

## 添付資料

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i)第一次事前評価調査 協議議事録 (Minutes of Meetings)


**MINUTES OF MEETINGS  
BETWEEN  
THE JAPANESE PREPARATORY STUDY TEAM AND  
THE AUTHORITIES CONCERNED OF THE REPUBLIC OF INDONESIA  
ON JAPANESE TECHNICAL COOPERATION  
FOR  
THE PROJECT FOR THE PROMOTION  
OF THE SUSTAINABLE COASTAL FISHERIES**

The Japanese Preparatory Study Team (hereinafter referred to as "the Team"), organized by Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Dr. Kohei Kihara, visited the Republic of Indonesia (hereinafter referred to as "Indonesia") from April 2<sup>nd</sup> to April 16<sup>th</sup>, 2005 for the purpose of identifying an outline of Japanese technical cooperation program concerning the Project for the Promotion of the Sustainable Coastal Fisheries (hereinafter referred to as "the Project") in the Republic of Indonesia.

During its stay in Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned with respect to desirable measures to be taken by JICA and the Indonesian Government for the successful implementation of the above-mentioned Project.

As a result of meetings, the both sides agreed upon the matters referred to in the documents attached hereto. This Minutes reflects discussions and initial agreements made between the authorities concerned of the Government of Indonesia and the Team, which are subject to further consideration and approval of higher authorities of both sides.

Jakarta, April 14<sup>th</sup>, 2005



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Dr. KIHARA, Kohei  
Leader,  
Preparatory Study Team  
Japan International Cooperation Agency  
Japan



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Mr. Ir. Saut P. Hutagalung, Msc  
Director of Planning and Foreign Cooperation Bureau,  
Ministry of Marine Affairs and Fisheries  
The Republic of Indonesia

## ATTACHED DOCUMENTS

### I. Background of the Project

Nusa Tenggara Timur (NTT) and Nusa Tenggara Barat (NTB) are known as areas surrounded by rich fishing grounds. Under increasing tendency of the demand of fisheries products as a high quality protein resource, the expectation toward NTT and NTB is getting stronger to stably distribute fisheries products to consumers through the enhancement of the fisheries scheme. This fact also contributes to vitalize fisheries areas and to increase fishers' income in NTT and NTB. On the other hand, the fisheries in NTT and NTB, which have been formulating the scheme for better utilization of fish resources, have been required to be promoted.

Under those situations, Ministry of Marine Affairs and Fisheries (MMAF) and JICA completed "The Study on Fisheries Infrastructure Support and Coastal Communities Development Plan in Eastern Indonesia (Development Study)" in October 2002. Through this study, several critical issues have been identified as constraints to sustain the stable supply of high quality fish products and the vitalization of fisheries communities in NTT and NTB, and the study proposes the achievements such as improving fundamental facilities for sustainable fisheries and fish processing, distribution, mitigating the pressure on fish resources by introducing appropriate fishing technologies and methodologies, and enhancing fisher's groups for effective management of the fisheries.

To address these issues, the Government of Indonesia requested a Technical Cooperation Project to the Government of Japan in order to reflect the needs of the local government and to provide support to benefit the local communities.

### II. The Outcome of the Discussions

The Team and the Indonesian sides discussed upon the frameworks of the Project. As the outcome of the discussions, the tentative frameworks of the Project and the measures to be taken by both sides have been clarified.

The both sides agreed that the Indonesian side will take ownership and overall responsibilities for the successful and effective implementation of the Project.

### III. Tentative Framework of the Project

Tentative Framework of the Project was modified over the course of discussion between the Team and the Indonesian side. Based upon the result of above discussion, it will be finalized between the Team and the Indonesian side prior to the signatory measure of the

document titled Record of Discussions (R/D).

1. Name of the Project

“The Project for the promotion of the sustainable coastal fisheries”

The name of the Project may be changed before signing the R/D, if necessary.

2. Overall Goal

Successful promotion models for sustainable coastal fisheries are disseminated to other coastal areas.

3. Project Purpose

Promotion models for sustainable coastal fisheries are developed in two target areas.

4. Outputs and Activities

(1) The coastal fisheries groups are strengthened through the fisheries activities.

1) Technologies and methodologies of fish processing are improved.

2) Technologies and methodologies of fish-product distribution are improved.

3) Managerial skills of the fisheries/fish-farmers groups are improved.

(2) The supporting system by the district governments for local sustainable coastal fisheries is strengthened.

1) The district governments acquire the knowledge concerning the sustainable fisheries resource management, and disseminate it to fisheries groups.

2) The district governments improve a supporting system to sustain fisheries activities, such as provision of information on fisheries and aquaculture technology for the coastal fisheries groups.

5. Target Areas

One project area respectively in NTT and NTB:

(1) Amargapati in East Flores, East Nusa Tenggara

(2) Waworada in Bima, West Nusa Tenggara

6. Target groups and beneficiaries

(1) District governments

(2) Coastal fisheries communities

7. Duration of the Project

Three (3) years

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12

8. Inputs required for the project

(1) Japanese experts:

Fisheries Development as the Japanese side leader of the project,  
Fisheries community empowerment,  
Fish processing,  
Products distribution,  
Fish resource management, etc.

(2) Indonesian experts as required:

Fisheries technologies,  
Fishing vessel engineering,  
Fisheries education, aquaculture,  
Fish resource management,  
Fish processing, products distribution,  
Community empowerment, etc.

(3) Capacity building

- 1) To provide training to staff of district Government
- 2) To provide training to local fishers including member of women groups.

(4) Necessary facilities and equipments

Refer to ANNEX.

9. Indonesian side counterparts

(1) Representative of the Project Director:

Director of Planning and Foreign Cooperation Bureau, MMAF.

(2) Sub Representative of the Project:

- 1) Secretary for the DG of Capture Fisheries
- 2) Secretary for the DG of Aquaculture
- 3) Secretary for the DG of Coasts and Small Island
- 4) Head of Marine and Fisheries Regional Services, NTT Province
- 5) Head of Marine and Fisheries Regional Services, NTB Province
- 6) Head of Fisheries Division, East Flores
- 7) Head of Fisheries Division, Bima

(3) Implementation Body for the Project:

Implementation Body for the Project is responsible to lead and implement this

project and to arrange with the local governments for the this project.

#### IV. Others

Besides the matters as mentioned above, the following suggestion and proposal were made;

##### (1) From Japanese side

- 1) For the implementation of the Project, it is quite important for Indonesian side to coordinate and cooperate with related organizations. Especially as for the input of the experts, utilization of domestic human resources will be encouraged as shown in 8 (2).
- 2) For the requested Grant Aid Project, it is recommended for Indonesian side to further investigate the following items and submit to Japanese side.
  - (a) To study about related laws and regulations in relevant with executing this projects by the end of 2005.
  - (b) To evaluate the financial and technical appropriateness of the introduction of the ice making facilities, fish drying facilities, fuel supply facilities and to clarify the technical and financial scheme to maintain those facilities by June, 2005.

##### (2) From Indonesian side

The Government of Indonesia prepared the list of facilities as the materials for Japanese Government decision concerning implementation of the Grant Aid Project shown as ANNEX.

##### (3) From Indonesian and Japanese sides

###### 1) Program approach by the technical cooperation and grant aid project

Both side suggested that, if some infrastructures necessary for the development of the target areas are introduced by the grant aid, the impact and the effectiveness of the project are expected to increase quite high. Both side recommended to Japanese side that the timing for some activities of the technical cooperation project should be corresponded to the implementation of the grant aid project.

###### 2) Temporary schedule for the commencement of the project

Both sides suggested for JICA to dispatch the next mission for the preparing of draft of the record of discussion as soon as possible.

## ANNEX

### The list of facilities

#### (a) Amargapati site

- Wharf/Quaywall
- Ice making facility
- Fuel supply facility
- Slipway
- Multi purpose yard and shed
- Fishing gear warehouse
- Management office

#### (b) Waworada site

- Wharf/Quaywall
- Ice making facility
- Water supply facility
- Waste water treatment facility
- Slipway
- Multi purpose yard and shed
- Fishing gear warehouse
- Management office
- Fish Drying facility

### 3) Indonesia suggested following equipments;

#### (a) Amargapati site

- Ice making machine
- Multi purpose vessels (Transportation, field study, extension work)
- Fisheries-products carrying vehicle
- Hanging scale
- Ice box
- Fuel tank
- Fish processing equipment

#### (b) Waworada site

- Ice making machine
- Fish drying machine
- Water supplying pipe
- Multi purpose vessels
- Fisheries products carrying vehicle
- Hanging scale
- Ice box



- Single side band communication radio
- Processing equipment
- Global positioning system

ii)第二次事前評価調査 協議議事録 (Minutes of Meetings)

**MINUTES OF MEETINGS**  
**BETWEEN**  
**THE JAPANESE PREPARATORY STUDY TEAM AND**  
**MINISTRY OF MARINE AFFAIRS AND FISHERIES OF**  
**THE REPUBLIC OF INDONESIA**  
**ON JAPANESE TECHNICAL COOPERATION**  
**FOR**  
**THE PROJECT FOR THE PROMOTION**  
**OF THE SUSTAINABLE COASTAL FISHERIES**

The Japanese Preparatory Study Team (hereinafter referred to as “the Team”), organized by Japan International Cooperation Agency (hereinafter referred to as “JICA”), headed by Mr. Kiyoshi KATSUYAMA, visited the Republic of Indonesia from October 7<sup>th</sup> to October 26<sup>th</sup>, 2005 for the purpose of identifying an outline of Japanese technical cooperation for the Project for the Promotion of the Sustainable Coastal Fisheries (hereinafter referred to as “the Project”) in the Republic of Indonesia.

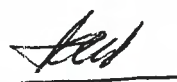
During its stay in Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned with respect to desirable measures to be taken by JICA and the Indonesian Government for the successful implementation of the above-mentioned Project.

As a result of meetings, the both sides agreed upon the matters referred to in the documents attached hereto. This Minutes reflects discussions and initial agreements made between the authorities concerned of the Government of Indonesia and the Team, which are subject to further consideration and approval of authorities of both sides.

Jakarta, October 26<sup>th</sup>, 2005



Mr. Kiyoshi KATSUYAMA  
Leader,  
Preparatory Study Team  
Japan International Cooperation Agency  
Japan



Mr. Saut P. Hutagalung, Msc  
Director of Planning and Foreign Cooperation Bureau,  
Ministry of Marine Affairs and Fisheries  
The Republic of Indonesia

## ATTACHED DOCUMENTS

### **I. The Outcome of the Study**

The field surveys and discussions have undertaken by both the Japanese Preparatory Study Team and the Indonesian side during the mission for better implementation of the Technical Cooperation Project. The field surveys on the fishing communities in the target areas in Nusa Tenggara Barat (NTB) and Nusa Tenggara Timur (NTT) Province have been conducted in order for designing the Tentative Framework of the Project. Especially, the Team has carefully interviewed local fishers in the Project areas to know problems in sustaining their livelihood that include not only those in fisheries but also those in daily living conditions such as freshwater shortage. As a result of the field surveys, the Team has come to conclude that the Project activities need to be prioritized more in the sites of Bima District than in ones of East Flores District, since the former appears to be situated in more difficult and marginalized conditions than the latter, as shown in difference of their local prices of diesel oil, and geographic position for reaching to consumers markets nearby.

The Team and the Indonesian sides discussed upon the Tentative Framework of the Project. As the outcome of the discussions, the Tentative Framework of the Project and the measures to be taken by both sides have been clarified. It is also agreed that the Indonesian and the Japanese Government will pursue the same hope with the fishers in order to improve their livelihood in future through the Project.

### **II. Tentative Framework of the Project**

The both parties have agreed on the following Tentative Framework of the Project. However, it may be modified and finalized over the course of discussions prior to the official signing of the document titled Record of Discussions (hereafter referred to as "R/D").

The draft Project Design Matrix and the draft Plan of Operation will be shown in the Annex I and Annex II respectively.

#### **1. Name of the Project**

The Project was requested to the Government of Japan entitled on "the Project for the promotion of the sustainable coastal fisheries", however, both parties agreed to recommend the following title to their responsible bodies for consideration. The recommended title is "the Project for Improvement of livelihood in Coastal Fishing Communities in the Republic of Indonesia" (hereinafter referred to as "the Project").

#### **2. Target Areas and Groups**

The target groups of the Project are the coastal fishing communities and the local

governments of Bima district in NTB and East Flores district in NTT.

The target fishing communities are those that are located in 1) Waworada village in Bima and 2) Amagarapati village in East Flores. However, the neighboring fishing communities should be included in the Project as the beneficiaries and expected to be involved in the Project activities. The details of target areas will be shown in the Annex III.

### 3. Duration

The duration of the technical cooperation of the Project will be three (3) years from the arrival date of the Chief Advisor of JICA Experts for the Project.

### 4. Overall Goal

Income generation and means of livelihood in the coastal communities are improved based on the promotion models for sustainable development in NTB and NTT.

### 5. Project Purpose

Promotion models for sustainable development of the coastal fishing villages are established in the Project areas.

### 6. Outputs

1. Management ability of fishery resources in local government is enhanced.
2. Basic ability of fisher's household management is improved.
3. Coastal fishery and fishery-related activities are improved.
4. Organized cooperation activities by fishers' group are promoted.

### 7. Activities

- 1-1. Enhance management ability of fishery resources in local government.
  - 1-1-1. Enhance basic information and capability of the district fisheries officers for coastal stock management.
  - 1-1-2. Collect local information on demand and supply of fishery products.
  - 1-1-3. Propose data collection system of fisheries in a proper level to fishers.
  - 1-1-4. Implement experimental data collection and analysis of fisheries with participation of fishers.
- 2-1. Enhance ability for daily account management in fishers.
  - 2-1-1. Conduct a survey of current fisher's basic ability condition of local residents in fishing villages.
  - 2-1-2. Develop a plan for enhancing basic ability such as literacy and numeracy of fishers at the targeted local government.

- 2-1-3. Conduct periodical trainings for enhancement of basic ability at fishers along with the above mentioned plan.
- 2-2. Enhance ability of the fisher's household management.
  - 2-2-1. Conduct a survey of current fisher's household management.
  - 2-2-2. Develop an action plan for improving fisher's household management at the targeted local government.
  - 2-2-3. Conduct periodical trainings for enhancement of fisher's household management for fishers along with the above mentioned plan.
- 3-1. Improve fishing gear and methods for proper utilization of fishery resources.
  - 3-1-1. Conduct a survey of current fishing gear and methods.
  - 3-1-2. Propose effective fishing gear and methods to prevent the depletion of fishery resources to fishers.
  - 3-1-3. Conduct trial fishing with the proposed gear and methods.
  - 3-1-4. Make up a technical guidebook of sustainable fishery with participation of fishers.
- 3-2. Improve fish handling and treating by fishers.
  - 3-2-1. Conduct a survey of current condition of handling and treating at on-board, landing and selling stage.
  - 3-2-2. Propose proper fish handling and treating in practical basis.
  - 3-2-3. Conduct training for the above proposed fish handling and treating.
  - 3-2-4. Prepare extension materials on fish handling and treating with participation of fishers.
- 3-3. Improve primary fish processing techniques.
  - 3-3-1. Conduct a survey of current fish processing and fishing quality.
  - 3-3-2. Propose practical fish processing techniques for fishers.
  - 3-3-3. Conduct trial fish processing along with the above proposed techniques.
  - 3-3-4. Prepare extension materials on fish processing and quality improvement.
- 4-1. Promote sustainable utilization of coastal fishery resources by fishers' groups.
  - 4-1-1. Study proper management of utilized fish in the coastal villages.
  - 4-1-2. Promote activities for securing spawning/nursery ground and juvenile fish by fishers.
  - 4-1-3. Develop an action plan for sustainable utilization of coastal fishery resources at the local government.

- 4-2. Promote income diversification of fishery households through the group activities.
- 4-2-1. Propose development of unutilized coastal fishery resources with participation of fishers.
- 4-2-2. Conduct experimental works for creating supplemental income.
- 4-2-3. Propose an action plan for improving income generation and means of livelihood with participation of fishers at the local government.

### **III. Measures to be taken by the Japanese Government**

Japanese side will take, at its own expense, the following measures through JICA upon the mutual understandings of Japanese input, described in the PDM:

1. Dispatch of Japanese Experts considering the following expertise:

- 1) Long-term Expert(s)

- Chief Advisor
- Project Coordinator/Extension Activities

- 2) Short-term Expert(s)

The short-term Experts will be dispatched as the necessity arises for the smooth implementation of the Project.

2. Provision of machinery and equipment

The Government of Japan will provide equipment, machinery and materials necessary for the implementation of the Project.

3. Training of Indonesian personnel

The Government of Japan will consider the technical training in Japan for Indonesian personnel in relation with the Project.

### **IV. Measures to be taken by the Indonesian Government**

The Government of the Republic of Indonesia will take necessary measures to ensure the self-reliant operation of the Project.

1. Provision of facilities needed for implementation of the Project

- a. Facilities and office space
- b. Space for the machinery and equipment provided
- c. Electricity and communication facilities
- d. Other facilities necessary for implementation of the Project will be decided upon agreement of both sides.

2. Assignment of the necessary Counterparts

For the successful implementation of the Project, the Indonesian side will assign Counterparts to work with the Japanese Experts.

3. Budgetary allocations

Operational cost such as;

- a. Electricity and water service
- b. Local communication, and
- c. Transportation of the Counterparts

**V. Project Director, Project Manager and Counterpart Personnel**

1. Project Director and Project Manager will be assigned from the following institutions:

Project Director: Directorate General of Capture Fisheries, MMAF  
Project Manager(s): Two (2) Project Managers, every one from the Bima District Government and the East Flores District Government respectively

2. Counterparts shall be assigned from the MMAF, the Bima District Government, and the East Flores District Government in fields related to the activities of Japanese Experts.

**VI. Joint Coordinating Committee**

The Joint Coordinating Committee (hereafter referred to as "JCC") will be organized for the Project management and administration. The Project Director from the MMAF will take the chair of the JCC, and will be held once a year and the additional JCC will be held where necessary. The Committee members and functions are as follows:

1. Committee members

(Indonesian Side)

- a. Representative of Bureau of Planning and Foreign Cooperation, Secretariat General, MMAF
- b. Project Director
- c. Project Managers
- d. Counterparts
- e. Other institutions concerned with the Project decided by the Indonesian side, if necessary

(Japanese Side)

- a. JICA Experts



- b. Representatives from the JICA Indonesia Office
- c. Representatives from the Embassy of Japan
- d. Other personnel concerned with the Project decided by JICA, if necessary

## 2. Functions

- (i) To approve the plan of operation and the annual plan of operation of the Project.
- (ii) To review the overall progress of the Project activities as well as the achievements of the above mentioned annual plan.
- (iii) To review and exchange of views on major issues arising from or in connection with the Project and recommend corrective measures.
- (iv) Staffing of the Project
- (v) Others

## VII. Justification of the Project

The Project is justified through the following ex-ante evaluation. More detailed results of evaluation are attached in Annex V.

### 1. Relevance

Relevance of the Project is high. It was found that fishing households fallen below poverty line exist to a considerable extent in the planned Project sites. The Project directly aims at improvement of livelihood measures of the small-scale fishers. Thus, the Project fully meets the poverty alleviation policies of the Indonesian Government and the ODA guide line of Japan.

### 2. Effectiveness

Effectiveness of the Project is envisaged moderate. By adopting the broad and participatory approach, the Project is envisaged unfortunately to have to risk achievement in some of the Project outcomes and their contribution to the Project effectiveness. However, this risk is unavoidable and can be justified from aspect of a necessity to build development models.

### 3. Efficiency

An extent of the Project efficiency will largely depend on process of the inputs during implementation of the Project. For supporting actions by the long-term Experts, timely and appropriate inputs of competitive short-term Experts should be effectively ensured.

### 4. Impacts

An achievement of the Project overall goal depends largely on the Project ownership of the Ministry of Marine Affairs and Fisheries (MMAF). For preparing the Project in further stages and for building the project ownership of the ministry, a most effective involvement of the Directorate General of Capture Fisheries of the MMAF is needed.

## 5. Sustainability

Sustainability of the Project is foreseeable under certain conditions. By adopting and utilizing locally available equipment and materials that are affordable for organized or individual fishers, their participation will be made more practicable. However, the Project will occasionally have to purchase equipment that is necessary but may be unaffordable for individual fishers. In such an occasion, unjustifiable equipment should be eliminated from supplies by the Project. By keeping practicability of the fishers' participation in such a way, the Project benefits can be sustained for a long time in post project stage.

## VIII. Other Remarks

### 1. Coordination and cooperation with related institutions

Coordination and cooperation with related institutions is important for the MMAF to achieve the Project Outputs as well as the Project Purpose. It is especially required to liaise with the both District Governments of Bima and East Flores in order to ensure the exchange of information and the Project progress in both sites.

### 2. Temporary Schedule for the commencement of the Project

The both sides will make efforts to launch the Project as soon as feasible. The R/D will be signed afterwards by the concerned authority of Indonesian side and the Resident Representative of JICA Indonesia Office.

Annex I	Tentative Project Design Matrix (PDM)
Annex II	Tentative Plan of Operation (PO)
Annex III	Location of Project Target Areas
Annex IV	Organization Chart
Annex V	Justification of the Project

Draft PDM: Project for Improvement of Livelihood in Coastal Fishing Communities in the Republic of Indonesia  
 Project Sites: Waorada (NTB), Amagarapati (NTT) and their vicinity  
 Target Groups: Small-scale fishers in the project sites, District Fisheries Officers

Version 1.0  
 Revised on 23 Oct. 05

Revised on 23 Oct. 03

Narrative Summary		Objectively Verifiable Indicators	Source of the OVI's	Important Assumptions
Overall Goal	Income generation and means of livelihood in the coastal communities are improved based on the promotion models for sustainable development in NTB and NTT	Adoption of the model(s) by MMAF: Households in coastal communities below the BPS poverty line decrease to a half in 2004 level	MMAF development programs; BPS Poverty Statistics	
Project Purpose	Promotion models for sustainable development of the coastal fishing villages are established in the project areas.	The MMAF adopts the model(s) in its assisting actions for coastal fisheries in districts of NTT and/or NTB.	MMAF development programs	MMAF's priority for assisting small-scale fisheries is unchanged.
Outputs	1 Management ability of fishery resources in local government is enhanced.	The participatory analysis based on the data collected are implemented 3 times at least. At least 75 % of the counterparts can complete training programs.	Monitoring reports by the project	Present transport conditions connecting the project sites and consumers markets are not significantly worsened.
	2. Basic ability for fisher's households management is enhanced.	The seminars for basic skills and household management are held 10 times or more respectively.	Monitoring reports by the project	Fuel oil costs are not increased further more.
	3. Coastal fishery and fishery-related activities are improved.	Respectively more than 3 kinds of alternative fishing gears/methods, fish handling and fish processing are identified and promoted.	Monitoring reports by the project	A large population of immigrant fishers is not entered in the project sites.
	4. Organized cooperation activities by fishers' group are promoted.	2 to 3 different actions for securing spawning/nursery grounds are carried out; 2 to 3 experimental works for creating supplemental income are carried out.	Monitoring reports by the project	
Activities	Inputs			
		Japanese side:  1) Personnel  Long-term experts, two persons Chief Advisor Coordinator (Extension Activities)	Indonesian side:  1) Personnel  Project Director in MMAF Project Manager in the districts	

2-1 Enhance ability for daily account management in fishers	Short-term experts, 2 to 3 persons per year	Project Coordinators in the districts Project Counterparts Assistants, as needed
2-1-1. Conduct a survey of current fishers basic ability condition of local residents in fishing villages.	Coastal Fisheries Resources	
2-1-2. Develop a plan for enhancing basic ability/ability such as literacy and numeracy in fishers at the targeted local government.	Fishing Technologies Coastal Fisheries Fishers' Organization	
2-1-3. Conduct periodical trainings for enhancement of basic ability at fishers along with the above mentioned plan.	2) Equipment and Materials	
2-2. Enhance ability of the fisher's households management.	Fishing equipment, materials and others	2) Equipment as required
2-2-1. Conduct a survey of current fisher's household management.	3) Training in Japan (under consideration) Fishing technology, Resource management, Fishing community development	
2-2-2. Develop an action plan for improving fisher's household management at the targeted local government.		3) Facilities Office for the experts and others
2-2-3. Conduct periodical trainings for enhancement of fisher's household management for fishers along with the above mentioned plan.		
3-1. Improve fishing gear and methods for proper utilization of fishery resources.		4) Operation costs
3-1-1. Conduct a survey of current fishing gear and methods.		
3-1-2. Propose effective fishing gear and methods to prevent the depletion of fishery resources to fishers.		
3-1-3. Conduct a trial fishing with the proposed gear and methods.		
3-1-4. Make up a technical guidebook of sustainable fishery with participation of fishers.		

3-2. Improve fish handling and treating by fishers.			
3-2-1. Conduct a survey of current condition of handling and treating at on-board, landing and selling stage.			
3-2-2. Propose proper fish handling and treating in practical basis.			
3-2-3. Conduct training for the above proposed fish handling and treating.			
3-2-4. Prepare extension materials on fish handling and treating with participation of fishers.			
3-3. Improve primary fish processing techniques.			
3-3-1. Conduct a survey of current fish processing and fishing quality.			
3-3-2. Propose practical fish processing techniques for fishers.			
3-3-3. Conduct trial fish processing along with the above proposed techniques.			
3-3-4. Prepare extension materials on fish processing and quality improvement.			
4-1. Promote sustainable utilization of coastal fishery resources by fisheries group.			
4-1-1. Study proper management of utilized fish in the coastal villages.			
4-1-2. Study future development of unutilized fish in the coastal villages.			
4-1-3. Promote activities for securing spawning/nursery ground and juvenile fish by fishers.			
4-1-4. Develop an action plan for sustainable utilization of coastal fishery resources at the local government.			
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4-2-2. Conduct experimental works for creating supplemental income.			
4-2-3. Propose an action plan for improving income generation and means of livelihood with participation of fishers at the local government.			

## Draft Plan of Operation: Project for Improvement of Livelihood in Coastal Fishing Communities in the Republic of Indonesia

Project Duration: Three years

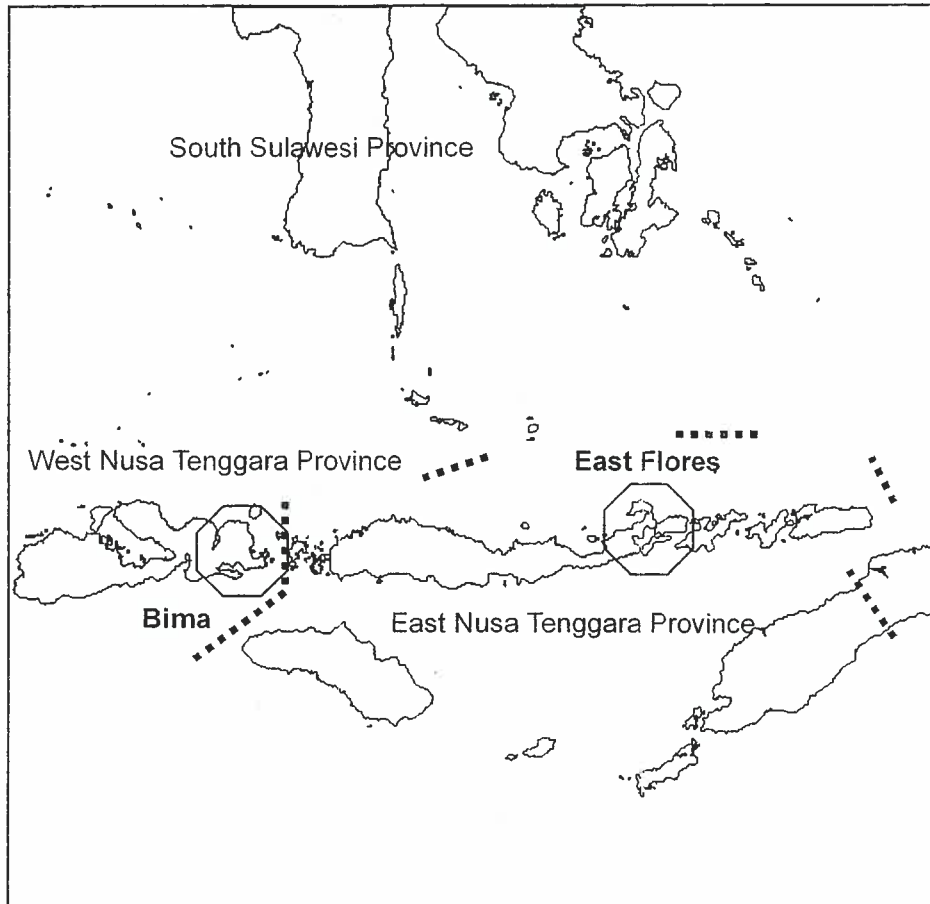
Revised Date: 23 Oct. 2005

Item No.	Project Activities													Officers in charge	
		1st Year				2nd Year				3rd Year				Districts	MMAF
		I	II	III	IV	I	II	III	IV	I	II	III	IV		
1-1.	Enhance management ability of fishery resources in local government.		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	PM/CP	
2-1.	Enhance ability for daily account management in fishers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					PM/CP	
2-2.	Enhance ability of the fisher's households management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					PM/CP	
3-1.	Improve fishing gear and methods for proper utilization of fishery resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PM/CP	
3-2.	Improve fish handling and treating by fishers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PM/CP	
3-3.	Improve primary fish processing techniques.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PM/CP	
4-1.	Promote sustainable utilization of coastal fishery resources by fisheries group.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PM/CP	AI:PM 4-1-4; PD/PM
4-2.	Promote income diversification of fishery households through the group activities.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PM/CP	AI:PM 4-2-3; PD/PM

☐ Actions in Bima District
 ☐ Action in East Flores District

PD: Project Director, PM: Project Manager, CP: Project Counterparts

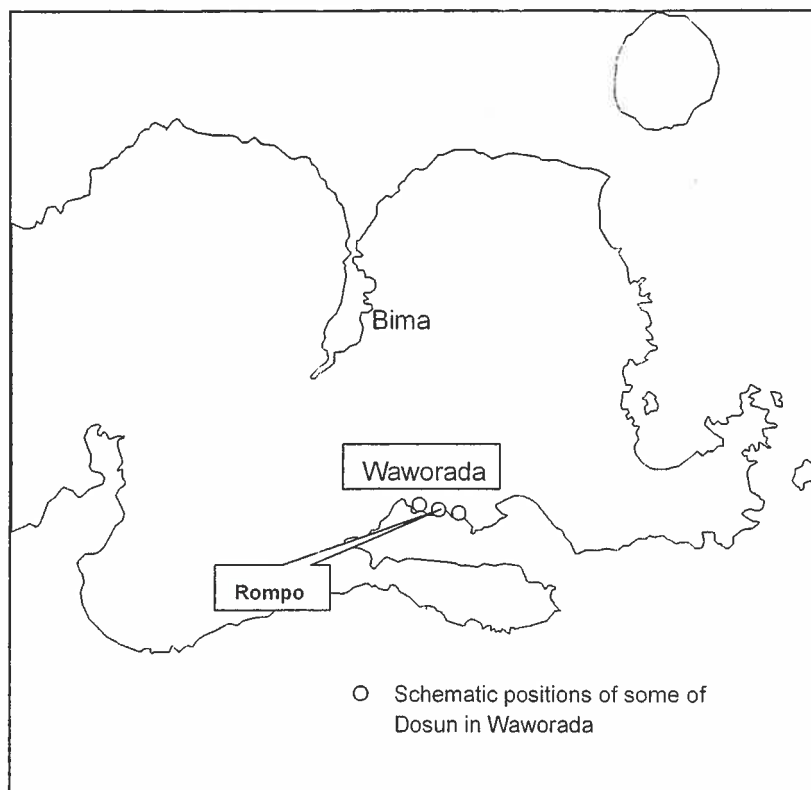
Location of Target Districts



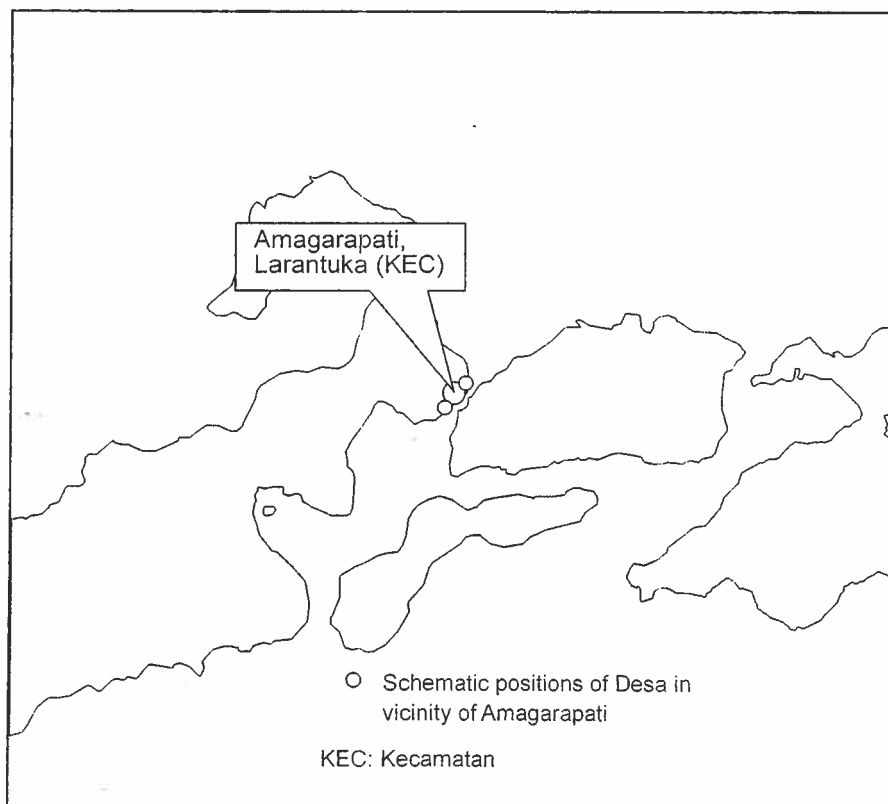
Remark: Border lines are only for schematic reference.



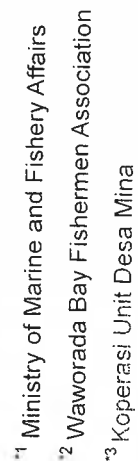
Project Sites in Bima District, NTB



Project Sites in East Flores District, NTT







## Evaluation by Five Criteria

## 1. Relevance

Relevance of the Project is high. It was found that fishing households fallen below poverty line exist to a considerable extent in the planned Project sites. In the NTT sites, a 27% to 48% of the total household in Amagarapati and its vicinity is positioned below the poverty line, and a majority of the poorest families is estimated from paddling canoe fishers and employed fishers. In the NTB sites, a 21% of the total households in Bima District is below the line. In Dosun Rompo, a 30% of the fishing fleet is paddling canoes and their owners are estimated mostly poor. The Project directly aims at improvement of livelihood measures of small-scale fishers. They are living in rural coastal villages under marginalized conditions and mostly poor. The Project fully meets the poverty alleviation policies of the Indonesian Government and the ODA guide line of Japan.

## 2. Effectiveness

Effectiveness of the Project is envisaged moderate. Most of the Project activities are implemented in fishers' participation basis. It seems that their participation in the Project is essential for sustaining the Project benefits under weaker capabilities of fisheries administrations by the district governments in kabupaten and kecamatan level. Meanwhile, the participation approach may make some of the activities repeated to conduct in trial and error bases, and hence they may take more time than expected. The Project will also have a diversified scope in its activities. By adopting the broad and participatory approach, thus, the Project is envisaged unfortunately to have to risk achievement in some of the Project outcomes and their contribution to the Project purpose. However, it should be duly noted that, since finding itself of ineffective approach is also meaningful for building the development model, this risk should be positively allowed.

## 3. Efficiency

An extent of the Project efficiency will largely depend on process of the inputs during implementation of the Project. Field works by means of participatory approach demand repeated and time consuming trials. Diversified tasks in the Project also give considerably high working load to two long-term experts. By these reasons, for supporting their actions, timely and appropriate inputs of competitive short-term experts should be effectively ensured. For this purpose, it will be helpful to consider a

possibility to hire short-term experts from Indonesia or neighboring countries. Some resident Japanese fisheries specialists in fields of fish handling and marketing may be available in the Southeastern Asian countries and their Indonesian or Malaysian language skills and mobility are higher than those from Japan. Further more, operation budgets that should closely reflect and assure the Project activities are also desirable.

#### 4. Impacts

An achievement of the Project overall goal depends largely on the Project ownership of the Ministry of Marine Affairs and Fisheries (MMAF). In a process of the previous studies by JICA, project concepts of grant aid and technical cooperation had been handled together and their frameworks were presented less separately. This may have unfortunately resulted in a confusion on which departments of the ministry should be directly responsible to the planned projects. The current Project is designed and implemented under a technical cooperation scheme with an aim to empowerment of coastal fishing communities. For preparing the Project in further stages and for building the Project ownership of the ministry, a most effective involvement of the Directorate General of Capture Fisheries, MMAF is needed.

#### 5. Sustainability

Sustainability of the Project is foreseeable under certain conditions. In a meaning, most of the project that directly works with fishers is comprised from a series of various pilots. These pilots have been identified through the current and past preliminary studies and their details are going to be formulated in a course of the Project implementation. Importantly, all these pilots are intended to be designed and conducted under fishers' close participation. By adopting and utilizing locally available equipment and materials that are affordable for organized or individual fishers, their participation will be made more practicable. However, the Project will occasionally have to purchase equipment that is necessary but may be unaffordable for individual fishers. In such an occasion, cash flow analysis should be made in advance and thus unjustifiable equipment should be eliminated from supplies by the Project. By keeping practicability of the fishers' participation in such a way, the Project benefits can be sustained for a long time in post project stage.

#### 6. Conclusion of Five Criteria Evaluation

The planned Project is highly evaluated in view of its clear relevance and possible sustainability. The Project is aimed at solving of wide-ranging problems in fishing

communities in NTB and NTT. Its activities are aggressively covering a broad array of practices in the small-scale fisheries sector; those included are fisheries administration for resource management, fisher's household management, fishing production, post-harvest fish handling, fish processing, and fishing grounds development and management. There would be other options that have more limited objectives where the activities are focused only on one or two of these components. However, a diversity of development demands that exists in actual fishing communities in NTT and NTB is quite wide and does not easily allow a narrower view when selecting project approaches. By incorporating such a wide range of the activities, it may only be possible to build appropriate development models through trainings and field activities. That is to say, from aspect of building the model, a broad approach is more justifiable than a limited approach.

## Memorandum of Understandings

During the discussion of technical cooperation Project for the Promotion of the Sustainable Coastal Fisheries in the Republic of Indonesia, Japanese side share the Indonesian views about the necessity of both infrastructure and technical transfer cooperation at East Nusa Tenggara Province and West Nusa Tenggara Province respectively.

However, the circumstance of fisheries and fishing communities of those areas are quite different, and the requirements should be treated in distinct approaches with considering individual trait and prioritized subject.

In the consequent, Japanese side suggested that the office of the Technical Cooperation Project should be placed in Bima Kabupaten instead of facility supply from Grant Aid. Japanese side also expressed the provision for the demand on small-scale facilities in Waworada Village of Bima Kabupaten or neighboring villages shall be accounted in the Technical Cooperation Project. In addition, Indonesian side emphasized the necessity of improvement of net-communication and publishing tools at the office mentioned above for the effective conduct of this Project.

26<sup>th</sup> October, 2005



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Mr. Kiyoshi KATSUYAMA  
Leader,  
Preparatory Study Team  
Japan International Cooperation Agency  
Japan



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Mr. Saut P. Hutagalung, Msc  
Director of Planning and Foreign Cooperation  
Bureau,  
Ministry of Marine Affairs and Fisheries  
The Republic of Indonesia



iii)他ドナーによる類似援助



付属資料 iii) - ドナーによる類似援助

No.	Donor	Implementing Agency	Location	Inception Year	Acronym Title	Description	Funding Level (US\$ '000s)
1.	ADB	MMAF	North Sumatra West Sumatra Riau	2004	COREMAP II	Coral reef rehabilitation and management through decentralized and community based interventions	25,004
2.	WORLD BANK	MMAF	Blak/Numfor Raja Ampat Buton/Waktobi Selayar Pangkep Sikka	2005	COREMAP II	Coral reef rehabilitation and management through decentralized and community based interventions	63,700
3.	ADB	MMAF	North and West Sumatra Riau Bengkulu Jambi Kalimantan (3 provinces) West and East Nusa Tenggara Sulawesi (4 provinces)	2001	MCRMP	Coastal and marine resources planning and management Spatial data and information management Legislative review and law enforcement Small-scale national resources management schemes	76,070
4.	ADB	MMAF	Riau Central Java East Java West Nusa Tenggara	2001	COFISH	Implementation of community based fisheries resource management, community income and quality of life improvement, sanitation at fishing ports, institutional strengthening of government, communities and NGOs	53,300
5.	GOI - APBN	MMAF	30 Provinces (160 districts)	2004	PEMP	Increasing coastal community welfare through economic development, improvement of human resources, . improve socioeconomic institutions, optimal and sustainable use of marine and fisheries resources.	15,054
6.	GOI - APBN	MMAF	33 Provinces (111 Districts)	2005	PEMP	Same as above	10,752
7.	UNEP	Yayasan TAKA	Karimunjawa East Java	2004	Community Resource Centre	Empowering and Strengthening the Karimunjawa community	10
8.	GTZ	MOHA	Bali (Denpasar) West Nusa Tenggara	2002	Poverty Alleviation and Local Governance	Poverty alleviation through support of self-help groups and capacity-building	5,545



			(Bima, Dompu, Lombok Timur, Mataram) East Nusa Tenggara (Alor, Ende, Kupang, Sumba Timur)		in Nusa Tenggara	for village institutions	
9.	ADB	Destructive Fishing Watch	North Sumatra West Sumatra Riau	2004	CBM Resource Management	Acceleration of the CBM component of ADB COREMAP Phase II Design in 6 Districts	167
10.	West Natuna Consortium	Yayasan Perisai Laut Indonesia	Anambas, West Natuna	2002	Community Empowerment through Coral Management and Rehabilitation	Coral transplantation, community training, forming environment friendly network and creating an artificial barrier reef	77
11.	Conservation International	Conservation International	Togean Islands	2004	Community Based Marine Protected Areas	Establish community based marine protected areas	Not Available
12.	The Nature Conservancy	The Nature Conservancy	Bali Komodo Wakatobi Derawan	1990 a)	Marine Park Management	Sustainable marine park management Marine park co-management and use of marine protected areas. Alternative income generation programs.	Not Available
13.	WWF	WWF	Ujung Kulon Sumatra Kalimantan Bali Papua	2000 a)	Endangered Species Protection	Development of ecotourism, environmentally friendly occupations, village conservation agreements, community based management plans and monitoring.	Not Available
14.	Marine Aquarium Council	Marine Aquarium Council	Thousand Islands Bali	2000 a)	Sustainable Aquarium Fish Collection	Train collectors in sustainable management of aquarium fish collection. Establish certification processes	Not Available
15.	Operation Wallacea	Operation Wallacea	Wakatobi	1995 a)	Sustainable Aquarium Fish Collection	Train collectors in sustainable management of aquarium fish collection. Establish certification processes	Not Available

備考：a) 推定

出典：Fisheries Co-management Study in Indonesia and Japan, Part-2,  
September 2005, World Bank

#### iv) 近隣県における類似プロジェクトの教訓

#### 添付資料-iv) 近隣県における類似プロジェクトの教訓

##### Lessons Learnt:

A summary of lessons learned from the Sikka COREMAP Phase I experience include:

- Institutional arrangements must be carefully defined before Program inception. It is most important to properly delineate how operations will function on a daily basis. This includes definition of: (i) organizational structures; (ii) GOI roles and responsibilities; (iii) full time staff commitment; (iv) career path implications; (v) reporting lines; (vi) funds commitment, authorization lines and flows; and (vii) conflict resolution mechanisms.
- Small investments in critical areas can have a large impact and leverage positive morale building. For example, especially useful was AusAID's funding of a radio network for key stakeholders organizations and communities.
- Investing locally is important. AusAID recruits staff and purchases locally whenever possible. Reef watcher boats were even contracted and built in the target villages.
- Proper implementation requires more time than generally anticipated. For example, significant work with Alternative Income Generation (AIG) revolving funds only began after about 3 years of preparation. Practicality must be exercised when making schedules to allow for sufficient implementation time.
- MCS systems should show a local presence, be low cost and self sustaining. AusAID MCS is village based and self-financing.
- Vital to community MCS systems is reporting coordination with local authorities (i.e., police, navy, army) coupled with a reliable communications network.
- Gender goals can be achieved - but only if a persistent long-term effort is made. No doubt the significant use of competent female staff helped AusAID attain success with its gender equity program and the recruitment of women participants.
- Monitoring parameters should be practical and concentrate on items useful for management and community use. The parameters should attempt to measure program impacts. Physical parameter measurements are rather straightforward - not so socio-economic measures. Perhaps, change in attitude surveys would be most informative.
- Awareness of COREMAP goals without understanding of the underlying concepts is problem. It can be overcome by continuing contact and reinforcement of program objectives with specific examples and explanatory materials.
- Training is different from institutional development. Institutional development is essential to successful district level decentralization. Proper institutional development is a long-term process and requires stability of organizational structures and staff consistency.
- Although only in the initial stages, AusAID has been successful in building community revolving funds and has financed over 150 proposals from villages. AIGs help build community support and esprit de corp. However, AIGs are expensive per village and not necessarily related to any impact on coral reef resources.

##### Positive Aspects:

In addition to the lessons learned as cited in the *Pedoman*, existing field conditions will impact the implementation of COREMAP Phase II. The positive aspects include:

- Fisheries Strategic Plan, Fisheries Master Plan and Maumere Bay Management Plan all exist and are complementary to the COREMAP goals.
- Repeated socialization of the need to manage fisheries and the non-acceptability of destructive fishing by key Catholic Church leaders has led to behavior change by the coastal fishers on the northeastern coast of Maumere Bay. Repeated highlighting of offenders in the church and on public address systems shamed offenders thereby causing compliance with good fishing practices.
- Improved willingness to enforce the law has been evidenced by a new police chief, who acted quickly and responsibly to deal with illegal coral mining. Such initiatives need to be supported and sustained.
- The community communication (radio) network established is very effective and works well throughout the work area. Future contracts for radio networks should be based on complete installation network, testing and approval by the government, user and consultants rather than just provision of equipment.
- In marked contrast to other COREMAP sites, equipment procured under the AusAID COREMAP Phase I program appears to be in excellent condition and well maintained and managed.
- Quality of COREMAP I key outputs products is uniformly high. Reports and training programs are generally of superior quality. However, even more dissemination of results would certainly benefit the image of the Program.
- First steps at developing an effective CRITC have been achieved. Expectation is that an enhanced district CRITC will be fully operational by December 2003. Information is well prepared to both feed into the proposed District Information System and be placed on the Web.
- AIG success, especially with seaweed production, is of definite benefit to the communities with a fast return on investment.
- Two NGO's exist that have experience in working with fishing communities and COREMAP Phase I.
- Local government has recently elected a new *Bupati*, who has a good understanding of community empowerment needs and wants to institutionalize service delivery to the community.

Overall a strong foundation has been laid in the first three years, benefits are beginning to emerge. It is hoped COREMAP Phase II can build on these with no loss of momentum.

#### Challenges:

The outstanding challenges include:

- Bajo communities comprise the major fisher groups. Bajo culture encourages very individualistic behavior and people are not used to working in groups. A strategy needs to be developed to reach such individualistic Bajo fishers. A link to the Bajo effort in Buton would be most useful.
- Private sector experience of using marker and mooring buoys has not been successful. Buoys are frequently stolen even when heavy chains and cables are used. The use of buoys has a strong

correlation with MPA success and consequently a strategy to allow for effective buoy use needs to be developed.

- There are different standards applied to theft and destruction of land and marine resources. Lack of sense of ownership leads to illogical comments such as “they are poor” being used and accepted with reference to destruction of marine resources. This same excuse is unacceptable in reference to land based legal violations.
- Over fishing is a major issue; and destructive fishing methods are commonplace and widespread. In specific, a major source of over-fishing is reputed to be the use of *lampara* nets by fishers based at the western end of Maumere Bay.
- There are no reports of patrols being undertaken by either the Police, the Navy or the KSDA. Community MCS reef watcher boats are operable; and reef watchers trained. However, the protocols for Reef Watchers report legal violations to government authorities have not yet been finalised.
- The private sector should be more engaged in the program implementation. Key fisheries companies such as Golden Fish and the local dive resorts should be part of the COREMAP team. There is a definite need to work closely with the private sector (e.g., Golden Fish, Sao, Happy Divers, Seaworld Club, Ankorme, etc.)
- Most communities and the local government are used to grant based funding. This mindset leads an unhealthy, short term and dependency attitude.
- Competition/lack of coordination between donor programs is evident. This leads to inefficiency of the overall development impact. Special effort will be needed in COREMAP Phase II to coordinate assistance efforts and share information.
- Successful Program implementation requires the active participation of many government agencies. Consequently, an effective coordination mechanism is vital. This will insure that funds are properly delivered to different agencies, interagency competition is lessened and conflict resolution can be effected in a satisfactory manner.
- Capital investments are easy to make, measurable and visible. As a result, there exists a disproportionate preference for physical investment over community empowerment and better management of existing resources, both natural and human.

出典 : COREMAP (Phase-I) Implementation Plan Sikka District (Draft), November 2003, World Bank

v)漁業管理関連法規

## 添付資料-v) 漁業管理関連法規

### 漁業法 :

The basic law governing fisheries is Law No. 31 of 2004 Concerning Fisheries (Law No. 31/04). The law represents a considerable modernization over previous legislation. The act deals with a range of contemporary concerns such as fisheries resource sustainability, resource enhancement, environmental protection, prohibition of destructive fishing, ecosystem conservation, genetic resource regulation, processing quality assurance, community based management and fisheries tribunals.

The purpose of fisheries management (Article 3) is to:

- (a) enhance living conditions of small scale fishers and fish farmers;
- (b) increase the government's income and foreign exchange;
- (c) provide for the growth of work opportunities;
- (d) enhance the supply and consumption of fish protein;
- (e) optimize management of fisheries resources;
- (f) increase the sector's productivity, quality, value added and competitiveness;
- (g) increase the supply of basic commodities for fish processing;
- (h) achieve the optimum utilization of fish resources, areas for fish culture and related environments; and
- (i) insure the preservation of fisheries resources, areas for fish culture and spatial management.

Considerable attention is accorded to small scale fisheries; and, as a result, they enjoy special status under Law No. 31/2004. A small scale fisher or fish farmer is defined "as any person whose livelihood is undertaken to meet his daily needs" (Law No. 31/2004, Article 1, Chapter 1, Sec. 11).

### 地方分権法 :

The Regional Autonomy Act No. 22/1999 (Act No. 22/99) aims to decentralize most government services in Indonesia. Specifically, it devolves responsibility for marine and coastal resources within Indonesia's territorial waters (up to 12 nm from archipelagic baselines) to regional governments but especially districts.

### 地方政府法 :

Act No. 22/99 is supplemented by Regional Government Act No. 32/2004 (Act No. 32/04), which generally serves to strengthen provincial government authority. Act No. 32/04 provides that regional laws and accompanying guidelines should be drafted in accordance with traditional laws and practices. Also districts may authorize villages to exercise authority over the adjacent sea space within district waters. Act Nos. 22/99 and 32/04 thus provide incentives to local governments for sustainable management of marine and coastal resources within their respective jurisdictions.

### 農業省政令 :

Detailed fisheries regulations pre-date Fisheries Law No. 31/04, Act Nos. 22/99 and 32/04. Fisheries regulations are set out in Agricultural Ministerial Decree 392/999 (Ag. Min. 392/999). Ag. Min. 392/999 divides Indonesian waters into four fishing belts defined by the distance from the shoreline.

Fishing Belt 1A is set aside for exclusive use by small scale fishers and stretches from 0 to 3 nm. For Fishing Belt 1A allowable vessels/gear include (a) sedentary fishing gear; (b) other fishing gear without modernization; and (c) fishing boats without engine with an overall total length < 10 meters (m). Vessels in Fishing Belt 1A must have one quarter of their hull painted white.

Fishing Belt 1B is also set aside for exclusive use by small scale fishers. It is located from 3 to 6 nm. In



Fishing Belt 1B allowable vessels/gear include: (a) sedentary fishing gear with modernization; (b) fishing vessels with either outboard or inboard engines with an overall total length  $\leq 12$  m or  $\leq 5$  GT; (c) purse seines with a maximum total length up to 150 m; and (d) drift gillnets with a maximum total length up to 1,000 m. Vessels in Fishing Belt 1B must have one quarter of their hull painted red.

Fishing Belt 2 is reserved for intermediate size fishers and stretches from 6 to 12 nm. For Fishing Belt 2 allowable vessels/gear include: (a) fishing vessels with inboard engines  $\leq 60$  GT; (b) purse seines with a maximum total length up to 600 m for single fishing vessel operation or with a maximum total length up to 1,000 m for group fishing vessel operations; (c) tuna long lines with a maximum number of hooks up to 1,200; and (d) drift gillnets with a maximum total length up to 2,500 m. Vessels in Fishing Belt 2 must have one quarter of their hull painted orange.

Fishing Belt 3 is generally for large scale commercial fishing and stretches from 12 to 200 nm. Although some restrictions do apply, a large range of vessels are permitted. Vessels in Fishing Belt 3 must have one quarter of their hull painted yellow.

National, provincial and district authorities follow the guidelines laid down in Ag. Min. 392/999 for vessel and gear registration and licensing. Unfortunately, significant inconsistencies exist between Law No. 22/99 and Ag. Min. 392/999. Notably, Law No. 22/99 sets district boundaries at 4 nm from the shoreline and provincial at 4 to 12 nm; while under Ag. Min. 392/999 Fishing Belt 1B stretches from 3 to 6 nm and Fishing Belt 2 from 6 to 12 nm. Fortunately, most customary fishing is undertaken near shore; and consequently limited to Fishing Belt 1A, which clearly falls under district jurisdiction.

出典 : “Fisheries Co-Management in Indonesia and Japan: Part-2”, Draft, World Bank, September 2005



vi) 漁獲水産物及び資料価格

添付資料-vi) 漁獲水産物及び資材価格

(1) ビマ市露天市場スルタンバサルディーン、2005 年 10 月 9 日午後

- ・ ミルクフィッシュ（生鮮、養殖、6 尾 700g 程度） 10,000 Rp
- ・ イカ（生鮮、小型） 16,000 Rp/kg  
（注：鮮魚は交渉価格。実価格は 7 割程度か）
- ・ 塩蒸し魚（棕櫚葉でくるんだもの、5 尾） 5,000 Rp

備考：他に貝類（殻付き、剥き身）、塩干魚（開き）、小魚丸干しなど  
ミルクフィッシュを並べる店が多い。全て婦人魚商。

- ・ テンペイ（大豆発酵食品）200g 弱/袋 1,000 Rp/袋
- ・ 精米（長粒） 4,000 Rp/kg
- ・ 鶏肉（ブロイラーサイズ） 13,000 Rp/羽
- ・ 鶏卵（スラバヤ産） 700 Rp/pce
- ・ バナナ 6,000 Rp/房

(2) 東フローレス県ララトゥカの新市場、2005 年 10 月 15 日午前

- ・ 小鰹（12 尾） 12,000 Rp
- ・ カツオ（1 尾、2kg 程度） 20,000 Rp
- ・ カマス（2 尾、中サイズ） 15,000 Rp
- ・ ヒラアジ（小、6 尾） 20,000 Rp
- ・ ヒラマサ（1 尾、4kg 程度） 25,000 Rp
- ・ イカ（小、10 匹） 20,000 Rp
- ・ ムロアジ（8 尾） 10,000 Rp
- ・ 小型魚干物（12 尾） 15,000 Rp
- ・ 同上別種 5,000 Rp
- ・ 乾し小イワシ（皿 3 杯） 5,000 Rp
- ・ ハマダツ干魚（10 尾） 4,500 Rp
- ・ 鶏卵（30 個スラバヤ産） 23,000 Rp
- ・ 鶏肉（中サイズ 1 羽） 20,000 Rp
- ・ 精米（スラウエシ産 30kg） 175,000 Rp
- ・ 精米各種 3,500~6,000 Rp/kg
- ・ 玉ねぎ（小） 8,000 Rp/kg
- ・ トマト（バケツ一杯） 15,000 Rp
- ・ バナナ（房） 3,000 Rp
- ・ 砂糖 7,500 Rp/kg
- ・ ジャガイモ（スラウエシ） 9,000 Rp/kg

(3) ビマ市金物屋・パーツ屋の漁業資材： 2005 年 10 月 9 日

- ・ Mustard 型釣針、Singapore 製
  - #5 1,500 Rp
  - #6 750 Rp
- ・ Barrel swivel（この言葉で Kirikiri), brass
  - #5 4,000 Rp/12 pcs
  - #0/1 6,500 Rp/12 pcs
- ・ Lead, round dia. 8mm 250 Rp/pce

- Nylon string (テグス)
 

#0.5	3,200 Rp/120FT x 10 coil
#1.0	7,000 Rp/120FT x 10 coil
#1.5	16,000 Rp/120FT x 10 coil
- Netting, Nylon, メーカー名 ARIDA、インドネシア製  
 1.25 inch MS, 100 MD x 100m, 210D/3, Multi-twine  
 155,000 Rp/roll
- Synthetic rope, PE, Indonesian 製
 

3 mm	250 Rp/m
4 mm	350 Rp/m
5 mm	500 Rp/m
6 mm	750 Rp/m
7 mm	1,000 Rp/m
8 mm	1,250 Rp/m
10 mm	1,500 Rp/m
12 mm	2,000 Rp/m
- Three-blade propeller;  
 (poor manufactured, 真鍮または鉄製にあらず) 7,500 Rp
- 換装船外機 (Katintin) ガソリン汎用エンジン、5.5 馬力 (hp)、  
 ホンダ中国製、燃費 1 ltr/hour 1,850,000 Rp
- 換装用資材：長尺シャフト、二翼プロペラ、連結具、  
 インドネシア製 (スラバヤ) 1 セット 300,000 Rp

#### 店主 (中国系) の話

不漁の時は売れない。好漁の時は換装船外機が 1 日 3 台売れたこともある。耐用年数について：オイル交換とプラグ交換を適切に行えば長期間持つと。ここの漁師はオイルを注ぎ足しているから短命であると。2003 年に県水産事務所が 30 セット購入。政府予算か援助か不明。

- 中国製船用ディーゼル機関、4 サイクル、メーカー名 JIANGDONG
 

20hp/2400rpm	3,000,000 Rp
35hp/2400rpm	7,000,000 Rp