Deployment of artificial reefs for fish ground development and alternative livelihood activities have been considered. Community based artificial reef trials have been

implemented in pilot projects sites in order to improve fishing ground for communities and provide opportunity to introduce the sense of importance of a collective fishery resources management by the community.



Hand made artificial reef

Artificial reef installed in pilot project was designed and planned by the Study team, but made and set up by community people. It aims to be community based trial, therefore the material, size, set up method, cost needed to be affordable, simple and easy enough for communities. The site was decided from the aspect of environmental conditions especially geographic, sea bottom, slope, current and biological conditions based on aerial photos

and direct observations. After a month of setting up an artificial reef in a pilot project village, the artificial reef has already been covered by fouling organisms and hundreds of juvenile fishes, lobsters, and shrimps have started living comfortably at their new habitat. According to the monitoring survey that was conducted, 15 species of fishes and shrimps are identified inside and surrounding artificial reef.

Community people expressed their happiness to see the evidence of success and were very much encouraged to keep going with the trial. Community people started discussion on the management of the resources they are going to gain by this device. They have already realized that without proper management on their resources, the community would deplete them very quickly since the resource seems so limited in the limited area. Artificial reef is not only that it improves fishing ground for community, at the same time, it teaches people the importance of management on fishery resources by visualizing the amount of resources they gain.

## 6.7 Results

After a year of implementation of the pilot project, the results are showing not only the success to formulate their coastal management plans, village ordinance, and management groups, but also high awareness of the coastal area ecosystem and its management among community people in each village. The village people are showing very positive and active involvement in the coastal management and their input is not only participation of meetings but also they gave material inputs and labor for implementation of their management project. For example, in village Basaan, some fisherman contributed buoy and ropes for establishment of DPL and in village Raprap, community people contributed both labor and money to the establishment of their planned public toilets.

People now realized that the coastal management is for their community and it is up to them to implement their own management plan. People are not shy to ask for funding supports to local governments and to the private sector as well. They are willing to listen any technical inputs from outside and do not miss any opportunities to get such supports. However it should be emphasized that the community based management cannot be successfully implemented only by community support and input, but together with timely and adequate outside support is the key element of the successful community based management. During the pilot project, those supervisors have given continuous, adequate and timely support to their EOs and the capacity building of EOs have been done along with the project. Now the villages have very capable EOs who can now give technical support to the village people to implement their own coastal management.

Artificial Reef trial is encouraging people to make their efforts on the coastal management. It is learned that the sense of incentives for the management is the important factor to maintain the enthusiasm of communities to keep their efforts on coastal management.

This is a long learning process for coastal village about their coastal area and their capacity to manage them. We evidenced that a community which did not believe their ability to solve their problems existing in the coastal area is now full of confidence on their own capability. We conclude that CBCM is not going to be successful without this process of empowering each village and also the timely and appropriate outside support from local government agencies, academic institutions and even private sector.



Management Group of ManadoTua decided to develop water resource facility and distribution facilities as pilot project.



Management Group of Rap rap chose development of public toilet as pilot project.



## **Chapter 7**

# **Community Based Artificial Reef Establishment**

## Chapter 7

# Community Based Artificial Reef Establishment

### 7.1 Background and Objectives

It can be said that the coastal area is not managed very well, so that coastal resources have been damaged by all sorts of inappropriate manner as gleaned from the analysis of the Study Team. A bottom-up approach to community based management is very important for coastal management. However, it is not intended that fishermen try to achieve sustainable resources when there is no incentive brought by open access to coastal waters. But it is essential for coastal management that every fisherman become aware of resource management and what the potential opportunities could be because of it. It is expected that establishment of shall provide opportunity for introduction of own resources and collective management at the community levels to fishermen, and that artificial reefs shall be intended for improvement of fishing grounds rather than for increase of amount of fish catch in this study.

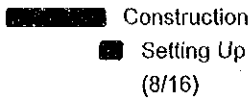


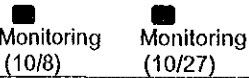

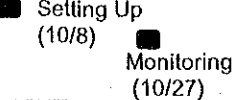


### 7.2 Methodology

Artificial reefs installed in the pilot project site was designed and planned by the Study Team. On the other hand, construction and setting up of artificial reefs were conducted by community people in cooperative with JICA Study Team. It aims to be a community based trial, therefore, the material, size, set up method, and cost needed to be affordable, simple and easy enough for communities. The site was decided from the aspect of environmental conditions especially geographic, sea bottom, slope, current and biological conditions based on aerial photos and field reconnaissance.

### 7.3 Work Period

The selection of site and design was started in August 2001. Following two units installations of artificial reefs, and a few monitoring activities.

Work Schedule of Artificial Reef

	August 2001	September	October
Unit 1	 Construction  Setting Up (8/16)	 Monitoring (9/27)	 Monitoring (10/8)      Monitoring (10/27)
Unit 2		 Construction	  Setting Up (10/8)  Monitoring (10/27)

Source: JICA Study Team

## 7.4 Activities

### 7.4.1 Selection of site

The Study Team selected villages for community artificial reef at Basaan and Basaan Satu village, Minahasa Regency (North Sulawesi Province), based on the following criteria:

- area where there has been damage by physical forces, and can be improved as fishing ground;
- data and information for identification of appropriate site for setting artificial reef can be obtained; and
- community people provide cooperation and can be involved for the activities.

Environmental conditions especially geographic, sea bottom, slope, current and biological conditions in Basaan were investigated based on aerial photos and observation. Then the site for setting up artificial reef was decided. Location of site is shown in Figure 7.1.

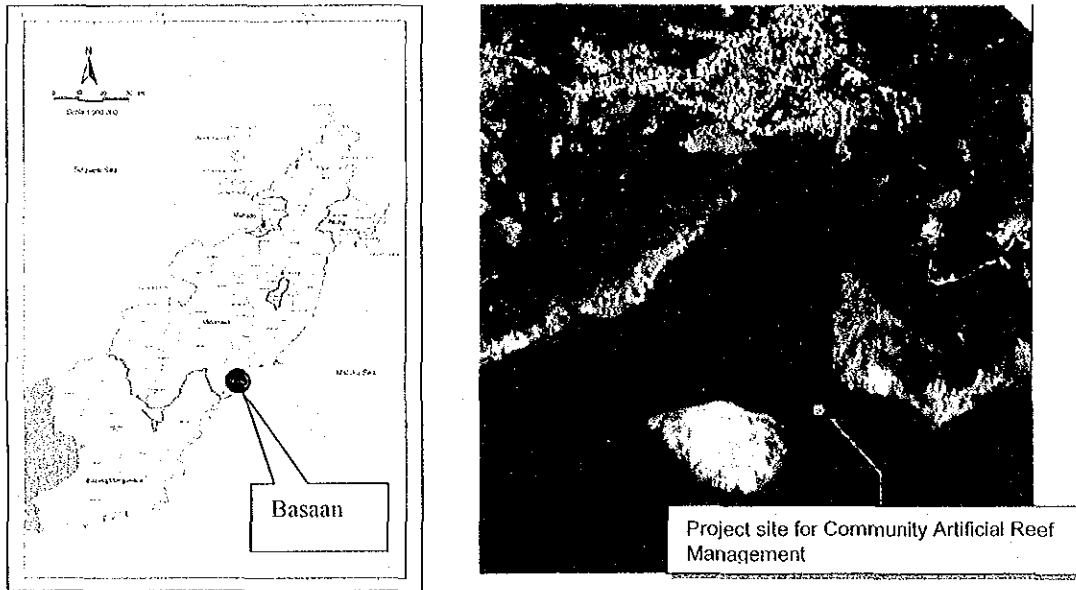


Figure 7.1 Location of Artificial Reef at Basaan

#### 7.4.2 Construction and Submergence of Artificial Reef

##### (1) Design of the Artificial Reef

Design criteria for artificial reef were formulated. In principle, artificial reef should be made and set up by community people, because the aim is to provide opportunity and introduction of community based fishery resource management for the community people. Conditions for adoption of artificial reef are that they can be made easily and be carried to site by small fishing boats. Other details are as follows:

- Type of artificial reef : bottom type (floating artificial reef such as bagan and lampoon were already introduced) plate type (InteCo Model) and cubic type
- Materials of artificial reef : concrete and steel pipe
- Size of artificial reef : see Figure 7.3

Then a design was made of a simple model of artificial reef; it was called "InteCo Model." Village fishermen made an InteCo Model and then a cubic type, supported by the Study Team (see Figure 7.2).



Figure 7.2 Preparation and Setting up of Artificial Reefs

Table 7.1 Construction Cost of Artificial Reefs

Type of Artificial Reef	Materials	Cost
InteCoModel	Iron pipe (2m)	50,000
	Steel line (10m)	6,000
	Cement (10kg)	5,000
	Sand and Gravel (60kg)	18,000
	Total	Rp. 79,000
Cubic Type	Steel line (20m)	12,000
	Cement (10kg)	5,000
	Sand and Gravel	18,000
	Total	Rp. 35,000

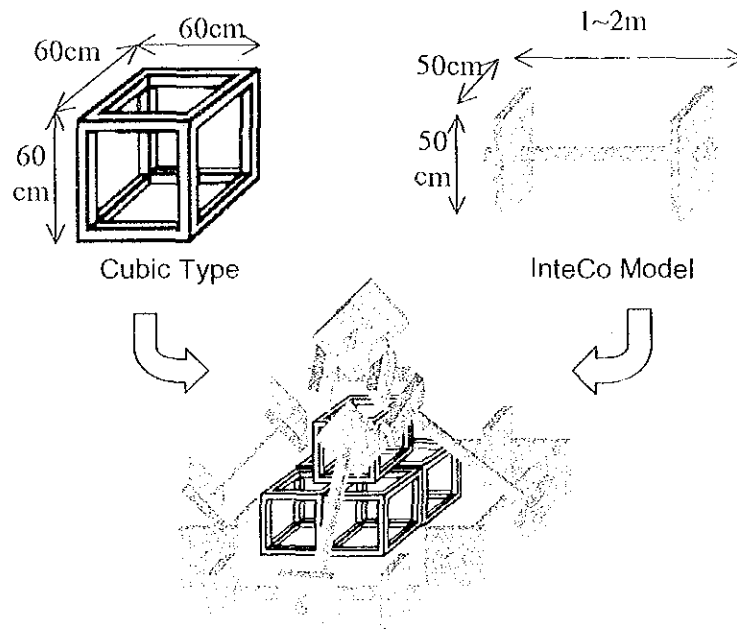


Figure 7.3 Image of Artificial Reef in Basaan Village

## (2) Setting Up of Artificial Reef

### *Formulation of Rules for Community based Artificial Reef Management*

Main objective of setting up artificial reef is to introduce and/or provide opportunity of community based fishery resources management, so that formulation of rules on the use of artificial reef is very important. At present, fishermen are discussing how to manage artificial reef. The following aspects were decided by village fishermen:

- prohibited fishing period and seasons
- prohibited fishing gear and methods
- reporting of total catch weight and number of fishes
- monitoring including conditions of artificial reef (damage, shape, slip, collapse, burring etc.), fouling organism and attractive marine life around established artificial reef

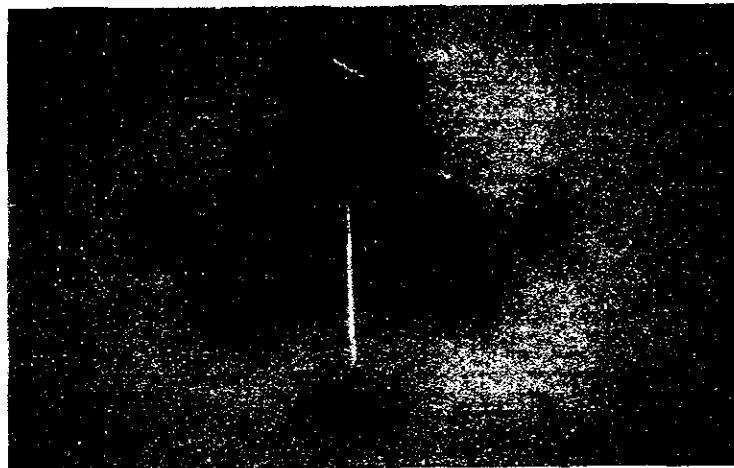


Figure 7.4 Setup of Artificial Reef Models

One unit consist of one cubic type module and 15 modules of InteCo Model type were set up at sand bottom 16 m deep on August 16 and October 8, 2001.

### 7.4.3 Result of Setting Up Community Artificial Reef

#### (1) Aggregated fishes

They were monitored until October 27, 2001, or a period of 2 months.

In the monitoring survey on October 27, 15 species of fishes such as Damselfish, Cardinal fish and Cleaner fish, hundreds of juvenile fishes, lobsters and shrimps are identified inside and surrounding the artificial reef. Although it has past just 1.5 months, fouling organisms were also identified. Some fish made artificial reef as feeding area such as Sweetlips and Humpnose Big-eye bream. Some fishes such as *Caesio sp* used artificial

reef as shelter from predator. Besides these species, many other organisms were observed at the artificial reef such as ascidian, shrimp, and crinoid.

## (2) Community Opinion

The community people were gathered together for the showing of underwater video taken a month after the installation of the artificial reef. The video was about the evolution of marine life around the new habitat. By this time, the artificial reef has already been covered by fouling organisms, and hundreds of juvenile fishes, lobsters, and shrimps have started living comfortably at their new habitat.

Table 7.2 Fishes and Other Organisms Found on Artificial Reef at Basaan

Date of Survey: September 27, 2001				
No.	Common Name	Indonesian Name	Scientific name	Remarks
<b>FISHES</b>				
1	Damselfish – 1	Ikan karang	<i>Chromis</i> sp	++
2	Damselfish – 2	ditto	<i>Chromis lepidoles</i>	++
3	Damselfish – 3	ditto		++
4	Ambon chromis	ditto	<i>Pomachromis richardsoni</i>	++
5	Black-saddled sharpnose puffer	Ikan buntal	<i>Chromis amboinensis</i>	+
6	Grubfish	-	<i>Canthigaster valentini</i>	+
7	Sweetlips	-	<i>Parapercis sexfasciata</i>	+
8	Blue headed wrasses	-	<i>Plectorinhus lessonii</i>	+
9	Shoulderspot wrasses	-	<i>Thalassoma amblycephalum</i>	+
10	Cardinal fish	-	<i>Leptojulius cyanopleura</i>	++++
11	Cleanerfish	Ikan pembersih	<i>Apogon</i> sp	+
12	Trevallier	Ikan kuweh	<i>Labroides bicolor</i>	++
13	Mottled fusilier	-	<i>Caranx</i> spp	+++++
14	Humnose Big-eye bream	Kakap putih	<i>Dipterygonasus balteatus</i>	+
15	Unidentified young fishes ( <i>Caesio</i> sp)	-	<i>Monotaxis grandoculis</i>	++++
<b>OTHERS</b>				
16	Ascidians	-	<i>Didemnum</i> sp	+++
17	Hingeback shrimp	-	<i>Rhynchocinetes uritai</i>	++

Source: JICA Study Team

Following the video presentation on setting up of artificial reefs, the community people were asked what they thought about the video. Overall, they expressed their happiness to see the evidence of success and were very much encouraged to keep going with the trial. They added that they needed to see the result, and were so excited about what they saw on the video. Then the discussion went on to the management of resource. They talked about how they should manage the resource that they are going to gain. They already knew that without managing their resource, the community would deplete them very quickly since the resource seems so limited in such a confined area.

After seeing the evolution of marine life at the new artificial habitat, they seemed to value the natural eco-system more on its complexity, beauty, and richness. They now know that the natural eco-system is the only thing for them and they value the existence itself as well as the economic value.

# **Chapter 8**

## **Workshop**



## Chapter 8

### Workshop

#### 8.1 PCM Workshop

##### 8.1.1 Background

In the planning process of the master plan in the Study, the Study Team aimed to formulate it by a participatory planning technique. Toward this end, the Study Team held several workshops using the PCM (Project Cycle Management) method.

##### 8.1.2 Objectives

Objectives of PCM workshop are as follows:

- to reflect the result of the workshop in coral reef management plan; and.
- to plan and implement projects which can be implemented by community people for coastal management. Then the result of the trial implementation would be reflected and fed back to planning process of coastal management plan.

##### 8.1.3 Methodology

The PCM workshop in May 2000 for executive officers of the central government and the provincial government of North Sulawesi was held to identify problems they have on coastal management and how they propose to address these problems.

The PCM workshop in February 2001 in Sulawesi had two purposes. The first



*PCM Workshop in February 2001*

purpose is to analyze existing coastal problems of a community using the PCM technique. By this analysis, the Study Team was able to know how fishermen understood the causal relationship of a particular problem in connection with coastal use. This analysis result was reflected in education and enlightenment in the Master Plan. The second purpose was to determine how to establish a management organization appropriately for coastal management by community people when the pilot project (which was mentioned in Chapter 6 in detail) would be implemented.

#### 8.1.4 Benefits from Stakeholders Meeting

Benefits of stakeholders Meeting are considered as follows;

- to open the necessary information,
- to exchange the information
- to formulate consensus among stakeholders

#### 8.1.5 Work Period

Workshop utilizing the PCM method were held occasionally based on the planning process of the master plan as detailed in the following table.

Table 8.1 PCM Workshop

	Date	Title	Place
PCM Workshop 1			
	May 2, 2000	PCM Workshop for central government officials on coastal management <u>Participants:</u> Counterpart personnel of Ex. Ministry of Sea Exploration and Fisheries (Ministry of Marine Affairs and Fisheries at present), Members of National Steering Committee, Study Team members <u>Topics:</u> Stakeholder analysis and problem analysis <u>Objectives:</u> To identify problems and issues for planning the master plan, To share understandings and perceptions among participants, and carry out the Study smoothly	Jakarta
	May 26, 2000	PCM Workshop for local governments on stakeholder analysis and problem analysis on coastal management <u>Participants:</u> Counterpart personnel of Ex. BAPPEDA North Sulawesi Province (BAPELITBANG North Sulawesi Province at present), Members of Provincial Steering Committee, Members of technical working group, Study Team members <u>Topics:</u> Stakeholder analysis and problem analysis <u>Objectives:</u>	Manado

The Study on the Integrated Coral Reef Management Plan in North Sulawesi

	Date	Title	Place
		To identify problems and issues for planning the master plan, To share understandings and perceptions among participants, and carry out the Study smoothly	
PCM Workshop 2			
	August – November, 2000	PCM Workshop for local community members <u>Participants:</u> Community people <u>Topics:</u> Stakeholder analysis, problem analysis, and objective analysis <u>Objectives:</u> To identify problems and needs which community people are facing, on conservation of coral reef and management of coastal natural resources	Selected communities for Rapid Community Assessment Survey → See Chapter 5
	Feb. 18, 2001	PCM Workshop for local community members <u>Participants:</u> Community people, Local NGOs, Local Government staff <u>Subjects:</u> Stakeholder analysis, problem analysis, objective analysis, and making of PDM (Project Design Matrix) <u>Objectives:</u> To plan and prepare pilot projects which can be implemented by community people, for conservation of coral reef and management of coastal natural resources	Rap rap (Pilot Project site)
	Feb. 21, 2001	Ditto	Basaan / Basaan Satu (Pilot Project site)
	Feb. 22, 2001	Ditto	Manado Tua (Pilot Project site)
PCM Workshop 3			
	July – October, 2001	PCM Workshop for local governments on coastal management planning <u>Participants:</u> Members of Sub-Steering Committee → see Chapter 2, 2.1(5) <u>Topics:</u> Stakeholder analysis, problem analysis, objective analysis, and selection of planning issues for master plan <u>Objectives:</u> To show principles and frame of regional development to participants, then, identify problems and issues to achieve the principles and frame when the participants adopt them as policy To reflect the above-mentioned problems and issues into the planning process of the master plan.	Manado
	Feb. 2, 2002	PCM Workshop for local governments on coastal management planning <u>Participants:</u> Members of Sub-Steering Committee <u>Topics:</u> Master plan proposed by Study Team, and basic knowledge of coastal management <u>Objectives:</u> To disseminate the master plan to participants	Manado

## 8.2 International Workshop in Cooperation with University

The international workshop on tourism and coral reef management was held on August 12, 2000, organized by the committee as a cooperative work between the Faculty of Fisheries and Marine Sciences, Sam Ratulangi State University, and the Study Team. The objective was to increase people's awareness on coral reef



Minister, Dr. R. Dahuri in Workshop on August 12, 2000

protection by providing a forum for the exchange of information on coral reef management and how tourism activities affect the coral reef ecosystem. Participants were from each office of the provincial and local governments, a private diving operator, NGOs, academic institutions, and university students. Dr. Rokhmin Dahuri, General Director of Directorate General of Coastal and Small islands (Minister, Ministry of Marine Affairs and Fisheries, at present) also presented.

The workshop included lectures from many direction of industrial, administrative and academic sectors, and it was a great success.

Table 8.2 Agenda of Workshop on August 12, 2000

Time	Program	Speaker	Moderator
09.00-09.15	Welcome Speech	Dr. Hanny Tioho	Committee
09.15-09.30	Opening Speech	Prof. Dr. J. Paruntu, Rector of Sam Ratulangi University	Committee
10.00-10.20	Keynote Speech	Dr. Rokhmin Dahuri, DKP(Ex.DELP) RI	Dr. J.D. Kusen
10.20-11.00	Speech	Dr. Akinori Sato, JICA Study Team	Dr. J.D. Kusen
11.00-11.35	Speech	Mr. Bobby Roring, Msi North Sulawesi Tourism Office	S.B. Pratasik, MSc
11.35-12.10	Speech	Ms. Simone Geritsen, Thalassa Diving Center	Dr. K.W.A. Masengi
13.10-13.45	Speech	Prof. Dr. E. Mantjoro, Sam Ratulangi University	S.B. Pratasik, MSc
13.45-14.20	Speech	Mr. Masahiro Ohta, JICA	Dr. Hanny Tioho
14.55-15.30	Speech	Mr. Boyke Toloh, MSc, Sam Ratulangi University	Dr. K.W.A. Masengi
15.30-16.05	Speech	Ir. Dominggus, Bunaken National Park Authority	Farnis Boneka, MSc
16.05-16.40	Speech	Mr. Pitres Sombowadile NGO Suara Nurani	S.B. Pratasik, MSc
16.40-17.00	Conclusion	Mr. S. Benny Pratasik, MSc.	Committee

Source: JICA Study Team

## **Chapter 9**

# **Education and Enlightenment**

## Chapter 9

# Education and Enlightenment

### 9.1 Background

The most important issue for coastal management is that people understand the importance of the coastal management.

In order for people to understand a concept of coastal management, knowledge required for coastal management and recognition of present condition are indispensable. Then, enlightenment becomes important. This chapter explains production of video program as teaching materials, production of manual for participatory workshop, overseas counterpart training program. But, training program of Extension Officers of Pilot Project are explained in Chapter 6, not in this Chapter.

### 9.2 Video Program for Community Based Management

The Study created some educational materials combined with presentation of the Study process. A 23-minute video program to explain CBCM (Community Based Coastal Management) was made by showing Pilot Project activities in the field. The video was made in Indonesian language, and aimed to raise awareness of not only community people but also any stakeholders related with coastal area management. The video program was duplicated into VHS tapes and Video CD (VCD) disks, and distributed to related government agencies (DKP, BAPELITBANG, each BAPPEDA of municipalities and regencies in the Study area).

#### *Format of Video and Video CD*

The program was packaged in VHS-PAL format and Video CD format and distributed to above mentioned organizations. Original source was recorded in Betacam-SP format and has been kept by consultant (Pacific Consultants International, Tokyo).

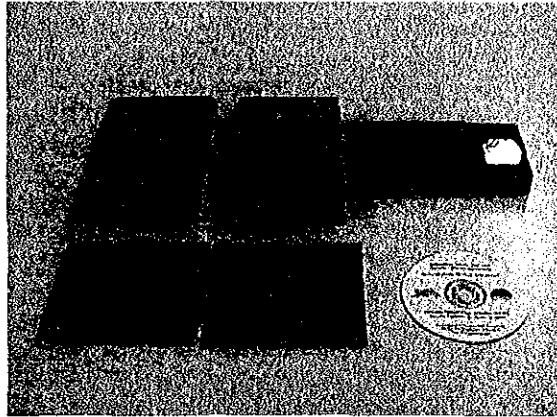


Figure 9.1 Produced VIDEO and Video CD

### 9.3 Manual for Participatory Workshop

Through the Study, a participatory planning methodology called Project Cycle Management (PCM) was introduced into the workshop. In the Study, the Study Team mainly play a role of facilitator, but it is expected that the participatory planning method will be used after the Study. For this reason, the manual for the methodology was prepared to Indonesian language by the Study Team and distributed to related stakeholders.

### 9.4 Overseas Counterpart Training

JICA provided overseas counterpart training. JICA invited two person to Japan during the Study period from the counterpart agency, BAPELITBANG North Sulawesi Province.

#### (1) Environment Management Course

Ms. Bernadetta Puspita Devi of BAPELITBANG North Sulawesi Province was invited by JICA to attend the Park Management Course conducted from August 22 to October 1, 2000. The training activity in Japan was coordinated by (former) Environment Agency of Japan and JWRC (Japan Wildlife Research Center). The training comprised both individual and group activities training. Ms. Devi participated in a seminar group with topic of 'Natural Resources and Park Management'. There were 11 trainees in total from 8 countries - Brazil, Kenya, Ethiopia, Cambodia, Indonesia, Malaysia, Vietnam and Paraguay. While on individual training activity, Ms. Devi was separated from the group

for a week and did a study in Iriomote Island in Okinawa prefecture. This training activity was designed specifically to study marine conservation and eco-tourism in Japan.

The training program was aimed to understand environmental management, and its natural resources based on the condition in Japan, monitoring of field conditions, appropriate approaches and solutions against problems.



Figure 9.2 Scene of Counterpart Training Program in Japan  
(Ms. Devi at the right corner)



Table 9.1 Training Schedule of Overseas Counterpart Training in 2000

		AM	PM
1	Aug ,22	Arrival in Japan	
2	Aug ,23	Briefing, Orientation	
3	Aug ,24	General orientation	
4	Aug ,25	General orientation	
5	Aug ,26	Bus tour	
6	Aug ,27	Holiday	
7	Aug ,28	"Nature conservation system" (introduction)	Courtesy visit at Agency of Environment / "Historical Background of nature conservation policy"
8	Aug ,29	Country Report (presentation)	
9	Aug ,30	Country Report (discussion)	
10	Aug ,31	"Natural Park system"(outline)	"Forest conservation management"
11	Sep ,01	"Connection with volunteer" "Eco-club of children"	"Wild life conservation policy"(outline)
12	Sep ,02	Holiday	
13	Sep ,03	move to Jyou-sin-etsu natural park	"Natural environment conservation program with community participation"
14	Sep ,04	Courtesy visit at Natural park office	Introduction of activity of Myo-ko-kogen highland V.C.
15	Sep ,05	Introduction of activity of neighboring cities' government / "natural environment master plan covering several neighboring cities"/ Introduction of activity of NAKAGO elementary school	
16	Sep ,06	Field survey (to neighboring facilities)	return to Tokyo
17	Sep ,07	Data compilation	move to Fuji-yoshida
18	Sep ,08	"Basic survey of natural environment preservation"	visit at "Bio-diversity center" / return to Tokyo
19	Sep ,09	Holiday	
20	Sep ,10	Holiday	
21	Sep ,11	move to Kushiro / "Wetland" environment and bio-diversity" / Introduction of nature conservation program by community	
22	Sep ,12	Visit at enlightenment facility	Monitoring method of wetland & bio-diversity
23	Sep ,13	Courtesy visit at Natural park office / Nature conservation policy in east area of Hokkaido" / Eco-tourism(Canoe)	
24	Sep ,14	"Wildlife protection management ("ezo" deer)"	Visit at sanctuary of "striped owl"(bird)
25	Sep ,15	Visit at Kiritapp marsh center / "Eco education in Kiritappu marsh" / "Waterfowl protection program"	
26	Sep ,16	Visit at Kushiro zoo / Visit at Japanese crane(bird) natural park	
27	Sep ,17	Holiday	
28	Sep ,18	"National park management at Akan national park"	move to Shiretoko
29	Sep ,19	"National trust movement" and field survey	"Wild life management" and field survey
30	Sep ,20	return to Tokyo	
31	Sep ,21	Data compilation	
32	Sep ,22	"case study in Philippines"	"Socio environmental survey method"
33	Sep ,23	Holiday	
34	Sep ,24	Holiday	
35	Sep ,25	"Wildlife protection, breeding, and zoo management technique"	
36	Sep ,26	Preparation for action plan	
37	Sep ,27	Presentation of action plan	
38	Sep ,28	Discussion with staff of Authority of Environment	
39	Sep ,29	Farewell ceremony and party	
40	Sep ,30	Preparation for left Japan	
41	Oct ,01	Leave Japan	

\* means lecture

Source: JICA Study Team

## (2) Conservation and Sustainable Management of Coastal Area for Officers of High Rank.

As the second counterpart training course, JICA invited Prof. Dr. Ir. L.W. Sondakh, Head of BAPELITBANG North Sulawesi Province to an individual training course on Conservation and Sustainable Management of Coastal Area conducted from November 18 to December 1, 2001. The training activity was coordinated by JICA Study Team in cooperation with Ministry of Environment. This 15 days training program aimed to show how local governments make policy for coastal management in Japan.

Table 9.2 Training Schedule of Overseas Counterpart Training in 2001

		AM	PM
1	Nov.18	Left Jakarta	
2	Nov.19	Arrival in Tokyo	
3	Nov.20	Briefing and program orientation at JICA-TIC Courtesy call to JICA headquarters	Meeting on proposed master plan by JICA Study Team
4	Nov.21	Haneda → Naha Okinawa Prefecture	Okinawa Nature Conservation Office of Ministry of Environment
5	Nov.22	Naha → Ishigaki-island Coral Reef Monitoring Center,	WWF Coral Reef conservation research center, Fisheries experimental station, Okinawa prefecture
6	Nov.23	Ishigaki island → Iriomote island	Field survey , ecology tour at Honai river Iriomote island → Ishigaki island
7	Nov.24	Ishigaki island → Naha	
8	Nov.25	Naha → Kagoshima	
9	Nov.26	Kagoshima Prefecture Kinko bay management plan, red-clay prevention, crown-of-thorns starfish management, marine-resources management (restriction of fishing right and a development act, resources management of a fishery company), water quality conservation and fish culture	Kagoshima → Tokyo
10	Nov.27	Natural Environment Department, Ministry of Environment,	Marine Park Centers of Japan, National Federation of Fisheries Cooperative Associations
11	Nov.28	Ministry of Land Development and Transportation	
12	Nov.29	Meeting on Draft Final Report of the Study	
13	Nov.30	Lecture by Dr. Mimura , University of Ibaraki	Submission of training course report
14	Dec.1	Tokyo → Jakarta	

Source : JICA Study Team

# **Chapter 10**

## **Public Relations**

## Chapter 10

# Public Relations

### 10.1 Background and Objectives

Coastal management cannot be carried out just because there was a master plan. In order to be implemented the plan, it is essential that people recognize and understand the importance of the coastal management. But it is difficult to attain their change of mind in a short period of time. The Study Team actively had tried to open and disseminate the Master Plan to people concerned who are not only government staff but also community-public during 2 years study period. Through these activity, the Study Team has heightened transparency of planning process of the Master Plan. Major public relation's activity by the Study Team are introduced in this chapter.

### 10.2 Publication of Newsletter

The Study Team issued Newsletters, and distributed to NGOs, coastal communities, tourism establishments, academic institutions including junior high schools, high schools, vocational schools, collages, universities, and local government organizations concerned to the Study as well.

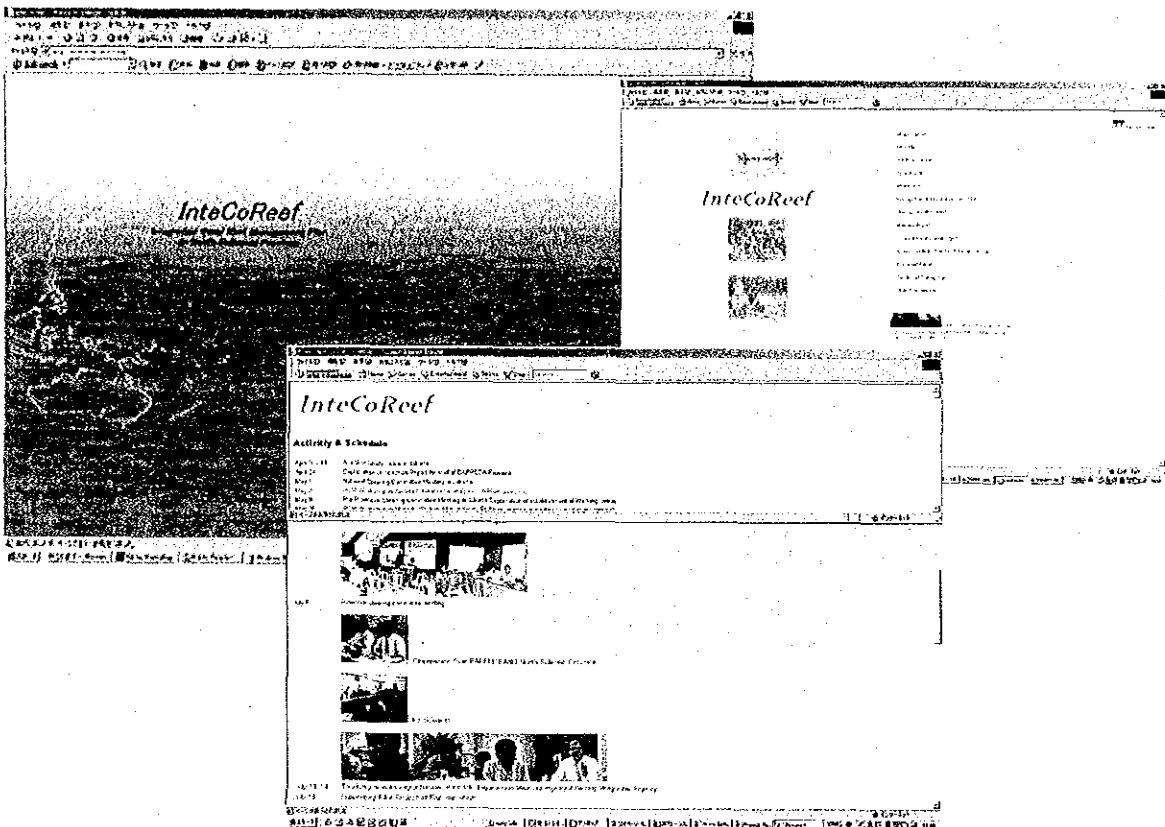
- Volume 1 - No.1 : June 2000
- Volume 1 - No.2 : October 2000
- Volume 1 - No.3 : January 2001
- Volume 2 – No.1 : August 2001

Photocopy of these News letters are included in appendix of this chapter.

### 10.3 Homepage

The Study Team developed a homepage on the Internet. The URL of the site is as follows.  
**<http://www.intecoreef.com>**

This page has introduced brief explanation of the Study, Activity & Schedule, Report of major meetings and workshop, Report of Pilot Project, Contribution articles by professors of university, and so on, in English and Indonesian.



Source: JICA Study Team

Figure 10.1 Home page of the Study

### 10.4 Contest of the Study Symbol

The Study Team had invited the students who lived in the Study area to enter the Study's Symbol (including mascot and logo) contest. Finally, more than 50 wonderful entries reached the Study Team. Unfortunately, there was no entry from elementary schools; all entries were from junior high schools, high schools, and vocational schools.

The contest rules were as follows:

Mascot	Simple designed character showing images of "coral reef," "conservation," "natural resources," "coral reef ecosystem," "marine fauna and flora" and others
Logo	Designed graphics for the study that could be either a "letter" or "image" of the study title.
Format	Entries should be drawn on white paper of A-5 size, Black and white, or in color. Entries will not be returned.
Eligible Applicants	Applicants should be Primary, Secondary or High-School students, who live in the Study Area as follows: Kotamadya Manado, Kotamadya Bitung, Kabupaten Minahasa, and Kabupaten Bolaang Mongondow

Among the entries, three symbols were selected by Department of Marine and Fisheries, BAPPEDA (BAPELITBANG at present) North Sulawesi Province, and the JICA Study Team as follows:

Prize of DKP  
(Coastal Beaches, and Small Islands Affairs,  
Ministry of Marine Affairs and Fisheries)  
Mr. Andika Tiada  
School : SMK N 5, Manado  
"Coral Reef, North Sulawesi"  
Pencil, Black and White



Prize of BAPPEDA SULUT  
(Regional Development Planning Board, North  
Sulawesi Province)  
Mr. Fredi Hermanus  
School : SMK N 5, Manado  
Pencil, Black and White



Figure 10.2 Winners of the Study Symbol Contest (1)

Prize of InteCoReef  
(JICA Study Team)  
Mr. Herri Malensang  
School : SMK N 5, Manado  
Fiber-tipped pen, Colored

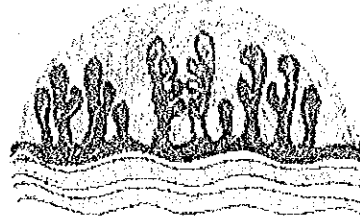


Figure 10.2 Winners of the Study Symbol Contest (2)

The selected symbols were used in newsletters, reports, and some novelty items like T-shirts. Winners were invited to a ceremony of commendation in March 2001.



Figure 10.3 Winners of contest

#### 10.5 Publicity Activities to Mass Media

The Study Team was interviewed by leading newspapers and TV programs from time to time.

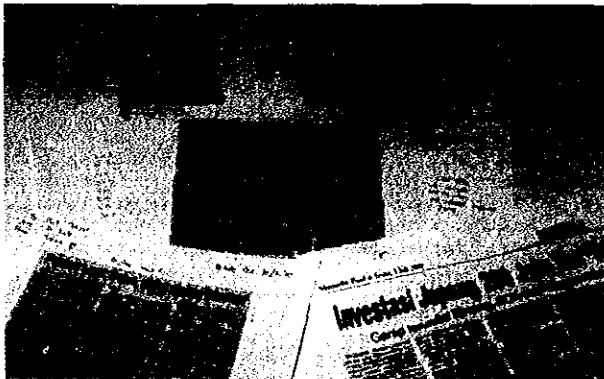


Figure 10.4  
Articles on JICA Study Team  
in Newspapers

Figure 10.5  
Interview by TVRI  
at Rap rap village  
on August 18, 2001



#### 10.6 Exposition "North Sulawesi Province Development Fair"

From September 15 to 23, 2001, the North Sulawesi Development Fair was held at Kayuwatu in northern Manado. The Study Team participated in the fair by exhibiting some materials on the Study activity in cooperation with BAPELITBANG North Sulawesi Province. More than 300 guests visited the Study booth.



Figure 10.6  
JICA booth at North Sulawesi Development Fair

#### 10.7 Participation in International Conferences and Seminars as Guest Speaker

Dr. Akinori Sato, team leader of the Study Team, was invited to the conferences listed below. He introduced the study activities and exchanged the information on coastal management with other researchers and organizations. The Study Team reflected feedback from those at the forefront of coastal management technologies into the Study.

- 9<sup>th</sup> International Coral Reef Symposium in Bali, Oct. 2000
- International Workshop on Technology for Coastal Conservation and Rehabilitation in Jakarta, Aug. 2001



# **Chapter 11**

## **Report and Outputs**

## Chapter 11

### Report and Outputs

#### 11.1 Submission of the Study Reports

The Study Team submitted seven reports throughout the Study as follows;

- Inception Report : April 2000
- Working Paper I : December 2000
- Progress Report I : March 2001
- Interim Report : June 2001
- Progress Report II : October 2001
- Draft Final Report : January 2001
- Final Report : March 2002

At the beginning of the Study in April 2000, the Inception Report was submitted to the Indonesian side, and explained at National Steering Committee, Provincial Steering Committee in order to share the objectives, scope of work and methodology of the Study between Indonesian side and Japanese side.

In December 2000, the Working Paper was submitted to the Indonesian side to report progress of the Study.

After twelve months of the commencement of the Study, the Study Team submitted the Progress Report I in March 2001, which includes preliminary identification of existing conditions as the result of Phase I. Three meetings for explanation and discussion of Progress Report I were held at Municipalities and Regencies for Parliament members from March 14 –17, 2001. Provincial and National Steering Committee Meetings were also held on March 19 and 22, respectively.

In June 2001, the Interim Report was submitted containing the result of analysis of existing conditions. The report also explained the planning framework for the management plan and development framework for future consideration.



Figure 11.1 Team leader of the Study Team, Dr. Akinori Sato submitted Progress Report II to chairperson of BAPELITBANG North Sulawesi, Dr. Prof. Lucky Sondakh with Mr. Agus Dermawan, DKP at Jakarta on November 2, 2001

In October 2001, the Study Team submitted and explained Progress Report II, which includes planning framework, guidelines for coastal resource use, and draft structure of the master plan. Explanation and discussion of the report were held at Municipalities and Regencies for Parliament members and related agencies from October 30 to November 1. Provincial and National Steering Committee Meetings were also held on November 2 and 6, respectively.

In January 2002, the Study Team submitted and explained Draft Final Report, which finalizes guidelines for coastal resource use, and master plan on coastal management for North Sulawesi Province. Explanation and discussion of the report were held at Municipalities and Regencies for Parliament members and related agencies from January 22 to 31, 2002.

After the presentation of Draft Final Report by the Study Team and discussion among the agencies concerned, the Indonesian side submitted their comments to JICA. Based on these comments, the Study Team modified the reports and issued the Final Report in March 2002. The Final Report was also submitted to the Indonesian side by JICA.

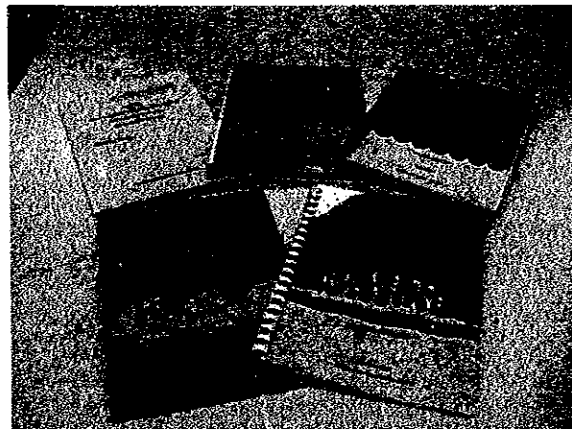


Figure 11.2 Reports submitted by the Study Team

## 11.2 Other Outputs and Products from the Study Team

In addition to the study reports, the Study Team submitted several outputs and products to the Indonesian side as follows.

- Aerial photo data and Orthophoto maps, GIS database, Atlas and a set of computer equipment (see chapter 3)
- Video Program  
“Mewariskan berkah dari laut kepada generasi mendatang  
~Menurut Anda, apakah CBCM itu ?~”  
(Bequeath the blessing of the sea to our next generation  
~What is the Community-based coastal management? ) (see chapter 9)
- Water quality survey report(see chapter 4)
- Manual for Participatory Workshop (see chapter 9)
- Newsletter (see chapter 9)