

## Summary of Terminal Evaluation Report

1. Project Outline	
Country Name : The Philippines	Project Name : Comprehensive Outreach and Fish Breeding Project
Category : Fishery-Aquaculture	Type of Cooperation : Technical Cooperation
Competent Section : JICA Philippines Office	Total Amount of Cooperation : JPY 285,000 thousand
Project Period	(R/D) : November 2006 ~ April 2010
	Counterpart Agency : Department of Agriculture, Bureau of Fisheries and Aquatic Resources (DA-BFAR), National Integrated Fisheries Technology Development Center (NIFTDC)
	Japanese Other Cooperation Agency : N/A
Other Cooperation : N/A	
1 – 1 Project Background and Outline	
<p>The Philippines holds about 36,000km coastline, and it consists of about 800 islands with widely dispersed population. Most of the population is living in the coastal areas and those people have been depending on coastal resources for their livelihood. In the Philippines, the fishery industry accounts for 4% of the country's GDP and 5% of the total working population. Especially fish farming industry is recognized as one of the prominent industries with annual average 10% growth.</p> <p>On the other hand, one of the major commodities for fish farming in the Philippines, milkfish production has recently confronted some difficulties. Milkfish is produced mainly in Regions I, III, and VI but there is a decrease of wild fry supply due to deterioration of coastal resources. To address this situation, millions of artificially-produced fry are imported from Indonesia and Taiwan, but these fry are degraded their quality due to the long period for the transportation and this situation hinder the development of milkfish farming industry. Thus, there is a need to stabilize the local supply of good quality fry.</p>	

Also, as most of the fisher folks are in poverty, it is necessary to address their concerns not only for productivity but also for income generation.

In the light of this situation, the Government of the Philippines through DA- BFAR and NIFTDC established the Philippines Bangus Development Program (PBDP) which aims at stabilizing the production and supply of artificial fry, distribution of fry to fish farmers through local hatchery managed by several stakeholders like central government, local government units and private sector and the government of the Philippines requested official development assistance to the government of Japan. In response to the request, this project was started from November 2006 aiming to transfer technology to NIFTDC and to conduct various trainings such as training for workers at hatchery, fisher farmer and extension worker for fish farming. Pilot activities which included water quality improvement at fish farming site, middle seeding nursing and sales promotion were implemented at the following three pilot project sites (Pangasinan (Region I), Pampanga (Region III) and Oriental Mindoro (Region IV-B), which were selected based on the preliminarily socio-economic survey in order to solve issues of each sites and improve fish farmers income.

## 1 – 2 Summary of the Project

### (1) Overall Goal

Livelihood of fish farmers is enhanced in the pilot municipalities.

### (2) Project Purpose

Aquaculture outreach functions in the pilot municipalities.

### (3) Outputs

1 : Fry Production process and management are improved at PBDP hatcheries.

2 : Fish farmers and extension workers' knowledge of and skill in aquaculture production and management are improved at the pilot municipalities.

### (4) Input

#### Japanese Side

Dispatch of Japanese Experts : 1) Team Leader / Extension, 2) Training, 3) Aquaculture Technology, 4) Broodstock Management and Spawning Techniques, 5) Feed Management, 6) Marketing and Business Management, 7) Monitoring, 8) Resource Environment Research, 9) Hatchery

<p>Management、10) Project Coordinator Total man-months (M/M) for dispatch of experts to the Philippines up to the end of April 2010 is 71.99.</p> <p>Provision of Equipment : Vehicles: 2 units、Seawater intake pipe:1 set、Total Cost: Php 3,140,000 (up to the end of April 2010)</p> <p>Local Cost Expenditure : Php 12,150,000 (up to the end of April 2010)</p> <p>Counterpart Training : 6 (In Indonesia: 5, In Japan: 1)</p> <p>Philippine Side</p> <p>Assignment of Counterpart personnel : 9 ( Due to 1 personnel relocation, cumulative number is 10)</p> <p>Provision of the Office Space</p> <p>Local Cost Expenditure : About Php 25,510,000 (up to the end of December 2009)</p>		
<p>2. Outline of Evaluation Team</p>		
Surveyor	<p>(Study Area : Name and Position)</p> <p><u>Japanese Team</u></p> <p>Team Leader / Aquaculture Technology : Mr. Satoshi Chikami (JICA Senior Advisor)</p> <p>Cooperation Planning : Mr. Nick Baoy (JICA Philippines Office In-house consultant)</p> <p>Cooperation Planning : Mr. Ryutaro Kobayashi / Mr. Pablo Lucero (JICA Philippines Office Representative/Program Officer)</p> <p>Project Evaluation : Ms. Miki Ozaki (Evaluation Consultant)</p> <p><u>Philippine Team</u></p> <p>Team Leader : Ms. Ma. Theresa M. Mutia, Agricultural Center Chief III, National Fisheries Research and Development Institute, DA-BFAR</p> <p>Aquaculture Technology : Mr. Rene Geraldo G. Ledesma, Senior Aquaculturist, National Fisheries Research and Development Institute, DA-BFAR</p>	
Evaluation Schedule	February 8 to 26, 2010	Type of Evaluation : Terminal Evaluation
<p>3. Outline of Evaluation Result</p>		
<p>3 – 1 Confirmation of Achievements</p> <p>(1) Output</p> <p>The Output 1 “Fry production process and management are improved at</p>		

PBDP hatcheries” has been achieved with the exception of some indicators. Meanwhile, the Output 2 “Fish farmers and extension workers’ knowledge of and skill in aquaculture production and management are improved at the pilot municipalities” has been achieved most of the indicators, thus it can be said that the Output of the Project has been almost accomplished.

For Output 1, the improvement plan of seed production process and system has been developed and it has been implemented at NIFTDC based on the result of research for hatcheries. As a result, stabilization of primary food production, improvement of water intake facilities and hatchery operation system enhancement have been successfully implemented and milkfish egg and fry production and fry survival rate has been significantly improved.

Further, the technical manual and training program for hatchery workers have been created and revised accordingly.

Based on these materials, the trainings for PBDP hatchery workers have been conducted and the PBDP hatchery information network meetings have been held twice a year regularly after 2008. Consequently, majority of active hatchery workers have used the skills and knowledge acquired from the training for hatchery workers provided by the Project.

Some PBDP hatcheries stopped the milkfish fry production due to serious damage from Typhoon, but the increase in production can be seen at the hatchery where production activities have not stopped.

The mid-term review suggested that it was better and more realistic to focus on the NIFTDC and Naujan hatchery only rather than targeting at the whole PBDP hatcheries improvement. In this connection, the roadmap for Naujan hatchery fry production has been created and On the Job Training for the hatchery workers has been also conducted.

As a result, the Naujan hatchery successfully produced fry in 2008 and 2009. However, as a result of the serious damage brought by Typhoon in 2009, which was beyond the control of the Project, Naujan hatchery stopped its operation. Herewith some of the indicators of Output 1 have not been accomplished.

For Output 2, the pilot areas were selected according to the issues identified by each targeted area. The training program for extension

workers and fish farmers were developed and training manuals and materials were revised accordingly. Six (6) extension worker trainings were held and fish farmers training has been conducted twice a year by each pilot province up to year 2008 (after 2008, it has been organized by each pilot municipality). Consequently, almost all participants of the training have been applying the skills and knowledge which have been introduced by the Project. Also, the skills and knowledge of fish farmers who participated in the training were enhanced. Moreover, 16 fish farmer meetings were held to share good practices among the farmers.

## (2) Project Purpose

Project Purpose has been mostly achieved.

As stated above, NIFTDC has improved its egg and fry production significantly due to the Project's effort. NIFTDC also improved its fry production even during off-season months (July-February).

Trainings were provided to fish farmers and majority of the participants have applied the skills and knowledge introduced by the Project.

On the other hand, fertilized egg supply from NIFTDC decreased compared to the figure in 2006 because some of the satellite hatcheries served by NIFTDC stopped its milkfish fry production due to the serious damage brought by typhoons or difficulty to compete in the market with import seeds.

## 3 – 2 Summary of Evaluation Result

### (1) Relevance

The relevance of the Project is high considering that the Project Purpose and Overall Goal are in conformity with the current Development Policy of the government of the Philippines and Japanese ODA policy. The Project Pilot sites and activities are selected by consultation among stakeholders and it was determined based on its social and economic survey results. Therefore it sufficiently addressed the needs of the target group.

### (2) Effectiveness

As 3-1 shows, the Project Purpose is achieved for the most part. The

system of milkfish fry production has been organized at NIFTDC. Further, the utilization of natural food and fermented D1 rice bran has been recognized by the pilot municipalities and the improvement of extension workers and fish farmers' skill and knowledge has contributed to the achievement of the Project Goal.

However, some part of the project outputs and goals have not been accomplished due to several reasons like typhoons which stopped the operations of the PDBP hatchery, including the Naujan hatchery.

### (3) Efficiency

The Project, in general, was efficiently implemented.

Most of the Inputs have been adequately provided as planned and effectively utilized to produce the Outputs. Inputs from the Japan side, namely: dispatch of experts in 10 fields, counterpart training, supply of equipment, and provision of budget for local expenditures, were well utilized for the activities. The improvement of seawater intake facilities through the provision of 6-inch pipes contributed to improved fry production and training activity in pilot municipalities enhanced the knowledge and skills of extension workers and fish farmers. In addition, the dispatch of Japanese experts during peak season of milkfish spawning from March to April, and additional assignment of Japanese expert on hatchery management which were recommended by mid-term review contributed improvement of efficiency. Despite of the time-consuming and costly travel for monitoring owing to the long distance between NIFTDC and other pilot sites, the project is still efficiently managed to monitor their activities through the regular visit to the pilot sites. Though operations of the Naujan hatchery was stopped due to the significant damage of the typhoon in spite of the success for fry production from 2008 to 2009 and this fact affected the efficiency of the project implementation, these natural calamities were beyond the control of the Project.

### (4) Impact

It is still early to assess the Project's contribution to the Overall Goal but the results of demonstration activities in pilot sites, however, showed the possibility that the project can contribute to the Overall Goal of improving the livelihood of fish farmers in pilot municipalities over the long term. For instance, the Project has

proven that the use of natural food and fermented D1 rice bran can reduce feed cost by as much as 50% compared to commercial feeds, thereby raising the profitability level of milkfish farming. Achieving the goal of improving the livelihood of fish farmers in pilot municipalities, however, requires not only sustained fry production and supply from NIFTDC but also the firm extension system of its fly production.

Other positive impacts of the Project include: 1) the increased interest in using natural food with the help of local news coverage, 2) three (3) municipalities are now planning to establish the joint monitoring committee on water quality to undertake monitoring activities on their own.

#### (5) Sustainability

From the policy standpoint, sustainability of the Project is secured considering that the milkfish development program will remain as one of the priority programs of DA-BFAR. Considering that milkfish aquaculture development is a priority program of DA-BFAR, it is likely that NIFTDC will receive adequate budget and human resources to continue their operations. On the other hand, though technical transfer to local government units was also well conducted, there is a concern for budget allocation at local government units for expansion of extension activity. Though some local government units allocated budget for extension program, some municipalities might have difficulty for the allocation of budget for extension.

### 3 – 3 Positive factor of the Result

#### (1) Regarding the Planning

N/A

#### (2) Regarding Implementation Process

One of positive factors of the results is the establishment of a smooth coordination network system among DA-BFAR, BFAR regional offices, and LGUs in the pilot project areas by adequately grasping their respective institutional roles in fishery extension activities. Also, the good coordination network has been seen among NIFTDC counterparts and hatchery workers, which strengthened the NIFTDC

internal teamwork especially while the latter part of the project.

### 3 – 4 Issues and Negative factor of the Issues

#### (1) Regarding the Planning

N/A

#### (2) Regarding Implementation Process

Throughout the project period, there were several natural disasters like typhoons and floods which damaged the project sites and caused serious negative impacts on the pilot activities.

### 3 – 5 Conclusion

The Project has mostly achieved the Project Purpose as a result of efficient implementation and effective interventions. Though the stoppage of fry production at some hatchery hindered project accomplishment, it was due to the natural disaster which is beyond project control. To achieve overall goal of the project, further efforts to sustain increased fry and egg production and supply, and strengthen extension works among fish farmers are deemed necessary.

### 3 – 6 Recommendations

#### (1) For DA-BFAR

- 1) To increase seeds and fry production, i) reactivate the PBDP satellite hatchery system in Region I and nearby areas and ii) establish a backyard hatchery system near the center. Such systems can be good models for other central hatcheries to follow.
- 2) Considering some hatchery couldn't continue their fry production due to the deterioration of facility by natural calamities, DAF-BFAR should re-conduct feasibility study for each hatchery and review the hatchery development plan.
- 3) Hatchery networking should further be strengthened as a platform to share the development issues and future perspectives of the milkfish industry.
- 4) DA-BFAR regional offices should assist the LGUs in sustaining the activities of the Project by providing technical assistance and



extension services.

- 5) DA-BFAR, in close coordination with the LGUs, should monitor and evaluate the utilization of the technical manuals and training materials provided by the Project, and update them as necessary.
- 6) Moreover, it is also important to consider the creation of favorable policy environments for the private sector to invest in milkfish production and for the LGUs to prioritize its extension activities.

## (2) For Pilot Municipalities

As for the grow-out technology extension, it is the LGU that is responsible for sustaining the project activities through close monitoring. In addition, it is recommended to replicate or expand those good practices of pilot fish farmers to other fish farmers. In so doing, it is suggested to facilitate good coordination with the provincial government and BFAR regional offices for replication of the activities.

## 3 – 7 Lessons Learned

- (1) For projects implemented in calamity-prone areas, project planners need to carefully consider at the outset countermeasures to mitigate if not avoid the disastrous effects of calamities on project activities in order to achieve planned objectives. In addition, the project plans should be adjusted accordingly in response to fortuitous events like typhoons and floods that could happen anytime in the course of project implementation.
- (2) Proper recognition of the mandate and role of each stakeholder at the planning stage of the project is really important for project implementation.
- (3) Selection of pilot sites should consider the capacity of the implementing agency to monitor outreach activities and provide timely response to issues affecting project implementation. In case far distant place from project base is selected as pilot sites, alternative implementation arrangements may need to be considered for the project implementers to be able to manage future outreach activities in distant pilot sites.

(4) In areas where intensive fish farming is a common practice, aquaculture outreach projects should incorporate activities aimed at addressing environmental issues.

3 – 8 Follow-Up Status

N/A.