付属資料 4

MINUTES OF MEETING
BETWEEN
THE JAPANESE EVALUATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF MOZAMBIQUE
ON THE JAPANESE TECHNICAL COOPERATION
FOR THE INTEGRATED AGRICULTURAL DEVELOPMENT FOR SMALL SCALE FARMERS IN CHOKWE IRRIGATION SCHEME
IN THE REPUBLIC OF MOZAMBIQUE

The Japanese Mid-term Evaluation Team (hereinafter referred to as "the Japanese Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Dr. Narihide NAGAYO, visited the Republic of Mozambique (hereinafter referred to as "Mozambique") from January 5 to 22, 2009, for the purpose of conducting the Mid-term Evaluation of the Integrated Agricultural Development for Small Scale Farmers in Chokwe Irrigation Scheme (hereinafter referred to as "the Project") as well as discussing the major issues related to the implementation of the Project.

The Mozambican Evaluation Team (hereinafter referred to as "the Mozambican Team") was organized by the Ministry of Agriculture (hereinafter referred to as "MINAG") of the Government of Mozambique and headed by Mr. Mr. Inácio NHANCALE, Head of Technical Department, National Directorate for Agricultural Extension, MINAG.

During the Japanese Team's stay in Mozambique, the Japanese Team and the Mozambican Evaluation Team formulated the Joint Evaluation Team (hereinafter referred to as "the Joint Evaluation Team") to conduct the Joint Mid-term Evaluation of the Project by carrying out field surveys, exchanging views and holding a series of discussions with staff and personnel of the Project in respect of desirable measures to be taken by both Governments for successful implementation of the Project.

As a result of the evaluation, the Japanese Team and the authorities concerned of the Government of Mozambique agreed to report to their respective Governments the matters referred to in the document attached hereto and the Joint Evaluation Report (hereinafter referred to as the "Report") attached hereto.

Done in duplicate in the English and Portuguese languages, each text is equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Maputo, January 20, 2009

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Team Leader,
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Mr. José Antonio GASPAR
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Attached Document

I. The Joint Mid-term Evaluation Report

1. The Joint Evaluation Team presented and explained the contents of the Report to the Joint Coordinating Committee (hereinafter referred to as the "JCC").
2. The JCC received the Report and took notes of the recommendations by the Joint Evaluation Team.

II. Major Points of Discussions and Agreement

1. The necessity to create more opportunities for training extension officer and model farmers in the Project was requested by a member of JCC, and JCC recognized it.
2. The issue on insufficiency of activity budget, extension officer's number and their commitment in this Project was discussed. The Director of SDAE explained the current status and difficulties to improve them by their own resources. JCC recognized the necessity to request the institutions concerned to allocate necessary budget and human resources, particularly full-time counterparts, as strongly recommended in the Report by the Joint Evaluation Team, for effective dissemination of outcomes gained by the Project to other areas. The Chairman of JCC mentioned existence of contribution from Mozambican side, such as fuel of extension officers' transport, and also requested the personnel concerned with the Project to take necessary measures to improve the situation.
3. The Joint Mid-term Evaluation Report was finally approved and accepted by the JCC.

Attachment: the Mid-term Evaluation Report

MID-TERM EVALUATION REPORT

ON

THE INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT

FOR SMALL SCALE FARMERS IN CHOKWE IRRIGATION SCHEME

IN THE REPUBLIC OF MOZAMBIQUE

Maputo, January 20, 2009

Japan-Mozambique
Joint Evaluation Team

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1. Objective and Method of the Evaluation

1-1 Objectives of the Mid-term Evaluation

(1) To evaluate the overall achievement of "the Integrated Agricultural Development Project for Small Scale farmers in the Chokwe Irrigation Scheme" (hereafter referred to as "the Project") in terms of five evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability) based on the Record of Discussions (R/D) and Project Design Matrix (PDM).

(2) To review the project plan of the remaining period of the Project through discussion on the plan of operations and prospect of achievement of the Project at the end of the Project.

(3) To identify and discuss necessary measures for solving problems on the project operation and assuring sustainability of the Project, and report and recommend the results of discussions to the relevant government agencies in Mozambique and Japan.

1-2 Method of the Mid-term Evaluation

1-2-1 Evaluation Procedure (Joint evaluation)

The Project was evaluated by the Mozambican and Japanese Evaluation Teams (hereinafter referred to as "the Joint Evaluation Team") in accordance with the R/D. The evaluation study included analysis of documents, field survey, and interview with stakeholders such as counterparts, JICA experts, staff of the Chokwe Agrarian Station (EAC), the District Services for Economic Activities in Chokwe (SDAE), the Chokwe Hydraulics Public Corporation (HICEP), and farmers in model areas.

1-2-2 Evaluation Criteria (Five Evaluation Criteria)

The evaluation was conducted based on the following five Evaluation Criteria.

(1) Relevance

Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Government of Mozambique as well as the needs of beneficiaries.

(2) Effectiveness

Effectiveness refers to the extent to which the expected benefits of the Project have been achieved as planned. It also examines whether these benefits have been brought about as a result of the Project.

(3) Efficiency

Efficiency refers to the productivity of the implementation process. It examines whether the inputs of the Project have been efficiently converted into outputs.

(4) Impact

Impact refers to direct and indirect, positive and negative impacts caused by the implementation of the Project, including the extent to which the overall goal has been attained.

(5) Sustainability

Sustainability refers to the extent to which the Project can be further developed by the Government of Mozambique and beneficiaries, and the extent to which the benefits generated by the Project can be sustained under national policies, technology, systems and financial state.

1-3 Members of the Joint Evaluation Team

(1) Japanese Evaluation Team

Dr. Narihide NAGAYO	Team Leader	Senior Advisor (Agricultural Development/ Rural Development), JICA
Mr. Jun HIRASHIMA	Rural Development	Project Formulation Advisor, JICA Mozambique Office
Mr. Masato KOINUMA	Project Management	Project Management Officer, Eastern & Southern Africa Team, Rural Development Department, JICA
Mr. Isao DOJUN	Evaluation and Analysis/ Training	International Project Department, Chuo Kaihatsu Corporation

(2) Mozambican Evaluation Team

Mr. Inácio NHANCALE	Team Leader	Head of Technical Department, National Directorate for Agricultural Extension (DNEA), Ministry of Agriculture (MINAG)
Mr. Susartino PALEGE	Irrigated Agriculture	Engineer, National Directorate for Agricultural Services (DNSA), MINAG
Mr. Eugenio COME	Farmers Training	Agronomist, DNEA, MINAG

1-4 Schedule of the Mid-term Evaluation

The schedule of the evaluation is attached as Annex 1.

2. Outline of the Project

2-1 Background of the Project

Mozambique is a country with 800,000 km^2 land area (180,000 km^2 farmland). Its population is 20.37 million (2007). Agriculture is the main industry, which contains 81% of labor force, 33% of its GDP. Potential area for rice production in the country is estimated to be 900,000 ha. From which only 200,000 ha (Action Plan for Food Production, 2007) are cultivated, and its production is 196,000 ton (2007) (average yield is 0.98 ton/ha). With the increase of demand for rice, rice the self-sufficient rate is low (38.3%), therefore, around 316,000 ton of rice is imported. Rice is the second staple food next to maize. From the food security standpoint, improvement of food self-sufficiency should be achieved immediately.

Chokwe Irrigation Scheme in Chokwe District, Gaza Province is the largest irrigation

scheme in the nation. Its irrigation area is 23,000 ha and in former times, more than 100,000 ton of rice was produced. The scheme's function was stagnated and rice production in the scheme was dropped to one tenth of the past production because of the civil war in the 80's, change of the economic system after independence, and the flood of the Limpopo River in 2000.

Mozambique set up the irrigation scheme improvement program in 1992. Japan supported its through the grant aid form 2002 to 2003 by repairing main canals (primary canals of 14 km). During the years 1998 to 2004, secondary and tertiary canals were partially repaired and water user associations were strengthened by French Development Agency's (AFD) support. HICEP manages the Chokwe Irrigation Scheme in 1) management of primary canals to secure water supply and distribution, 2) collection and management of water fee, and 3) operation and maintenance of irrigation facilities. Water user associations have roles in managing and maintaining secondary and tertiary canals, but they lack skills to manage and maintain irrigation facilities appropriately. Therefore, irrigation facilities have been poorly managed.

In Chokwe district, there are SDAE and EAC. (There is SDAE office in all districts of the country. Chokwe is one of the few districts with agricultural research station (EAC). Those offices are in charge of provision of agricultural technical services and development of agricultural technologies in order to provide agricultural extension services for farmers. But due to lack of number of staff members, their ability, and mutual collaboration of organizations concerned, farming support system such as technical guidance, microfinance, and introduction of rice mills, for small-scale farmers has not been worked well.

Around 90% of farmers in the Chokwe Irrigation Scheme are small-scale farmers. Due to lack of proper farming technology and difficulty on efficient use of water resources, agricultural inputs, and access to market, cultivated area in the scheme is only 6,000 ha. Due to low profitability on agriculture, collection rate of water fee is low, and this brought insufficient management of irrigation facilities by the water users' associations.

The Government of Mozambique requested a technical cooperation to the Government of Japan in order to improve livelihood of small-scale farmers in the Chokwe Irrigation Scheme.

Based on the results of the preliminary study, the Record of Discussions (R/D) on the Project was signed by both Japanese and Mozambican sides on December 4, 2006. The Project has been implemented since March 17, 2007 for the cooperation period of around 3 years (by the end of March 2010).

2-2 Summary of the Project

The framework of the Project is shown in the revised Project Design Matrix (PDM) version 3 which was modified the Joint Evaluation Team through this evaluation study (See Annex 2).

(1) Overall Goal

Small scale farmers' income in Chokwe Irrigation Scheme is improved.

(2) Project Purpose

Agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme is increased.

(3) Outputs

Output 1: Techniques for small scale farmers in the target area are improved.

Output 2: Management of irrigation facilities and water use in the target area is improved.

Output 3: Farming support activities provided by extension officers for small scale farmers in the target area are strengthened.

Output 4: Collaboration among SDAE, EAC, and HICEP is strengthened.

3. Revision of PDM

The Joint Evaluation Team has proposed revision on verifiable indicators, measures of verification etc. as described in the following table. The evaluation was conducted based on the proposed PDM 3.

Table 1: Major modifications of PDM

Item	Version 2	Proposed revision (Version 3)	Reason of change
Overall Goal 1	To improve small scale farmers' income in Chokwe Irrigation Scheme	Small scale farmers' income in Chokwe Irrigation Scheme is improved.	Sentence is changed into the passive.
Overall Goal 2	To contribute to food security in Mozambique	(deleted)	It is difficult to contribute to food security of Mozambique significantly by increasing rice production in Chokwe Irrigation Scheme within five years after the completion of this project.
Project Purpose	To increase agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme	Agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme is increased.	Sentence is changed into the passive.
Output 1	Improved technology for small scale farmers in the target area	Techniques for small scale farmers in the target area are improved.	Sentence is changed into the passive.
Output 2	Improved management of irrigation facilities and water use in the target area	Management of irrigation facilities and water use in the target area is improved.	Sentence is changed into the passive.
Output 3	Strengthened farming support activities provided by extension officers and WUAs for small scale farmers in the target area	Farming support activities provided by extension officers for small scale farmers in the target area are strengthened.	Sentence is changed into the passive. Word of "WUAs" was deleted because WUA does not have function for providing farming support.
Output 4	Strengthened collaboration among SDAE, EAC, and HICEP	Collaboration among SDAE, EAC, and HICEP is strengthened.	Sentence is changed into the passive.
Indicator for the Overall Goal 1	Farming income of small scale farmers is increased.	Farming income by rice cultivation of small scale farmers in D4, D7, and neighboring areas of rice production is increased 30%.	Target crop, target area and target income increase are defined.

Indicator for the Project Purpose	Production of major products is increased in the project target area. (rice; minimum 50% of yield increase in 2 WUAs (D4, D7) compared to the base line survey data.)	Yield of rice at the model farmers (59 farmers) in the project target area is increased from current yield level (level of 3 t/ha) to 5.0 t/ha.	Rice is focused as target product. Target farmers are clarified. Target yield of rice is set.
Indicator for Output 1	1-1. Number of small scale farmers adopted appropriate agricultural technology 1-2. Number of extension officers adopted agricultural technology for small scale farmers 1-3. Number of agricultural technologies developed and improved 1-4. Number of seed production technologies improved 1-5. Number of various kinds of manuals prepared	1-1. Number of model farmers adopted appropriate agricultural techniques (33 farmers in D4 and 26 farmers in D7, in total 59 farmers) 1-2. Number of extension officers adopted agricultural techniques for small scale farmers (8 officers) 1-3. Number of agricultural techniques developed and improved (11 kinds) 1-4. Number of seed production techniques improved (2 kinds) 1-5. Number of various kinds of manuals prepared (5 kinds)	Target farmers are defined and numerical indicators are added.
Indicator for Output 2	2-1. Number of water users association members acquired management methods of irrigation facilities 2-2. Irrigable area 2-3. Collection rate of water fee 2-4. Number of various kinds of manuals prepared	2-1. Number of water users association members acquired management methods of irrigation facilities (38 farmers in D4 and 41 farmers in D7) 2-2. Collection rate of water fee from the model farmers (80%) 2-3. Number of various kinds of manuals prepared (3 kinds)	Numerical indicators are added. "Irrigable area" is deleted because irrigation channels were rehabilitated by OPEC fund and the project activities are not related with expansion of irrigable area.
Indicator for the Output 3	3-1. Number of trainees trained on micromill operation 3-2. Operation rate of rice mill 3-3. Contents and size of joint sale of product 3-4. Number of micro-credit access	3-1. Number of trainees trained on micromill operation (10 persons) 3-2. Operation rate of rice mill (operated throughout the year and more than 90,000 kg of rice is milled annually) 3-3. Contents and size of joint sale of product	Numerical indicators are added. Indicator 3-4 is deleted because the project activities related with micro-credit were not included.
Indicator for the Output 4	4-1. Achievement of collaboration activities of SDAE, EAC and HICEP 4-2. Number of periodic meetings held 4-3. Number of officers concerning the Project 4-4. Number of workshops and participants 4-5. Action Plan prepared 4-6. Implementation status of action plan	4-1. Achievement of collaboration activities of SDAE, EAC and HICEP (number of periodic meetings held, number of officers concerning the Project, number of workshops and participants) 4-2. Action Plan prepared 4-3. Implementation status of action plan	Former indicators 4-2, 4-3 and 4-4 are integrated into the indicator 4-1.
Measures of Verification	Measures of Verification for the Overall Goal, Project Purpose, and Output are modified more appropriate ones. (Please refer PDM version 2 and version 3 of Annex 2)		
Remarks	Explanations on numerical indicators are described as remarks.		
Important Assumption	Some important assumptions are changed to more appropriate ones.		

4. Achievement of the Project

4-1 Inputs

4-1-1 Inputs by Japanese side

(1) Dispatch of Japanese Experts

Following fields of Japanese experts have been dispatched, i.e. 1) Chief Advisor, Extension/ Training, 2) Agronomy, 3) Irrigation Water Management, 4) Baseline Survey, 5) Rice Mill Operation/ Marketing, and 6) Coordinator. Details see Annex 3.

(2) Provision of equipment

Rice mill, irrigation pump, thresher, winnower, bush cutter and office equipment etc. have been provided. Expenditure for such equipment is 232,178Mt (Metical), 2,447,393 JPY (Japanese Yen) and 83,361 US dollars. Details see Annex 4.

(3) Training in Japan

Four counterparts have participated in training in Japan as of October 2008. Titles of training courses are "Agricultural Development through Farmer Participation", "Extension for Managers" and "Study Visit". Details see Annex 5.

(4) Local cost allocated by Japanese side

Local cost allocated by JICA for the implementation of the Project activities is 41,092,000 JPY (Japanese Yen) in total. Details see Annex 6.

4-1-2 Inputs by Mozambican side

(1) Assignment of counterpart personnel

Currently, Project Director and Project Manager, and 5 counterparts from SDAE, EAC and HICEP, in total 7 personnel, are assigned to the Project. A counterpart, who was staff of EAC, changed his work. Details see Annex 7.

(2) Budget allocation by Mozambican side

MINAG bears the expenses for water and electricity etc. for the offices for Japanese experts.

4-2 Outputs

4-2-1 Output 1: Techniques for small scale farmers in the target area is improved.

Development of appropriate rice cultivation techniques, preparation of manuals on rice cultivation, capacity development of extension officers, the model farmers, and other farmers are progressing mostly as planned. Further capacity development of extension officers and the model farmers is important for the remaining period of the Project.

Indicator 1-1: Number of small scale farmers adopted appropriate agricultural techniques (33 farmers in D4 and 26 farmers in D7, in total 59 farmers)

Target of this indicator means all model farmers (33 farmers in D4 and 26 farmers in D7, in total 59 farmers) adopt appropriately recommended rice cultivation techniques such as nursery preparation, method of seeding, transplanting method, and fertilizing method, to rice cultivation undergoing at present.

Household economic survey to find whether the model farmers can adopt rice cultivation techniques appropriately will be carried out from June to August this year (2009).

For reference, numbers of the model farmers in previous rice cropping season are 15 in D4 and 23 in D7. Number of the model farmers who got yield more than 4.50 tons/ha are 6 in D4 and 7 in D7, in total 13 farmers. It seems that those 13 farmers could adopt appropriate rice cultivation techniques. One of the reasons why other farmers could not get higher rice yield was slow growth due to delay of timing of transplanting.

According to opinions of model farmers, most useful rice cultivation techniques for increasing rice yield are preparation method of nursery, number of seedling in one hole (3-5 seedlings per hole), plant density per square meter (30 hills/m^2) frequency and amount of application of fertilizer, land leveling or puddling, etc. On the other hand several farmers expressed that they do not understand well yet about appropriate timing of fertilizer application and amount to apply. Some model farmer wanted to know whether profit can be obtained with rice cultivation by using less amount of fertilizer, because price of fertilizer rose. There are opinions that some farmers apply fertilizer 2 times only and other farmers want to apply more amount of fertilizer. (Application of 100kg/ha of urea is recommended by the Project. Final recommendation on fertilizer application will be made using results of experimental cultivation of rice which is underway.)

Regarding to the size of paddy plot and utilization of animal traction for puddling, some technical adaptation is necessary. Farmers make small plots (for example 300m^2 per plot) divided by ridge and transplanting activities are carried out by contracted labors traditionally. Payment is made per plot. In order to apply puddling using animal traction, bigger size of plot is appropriate from the view point of working efficiency. Therefore, farmers are facing difficulty with bigger size of plot and payment to the contracted farmers. Filed level water management is crucial for rice cultivation since the paddy fields are not flat. It seems that some technical adjustment is necessary in regard to the size of plot and method of ridge making considering opinions of model farmers.

Regarding to weed control, it was observed that there are a lot of weed in paddy fields not only paddy fields of small-scale farmers but also large-scale farmers including commercial farmers. Growth of weed is very fast and vigor than growth of rice. It seems that quantity of weed influences rice yield greatly. Among variety of weed control methods, weed can be

controlled appropriately to some degree by practicing appropriate land preparation, puddling/land leveling, and keeping appropriate water depth in paddy field. It is known that more instruction to the model farmers at their paddy fields is necessary.

Indicator 1-2: Number of extension officers adopted agricultural techniques for small scale farmers (8 officers)

There are 8 extension officers in SDAE in total. All 8 extension officers have participated in the training courses on the basic rice cultivation technique and practices of the Project. More training courses will be held under the Project in February and more rice cultivation techniques related with the rice cultivation manual and the agricultural extension manual will be acquired further by those extension officers.

It seems that those extension officers can acquire knowledge (mainly theoretical aspects) on basic rice cultivation techniques which are proposed by the Project. Evaluation about whether extension officers adopted agricultural technology (whether instruction of extension officers to small-scale farmers is appropriate) will be done considering results of the farmers household survey which will be carried out from June to August this year and also considering interview survey to the model farmers at the terminal evaluation of the Project.

2 extension officers who are in charge of D4 and D7 have practiced technical instruction to the model farmers at fields. Same extension officers are also assisting other farmers. Other 6 extension officers are in charge of other areas in Chokwe district, therefore, they did not have opportunity to practice learned knowledge and skills at the training due to limitation of input for establishment of demonstration farms. It seems difficult to acquire practical capacity on instruction to farmers sufficiently by only learning theoretical aspect at training.

Indicator 1-3: Number of agricultural techniques developed and improved (11 kinds)

Following 11 kinds of techniques are target of development and improvement.

1) Preparation of nursery (protected semi-irrigated rice nursery, area for nursery, nursery period)
2) Choosing variety and seed (Limpopo variety has good quality, use of certified seed)
3) Seed preparation (appropriate amount of seed (60 kg/ha), rough selection of seed, selection with water, soaking, and germination)
4) Seeding (Seeding density, soil covering and water management)
5) Preparation of rice field (farm layout and plough (animal traction) using 2 cows)
6) Transplanting method (seedling density and number of seedlings at one plot)

7) Fertilizing method (Application of urea in three times, 100 kg/ha of urea in total)
8) Rice field management (water management, weed control, and pest control)
9) Harvesting (appropriate timing for harvest)
10) Post-harvest (moisture content of rice)
11) Seed selection by farmers for their own use

(Remarks: underlined issues are techniques under development or improvement)

Techniques of No.5 and No.11 are under development or improvement. Other 9 kinds of techniques are already developed or improved. Techniques of No.5 and No.11 will be developed by the end of the Project. Therefore, this indicator will be achieved by the end of the Project. These techniques are described in manuals.

Although seed selection method conducted by farmers for their own use is explained in the seed production manual (draft), it seems better to make specific leaflet for the purpose. Contents should be understandable for farmers. Such leaflet will be utilized at the training for the model farmers or for distribution to farmers in project target area. Especially, it is desirable that model farmers practice seed selection at their fields during this rice harvest season (from March).

Regarding to technique of puddling using animal traction, adjustment of this technique considering farmers opinions is necessary as mentioned already (indicator 1-1).

Indicator 1-4: Number of seed production techniques improved (2 kinds)

Following 2 kinds of seed production techniques were improved at EAC (Chokwe Agrarian Station)

1) Improvement of working accuracy (Staff of EAC can carry out seed production works in accordance with the procedures described in the manual on seed production techniques, rate of mix of seeds of other variety is reduced.)
2) Improvement of seed quality through improvement of facilities and equipment for seed processing (improvement of drying yard, introduction of threshing machine, sorting machine by wind, and awn threshing machine)

Indicator 1-5: Number of various kinds of manuals prepared (5 kinds)

5 kinds of manual will be prepared in Portuguese and English. Drafts of the seed production manual, the rice cultivation manual, the agricultural extension manual, the manual for animal traction have been prepared. Final version of those manuals will be made by the end of December 2009. The upland crop cultivation manual (maize, beans, cabbage and onion etc.) will be made also by the end of December 2009.

According to the members of animal traction groups, they utilize the animal traction manual when it is necessary and useful for them.

4-2-2 Output 2: Management of irrigation facilities and water use in the target area is improved.

Capacity development on water management and irrigation facility maintenance, and preparation of manuals are progressing as planned. In regard to collection rate of water fee, some measures for improvement are necessary to be taken especially to the model farmers in D4.

Indicator 2-1: Number of water users association members acquired management methods of irrigation facilities (38 farmers in D4 and 41 farmers in D7)

Member of WUAs of D4 and D7 are 175 and 176 farmers respectively. Main target of the training courses on the irrigation facility management and the field level water management are leaders of water users' groups (who are in charge of water management of tertiary canals) in D4 and D7, and the model farmers of the Project. Numbers of participants to the training courses are as follows.

Table 2: Number of participant to the trainings

Area	Member of WUA	Number of head of water users' group	Participants to the training courses	Target persons for the training (number of model farmers and umber of head of water users' group)
D4	175	5	5 model farmers and 2 leaders of water users' groups	33 model farmers and 5 leaders of water users' group, in total 38 persons
D7	176	15	10 model farmers and 2 leaders of water users' groups	26 model farmers and 15 leaders of water users' group, in total 41 persons
D5 and D6			19 leaders of water users' groups	---

The numbers of participants to trainings have not reached the target. More participation is necessary. Especially, field level water management is important technique in the rice cultivation techniques. It is planned to hold a training course in February 2009. Most of model farmers, will participate in the training on water management. It seems that more instructions to model farmers on field level water management at model fields are necessary in order that they acquire not only theoretical knowledge but also practical skills on water management.

Indicator 2-2 Collection rate of water fee from the model farmers (80%)

The average collection rate of water fee in the Chokwe Irrigation Scheme from 2003/04 to 2006/07 (before the Project) was 56.6%. It is assumed that if rice yield is increase with

project implementation, water fee collection rate will be increased. Therefore, 80% is set as target.

Water fee collection rates from the model farmers at 2007/08 cropping season were 7% at the model area of D4 (1 person only paid among 14 farmers) and 97% at the model area of D7 (29 farmers paid among 30 farmers). Collection rate at the model area in D4 is too small comparing to the collection rate at the model area in D7. One of the possible reasons of such difference of collection rate is their awareness on the situation of irrigation facilities. Irrigation facilities in D7 have been rehabilitated by the Government of Mozambique and some more irrigation facilities were constructed under the Project. On the other hand, irrigation facilities in D4 have been maintained by farmers and intervention by the government and the Project is limited. Therefore, farmers in D4 don't feel necessity to pay water fee. Other possible reason is awareness improvement of the model farmers in D7. The persons concerned to the Project instructed them importance of water fee payment. It is necessary to take some measure for promoting payment of water fee to the model farmers in D4.

Indicator 2-3: Number of various kinds of manuals prepared (3 kinds)

Draft of the water management manual and the irrigation facility maintenance manual have been prepared and final version in Portuguese and English will be produced by the end of December 2009. In addition, draft of construction management manual is prepared and final version in Portuguese and English will be produced by the end of March 2009. According to the counterparts of HICEP, construction management manual will be referred at the preparation of tender document.

4-2-3 Output 3: Farming support activities provided by extension officers for small scale farmers in the target area are strengthened.

Farming support activities are progressing with good effects for small-scale farmers. Further strengthening in terms of preparation of a vision, marketing, management, regulation etc. are important.

Indicator 3-1: Number of trainees trained on micromill operation (10 persons)

A farming support group was organized in each WUA of D4 and D7. A farming support group is composed of 5 members. Training for the 10 members of farming support groups has been carried out twice. Total duration of the training is 6 days. Main contents of the trainings were structure of rice mill machine, operation and maintenance of machine, financial

management, and profitability of rice mill operation.

Through interview to the members of farming support groups, following information was obtained.

- They can understand the contents of training such as operation and maintenance of rice mill machine easily because there are members who have experiences on usage of machinery.
- They can understand about accounting easily. However, they want to strengthen knowledge about accounting further.
- Condition of rice mill machines is good.
- Both groups carry out financial management using bank account. A part of profit from the rice mill operation is utilized for farming loan to model farmers. However, regulation on usage of profit of rice mil operation is necessary to be set up properly for ensuring sustainability.

Indicator 3-2: Operation rate of rice mill (operated throughout the year and more than 90,000 kg of rice is milled annually)

The farming support groups of D4 and D7 started rice mill operation from June 2008. Average monthly quantities of rice mill during 5 months from the start of operation were 7,880kg and 5,864kg respectively. Assuming monthly operation are 25 days, average daily quantities of rice mill are 315kg (D4) and 235kg (D7) respectively. In the case of D4, daily quantity is more than 300kg and this amount profitable level. In the cases of D7, quantity is not sufficient yet. However, not only D4 and also D7 are gaining profit from rice mill operation. As of January 2009, the operation frequency of rice mill machine is 2 days per week in D4 and 4 days per week in D7. Operation rate is reduced because time passed from the rice harvest season. Therefore, amount of rice milling is not at profitable level at present. Amount of rice milling is largest at the rice harvest season and after then amount of rice milling is reduced gradually. In order to judge whether operation rate of rice mill become more than 90,000kg per year, it is necessary to collect data at least one year.

Indicator 3-3: Contents and size of joint sale of product

A part of milled rice (polished rice) is sold as trial by the WUA of D4 and D7. Following table shows quantity of rice sold, selling price and persons purchased.

Table 3: Trial sale of milled rice

WUA	Quantity (polished rice)	Selling price	Purchasers
D4	412 kg	20 Mt	Residents in Chokwe town
D7	200kg	3 kinds depend on quality of rice (15MT/kg, 20MT/kg, 25 MT/kg)	Residents in Lionde village

Remarks: When information about selling of polished rice reached to surrounding peoples, residents came to buy rice.

Although draft regulation for the use of rice milling machine for farming supporting group is made, a concrete vision of farming support activity, such as marketing plan (for example how to add value of milled rice and which is market to sell) and business management plan are not prepared yet. Although farming support activity is regarded as one of the activity of water users' association (WUA), agreement of members of WUA is not obtained as a business of WUA and there is no document of rules on this business. There are several points that should be decided as rule, such as organizational structure for business administration linked with organization of WUA, roles or duties of members of WUA, how to share profit and hot to use profit, who take risk or responsibility in case of deficit. It is necessary to prepare concrete vision including marketing plan, management plan, and regulations concerned, because rice harvest season comes soon.

4-2-4 Output 4: Collaboration among SDAE, EAC, and HICEP is strengthened.

Collaboration among three institutions is under strengthening through joint planning and implementation of activities in the Chokwe Irrigation Scheme.

Indicator 4-1: Achievement of collaboration activities of SDAE, EAC and HICEP (number of periodic meetings held, number of officers concerning the Project, number of workshops and participants)

Three partner institutions meeting (SDAE, EAC and HICEP) has been held 5 times and Workshop has been held 5 times as of October 2008. Around 50 officials of three partner institutions including extension officers and water management staff have engaged in the project activities. By collaborating three partner institutions, a rice production promotion plan in the Chokwe Irrigation Scheme was prepared. Through these activities, collaboration among three partner institutions is under strengthening.

Indicator 4-2: Action Plan prepared

SDAE, EAC and HICEP prepared draft of action plan jointly. However, necessary

budget for implementing the action plan was not obtained. And then, the draft action plan was modified focusing the activities which can be implemented within current framework of the structures of three organizations and current available budget. Following 3 kinds of activities mainly related with implementation of agricultural roan scheme (OPEC fund) have been implemented.

Table 4: Plan of activities and its progress of the action plan

	Activities	Progress
1	Preparation of agricultural calendar and its dissemination to farmers (instruction to farmers in order not to delay timing of appropriate planting)	This activities are underway with initiative of extension officers
2	Promotion of rice cultivation techniques	SDAE is implementing rice seeds production for next rice cropping season using 16 ha of rice fields in the Chokwe Irrigation Scheme. An agricultural loan scheme (OEPC fund) is carried out by collaboration among SDAE, EAC, and HICEP. Its target area is 800ha.
3	Periodical meeting by SDAE, EAC, and HICEP	For smooth implementation of the agricultural loan scheme (OEPC fund), SDAE, EAC, and HICEP are holding periodical meetings.

Indicator 4-3: Implementation status of action plan

As mentioned above.

4-2-5 Others (trainings implemented)

Various trainings for extension officers, model farmers, members of WUA, members of farming support groups and member of animal traction promotion etc. groups have been carried out under the Project. Kinds of trainings, times of trainings held, participants and contents of trainings are as follows. (Detail see Annex 8)

Table 5: Trainings implemented

Title of training	Target	Time	Participants in total	Contents
Training for extension officers	8 extension officers of SDAE	2	16	Basic rice cultivation technique, practice and field visit
Training for model farmers	Model farmers in D4 and D7 areas	5	108	Basic rice cultivation technique and field visit, preparation of nursery, seeding method, technical exchange meeting, beans cultivation technique in dry season, explanation of trial and extension activities, and practice
Training for water management and irrigation facility maintenance	HICEP contracted workers and water group leaders in D4 and D7 areas	5	111	Water management and irrigation facility maintenance
Training for farming support group	Members of farming support groups in D4 and D7 areas (5 members in each group, in total	2	15	Structure, operation and maintenance of rice mill, fund management, and profitability of

	10 persons)			rice mill operation
Training for animal traction promotion group	Members of animal traction promotion groups in D4 and D7 areas (5 members in each group, in total 10 persons)	2	10	Animal health, reproduction, and animal traction work
Training for D4 farmers surrounding D4 model farm for 2008/9 crop season	Farmers in D4 area but other than the model farmers	1	9	Basic rice cultivation technique and field visit, preparation of nursery, and seeding method

Followings are opinions of participants to trainings and their situation on practice.

In general, most of farmers in Chokwe Irrigation area are engaged in rice production either as labor or subsistent farmer using traditional farming system. This project has introduced new rice cultivation techniques on mainly germination of seed, nursery preparation, number of seedling, and fertilizer application method, etc.

(1) Opinions of participants to training for extension officers:

Especially first training was very good for us and we could learn new knowledge/techniques on rice cultivation mentioned above. They requested more training. They also want to learn about reasons why rice yield becomes low or high.

(2) Opinions of participants to training for model farmers:

The contents of training were very good. However, there are some techniques which are not easy to practice. The way of teaching of instructors was very good. Useful techniques learned are number of seedling for transplanting (3-5 seedlings), land leveling, and weed control. Some model farmers do not apply puddling using animal traction. They want to learn more about method of application of fertilizer such as appropriate amount of fertilizer and appropriate timing of application. Some other model farmers want to know profitable application of fertilizer with less amount of fertilizer, because price of fertilizer rose. Some model farmers said that they learned 3 split application of fertilizer, but they apply fertilizer 2 times.

(3) Opinions of participants to training for farming support group:

As mentioned already.

(4) Opinions of participants to training for animal traction promotion group:

Some contents of training were easy to understand and some were difficult. Training contents were wide including usage of tools, method of tillage and land leveling, feeding method to animal, method for identifying animal diseases and simple treatment of diseases. They learned that land leveling (puddling) is useful for weed control. As mentioned already, they feel the manual on animal traction is useful because they can refer when they need.

Considering above mentioned opinions of training participants, training contents and way of teaching by instructors were appropriate. Some participants expressed that more training is necessary and they want to learn again about subjects which are not well understood at the trainings. It is important to consider opinions of training participants in trainings which will be held in the remaining period of the Project and to strengthen technical instruction at the model fields.

4-3 Prospect to achieve the Project Purpose

(Project Purpose: Agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme is increased.)

Indicator: Yield of rice at the model farmers (59 farmers) in the project target area is increased from current yield level (level of 3 t/ha) to 5.0 t/ha.

Average yield of rice in D4 and D7 areas are as follows.

Table 6: Data on rice yield

Area	Results of the baseline survey (t/ha)	Average yield of some model farmers (yield data was obtained), 2007/08 crop season (t/ha)
D4	3.83	4,71
D7	3.24	4,32

Average yields of rice of the model farmers (not all farmers) in 2007/08 cropping season in D4 and D7 are around 4.71 t/ha and around 4.32 t/ha respectively. Average yield of rice of 11 small-scale farmers in D4, D5, D6 and D7 was 3.38 t/ha according to the results of sampling survey carried out in April 2007 by the Project. Although average yield of model farmers at 2007/08 cropping season was not yet reached 5.0 t/ha, average yield was increased around 1 t/ha. Rice cultivation (2008/09 cropping season) is underway at present. Achievement of the Project Purpose is going to be evaluated after the collection of yield data of the model farmers. It seems there is certain possibility to achieve the target yield by considering the degree of the rice yield increase at previous cropping season.

5. Results of the Evaluation with Five Criteria

5-1 Relevance

Relevance of the Project is high.

Household survey was carried out as a baseline survey under the Project for 202 small-scale farmers in D4, D5, D6, D7, and D12 areas in the Chokwe Irrigation Scheme. According to the results of the baseline survey, share of the agricultural income is around 20% only and main reasons of this low percentage of agricultural income in the total income are inappropriate crop production techniques, lack of agricultural machinery, lack of irrigation water, lack of finance for farming, weak marketing, etc. Average agricultural area (registered area) of small-scale farmers is 1 ha. However, due to the constraints mentioned above, it is said that actual crop cultivation area is around half hectare. Accordingly, necessity to take appropriate measures to tackle above mentioned problems and to promote increase of agricultural income through improvement of agricultural productivity is high.

Main objective of the Government Program for 2005-2009 is reduction of absolute poverty through promotion of sustained socio-economical development. In this program, 7 key sectors are pointed out and one of them is agriculture. The objective of the Action Plan for the Reduction of Absolute Poverty 2006-2009 (PARPA II) is to reduce poverty rate from 54% in 2003 to 45% in 2009. In agricultural sector, production increase, improvement of productivity, food security, income increase, strengthening of competitiveness of farmers are important issues. The objectives of the National Program for Agrarian Development II are poverty reduction and food security and main principle of this program is to take right of small-scale farmers and their needs into well consideration. The objective of the Action Plan for Food Production 2008-2011, which was prepared last year, is to achieve sustained increase of agricultural production and food self-sufficiency in national level. Main target of this program is to achieve self-sufficiency of main food crops in the next 3 years and to reduce dependence on food import. Rice is one of the important crops. This Project is well relevant to Government Plans of Mozambique.

In Japanese ODA (Official Development Assistance) policy, assistance to the agricultural sector for food production and rural development is considered important for poverty reduction and sustainable development. One of the important sectors of ODA policy to Mozambique is "rural development and economic development". At TICAD IV (Tokyo International Conference on African Development IV), it is decided to provide assistance with priority in order to double rice production in Sub-Saharan Africa through CARD (Coalition for African Rice Development) by promoting self-help of countries of Sub-Saharan Africa. Republic of Mozambique was selected as first targeted country at the CARD Nairobi conference which was held in October 2008. Therefore, this project is well conformity with priority subjects of Government of Japan.

The baseline survey was carried out in order to select target groups and target areas of the Project. Criteria for the selection of survey areas were 1) water users association is in

existence, 2) ratio of small-scale farmers is high, 3) rehabilitation of irrigation facilities has been mostly completed, 4) it can be expected good effect by demonstration activities. And then, water users association of D4, D5, D6, D7, and D12 were selected. And then, a baseline survey were carried out in these selected areas, and by analyzing collected data and considering effect on publicity, stable supply of irrigation water, road access in rainy season, and situation of rehabilitation of irrigation and drainage facilities, etc., D4 and D7 areas were selected as project target area. It seems that selection of target areas is appropriate.

5-2 Effectiveness

Effectiveness of the Project will be at a satisfactory level.

It seems that necessary outputs are set up for achieving the Project Purpose, which is to increase agricultural production of small-scale farmers. Degrees of achievement of the Output 1, 2, and 3 are mostly as planned. When degrees of achievement of the Outputs become high at the end of the Project, it is prospected that the Project Purpose will be achieved at a certain satisfactory level. As mentioned in the previous chapter, according to the results of surveys, average rice yield was level of 3 t/ha. By introducing rice cultivation techniques under the Project, average yield was increased to 4.5 t/ha. The model farmers become more familiar with new techniques, therefore, there is possibility to attain the target yield, which is 5.0 t/ha, by the end of the Project.

5-3 Efficiency

Efficiency of the Project is at a satisfactory level.

Inputs of Mozambican and Japanese sides were appropriate in general in terms of quantity, quality and timing, and have been utilized well for the Project activities. However, Mozambican counterparts pointed out that duration of stay of Japanese experts is short and it is necessary to stay at least whole period of a rice cropping season particularly for the first year of the Project. They recommended more opportunity for indirect beneficiaries by conducting demonstration activities for farmers who are not directly assisted by the Project and also by conducting field days for exchanging experiences between model farmers and other farmers within rice cultivation area. As for counterparts, it is important that the Government of Mozambique assign full-time counterparts to work directly with Japanese experts in order to ensure technical transfer.

5-4 Impacts

It is still early to judge whether the Overall Goal will be achieved or not. However, some other side effects or unexpected effects have been observed.

5-4-1 Prospect of achieving the Overall Goal

Overall Goal: Small scale farmers' income in Chokwe Irrigation Scheme is improved.

Indicator: Farming income by rice production of small scale farmers in D4, D7, and neighboring areas of rice production is increased 30%.

The Baseline survey was carried out under the Project in D4, D5, D6, D7 and D12 areas in the Chokwe Irrigation Scheme. 202 answers from small-scale farmers were collected. Average agricultural income in those areas was 10,685 Mt, average off-farm income was 44,303 Mt, and average total income was 54,988 Mt. In the case of the D4 and D7, average agricultural incomes were 9,091 Mt and 9,424 Mt respectively.

Average yields of rice of the model farmers in 2007/08 cropping season in D4 and D7 were 4.7 tons/ha and 4.3 tons/ha. According to a trial calculation, by increasing yield from 3.3 t/ha to 5.0 t/ha, gross income of rice production is increased from 23,100 Mt/ha to 35,000 Mt/ha. Net income of rice production is increased around 12,000 Mt/ha from 4,580 Mt/ha to 16,480 Mt/ha. It seems that this amount of income increase is significant for small-scale farmers.

In order to achieve this kind of income increase, following conditions should be fulfilled.

1) Small-scale farmers can get finance for farming such as fertilizer and land preparation, etc.
2) Irrigation water management and management of irrigation facilities are carried out appropriately by WUA.
3) Small-scale farmers adopt cultivation techniques which this project recommends.
4) Secondary and tertiary canals are rehabilitated.
5) Agricultural extension services are provided appropriately to small-scale farmers.

Where these conditions are satisfied, it is expected that small-scale farmers in D4, D7, and neighboring areas of rice production can achieve significant increase of income by rice production.

5-4-2 Side effects or unexpected effects

Following positive side effects or unexpected effects of the Project have been observed.

(1) Dissemination of the rice cultivation techniques of the Project to farmers of neighboring areas.

Several farmers in D8 and D9 areas were interested in the rice cultivation techniques

of the Project and they learned from the model farmers in D7. They are practicing rice cultivation using learned knowledge.

(2) Reduction of women's work load and time on rice milling

Traditionally women carry out rice milling manually for their home consumption. It is heavy and time consuming work for women. By introducing the rice milling machines, not only farmers of the WUAs of D4 and D7, other farmers are utilizing the rice milling service which is carrying out by the farming support groups. Farmers bring their rice for milling and after then they sell a part of milled rice and also they consume a part of its. It seems that women's working load and time for manual rice milling is reduced by using the rice milling service.

(3) Increase of employment opportunity for the people in this area as labor.

Because of introduction of new rice cultivation techniques to the model farmers and increase of cultivated area, more labors become necessary in order to carry out transplanting, weed control, harvest and post-harvest etc. appropriately.

5-5 Sustainability

Sustainability on policy aspect will be assured. In order to assure sustainability of institutional & organizational, financial and technical aspect, necessary measures should be taken.

5-5-1 Policy aspect

Chokwe District is one of the target districts of the Action Plan for Food Production 2008-2011 and focused crops for Chokwe District are rice, maize and wheat. Chokwe is one of the rice production areas and increase of rice production is important issue of the Government of Mozambique. Activities for increasing rice production are regarded as important. Therefore, policy sustainability will be assured.

5-5-2 Institutional and Organizational aspect

Number of staff of SDAE, EAC and HICEP is not so sufficient. In the case of extension officers in Chokwe District (SDAE in Chokwe), there are 8 extension officers and this number is bigger than other district in general. It is considered that minimum requirement to establish extension team is covered and increase of extension officers is difficult. However, the Government of Mozambique makes efforts to increase the number of extension officers in the country through PRONEA (National Agricultural Extension Program).Coordination and collaboration among three institutions (SDAE, EAC and HICEP) are being promoted under the Project and collaboration has been improved. In order to extend or disseminate rice cultivation techniques and related techniques which are introducing by the Project to other areas, it seems that preparation of an action plan for dissemination is necessary. Not only activities of the plan but also roles of each three institutions should be included in the action plan.

5-5-3 Financial aspect

MINAG carries out various activities based on the annual plan and budget. There is budgetary constraint for implementing new project by using proper governmental budget in general. In order to disseminate outcomes of the Project to neighboring areas in the Chokwe Irrigation Scheme, utilization of budget of Local Initiative Investment Fund or budget from donor institutions will be necessary.

5-5-4 Technical aspect

The Mozambican counterparts of the Project, who are staff members of SDAE, EAC and HICEP, have certain good capability as instructor for training courses carried out under the Project. In the case of extension officers, 2 extension officers have engaged in extension activities for model farmers. However, more engagement and practice with farmers may necessary. In the case of other 6 extension officers, they have participated in training courses twice. But they learned mainly theoretical subjects and opportunity to practice with farmers on rice cultivation at farms is lacking. It is necessary to strengthening practical capacity of those 6 extension officers.

Trainings on the farming support activity (rice mill operation) and the animal traction have been carried out by the local consultant and Japanese experts. There was not opportunity for Mozambican counterparts or any other governmental staff to engage in these activities as instructor. Therefore, knowledge and skills on these activities had not been transferred to them.

Overall, further capacity development especially for extension officers will be key for assuring technical sustainability of the Project.

6. Conclusion

The project activities have been progressed mostly as planned and the project performance is at a satisfactory level. The Project Purpose will be achieved if following recommendations are implemented.

7. Recommendations

7.1 Farmers level

(1) Self-reliance and sustainability of association activities

Farmer's organizations manage rice mill, credit system, animal traction, water management and irrigation infrastructure maintenance. However, they don't have appropriate management system yet, such as regulation, accounting system, and the organizational structure for association that should be legally recognized in order to access formal services. In order to ensure sustainability of their activities, long-term business vision on these activities should be prepared and suitable management structure should be established.

7.2 Counterpart institutions and Japanese expert team

(1) Detailed plan and schedule for extension activities

As for 2 extension officers who are in charge of the model areas in D4 and D7, in order to practice necessary instructions to the model farmers at appropriate timing, a detailed plan and schedule for extension activities, which are carried out by extension officers, should be prepared from now, through joint consultation among extension officers, Japanese expert team, and counterpart institutions. Monitoring of extension activities conducted by extension officers can be done by using this plan and schedule.

(2) Technical orientation and training

In order to ensure sustainability of the activities and dissemination of the techniques, it is necessary that the Project conducts more technical orientation and training to extension officers and the model farmers.

(3) Extension methodology under the Project

In order to have more farmers' access to rice cultivation techniques, it is necessary to strengthen extension methodology for increasing its effectiveness through farmer to farmer technical transfer with strong support of extension officers.

(4) Planning for self-reliant post-project

In order to ensure dissemination of the outcomes of the Project in the Chokwe Irrigation Scheme by own effort of the Mozambique side, it is necessary to plan a self-reliant post-project by the three counterparts institutions with assistance of Japanese experts, which should be included in the annual plan and budget (PAAO) of counterpart institutions.

(5) Technical manuals

It is necessary to enhance the contents of the technical manuals to be more practical one including illustrations, photos and figures for easy understanding by users. In order to disseminate relevant and selected technical manuals such as the rice cultivation, the water management, and the animal traction to other areas, it is recommended to duplicate them to appropriate media (for example durable hard copy for some manuals, CD, Leaflet, and Video) and distribute.

(6) Coordination among three counterpart institutions

In order to ensure sustainability and dissemination of the project outcomes, it is necessary to strengthen coordination and enhance capacities of counterpart institutions through the joint planning, implementation, monitoring and evaluation of the Action Plan.

(7) Adjustment of newly introduced techniques

The introduction of animal traction techniques for land preparation using the puddling system is well accepted by farmers. However, they observe that during the puddling it is necessary to avoid destroying the ridges which are used for water management, as unit (plot size/measure) for labor hired transplanting and weeding operations and keep the weeds removed from the field. The counterpart institutions and Japanese expert team should work with the farmers to adjust the puddling system to meet the needs/concerns of the farmers.

Farmers have to understand importance of field level water management not only for rice growth but also weed control. The counterpart institutions and the Project should make more efforts so that farmers can understand and implement appropriate water management for those effects.

Recognizing the importance of crop rotation for improving of farmer's income, reduce weed incidence and improve soil fertility, the counterpart institutions and the Japanese expert team will summarize the results of proposed idea regarding the crop rotation and inform to stakeholders.

7.3 District (SDAE), provincial (DPA: Provincial Directorate of Agriculture) and central (DNEA of MINAG) level

(1) Budget allocation for the project activities

The allocation of the budget for the project activities is mentioned on the Record of Discussion (R/D) as one of the measures to be taken by the Government of Mozambique. However, unfortunately its allocation had not been realized. In order to promote the project activities and ensure sustainability, it is strongly recommended to allocate budget for the Project.

(2) Assignment of full-time counterpart personnel

In order to ensure effective technical transfer and sustainability of the Project, it is necessary to assign full-time counterparts to work side by side with Japanese experts.

(3) Dissemination plan of the outcomes of the Project

In order to ensure dissemination of the outcomes of the Project to other areas (within in Chokwe Irrigation and other areas), it is necessary to consider planning for the human resource development, dissemination of the techniques of rice production through training and distribution of the manuals to other extension officers in other areas, and self-reliant post-project.

Annex 1 Schedule of the Evaluation

Date			Time	Schedule
1	5-Jan	Mon		A Japanese evaluation team member (consultant) arrive at Maputo
			12:00	Visit to JICA Mozambique Office
			13:00	Courtesy call to the Ministry of Agriculture (MINAG)
			14:30	Meeting with Mozambican evaluation team members (explanation of evaluation method)
2	6-Jan	Tue	10:00	A Mozambican evaluation member and a Japanese evaluation member move to Chokwe
			14:30	Meeting with Japanese experts
3	7-Jan	Wed	08:00	Interview to a counterpart of SDAE and 2 extension workers
			10:30	Interview to a counterpart of HICEP
			14:00	Visit to the model area in D7
4	8-Jan	Thu	08:00	Interview to a counterpart of EAC
			09:00	Observation of seed production facilities and rice cultivation experimental field
			14:00	Interview to members of animal traction promotion groups (D4 and D7)
5	9-Jan	Fri	08:00	Interview to members of farming support groups (D4) and model farmers in D4
			10:30	Interview to members of farming support groups (D7) and model farmers in D7
			14.30	Data collection
6	10-Jan	Sat	08:00	Observation of rice cultivation field of a private company (MIA) in D 11
7	11-Jan	Sun	---	Data analysis
8	12-Jan	Mon	08:00	Collection of additional data
			10:00	Interview to a staff of MIA (regarding seed production and rice mill etc.)
			13:00	Move to Maputo
9	13-Jan	Tue		Other Japanese evaluation team members arrive at Maputo
			11:30	Visit to JICA Mozambique Office (Japanese evaluation member only)
			13:30	Courtesy call to the Ministry of Agriculture (MINAG)
			15:00	Move to Chokwe
10	14-Jan	Wed	08:00	Courtesy call to SDAE, HICEP and EAC
			10:00	Workshop (presentation of the outputs and progress of the Project by counterparts)
			13:00	Field visit (interview to members of model farmers and members of farming support group in D4)
11	15-Jan	Thu	08:00	Field visit (interview to members of model farmers and members of farming support group in D7)
			13:00	Interview to counterparts and internal meeting for drafting the Joint Evaluation Report
12	16-Jan	Fri	8:00-17:00	Discussion within Joint Evaluation Team on the draft evaluation report
13	17-Jan	Sat	8:00-15:00	Discussion within Joint Evaluation Team on the draft evaluation report Translation of evaluation report to Portuguese
14	18-Jan	Sun		Preparation of draft evaluation report Translation of evaluation report to Portuguese Move to Maputo
15	19-Jan	Mon	09:00	Discussion and finalization of evaluation report by the Joint Evaluation Team
			15:00	Explanation of contents of the evaluation report to MINAG and the Minutes of Meeting (MM)
16	20-Jan	Tue	10:00	JCC meeting (explanation of the summary of the mid-term evaluation report) and Signing of MM
			15:00	Report to Embassy of Japan (by Japanese evaluation members)
			16:30	Report to JICA Mozambique office (by Japanese evaluation members)
17	21-Jan	Wed		Some Japanese evaluation team members visit other irrigation scheme in Mozambique (till 23 January)
18	22-Jan	Thu		A Japanese evaluation team member leave for Japan

Annex 2 PDM version 3 and version 2

(1) PDM version 3 (proposed version)

Project Title: The Integrated Agricultural Development Project for Small Scale Farmers in Chokwe Irrigation Scheme

Target Area: The areas where model farms located in D4 and D7 in Chokwe Irrigation Scheme

Target Group: Direct beneficiaries are model farmers (59 small-scale farmers) in D4 and D7, and the counterparts of the project and technical staffs of three partner institutions (around 50 persons) in Chokwe Irrigation Scheme. Indirect beneficiaries are small scale farmers in D4 and D7 areas and neighboring areas in Chokwe Irrigation Scheme

Implementation Organization: 1) National Directorate for Agricultural Extension of the Ministry of Agriculture, 2) SDAE (District Services for Economic Activities), 3) EAC (Chokwe Agrarian Station), and 4) HICEP (Chokwe Hydraulic Public Corporation)

Duration: From March 17, 2007 to March 31, 2010 Date of revision: January 20, 2009

Narrative Summary	Objectively Verifiable Indicator	Measures of Verification	Important Assumption
【Overall Goal】 Small scale farmers' income in Chokwe Irrigation Scheme is improved.	Farming income by rice production of small scale farmers in D4, D7, and neighboring areas of rice production is increased 30%. (*1)	Statistics data (Farmers' household survey and baseline survey results)	
【Project Purpose】 Agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme is increased.	Yield of rice at the model farmers (59 farmers) in the project target area is increased from current yield level (level of 3 t/ha) to 5.0 t/ha. (*2)	Baseline survey results and project report	- Agricultural production is stabled.
【Output】 1. Techniques for small scale farmers in the target area are improved.	1-1. Number of small scale farmers adopted appropriate agricultural techniques (33 farmers in D4 and 26 farmers in D7, in total 59 farmers) (*3) 1-2. Number of extension officers adopted agricultural techniques for small scale farmers (8 officers) (*4) 1-3. Number of agricultural techniques developed and improved (11 kinds) (*5) 1-4. Number of seed production techniques improved (2 kinds) (*6) 1-5. Number of various kinds of manuals prepared (5 kinds) (*7)	Common measure: Interview to farmers 1-1 Project report 1-2 Project report 1-3 Project report 1-4 Project report 1-5 Project report	- Serious natural disaster or disease doesn't affect extremely in the Chokwe Irrigation Scheme. - Lack of irrigation water due to severe drought is not occurred.
2. Management of irrigation facilities and water use in the target area is improved.	2-1. Number of water users association members acquired management methods of irrigation facilities (38 farmers in D4 and 41 farmers in D7) 2-2. Collection rate of water fee from the model farmers (80%) 2-3. Number of various kinds of manuals prepared (3 kinds) (*8)	Common measure: Interview to farmers 2-1 Project report 2-2 Data of HICEP 2-3 Project report	
3. Farming support activities provided by extension officers for small scale farmers in the target area are strengthened.	3-1. Number of trainees trained on micromill operation (10 persons) (*9) 3-2. Operation rate of rice mill (operated throughout the year and more than 90,000 kg of rice is milled annually) (*10) 3-3. Contents and size of joint sale of product	Common measure: Interview to farmers 3-1 Project report 3-2 Project report 3-3 Project report	
4. Collaboration among SDAE, EAC, and HICEP is strengthened.	4-1. Achievement of collaboration activities of SDAE, EAC and HICEP (number of periodic meetings held, number of officers concerning the Project, number of workshops and participants) 4-2. Action Plan prepared 4-3. Implementation status of action plan	Common measure: Interview to counterparts 4-1 Project report 4-2 Action Plan 4-3 Project report	

【Activities】	【Inputs】		- Agricultural policy doesn't change drastically. - Water users' association members cooperate to the Project activities.
0 Conduct baseline survey 1-1 Train extension workers in agricultural technology 1-2 Establish model farm 1-3 Promote animal traction 1-4 Strengthen capacity of EAC 1-5 Examine and establish rice cultivation techniques for small scale farmers 1-6 Examine and improve up-land crop cultivation techniques for small scale farmers 1-7 Improve rice seed multiplication techniques 2-1 Conduct survey on management of the irrigation facilities 2-2 Rehabilitate canals in model plots 2-3 Prepare manuals on irrigation facility management and water supply management 2-4 Train HICEP personnel and leaders of model water user associations in use and management of canals 2-5 Monitor management of irrigation facility and water supply in the target area 3-1 Review existing farming support activities (AFD, IFAD, NGO etc) 3-2 Train farming support groups of model WUAs 3-3 Carry out farming support activities by extension workers and WUAs 3-4 Monitor farming system support activities conducted by extension staff and model WUAs 4-1 Hold periodic meetings to mutually review activities of EAC, SDAE and HICEP 4-2 Conduct workshops for reinforcing the collaboration among EAC, SDAE and HICEP 4-3 Conduct activities to promote collaboration among SDAE, EAC, and HICEP, and strengthen the extension system 4-4 Monitor collaboration among SDAE, EAC, and HICEP 4-5 Prepare action plan for agricultural production through collaboration among SDAE, EAC, and HICEP 4-6 Carry out each activity conducted by EAC, SDAE and HICEP, according to the action Plan	<Mozambican Side> Counterpart staffs : Responsible counterparts for Japanese experts Supporting staff Facilities: Project offices and other facilities for the project Other related cost	<Japanese Side> Main Experts: 1. Chief Advisor/ Extension/ Training 2. Sub Advisor/ Farming System 3. Irrigation and Water Management 4. Coordinator Short-Term Experts: if necessary Equipment Vehicle, Rice mills, Small pumps, etc. Materials for rehabilitation of secondary and tertiary canals, etc. Counterparts training: if necessary	【Precondition】 - The condition of public safety is not deteriorated.

(*1) According to the results of the baseline survey, farming incomes by rice production per farmer in D4, D5, D6 and D7, which is sales income of unhusked rice deducted cost, were 7,590Mt, 8,034Mt, 1,785Mt, and 5,608Mt respectively.

(*2) According to the results of the baseline survey, average rice yields in D4 and D7 were 3.83 t/ha and 3.24 t/ha respectively. According to the results of rice yield sampling survey (harvesting rice of one square meter) carried out under the Project, average yield of 11 small-scale farmers was 3.38 t/ha. Considering these survey data, target rice yield is set as 5.0 t/ha.

(*3) Number of the model farmers means model farmers who cultivated rice in 2008/09 year in D4 and D7.

(*4) All agricultural extension staffs in SDAE

(*5) 11 kinds of technique such as 1) rice seed preparation (selection, soaking, and germination), 2) rice varieties and seeds (Limpopo variety, use of certified seeds, appropriate quantity of

seeds is 60 kg/ha), 3) nursery preparation (protected semi-irrigated rice nursery, size of rice nursery, and nursing term), 4) sowing (density, covering up seeds with soil, and water management), 5) preparation of paddy field (plotting and animal traction), 6) transplanting methods (planting density and number of seedlings per plot), 7) techniques on fertilizer application (application of urea in three times, total 100kg/ha), 8) paddy field management (water management, weed control and pest control), 9) harvesting (appropriate timing of harvesting), 10) post-harvest (appropriate rice drying), 11) farmers' seed production.

(*6) 1) Improvement of accuracy of works (techniques described in the Manual on High Quality Seed Production Technique) and 2) improvement of facilities and equipment for seed production such as drying yard for rice seeds, threshing machine, seed selection machine, etc.

(*7) 1) Manual on High Quality Seed Production Technique, 2) Manual on Rice Cultivation for the Extension Workers in Chokwe District, 3) Manual on Upland Crop Cultivation, 4) Manual on Agricultural Extension, and 5) Manual on animal traction

(*8) 1) Chokwe Irrigation Scheme Maintenance Manual for Water Users' Association, 2) Chokwe Irrigation Scheme Water Management Manual for Water Users' Association, and 3) Manual on Irrigation Facilities Construction Management

(*9) 5 persons in D4 and 5 persons in D7, in total 10 persons

(*10) Rice mill operation is profitable when more than 300kg of rice is milled daily. Operation days per month are estimated 25 days. In one year, 90,000kg of rice should be milled. (300kg x x25 days x 12 months = 90,000kg)

(2) PDM version 2

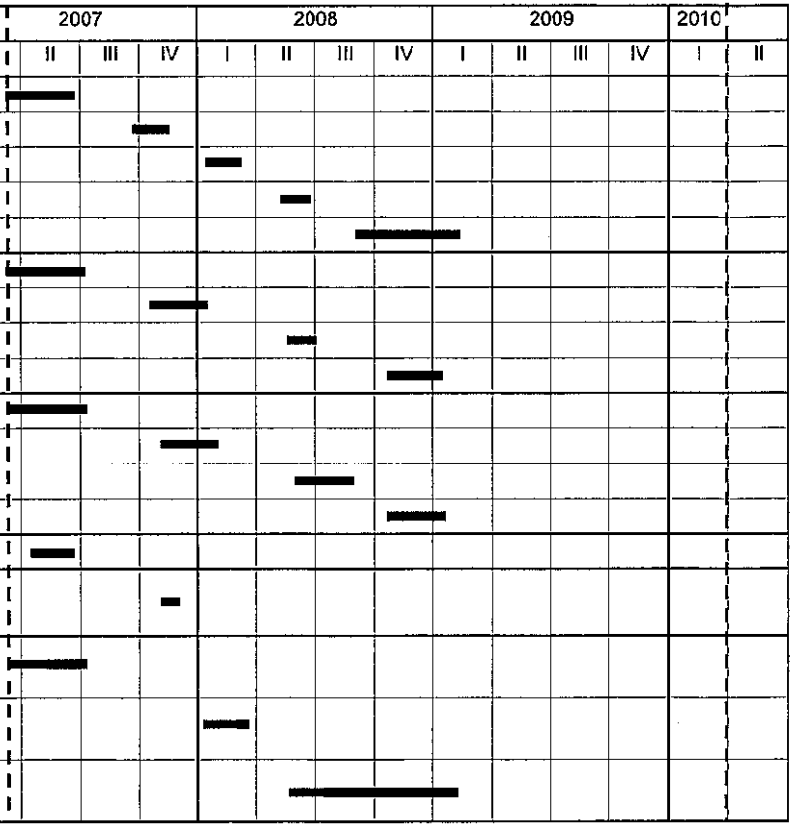
Project Title: Integrated Agricultural Development Project for Small Scale Farmers in Chokwe Irrigation Scheme
Target Area: 2 WUAs (D4, D7) and neighborhood's areas in Chokwe Irrigation Scheme
Target Group: Direct beneficiaries 100 persons - Small scale farmers within the Model Farms (around 50 persons) in 2 WUAs (D4, D7) and member of C/P and technical staff of three partner institutions (around 50 persons) in Chokwe Irrigation Scheme, Indirect beneficiaries – Small scale farmers in 2 WUAs (D4, D7) and neighboringhood's areas in Chokwe Irrigation Scheme
Duration: 3 years Date of revision: June 12, 2008

Narrative Summary	Objectively Verifiable Indicator	Measures of Verification	Important Assumption
[Overall Goal] 1. To improve small scale farmers' income in Chokwe Irrigation Scheme 2. To contribute to food security in Mozambique	1. Farming income of small scale farmers is increased. 2. The degree of self-sufficiency in food is increased.	Existing statistics data Project report	
[Project Purpose] To increase agricultural production by small scale farmers in the target area in Chokwe Irrigation Scheme	Production of major products is increased in the project target area. (rice; minimum 50% of yield increase in 2 WUAs (D4, D7) compared to the base line survey data.)	Existing statistics data Project report	Agricultural production is stabled.
[Output] 1. Improved technology for small scale farmers in the target area	1-1. Number of small scale farmers adopted appropriate agricultural technology 1-2. Number of extension officers adopted agricultural technology for small scale farmers 1-3. Number of agricultural technologies developed and improved 1-4. Number of seed production technologies improved 1-5. Number of various kinds of manuals prepared	1. Annual report of SDAE and EAC Project report	- Agricultural technology for small scale farmers is extended. - Water users associations utilize manuals. - The coordination among SDAE, EAC and HICEP is promoted.
2. Improved management of irrigation facilities and water use in the target area	2-1. Number of water users association members acquired management methods of irrigation facilities 2-2. Irrigable area 2-3. Collection rate of water fee 2-4. Number of various kinds of manuals prepared	2. Annual report of HICEP and Project report	
3. Strengthened farming support activities provided by extension officers and WUAs for small scale farmers in the target area	3-1. Number of trainees trained on micromill operation 3-2. Operation rate of rice mill 3-3. Contents and size of joint sale of product 3-4. Number of micro-credit access	3. Annual report of SDAE and Project report Operation record of rice mill	
4. Strengthened collaboration among SDAE, EAC, and HICEP	4-1. Achievement of collaboration activities of SDAE, EAC and HICEP 4-2. Number of periodic meetings held 4-3. Number of officers concerning the Project 4-4. Number of workshops and participants 4-5. Action Plan prepared 4-6. Implementation status of action plan	4. Project report	

【Activities】	【Inputs】		- Agricultural policy doesn't change drastically. - Water users' association members cooperate to the Project activities.
0 Conduct baseline survey 1-1 Train extension workers in agricultural technology 1-2 Establish model farm 1-3 Promote animal traction 1-4 Strengthen capacity of EAC 1-5 Examine and establish rice cultivation techniques for small scale farmers 1-6 Examine and improve up-land crop cultivation techniques for small scale farmers 1-7 Improve rice seed multiplication techniques 2-1 Conduct survey on management of the irrigation facilities 2-2 Rehabilitate canals in model plots 2-3 Prepare manuals on irrigation facility management and water supply management 2-4 Train HICEP personnels and leaders of model water user associations in use and management of canals 2-5 Monitor management of irrigation facility and water supply in the target area 3-1 Review existing farming support activities (AFD, IFAD, NGO etc) 3-2 Train farming support groups of model WUAs 3-3 Carry out farming support activities by extension workers and WUAs 3-4 Monitor farming system support activities conducted by extension staff and model WUAs 4-1 Hold periodic meetings to mutually review activities of EAC, SDAE and HICEP 4-2 Conduct workshops for reinforcing the collaboration among EAC, SDAE and HICEP 4-3 Conduct activities to promote collaboration among SDAE, EAC, and HICEP, and strengthen the extension system 4-4 Monitor collaboration among SDAE, EAC, and HICEP 4-5 Prepare action plan for agricultural production through collaboration among SDAE, EAC, and HICEP 4-6 Carry out each activity conducted by EAC, SDAE and HICEP, according to the action Plan	<Mozambican Side> Counterpart staffs : Responsible counterparts for Japanese experts Supporting staff Facilities: Project offices and other facilities for the project Other related cost	<Japanese Side> Main Experts: 1. Chief Advisor/ Extension/ Training 2. Sub Advisor/ Farming System 3. Irrigation and Water Management 4. Coordinator Short-Term Experts: if necessary Equipment Vehicle, Rice mills, Small pumps, etc. Materials for rehabilitation of secondary and tertiary canals, etc. Counterparts training: if necessary	【Precondition】 - Serious natural disaster or disease doesn't affect extremely in the Chokwe Irrigation Scheme. - The condition of public safety is not deteriorated.

Annex 3 Dispatch of JICA Experts

No.	Name of Expert	Field	Period of dispatch	M/M (Man-Month)	Total M/M
1	Mr. Masato TAMURA	Chief advisor, Extension/ training	2007.03.18 - 07.11	3.87	15.17
			2007.09.29 - 11.27	2.00	
			2008.01.12 - 03.12	2.00	
			2008.05.08 - 06.27	1.70	
			2008.08.30 - 2009.02.13	5.60	
2	Mr. Teruhisa NAMBA	Agronomy	2007.03.18 - 07.14	3.97	11.97
			2007.10.13 -2008.01.10	3.00	
			2008.05.08 - 07.06	2.00	
			2008.10.15 - 2009.01.12	3.00	
3	Mr. Masafumi TAGUCHI	Irrigation water management	2007.03.31 - 07.28	4.00	12.90
			2007.10.26 - 2008.01.20	2.90	
			2008.05.26 - 08.23	3.00	
			2008.10.18 - 2009.01.15	3.00	
4	Mr. Kazuo TORII	Base line survey	2007.04.14 - 06.26	2.47	2.47
5	Ms. Yorio IIZUKA	Rice mill operation/marketing	2007.11.03 - 12.03	1.03	1.03
6	Ms. Akiko OKIMURA	Coordinator	2007.03.18 - 07.08 (2008.03.18 - 05.16)	3.77 (2.00)	15.50 (6.06)
			2008.01.03 - 03.14 (2008.01.03 - 03.03)	2.40 (2.03)	
			2008.05.08 - 2009.02.11 (2008.05.08 - 07.07)	9.33 (2.03)	
				Total	59.04



Annex 4 Provision of Equipment by Japanese Side

No. of equipment	Arrival time	Name of equipment	Type	Manufacture	Quantity	Purchase price			Using Section	Storing place	Purchase	Purpose	Present working and using condition
						Yen	MT	$					
S-1,2	2007	Rice mill, Spare parts	SB10D/ R-230HD	Satake	2	1,300,552			SDAE	Store of WUA	From Japan	Farming support	Working and good condition
S-3,4	2007	Awn remover	SK Clean G-2	Hokuetsu	2	105,000			SDAE	Store of WUA	From Japan	Farming support	Working and good condition
S-5,6	2007	Transformer for awn remover	SWF-15	Hokuetsu	2	84,000			SDAE	Store of WUA	From Japan	Farming support	Working and good condition
S-7	2007	Winower	SK Toumi Manual type TS	Hokuetsu	1	25,780			SDAE	Store of WUA	From Japan	Farming support	Working and good condition
S—8	May-07	UPS	DIGITAL 500 PLAS	DCC	1		1,440		SDAE	Expert office	Local purchase	Protect PC	Working and good condition
S—9	May-07	Stabilizer	ALPH 2000SK	DCC	1		10,143		SDAE	Expert office	Local purchase	Stabilize PC	Working and good condition
S-10～13	Jun-07	Irrigation pump	HONDA a WB 30XT	HONDA	4		61,600		SDAE	SDAE store and EAC store	Local purchase	Irrigation	When lack of irrigation water, Good condition
E-1	May-07	UPS	DIGITAL 500 PLAS	DCC	1		1,440		EAC	Expert office	Local purchase	Stabilizing PC voltage	Working and good condition
E-2	May-07	Stabilizer	ALPH 2000SK	DCC	1		10,143		EAC	Expert office	Local purchase	Stabilizing PC voltage	Working and good condition
E-3	May-07	Refrigerator	LG 352L	LG	1		13,999		EAC	Expert office	Local purchase	Seeds storing	Working and good condition
E-4	Feb-07	Thresher	HMG 73S	Iseki	1	628,215			EAC	IRRI store in EAC	Local purchase	Seeds storing	Harvesting time, Good condition
E-5	Feb-07	Thresher	SK Clean G-2	Hokuetsu	1	54,500			EAC	IRRI store in EAC	Local purchase	Seeds storing	Harvesting time, Good condition
E-6	Feb-07	Transformer for awn remover	SWF-15	Hokuetsu	1	42,000			EAC	IRRI store in EAC	Local purchase	Seeds storing	Harvesting time, Good condition
E-7	Feb-07	Winnower	SK Toumi Manual type TS	Hokuetsu	1	25,780			EAC	IRRI store in EAC	Local purchase	Seeds storing	Harvesting time, Good condition
H-1	May-07	UPS	DIGITAL 500 PLAS	DCC	1		1,440		HICEP	C/P Office	Local purchase	Protection of PC	Good condition
H-2	May-07	Stabilizer	ALPH 2000SK	DCC	1		10,143		HICEP	C/P Office	Local purchase	Protection of PC	Good condition
H-3,4	May-07	Level	B-21	Sokia	2	181,566			HICEP	C/P Office	Local purchase	Leveling of the field	When necessary, Good condition
H5～10	Feb-08	Bush cutter	UMK435E	HONDA	6		121,830		HICEP	HICEP store	Local purchase	Clearing of grass	When training, Good condition
V-1	May-07	Vehicle	NISSAN HARDBODY(4WD)	NISSAN	1			38 500	SDAE	SDAE parking	Local purchase	Field &Research Work	Good condition
V-2	May-07	Vehicle	TOYOTA HILUX(4WD)	TOYOTA	1			20 711	SDAE	SDAE parking	Local purchase	Field &Research Work	Good condition
M-1～5	May-07	Motorbike	HONDA XL 125 SL DK	HONDA	5			24 150	SDAE	SDAE store and EAC store	Local purchase	Field &Research Work	Good condition
				Total		2,447,393	232,178	83 361					

Note: Initial S means equipment under SDAE , initial E means equipment under EAC and initial H means equipment under HICEP

ANNEX 5 Training in Japan

No.	Name	Present Position	Training contents and institutes	Period of training	
				From	To
1	Mr. Aderito Mavie	Director, SDAE (District Service for Economic Activities) in Chokwe District	Agricultural Development through farmer participation JICA Tsukuba Center	Nov.17, 2007	Dec.22, 2007
2	Mr. Amandio Lopez	Extension department head, SDAE in Chokwe District	Extension for managers JICA Tsukuba Center	July 7, 2008	Sep. 6, 2008
3	Mr. Jose Antonio Gaspar	Director of National Directorate for Agrarian Extension (DNEA), Ministry of Agriculture (MINAG)	Study visit JICA Tsukuba Center	Aug. 5, 2008	Aug. 14, 2008
4	Mr. Simao Nyiama	Head of International Cooperation Department, MINAG	Study visit JICA Tsukuba Center	Aug. 5, 2008	Aug. 14, 2008

SDAE: Serviços Distritais de Actividades Económicas

DNEA: Direcção Nacional de Extensão Agrária

Annex 6 Local Cost Allocated by Japanese Side

Unit: Yen

No.	Category	From Feb. to Sep. 2007	From Sep. 2007 to Mar. 2008	From May 2008 to Mar 2009	Total
1	General local cost expenses	3,290,000	7,094,000	10,709,000	21,093,000
2	Technical cooperation equipment purchase cost	2,532,000	1,264,000	-	3,796,000
3	Technical cooperation equipment transport cost	468,000	525,000	-	993,000
4	Expert carrying equipment purchase cost	3,136,000	-	359,000	3,495,000
5	Expert carrying equipment transport cost	60,000	-	-	60,000
6	Other equipment purchase cost	-	1,080,000	957,000	2,037,000
7	Other equipment transport cost	-	63,000	-	63,000
8	Construction cost	188,000	792,000	-	980,000
9	Local consultant cost	-	1,767,000	6,808,000	8,575,000
	Total	9,674,000	12,585,000	18,833,000	41,092,000

Annex 7 Assignment of Counterparts

No.	Name of Counterpart	Field for the Project	Present Post	Remarks	Period of Assignment for the Project		Assignment period for the organization
					From	To	
1	Mr. Jose Antonio Gaspar	Project director	Director of National Directorate for Agrarian Extension (DNEA), MINAG	---	2007.03.18	Present	January 1981～Up to now
2	Mr. Aderito Mavie	Project manager	Director, SDAE (District Service for Economic Activities) in Chokwe District	---	2007.03.18	Present	January 2001～Up to now
3	Mr. Marcos Langa	Rice agronomy researcher	Head of Rice research section, EAC	---	2007.03.18	Present	August 27, 1996～Up to now
4	Mr. Fiderio Salamandane	Rice agronomy researcher	-----	Job-change	2007.03.18	2008.03	---
5	Mr. Hirario Mulhanga	Rice, Upland crop researcher	Rice research officer, EAC	---	2007.03.18	Present	July 6 ,2005～Up to now
6	Mr. Alberto Banguine	Irrigation water management	Director of technical section, HICEP	---	2007.03.18	Present	February 2002 ～Up to now
7	Mr. Roberto Lumbero	Water user association supervisor	Director of land management, HICEP	---	2007.03.18	Present	March 1997～Up to now
8	Mr. Amandio Lopez	Extension/ training	Supervisor of rural extension, SDAE	---	2007.03.18	Present	September 2004～Up to now

MINAG: Ministry of Agriculture

Annex 8 Trainings implemented (as of October 2008)

(1) Training for extension workers

No	Date	Period	Participants	Participated organization/persons	Training contents
1	Oct 17-19 & 21, 2007	4 days	8	Extension workers in Chokwe	Basic rice cultivation technique and practices
2	Feb. 5 & 6, 2008	2 days	8	Extension workers in Chokwe	Study visit to Xaixai
		total	16		

(2) Training for the model farmers

No	Date	Period	Participants	Participated organization/persons	Training contents
1	October 25-26 & 29, 2007	3 days	22	Model farmers in D4 & D7	Basic rice cultivation technique and practices
2	Feb. 23, 2008	1 day	17	Model farmers in D4 & D7	Exchange of farmers experience between D4 and D7
3	Jun. 5, 2008	1 day	20	Model farmers in D4 & D7	Techniques on bean cultivation in dry season
4	Jul. 1, 2008	1 day	29	Model farmers in D4 & D7	1)Presentation and discussion on 2nd year results of 2007/08 season research and model farm, 2)Awarding
5	Oct. 1, 2008	1 day (+ 2 days practical)	24	Newly selected model farmers in D4 and D7	Basic rice cultivation technique and practices
		total	112		

(3) Training for water management and irrigation facility maintenance

No	Date	Period	Participants	Participated organization/persons	Training contents
1	Jan. 14 & 15, 2008	2 days	12	Water group leader in D7 WUA	Water management, irrigation facility maintenance
2	Jul. 24, 2008	1 day	19	HICEP contracted workers、Water group leaders	Water management, irrigation facility maintenance
3	Jul.29, 2008	1 day	27	HICEP contracted workers、Water group leaders	Water management, irrigation facility maintenance
4	Jul. 31, 2008	1 day	29	HICEP contracted workers、Water group leaders	Water management, irrigation facility maintenance
5	Aug. 12, 2008	1 day	24	HICEP contracted workers、Water group leaders	Water management, irrigation facility maintenance
		total	111		

(4) Training for farming support group

No	Date	Period	Participants	Participated organization/persons	Training contents
1	Nov. 13-16, 2007	4 days	10	Farming support group in D4 & D7	Structure, operation and maintenance of rice mill and fund management
2	Aug. 2, 2008	1 day	5	Farming support group in D4 & D7	Profitability of rice mill operation
		total	15		

(5) Training for animal traction promotion group

No	Date	Period	Participants	Participated organization/persons	Training contents
1	Dec. 3-14, 2007	10 days	5	Animal traction promotion group in D4	Animal health, reproduction and animal traction work
2	Jul. 7-23, 2008	10 days	5	Animal traction promotion group in D7	Animal health, reproduction and animal traction work
		total	10		

(6) Training for D4 farmers surrounding model farm 2008/9 crop season

No	Date	Period	Participants	Participated organization/persons	Training contents
1	Oct. 11, 2008	1 day	9	Surrounding farmers in D4	Basic rice cultivation technique and field visit