

TERMS OF REFERENCE (TOR)

SEAWEED CULTURE DEVELOPMENT IN NANGROE ACEH DARUSSALAM PROVINCE IN THE AREA OF TSUNAMI VICTIM

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I. Background

1.1. Justification of the Project

Seaweed is one of aquaculture commodity which is well developed in some parts of Indonesia (Sulawesi, Nusa Tenggara Barat, Bali) since 1987. They are established by rural coastal community by simple technique, marketable with feasible price, labour intensive. They grow the plant closed to shore line with bamboo rack, lone line hanger, or sub bottom settling. Cultivation period of initial stock is about 30-45 days for normal harvest. Post harvest treatment before trading is just direct sun drying. This farming does not need imported materials and sophisticated technique.

Aceh province is one of the Indonesian parts surrounded by the sea, with various type of coastal ecosystem. Some of them are suitable for seaweed culture. Its generating income is estimated USD 50/unit farming/ month. Stimulating activities are required to build up a community business with this commodity i.e. showing the proof that their coastal water is suitable to produce seaweeds and demonstrating that seaweeds aquaculture could be conducted practically with local materials. This action could be the effective extension for community.

Even though the culture plant originally does not available, it could be transported from adjacent province or from special cultivation center. The step should be followed after selecting well adapted seed in a selected site. These survivors are expected as the superior seed for the region. The growth rate of adapted plant must be not less than 3% per day, so the yield per m² is about 7,5 kg fresh weight or about 1 kg marketable yield.

The trading of seaweed needs marketing chain from producer (farmer) to exporter or processing plant. The farmers need a broker who pay the product even in small quantity and collect them before delivery to the larger trader. The traders are usually interested to buy the product after its quality and quantity conformed. Production site needs a quality equalizing unit to confirm the product quality as required by trader.

2. Name of the Project:

2.1 Seaweed culture Development in Nangroe Aceh Darussalam Province in The Area of Tsunami victim

Based on the socio-economic condition of the coastal and marine communities, the government of Indonesia have already launched program which one of them is development and management of integrated area model for seaweed culture activities. The objective is to increase marine culture production from seaweed culture. Several factors are addressed to the fisher folk affecting to slow development of seaweed culture are as follows: (a). Lack of capital, (b). Lack of skill on seaweed culture technique, (c). Lack of marketing access due to infrastructure problem, (d). Lack of post harvest technology, (e). And other external factors.

3. Main Activity of the Project:

- a). Survey of project site selection for identification and other collection data and information
- b). Implementation of the project composes of:
 - a. Demonstration on site experiment and pilot project
 - b. Delivery of superior seeds and local cultivation
 - c. Farming by earlier adopted persons
 - d. Build up of equalizing unit
 - e. Build up of relationship with trading company
- c). Monitoring and evaluation of the project

4. Institutional Framework

The Directorate General of Aquaculture (DGA), Ministry of Marine Affairs and Fisheries will be the executing agency, while the Directorate of Fish Production will be the project coordinator. The project coordinator in the implementation of this project will collaborate with the other related institutions.

5. Government Follow-up

After the completion of the project, the Directorate General of Aquaculture will continue to maintaining and improving the existing of seaweed culture activities. If possible, it would be disseminated to the other areas that have the similar conditions to improve the living quality of the coastal and marine communities, especially fish farmers.

II. Objective of the Project

- a). To select the most of suitable site for seaweed culture activities and most required for poverty alleviation.
- b). To introduce the seaweed culture technique by demonstration of commercial scale pilot project.
- c). To supply the seed of seaweed and some supporting facilities for community based seaweed culture development.
- d). To build an equalizing (pre-processing) unit located closed to seaweed culture area.
- e). To help in assisting creating jobs or other livelihood for the Tsunami victims along coastal areas and to reduce a pressure of illegal coral reef collection.

III. Propose schedule of the Project

The project will be proposed for 17 (seventeen) weeks operation in 2005. The activities will be executed as follows:

No	Activities	weeks																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Site selection	■																
2.	Experiment and pilot project		■	■	■	■												
3.	Seed delivery						■											
4.	Seed cultivation							■	■	■	■	■	■	■	■	■		
5.	Farming stimulation											■	■	■	■	■	■	■
6.	Ware house building up																	■
7.	Pre-processing demonstration																	■

IV. Project Cost

a. Site selection survey	
- Supervision	USD 1,500
- Analysis	USD 100
b. Experiment and pilot project	
- Materials	USD 500
- Seeds	USD 500
- Labor	USD 500
- Supervision	USD 1,000
c. Seed delivery	
- Air-Transport	USD 500
- Seeds	USD 100
- Supervision	USD 500
d. Seed cultivation	
- Materials	USD 1,500
- Small boat	USD 400
- Labor	USD 400
e. Farming facilities	
- Material for 3 groups	USD 4,500
- Small boat	USD 400
f. Pre-processing facilities	
- Roller machine	USD 1,100
- Non permanent ware house	USD 1,100
g. Monitoring and evaluation	USD 500
h. Incidentals	USD 900

Total **USD 16,000**

5. Project implementation and reporting

Implementation

Funds for this project are being provided from the World Aquaculture Society (WAS) Tsunami Relief Fund, supported by a donation from YSI Inc. and routed through Aquaculture without Frontiers (AwF), which will monitor the progress of the work.

The Directorate General of Aquaculture (DGA), Ministry of Marine Affairs and Fisheries will execute this project.

Reporting

DGA will provide the following reports to the AWF Chairman, Michael New:

- brief regular progress reports
- A final report containing ‘before and after’ photos at the completion of the project.

All reports will be sent by email attachment to Michael_New@compuserve.com

AwF will provide copies of the reports for WAS and YSI.