

## Summary of the Evaluation

1. Outline of the Project		
Country : Timor-Leste		Project title : Project for Irrigation and Rice Cultivation Project in Manatuto (IRCP)
Sector : Agriculture Development		Cooperation scheme : Technical Cooperation
Division in charge : Rural Development Department		Total cost : 270 Million JPY
Period of Cooperation	June 1, 2005 to March 31, 2010	Partner Country's Implementing Organization : Ministry of Agriculture and Fisheries (MAF)
		Supporting Organization in Japan :
		Related Cooperation
<p><b>1-1 Background of the Project</b></p> <p>Poverty reduction and improved food security is the main development objectives of the government of the Democratic Republic of Timor-Leste and is articulated on the National Development Plan as well as Millennium Development Goals. Since its emergency phase, rehabilitation of irrigation facility has been carried out across the country with assistance from the international donor communities. Under the Urgent Rehabilitation Project administered by UNDP, rehabilitation of the Lacro irrigation scheme in Manatuto District was accomplished in December 2003 with financial assistance from the Government of Japan. To ensure sustainability of the irrigation and improved crop production, the Ministry of Agriculture Forestry and Fisheries (MAFF) requested Japan International Cooperation Agency (JICA) for further technical assistance.</p> <p>In response, the preparatory study missions were dispatched in 2003 by JICA and held a series of discussion with MAFF in order to settle the project framework. As a result, MAFF, Ministry of Planning and Finance (MPF) and JICA agreed to implement the Technical Cooperation Project, namely the Irrigation and Rice Cultivation Project in Manatuto District (IRCP). Since June 2005, the IRCP has been in operation with view to prepare an improved rice farming system as well as to establish a functional water users' association (WUA).</p> <p><b>1-2 Project Overview</b></p> <p>The Project aims to improve rice productivity for the targeted 549 farmers at Lacro Irrigation Scheme in Manatuto District, through the activities such as preparation of improved rice farming system, selection and distribution of appropriate varieties of rice seed to farmers, land preparation service, strengthening the Water Users' Association, and so on.</p> <p><b>(1) Overall Goal:</b></p> <p>Improved rice cultivation system and Operation and Maintenance method of irrigation facilities will be adopted in at least two other irrigation schemes in Timor-Leste.</p> <p><b>(2) Project Purpose:</b></p> <p>Productivity of rice in the Project site will be improved.</p>		

**(3) Outputs:**

**Output 1:** Existing irrigated rice farming system will be improved in the Project site.

**Output 2:** Functional Water Users' Association will be established in the Project site.

**(4) Inputs**

Japanese side : Total input cost : 270 Million JPY

Long-term experts	5 persons in total, 101.5 M/M	Equipments	US\$115,740.
short-term experts	6 persons in total, 22.2 M/M	Local cost	US\$355,001.4
Training of counterparts in Japan	4 times, 8 persons in total		(as of Sep. 2009)
Training of counterparts in the Philippines	1 time, 3 persons in total		
Training of counterparts in Indonesia	1 time, 5 persons in total		

Timor-Leste side :

Assignment of Counterparts	8persons	Local cost	US\$26,700.
Personnel Land, Building and Facilities			

**2. Joint Evaluation Team**

Members of Evaluation Team	< Japanese side >		
	- Mr. Satoru HAGIWARA:	Team Leader, Deputy Director General, Rural Development Department, Japan International Cooperation Agency (JICA).	
	- Dr. Kenji IRIE:	Rice cultivation & farming, Associate Professor, Department of International Agricultural Development, Tokyo University of Agriculture.	
	- Mr. Masafumi HIRATA:	Irrigation & Water Users' Association, Technical Official Overseas Land Improvement Cooperation Office, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries.	
	- Mr. Ichiro MIMURA:	Cooperation Planning, Project Officer, Poverty Reduction / Paddy Field Based Farming Area Team I, Group I, Rural Development Department, JICA.	
	- Mr. Hiroyuki DOI:	Independent Consultant.	
	< Timor-Leste side >		
	- Mrs. Natalia Maria Dias Ximenes:	Head, Monitoring & Evaluation Department, MAF.	
	- Mr. Cosme Belo Ximenes:	Officer, Monitoring & Evaluation Department, MAF.	
	- Mr. Joao Antonio S.A. Piedade:	Officer, Monitoring & Evaluation Department,	

	MAF.	
Period of Evaluation	29 November 2009 to 19 December 2009	Type of Evaluation : Terminal Evaluation
3. Results of Evaluation		
<p><b>3-1 Achievements</b></p> <p><b>(1) Project Purposes</b></p> <p>The Social Survey on the members of the Water Users' Association (WUA) of the Laclo Irrigation Scheme was carried out by the IRCP-JICA Team since July to November 2009. Average yield in total was 2,611kg/ha.</p> <p><b>(2) Outputs</b></p> <p><b>Output 1:</b> Existing irrigated rice farming system will be improved in the Project site.</p> <p>(Indicator 1-1: More than 50% of the farmers in the Project site will adopt a recommended farming system and/or improved technologies.)</p> <p>Target area of the Project is Laclo Irrigation Scheme in Manatuto District. The area is about 507ha. The number of farmers is 549 based on the Result of social Impact Survey, 2007. 64% of farmers received technical advices such as recommended farming system and so on. 32% of farmers received land preparation service. (Percentage received technical advices and land preparation service means percentage adopted a recommended farming system and/or improved technologies. Land preparation service is one of the recommended farming system and/or improved technologies.)</p> <p>(Indicator 1-2: More than 50% of the farmers in the Project site will use certified seeds of recommended varieties.)</p> <p>65% of farmers were supplied and used certified seeds of recommended varieties.</p> <p><b>Output 2:</b> Functional Water Users' Association will be established in the Project site.</p> <p>(Indicator 2-1: Water is distributed equally to all 14 secondary canals according to the prepared day-to-day irrigation calendar with 100% of performance.)</p> <p>The major constraint was poor leadership of the previous President who could not impose sanction and penalty, and the situation was worsened by in-cooperative behavior of the upstream farmers. Problems of two secondary canals were settled through a series of discussion after July 2009. However, since double cropping has not been practiced in the target area, it is not clear at this stage if equal water distribution is implemented in next cropping season. Moreover, since WUA's management capability is at the immature stage, MAF and WUA need to strengthen their monitoring and feed back system for adequate and equal water distribution.</p> <p>(Indicator 2-2: More than 70% of WUA members in the Project site are able to pay the water charge.)</p> <p>Water charge (fee) collection rate reached 72.7%, which is more than the indicator.</p>		

(Indicator 2-3: Preparation of By-Laws.)

By-Laws was adopted and promulgated 31 August 2009. All WUA members accepted the By-Laws. By-Laws was already printed and distributed to the person concerned.

### **3-2 Summary of Evaluation Results**

#### **(1) Relevance**

The Project is highly relevant because of the following reasons; 1)The Project is consistent with the Timor-Leste National Priorities 2009 in which food security & agriculture is the first priority to increase domestic food production, 2)The Project is consistent with the needs for local people “Farmer are expecting to the IRCP on extension services, seed distribution, land preparation, and strengthening of WUA organization”, 3)The Project is consistent with Japan’s aid policy which sets Poverty Reduction as one of the priority issues.

#### **(2) Effectiveness**

Effectiveness of the Project is high because of following reasons; 1)The Project purpose “Productivity of rice in the Project site will be improved.” is achieved (Average yield reached 2.6 tons/ha.), 2)As for the Output 1, appropriate varieties of rice seed was distributed to 65% of the targeted farmers. 64% of the targeted farmers received technical advices from the IRCP, 3) As for the Output 2, existed problems of two secondary canals were settled, water fee collection rate reached 72.7%, and By-Laws of WUA was promulgated and distributed, 4)Factor achieving the Project Purpose is good relationship between Japanese Experts and their Counterpart personnel in Timor-Leste. As for Important Assumptions, most of them were fulfilled. As for factor impeding the Project Purpose was not found.

#### **(3) Efficiency**

Efficiency of the Project is considered as high because of the following reasons; 1) Appropriate numbers of Japanese experts have been dispatched, and also all equipment have been utilized and maintained well to implement the IRCP, 2) Existing irrigated rice farming system was improved in the project site, and foundation for strengthening the WUA was formulated through the project activities, 3) Assignment of counterparts has improved some extent in later half of the Project period. It promotes better communication and relationship between Japanese Experts and counterparts.

#### **(4) Impact**

Impact of the Project is relatively low. However, selected seeds variety produced in the IRCP have been adopted in Viqueque and several sub-districts (Laclo, Laleia and Manatuto) in Manatuto through NGO. Therefore, the result of the Project is expected to be applied in other irrigation schemes, which is the Overall goal of the Project, with strong dissemination will coupled with stable budgetary considerations by MAF.

#### **(5) Sustainability**

Sustainability of the Project is assumed slightly below average because of the following reasons; 1) MAF Manatuto Office has intention to promote rice production and continue to support to the WUA. However, there is no action plan yet in order to disseminate the outcomes of the Project, 2) Seven extensionists are allocated for 790 farmers (households) in the Laclo Irrigation Area. It means one extensionist shall take care of about 100 farmers. Therefore, number of extensionists thought to be adequate. However, they may need to strengthen their capability furthermore to disseminate improved farming system. Therefore, more training opportunities will be needed for their capacity development, 3) Budget for the MAF's Annual Action Plan was approved, and the budget allocated to MAF Manatuto Office is increased. Therefore, the Outputs produced by the Project are expected to be utilized, 4) Improved rice cultivation system, and Operation and Maintenance method of irrigation facilities are appropriate and affordable technologies for WUA member. However, management capability of WUA is not enough. Therefore, MAF should continue to support on developing their capability, 5) As for sustainability of WUA, although water fee collection rate is more than indicator, collected amount still accounts for 17% of annual operational cost of WUA. Therefore, productivity of rice needs to increase after the first crop in 2010 in order to maintain WUA's sound management and operation.

### **3-3 Factors that promoted realization of effects**

#### **(1) Factors concerning to the Planning**

Factors that achieved the Project Purpose are thought be the effects of land preparation service, distribution of certified seeds of recommended varieties in the Project Site, and technical service and training by the Project. In addition, according to the Social Survey on the members of the Water Users' Association (WUA) of the Laclo Irrigation Scheme carried out by the IRCP from July to November 2009, significant numbers of farmers were provided with fertilizer and chemicals by MAF and some from other organizations such as donor, which might be attributable to yield increase in 2009 (Average yield was 2,611kg/ha.).

#### **(2) Factors concerning to the Implementation Process**

As for the Project management and monitoring, the Project Director (Director of the National Directorate of Irrigation and Water Management) visited project site regularly and monitored the project activities. Joint Coordination Committee was held 5 times, and JICA Consultation Team was dispatched twice. As for relation between Japanese Experts and counterparts, regular meeting was held more than one time in a month. Moreover, Japanese Experts have involved in the Project very deeply. They have lived in Manatuto community to work day and night for the IRCP, and try to understand the people, culture and traditional social system in Manatuto. These closely works made it possible to work with Marinos, traditional water keeper. As a result, farmers were easy to accept the Project activities.

### **3-4 Factors that impeded realization of effects**

#### **(1) Factors concerning to the Planning**

The important assumption from the activities to the outputs “buffalos are controlled by owners” was not fulfilled. MAF Manatuto Office and the Project have tried to solve the situation. However, solution has not made yet.

(2) Factors concerning to the Implementation Process

At the beginning of the Project period, participation of the counterparts was not adequate to implement project activities. However, assignment of counterparts has improved some extent in later half of the Project period.

### **3-5 Conclusion**

Two Outcomes were produced by the Project Activities mainly composed of improving rice productivity and strengthening WUA’s capability. Through careful studies and discussions, the Evaluation Team confirmed that the Rice Productivity was more than the Objectively Verifiable Indicator. The Team concluded that the Project would achieve its purpose during the project period. Therefore, it is concluded that the Project will be terminated at the end of March in 2010 as planned.

### **3-6 Recommendations**

The recommendations from the Evaluation Team are as follows.

**(1) General aspect**

**1) Implementation plan and action plan**

To continue the Project activities, MAF should prepare an implementation plan and an action plan which include following by the end of March, 2010;

- staff allocation plan and its organizational structure chart
- monitoring system plan
- contents of support to WUA
- seed production and its provision plan
- management plan for hiring service by power tiller

**2) Securing budget allocation and recruiting necessary staff**

MAF should allocate necessary budget and staff for the continuation of the outcome of the Project. Specifically, the currently contracted based personnel by the Project, who have been trained through the Project, are recommended to be employed as staff of MAF project.

**3) Continuation of the Project activities**

Through the Project activities, more than fifty (50) percent of the targeted farmers learnt appropriate rice farming system such as certified seed, land preparation, line planting, weed control, etc and the Project published “Rice Cropping System in the Laclo Irrigation Scheme” to introduce appropriate rice farming system there. Therefore, it is strongly recommended that MAF continues and conducts more its activities so that the remaining number of farmers would adopt appropriate rice farming system.

## **(2) Technical aspect**

### **1) Establishment of seed production system**

So far there is no clear comprehensive seed production system covering from seed production to provision of seed to farmer in Timor-Leste. To secure stable rice production, it is indispensable to provide certified seed to farmers. Therefore, MAF should consider establishing a seed production system.

### **2) Double cropping for food security**

Due to several problems in the Laclo irrigation scheme such as uncontrolled grazing (water buffalo, goat, etc), the farmers in Laclo are not interested in double cropping. Therefore, MAF should consider alternative solution for livestock in order to promote double cropping season cultivation.

### **3) Renewal of heavy machine**

MAF explained that heavy machine would be dispatched whenever necessity occur in the Laclo irrigation scheme because the present heavy machines are still in use and express its intention not to renew heavy machine for the Laclo irrigation scheme due to its budgetary constraints. However, it is recommended that the present used heavy machines would be replaced rather than dispatched from Dili and should be permanently stationed in Laclo since sedimentation of the Laclo irrigation scheme is enormously huge and emergency operation is often (at least once a week) required.

### **4) Adequate water distribution**

Although WUA has tried to distribute water equally to all 14 secondary canals according to the prepared day-to-day irrigation calendar, WUA's management capability is at the immature stage and budgetary condition is not adequate. Therefore, MAF and WUA need to strengthen their monitoring and feed back system for adequate water distribution. In addition, MAF should give mandate to WUA to take control over the Laclo Irrigation Scheme.

### **5) "Operation & Maintenance manual for Irrigation"**

Considering the limited time of the Project, the Project is in need of accelerate the process of making the manual for operation & maintenance for the Laclo Irrigation Scheme reflecting the real experience of the Project activities and disseminate to MAF and WUA members.

### **6) Continuous monitoring & maintenance of Equipment**

MAF periodically needs to monitor condition of equipment donated by the Government of Japan such as hand tillers and maintain them. So far two (2) hand tillers has broken and need to repair before next cropping season, January 2010.

### **7) Necessity of training**

It is highly recommend that MAF will provide its staff with following trainings in order to strengthen

their capabilities. The contents of trainings should apply all recommend technology from the Project.

- to train extension officers/ workers with and without farmers
- to train MAF irrigation officers on operation system of WUA

### **3-7 Lessons learned**

The lesson obtained through the execution of the Project is as follows.

#### **(1) Socio economic consideration**

Through conducting the Project activities, the Project found many socio economic facts related to traditional water management system, people characteristic & behavior, etc and realized that all socio economic facts were complicatedly related and needed to pay careful consideration on the Project activities.

Although the Project deliberately studied the Project framework at the preliminary study stage, it was quite difficult to grasp whole socio economic aspects before commencement of the Project. Therefore, the Project took a flexible reaction in order to adapt new findings to the Project activities.

#### **(2) Use of suitable technologies**

The project introduced weed remover, trial direct seeder and thresher with local available materials. Those equipment can be locally produced and increase rice production without any big investment.

#### **(3) Approach to traditional society**

The Project closely works with Marinos, traditional water keeper, and they made up a gap between modern and traditional irrigation system. Through Marinos's involvement, the farmers were easy to accept the Project activities. This approach will be useful for other irrigation schemes. It is hoped that MAF adopt this experience.