

Summary of the Results of Evaluation Study (Terminal Evaluation)

I. Outline of the Project	
Country : The Independent State of Papua New Guinea	Project title : The Project for Promotion of Smallholder Rice Production in Papua New Guinea
Issue/Sector : Rural Development	Cooperation scheme : Technical Cooperation Project
Division in charge : Rural Development Department	Total Cost : 450 million Yen
Period of Cooperation	(R/D): December, 1 st 2003- November, 30 th 2008
	Partner Country's Implementing Organization : National Department of Agriculture and Livestock, Food Security Branch
	Supporting Organization in Japan : Supporting Committee in Japan
Related Cooperation : N/A	
1 Background of the Project	
<p>The consumption of rice has gradually been rising in Papua New Guinea (PNG) and is becoming established as a staple food, not only in urban areas, but also in the rural villages. However, most consumption depends on imported rice from other countries such as Australia and Thailand. It is estimated that the amount of the import reaches about 200, 000 tons per year.</p> <p>Under such situation, the Government of PNG has realized the necessity of food security and endorsed the National Rice Policy in 1998, and furthermore, the National Food Security Policy in 2000, which recognizes rice and grain as one of the 14 components necessary for food security. In accordance with these policies, the PNG government has launched a program for small-scale self-sufficient rice production in 17 provinces nationwide which is led by the Food Security Branch (FSB) within the National Department for Agriculture and Livestock (NDAL).</p> <p>In the past, JICA has cooperated on the promotion of small-scale rice farming in PNG by dispatching experts, JOCV (volunteers), and grant aid for machines. In 2002, a development study funded by the Government of Japan (GOJ) formulated a master plan in which interventions to realize increased smallholder rice productions was proposed. Following the proposals and recommendations from the plan, the Government of PNG made an official request to the GOJ to implement a technical cooperation project that would support the national rice policy and thus contribute to attaining the sustainability in smallholder rice production systems.</p> <p>In response to the request, JICA, as the implementing agency of Japanese technical cooperation, dispatched the Preparatory Study Team in July 2003 to assess the proposal and tentative framework of the project. In November 2003, the Record of Discussions (R/D) for the Project for Promotion of Smallholder Rice Production (the Project) was signed between the Papua New Guinean authorities and the Resident Representative of JICA. The Project commenced on December, 1st 2003 for the five year period which will be completed in November 2008. In addition, the mid-term review was conducted by the joint team in July 2006 for the purpose of finding the degree on achievement based on the Project Design Matrix (PDM) and Plan of Operations (PO), evaluating comprehensively with five evaluation criteria, as well as make necessary recommendations for the implementation of the project activities during the remaining cooperation period.</p> <p>As the Project is expected to be terminated within 6 month, the Terminal Evaluation Study was</p>	

conducted for the purpose of assessing the achievements and the outputs of the Project, making recommendations to the related organizations of the Government of PNG for promoting the further activities of the Project, and drawing lessons learned from the Project in order to implement similar Project in the future.

2 Project Overview

(1) Overall Goal

Food security situation of the target provinces are improved

(2) Project Purpose

Sustainable subsistence rice farming is practiced by smallholders by developing and applying the support system for Model Farmer extension activities.

(3) Outputs

Output 1: Model farmers (MF) conduct “Farmer To Farmer Extension Activities (FTFEA)” through acquiring sustainable subsistence rice farming skills

Output 2: A support system for Model Farmer Extension Activities and “market oriented” services for milling and seed distribution are developed and implemented by local Governments.

Output 3: NDAL’s capacities for policy implementation and extension of the Model to other provinces are strengthened in coordination with Department of National Planning and Monitoring (DNPM).

(4) Inputs

Japanese side : 450 million Yen

Long-term Expert 4 Short-term Expert 12

Training of Counterpart personnel (in Japan 23, in Indonesia 40)

Local cost 123 million Yen Provision of equipment 17 million Yen

PNG’s Side :

Counterpart personnel: 39 Facilities (Office for Japanese Experts, etc.)

Operational Cost: 500 million Yen (1,348,627.17 Kina)

II. Evaluation Team

<Japanese Members>

	Name	Assignment	Designation/Organization
1	Mr. Hideki TOMOBE	Team Leader	Group leader, Paddy Field Based Farming Area Group, Rural Development Department, Japan International Cooperation Agency (JICA)
2	Mr. Takao AKUTSU	Evaluation Analysis	Principal Consultant, Overseas Merchandise Inspection Co., Ltd. (OMIC)
3	Mr. Hiroyuki TANAKA	Planning Management	Project Officer, Paddy Field Based Farming Division3, Paddy Field Based Farming Area Group, Rural Development Department, Japan International Cooperation Agency (JICA)

Period of Evaluation: 25/May/2008~12/June/ 2008	Type of Evaluation : Terminal Evaluation
III. Summary of Evaluation Results	
1. Achievements	
1. <u>Output 1: Model Farmers conduct "Farmer To Farmer Extension Activities (FTFEA)" through acquiring sustainable subsistence rice farming skills.</u>	
The Objectively Verifiable Indicators (OVIs) for Output 1 are achieved.	
This project summarized the fundamental technology such as the rice cycle that smallholder farmers can afford for growing upland rice without spending much expenditure.	
At the point of the mid-term review, 6 kinds of instruction materials, guidelines and training manuals were developed. At the time of the Terminal Evaluation, it was confirmed that in total 13 kinds of instruction materials, guidelines and training manuals were completed. In addition, at the point of mid-term review, 3 kinds of publicity materials were developed. At the time of the Terminal Evaluation, it was confirmed that the preparation of remaining publicity material is fully in progress. Total number of MF selected by May 2008 achieved to 69 persons and the number of smallholders who obtained guidance from those MFs is 1,486 farmers in total in the target area. In addition to above numbers, subsistence smallholders who have adopted the rice cycle outside the target area are steadily in increasing. "General Information on Farmer training to become MF" and "General Information on Brush-up training for MF" is prepared by Madang and East Sepik Provincial DALs respectively.	
Based on the mid-term review, the revised OVIs for Output 1 have been approved by 5 th JCC held in December, 2006.	
2. <u>Output 2: A support system for Model Extension Activities (FTFEA) and "market oriented" services for milling and seed distribution are developed and implemented by local governments.</u>	
The OVIs for Output 2 are achieved.	
Support system to FTFEA by MF: In FY2007 report, the budget for the support system to FTFEA by MFs is allocated 3,956.30 Kina for Madang province and 5,400 Kina for East Sepik province. Guidelines for support system are developed in both provinces. And supporting system is being implemented according to these guidelines respectively.	
"Market oriented" services for milling is developed and implemented by local governments:	
One model rice mill was set in both provinces respectively. Operation and maintenance training was conducted to both rice mills and manuals of "Management Guideline on Milling Service" and "Operation Manual on Rice Milling" were prepared. The saving amount of depreciation was 2,000 Kina in Madang Province, 3,000 Kina in East Sepik province in 2007. NDAL and model milling centres developed instruction/training materials and general information on milling machine operation and management. When rice production will reach the feasible level for a rice mill operation in the area, both model milling centres can show proper management of rice mill to new comers.	
Development and implementation of seed distribution system by the local governments:	
In the initial stage of this Project, ROC supplied rice seed to this project through NDAL. However, a lot of complains for its low germination ratio were reported. Therefore the Project started seed multiplication through MFs and distribution activities after Mid-Term Evaluation.	

Madang Province delivered 245.5kg and East Sepik distributed 300kg of rice seed in 2007.

Others: Other indicators for Output2 were almost attained or can be attained by the termination of the project.

In addition, the target areas of the Project were Morobe Province, Madang Province and East Sepik Province in the original plan. Nevertheless based on the introduction of new concept of target areas putting emphasis on the achievement of results, two provinces as Madang Province and East Sepik Provinces were selected as target areas of the Project at the time of the mid-term review. Furthermore, OVIs for Output 2 have been approved by 5th JCC held in December, 2006.

3. Output 3: NDAL's capacities for policy implementation and extension of the Model to other Provinces are strengthened in coordination with DNPM.

The OVIs for Output 3 are achieved partially.

Establishment of REU under FSB of NDAL:

REU was established with 5 permanent staff under FSB in Aug 2007. REU currently prepares the arrangement for dissemination of the “smallholder rice production ”which executed in Madang and East Sepik Province to other 2 to 3 provinces from the year 2009.

NDAL develops instruction and training materials for the promotion of smallholder rice production:

REU under NDAL is developing 7 kinds of documents such as 1) Guideline and Manual to form "Model for promotion of Smallholder Rice Production", 2) Promotion video tape on "Model for promotion of Smallholder Rice Production". Those materials are scheduled to complete by August, 2008.

200,000 Kina of the National budget allocated to Promotion of Smallholder Rice Production in FY2008:

The actual disbursement for this Project was 40,069 Kina in FY2007. In 2008, NDAL requests 68,000 Kina, but the budget is not approved yet.

This amount is far below the target figure. Further activity for consensus-building among stakeholders should be promoted for securing budget allocation.

Based on the mid-term review, the revised OVIs verifiable for Output 3 have been approved by 5th JCC held in December, 2006.

-Project Purpose

The Project Purpose is “Sustainable subsistence rice farming is practiced by smallholders by developing and applying the support system for MF extension activities”.

The verifiable indicator of this Project Purpose is “Subsistence smallholders growing rice becomes 580 farmers in Madang and Sumkar Districts and 400 farmers in Maprik District respectively by the year 2008”.

The training and the monitoring for MF extension activities are being conducted in the sustainable manner, and the technical exchange among smallholders is being implemented. Therefore, the support system for MF extension activities established by the Project is being introduced extensively in the target areas. In concrete terms, the number of smallholders growing rice became 451 farmers in Madang District of Madang Province, 255 farmers in Sumkar District of Madang Province and 780 farmers in Maprik District of East Sepik respectively achieving the

indicators set up.

2 Summary of Evaluation Results

(1) Relevance

Overall, the Relevance of the Project is high. The details are as follows:

1) Relevance of the Project for PNG Policy for Food Security

The National Food Security Policy (2000-2010) and PNG Domestic Rice Development Policy (2004–2014) were prepared by NDAL and later endorsed by the National Executive Council (NEC). At present, these two main national policies clearly constitute a fundamental political base for NDAL to promote the domestic rice production for national food security by all the smallholders, institutions and semi-commercialized entities in the whole country. In addition, National Agriculture Development Plan (NADP) endorsed by the NEC in February 2007 adopts the promotion of subsistence smallholder rice production as a high priority. NADP secretariat office is preparing direct budget allocation system to local provinces and districts for its promotion.

2) Relevance of the Project for JICA’s program

The project purpose is relevant to JICA’s program “Rural Development”. This project aims to improve food security in rural area by development of smallholder rice production. As rice is a one of staple food in PNG, rice production for their own consumption helps to their household economy. Therefore the consistency of this Project to JICA program in rural development is secured.

3) Relevance of the Project for the target group

Smallholders in rural area in PNG wish to have rice consumption very much. In addition, imported rice prices are in soaring, many subsistence smallholders are keen to start rice production in their own farm. Therefore this project fulfills such vast needs in timely manner.

(2) Effectiveness

All outputs have contributed to realize the project purpose, and the Project has its effectiveness successfully.

1) Achievement of the Project Purpose

The indicator of the project purpose shown in the PDM is already achieved. In addition, most of outputs shown as verifiable indicators in the PMD also already achieved.

2) Inhibiting and promoting factors for the achievement of the project purpose

Among various promoting factors contributed to the achievement, following outputs should be highlighted;

- Establishment of low input upland rice cycle appropriate to PNG agriculture,
- FTFEA meets local society of PNG,
- Formulation of Monitoring System by local government and
- Introduction of manual rice husking and winnower practice.

Those approaches could be conducted by the Project through observation and its analysis of the rural society in PNG.

(3) Efficiency

The efficiency of the Project is high.

1) Timing of Inputs

Inputs of the project resources that include dispatch of experts and provision of equipment were made mostly as expected, with the exception of provision in budgets for project operation by NDAL.

2) Efficiency of activities and outputs

The Plan of Operations (PO) is constantly reviewed during the project period to cope with the practical ability of both subsistence smallholders and officers. Such constant reviewing reflected to the idea and establishment of low input rice cycle, FTFEA and monitoring system. Various guidelines and manuals were prepared jointly by experts and C/Ps.

The budget for this activity is increased in targeted provinces and the system developed by project is adopted in non-targeted district already. Moreover, the rice farming education started in Teachers Collage of Madang and other 3 high-schools in both provinces. These activities will definitely contribute to the achievement of the Overall Goal.

3) Coordination with other Institutes and Donors

During the project period, notable coordination activity with other Institutes and Donors are follows;

- MF training with OISCA
- Seed provision by ROC
- Establishment of rice production curriculum in Highland Agriculture College

(4) Impact

It is expected that the impacts of the Project are high positive.

- 1) In policy making, NADP describes the importance of smallholder rice development promotion. It seems that the understanding of the project results is getting penetration among them.
- 2) In economical aspects, as the demand for rice diet especially in young generation even in rural area is rising, smallholders in rural area can save expenses for rice purchase by adoption of the rice cycle. Some MF replied during interview survey in this terminal evaluation, they use the payment for rice purchase to educational expense of their children or to housing.
- 3) Technically, as the rice cycle is simple and affordable, everyone who wishes to produce rice can start it immediately.
- 4) As institutional impacts, C/Ps in provinces stated that“ MF approach”, “Monitoring system” and “MF supporting system” can be applied to extension works for other crops.
- 5) Environmental impacts by upland rice farming by slash & burn system is limited as smallholders cultivate rice within their farming cycle. However, concerns of enlargement of slash and burn area cannot be eliminated in accordance to increase of population and rice consumption in villages.

The rice cultivation technologies which are being introduced through the Project are suitable for the farming systems adopted by smallholders, therefore the sustainability will be relatively high. Taking into account the achievements of the Outputs and Project Purpose, the Project will be able to contribute to improve the food security of the target provinces, thus the Overall Goal will be achieved combined with the further dissemination of the rice cultivation.

(5) Sustainability

The sustainability of the Project is predicted to be moderate.

1) Institutional aspects

Various institutional practices developed through this Project such as “MF support system”, “Monitoring system” and Guidelines are suitable to PNG, so the sustainability in target provinces is high. In order to disseminate rice production to other provinces, REU has been preparing various guideline and materials, however the budget for its activities is not secured yet.

2) Financial aspects

Financial arrangement in Madang and East Sepik provinces is stable. On the other hand, budget allocation to REU/FSB/NDAL is not acquired yet. NDAL needs to arrange seminars and enlightenment activities of this project concept to related Departments for their understanding and to secure necessary budget.

3) Technical aspects

As mentioned before, this Project worked to establish simple and low input rice farming style appropriate to PNG. As a result, the numbers of smallholders started rice farming is increasing. Establishment of rice cycle will be in place. In addition, capacity development of rice mill operation and management of both model milling centres was challenged.

4) Social aspects

The technical dissemination through MF to promote rice cultivation for smallholder and the establishment of model rice milling station are contributing to increase the number of smallholder who cultivate rice in the target areas and to improve the livelihood of those smallholders through the improvement of the nutrition changing the eating habits and the poverty reduction. Therefore, it will be expected to secure the social sustainability.

5) Comprehensive aspects

The project promotes low input upland rice farming to be able to introduce in the target areas under the implementation of the related policies. It will be expected to secure the sustainability of the Project by the utilization of manuals and guidelines developed by the Project and the further introduction of farmer to farmer extension approach. In addition, the target provinces deal to increase the budget for the promotion of rice production since the commencement of the Project. On the other hand, Although REU was set up in NDAL, the sustainable and sufficient budgetary allocation in NDAL will be crucial to maintain the sustainability in the level of central government. .

3 . Factors promoting sustainability and impact

Appropriate introduction of Model Farmers approach enabled local governments to promote rice production sustainably. In addition, strong ownership and allocation of budget for rice extension at the target provinces is regarded to be the promoting factors in terms of sustainability and impact.

4 . Factors inhibiting sustainability and impact

Unpredictable budget allocation for rice production at central government cast uncertainty on the sustainability and impact.

5 . Conclusion

It was evaluated that the relevance, effectiveness and efficiency of the Project are high and the farmer to farmer approach through MF contributed to improve the livelihood of smallholder who

introduced rice farming. Furthermore, the sustainability of the Project will be moderate except for unstable budgetary allocation of NDAL. The Evaluation Team carried out the information gathering through a series of discussions with related organizations and the field survey including the interview to the MFs, and executed the evaluation in accordance with five evaluation criteria.

As a result, this project has been successfully implementing, and the indicators in PDM were confirmed that most of them have already achieved, and the matters pointed out by the mid-term evaluation team were solved. And the problems to give negative influence on the accomplishment of the project were not found.

Therefore, the evaluation team concluded that this project should be terminated on schedule at the end of November in 2008.

It is possible to say that the extension of rice production for the self-consumption at which this project aims was indeed timely from the viewpoints of the food security in the background of the situation that the demand for rice for self-consumption especially in the young generation will increase and imported rice price will rise.

Strengthening the manpower and their abilities of REU set up in NDAL is essential to promote a MF approach in other provinces in coordination with provincial, district governments. At the same time, REU is required to make their best efforts to acquire the budget for the promotion of the MF approach to other provinces.

6 . Recommendations

6-1 Short-Term Issue (by the termination of Project)

1) To support the MF approach in Madang Province and East Sepik Province, the evaluation team proposes the following points.

1)-1 MF support system

The guidelines for the MF support system in Madang and East Sepik Provinces were developed, and the budget has been allocated to provide necessary expenditure and the reward. It comes to keep MFs' incentives, however, it is necessary to continue reviewing the system to improve their incentives further. For example the reward should be provided according to the execution of their activities and their frequency. In addition, the point that the rewards of both guidelines are different although the MFs carry out the same content of the activities should be examined.

Finally, provincial or district government should persist making the MFs submit the activity report without fail and the confirmation of the result of their activities.

1)-2 Issue of MF certificate

The government should issue the certificate as the MF according to the performance and its results of the activities of the MFs. The certificate can be expected to rouse MF's motivation.

1)-3 Brush up training

It is necessary to carry out the brush up training to remind MFs of the content of the initial training. It is originally preferable that the technology of the MFs improves by the brush up training, but the organization to provide such training now doesn't exist.

Moreover, in the brush up training, it is necessary to provide the chance of the information sharing concerning the activities of the MFs and the problems they faced in the field not only among the MFs but also with the administrative officials.

1)-4 Establishment of MF network by MF meeting

The establishment of network among the MFs can expect a lot of effects such as the sharing their findings and experiences they obtained through their activities, and sharing information on the occurrence of the pest etc., and accommodating the rice seed necessary for the extension activities.

The matters shared through this network can be fed back to the administration, and can expect to be topics that research institute should take up.

2) To introduce the FTFEA that has successfully done in Madang and East Sepik provinces into other provinces, the evaluation team proposes a central government as follows.

2)-1 Securing of the budget for FTFEA in cooperation with NADP

In National Agriculture Development Plan (NADP) that obtained the approval of the NEC in 2007, the promotion of rice production for the self-consumption by the smallholders is described as its high priority matter. And NADP can allocate the budget for agriculture development in response to the proposal made by the district government and LLG. So REU should negotiate with NADP and participate in the process of this budget allocation. For example REU can give advices to the district/LLG when they make proposals, and REU support NADP staff when they examine proposals, moreover, REU can lead the NADP to allocate their budget to the district/LLG in which REU tries to promote smallholder's rice production by FTFEA in their policy.

Anyway REU should strengthen a communication with NADP that maintains their office in the room next to REU.

However, as NADP budget is not able to be used for the activities of central government including REU, REU itself has to secure development budgets (PIP) to DNPM.

It is very important for REU to make DNPM and NADP understand the effective results of this project and allocate the budget.

6-2 Long/Mid-term Issue (after project termination)

1) Strengthening manpower of REU

REU is planning to select three provinces that become the next targets for the promotion of FTFEA through the seminar to explain their plan to all the provinces. But it seems to be very difficult for the present manpower of REU to implement a series of activities from the selection of provinces to the introduction and execution of the FTFEA in cooperation with local governments. So increasing the number of their staff and strengthening their ability will be required.

2) Strengthening coordination among administration, research, education, and extension

So far promotion of FTFEA has been implemented without any support and collaboration with research and education institutes. They have National Agricultural Research Institute (NARI) in PNG, and they are also considering that rice must be very important food crop for smallholders according to their research program leader. Research and development of new technologies to respond to the problems in the site is expected to become possible if NARI cooperate with this project.

Moreover, the project has been cooperating with Highland Agricultural College for installation of the rice farming course, and as the result of this cooperation, this college can provide a series of training like a in-service training for administrators and a level-up training for MFs.

REU/NDAL should promote cooperation with these research and education institutes to strengthen the linkage among administration, research, education, and extension

3) Human resource development of the next generation

As it will take long time to promote FTFEA throughout PNG, the project should involve young staff and develop human resources of the next generation. For this purpose, introduction of rice production and practical experience in the field are very effective as some of the teachers' college and secondary school carry out. REU and PDAL, DDAL should support and expand these activities.

4) Support system for rice milling machine

The demand for the rice mill machine seems to be very high, and in NADP they plan to provide milling machines to district and LLG. However, judging from the past experience, appropriate operation and maintenance are very difficult to be provided and machine must be left in the condition of out of order. To avoid such situation, careful consideration on the support system must be made.

But actually establishment of support system which can provide appropriate operation, maintenance, spare-parts and repair must be done before the installation of milling machines.

5) Sustainable secure budget for Provincial Level

To expand the FTFEA in Madang and East-Sepik Provinces, both provincial governments should keep on allocating the necessary budget amount in the same trend so far.

7. Lessons Learned

1) Project that agrees with demand

Demand for the rice is being expected to expand especially in the young generation. But people living in the remote area cannot access the rice easily and recent price rise of rice gives big impact to household economy. This project could agree with the demand of PNG people in particular smallholders and the recent situation. In addition, the Project adopted farmer to farmer approach for the technical dissemination concerning rice farming for smallholders considering the local context of the recipient country. This can lead the successful implementation of the project.

2) Use of suitable technologies

- Instead of the installation of the mechanical milling machines, the project introduced the manual milling tool "KISER" by the Indonesian expert. This tool is very helpful for the people living in the remote area from model milling centres. Indonesian expert also gave technical guidance to MFs, and some of MFs started to build and sell "KISER" by themselves.

The introduction of KISER is a meaningful from the point of view of an appropriate technology, the application of existing good practices in neighbouring countries will be useful in order to solve the technical issues with rapidity

- The project introduced up-land rice production which was able to implement without any big investment such as irrigation facilities and fertilizer, and also introduced reproduction cycle in a understandable way, what we call "Rice Cycle". As this rice cycle was built in the traditional root crop production cycles, the enlargement of slash and burn area can be avoided. In this manner, the Project has been promoting the rice farming for smallholders taking into consideration of the succession of traditional farming, land use, culture and tradition. As the result, the expansion of the Project effect could be obtained.

3) Promotion of MF approach

- FTFEA works so effectively and efficiently in the Papua New Guinea society in which exclusive

community connection is so strong. If the outsiders like PDAL or LLG officials try to do the same thing, it takes much longer time than FTFEA does. Selecting the MF from the community members and letting them play a role of extension worker is acceptable for the community, this approach will be useful for other sectors. It is hoped that REU attempt to share this experience with other departments.

Moreover, in many developing countries, their extension systems do not work because of insufficient budget allocation as the result of promotion of the decentralization policy. FTFEA of this project has enough worth to examine to introduce as a possible alternative method.