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**MINUTES OF MEETINGS  
BETWEEN  
THE JAPANESE FINAL TERMINAL EVALUATION TEAM AND  
THE AUTHORITIES CONCERNED OF  
THE GOVERNMENT OF THE REPUBLIC OF MALAWI  
ON  
JAPANESE TECHNICAL COOPERATION  
FOR  
THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEMES  
TECHNICAL COOPERATION PROJECT**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") organized the Final Terminal Evaluation Team (hereinafter referred to as "the Team") on the Development of Smallholder Irrigation Schemes Technical Cooperation Project (hereinafter referred to as "the Project"), headed by Mr. Kyoji MIZUTANI, the Resident Representative of JICA Malawi Office, from 27<sup>th</sup> September to 10<sup>th</sup> October, 2008.


During the evaluation in Malawi, the Team had a series of discussions with the Malawian authorities concerned, jointly evaluated the achievements and implementation process of the Project, and exchanged views on the evaluation results and measures to be taken towards the end of the Project.

As a result of the discussions, both sides agreed to the matters referred to in the Joint Terminal Evaluation Report attached hereto.

Lilongwe, October 10, 2008

  
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*Leader of Japanese Final Evaluation  
Team  
Japan International Cooperation Agency  
Japan*

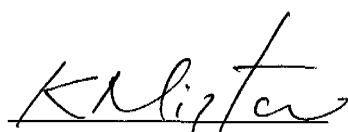
  
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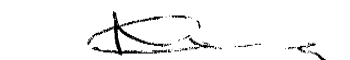


THE JOINT TERMINAL EVALUATION REPORT  
ON  
THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEMES  
TECHNICAL COOPERATION PROJECT  
IN THE REPUBLIC OF MALAWI

Lilongwe  
October 9, 2008



Mr. Kyoji MIZUTANI  
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## 1. BACKGROUND

The agriculture sector of Malawi plays a critical role in sustainable development and poverty reduction of the country, accounting for 38% of GDP, 80% of total export, and 80% of total work force of the nation. The production of the sector is, however, unstable and not sufficient to achieve food security in the country due to the fragile farming environment of smallholder farmers. More than 70% of individual Malawian farmers hold less than one hectare of farmland, and most of the smallholder farmers practice rain-fed farming, thus affected by natural disasters such as droughts and floods due to erratic rainfall of Malawi.

The Government of Malawi (hereinafter referred to as "the GoM") stresses the importance of irrigation development in Malawi Growth and Development Strategy (hereinafter referred to as "MGDS"), the medium-term development policy of the country, and has been making efforts to increase irrigated areas to address the problem of low and fluctuating crop production. Out of 400,000 hectares of potentially irrigable area in Malawi, however, only 61,350 hectares had been irrigated by the year 2005. Irrigation development particularly in smallholders irrigation schemes had been stagnant because of the scarce human and financial resources as well as the lack of appropriate technologies at both government and farmers levels.

To make a breakthrough in this circumstance, the Government of Japan (hereinafter referred to as "the GoJ"), through JICA, assisted the GoM to conduct the "*Study on Capacity Building and Development for Smallholder Irrigation Schemes*" (hereinafter referred to as "the Development Study") from the year 2002 to 2005. As a result, the Development Study successfully developed a "*package*" of low-cost technologies for self-help irrigation development, which enables smallholder farmers to embark on irrigation farming without any external inputs. The Development Study team also conducted pilot irrigation projects at several Extension Planning Areas (hereinafter referred to as "EPA") in Lilongwe and Kasungu Agricultural Development Division (hereinafter referred to as "ADD"), thereby having strengthened the frontline extension officers' technical and administrative capacity to promote irrigation development.

For establishing a nationwide system for further disseminating the cost-effective irrigation farming technologies, the GoM through the Department of Irrigation (hereinafter referred to as "the DoI") and the Department of Agricultural Extension Services (hereinafter referred to as "the DAES") has launched the "*Development of Smallholder Irrigation Schemes Technical Cooperation Project*" (hereinafter referred to as "the Project") since March 2006, in cooperation with JICA.

From the outset of the Project, a series of training programs on the small-scale irrigation development technologies have been conducted for frontline extension officers and farmers nationwide; field studies for further improving the quality of the small-scale irrigation development package have also been carried out. Since the Project is expected to be concluded in March 2009, JICA dispatched a mission team (hereinafter referred to as "the Team") to conduct the final terminal evaluation of the Project, as agreed in the Record of Discussion made by and between GoM and JICA on March 17, 2006.

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## 2. FRAMEWORK OF THE PROJECT

### 2.1. Project Title

Development of Smallholder Irrigation Schemes Technical Cooperation Project

### 2.2. Duration of the Project

From 23<sup>rd</sup> of March 2006 to 22<sup>nd</sup> of March 2009 (3 years)

### 2.3. Target Beneficiaries

Agricultural Extension Development Officers (AEDOs) and Smallholder farmers in Potential EPAs

### 2.4. Project Design Matrix (PDM)

The Project Design Matrix of the Project is attached in APPENDIX 2.

<b>Super Goal</b>	Dissemination of small-scale irrigation farming contributes to poverty reduction.
<b>Overall Goal</b>	Small-scale irrigation farming promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security.
<b>Project Purpose</b>	Nation wide extension system for comprehensive small-scale irrigation farming established
<b>Output</b>	<ol style="list-style-type: none"><li>1. Extension system for small-scale irrigation development package established at all potential EPAs.</li><li>2. Adaptation of small-scale irrigation farming technologies and experiences systematized.</li></ol>
<b>Activities</b>	<ol style="list-style-type: none"><li>1-1. Conduct training of small-scale irrigation development package for extension workers in all potential EPAs</li><li>1-2. Train extension workers on project formulation, monitoring and evaluation</li><li>1-3. Formulate programs for dissemination of small-scale irrigation farming at each potential EPA</li><li>1-4. Distribute tools and training materials for dissemination of small-scale irrigation farming to potential EPAs</li></ol> <ol style="list-style-type: none"><li>2-1. Examine and systematize the experience of development and application of methods and skills on small-scale irrigation farming at different EPAs.</li><li>2-2. Examine and systematize the experience of development and application of farm management and farming practice for sustainability of small-scale irrigation farming at different EPAs.</li></ol>

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	<p>2-3. Examine and systematize the experience and various socio-economic factors at different EPAs which influence sustainability of small-scale irrigation farming.</p> <p>2-4. Revise the contents of small-scale irrigation development package based upon results of systematization from activities mentioned above and establish improved comprehensive package for nationwide dissemination of small-scale irrigation farming.</p>
<b>Inputs</b>	<p>&lt;Japanese side&gt;</p> <ol style="list-style-type: none"> <li>1) Experts <ol style="list-style-type: none"> <li>(a) Long-term experts <ol style="list-style-type: none"> <li>i) Chief Advisor/Human Resource Development</li> <li>ii) Monitoring and Evaluation/Coordinator</li> </ol> </li> <li>(b) Short-term experts <ol style="list-style-type: none"> <li>i) Irrigation</li> <li>ii) Farm Management</li> </ol> </li> </ol> </li> <li>2) Machineries and Equipment <ol style="list-style-type: none"> <li>(a) Tools for constructing irrigation facilities (Hoes, spades, hammers, saws, axes, etc)</li> <li>(b) Equipment for extension and monitoring and evaluation (bicycles, Technical manuals, posters and leaflets)</li> <li>(c) 4 WD Vehicles (To be bought as needs arises)</li> <li>(d) Office equipments (To be bought as needs arises)</li> </ol> </li> <li>3) Training <ol style="list-style-type: none"> <li>(a) Training AEDOs in Malawi</li> <li>(b) Training Irrigation Technicians in Japan</li> </ol> </li> </ol> <p>&lt;Malawian side&gt;</p> <ol style="list-style-type: none"> <li>1) Provision of unskilled labor from the beneficiary farmers</li> <li>2) Provision of locally available materials for construction of small-scale irrigation facilities (dam, water, canal)</li> <li>3) Provision of Human Resources at each of Agricultural Development Division (ADD), District Agricultural Development Office (DADO) and EPA level</li> <li>4) Provision of office space</li> <li>5) Provision of counterparts from the DoI and the DAES</li> </ol>

NOTE: "The small-scale irrigation" that the Project is aiming to promote is limited to those with gravity system, not including the other types of small-scale irrigation such as watering cans, treadle/motorized pumps, and so forth.

### 3. OBJECTIVES AND METHODOLOGIES OF EVALUATION

#### 3.1. Objectives of the Terminal Evaluation

The major objectives of the terminal evaluation are as follows:

1. Review and evaluate comprehensively the achievement and implementation process of the Project by both Malawian and Japanese sides in accordance with five evaluation criteria: "Relevance"; "Effectiveness"; "Efficiency"; "Impact" and "Sustainability".
2. Identify existing problems and their countermeasures, recommend necessary actions to be taken within and after the Project period, and draw general lessons for efficient planning

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and implementation of similar technical cooperation project.

3. Summarize the evaluation results, recommendations and lessons learned in a joint terminal evaluation report attached with the Minutes of Meeting (M/M).

### **3.2. Members of the Joint Evaluation Committee**

The GoM and JICA agreed to form a Joint Evaluation Committee composed of representatives from both sides to evaluate the Project comprehensively. The committee members are listed in the Table 1 below.

**Table 1: List of Joint Evaluation Committee Members**

Malawian Side			
	Name	Title	Organization
1	Ms. C. Mlowoka	Principal Irrigation Officer	Department of Irrigation, MoIWD
2	Mr. B.P.Chikabadwa	Chief Agricultural Extension Officer	Department of Agricultural Extension Services, MoAFS
Japanese Side			
	Name	Title	Organization
1	Mr. K. Mizutani	Resident Representative	JICA Malawi Office
2	Mr. H. Hoshi	Director, Arid and Semi-Arid Farming Area Division I	Rural Development Department, JICA HQs
3	Ms. K. Itagaki	Consultant	Global Link Management, Inc.
4	Mr. H. Sonoyama	Project Formulation Advisor	JICA Malawi Office

### **3.3. Schedule of the Evaluation**

The terminal evaluation of the Project was conducted from September 27 to October 16, 2008, according to the schedule shown in APPENDIX 3.

### **3.4. Participants in Discussions**

Stakeholders participated in interview or discussions during the terminal evaluation are listed in APPENDIX 1.

### **3.5. Evaluation Process and Methodology**

The joint terminal evaluation exercise was conducted by taking the following steps.

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(1) Design of the Evaluation Framework

The Team first designed an “evaluation grid”(see APPENDIX 4), the framework of the terminal evaluation that contains key questions to assess the achievement and implementation process of the Project.

(2) Data Collection

In order to assess the Project according to the evaluation grid above, the joint evaluation committee members collected both quantitative and qualitative data by employing the following methodologies.

- a) Collect and review reports, documents and monitoring data of the Project.
- b) Field study and semi-structured interview to key informants at irrigation sites (farmers and AEDOs/AEDCs in EPAs).
- c) Discussion with, and questionnaire to Irrigation Officers (IOs) and AEDOs/AEDCs who participated in a workshop.
- d) Interview with Japanese experts and Malawian counterpart personnel.

(3) Data Analysis and Evaluation

The data collected through the above methodologies were analyzed and evaluated according to the five evaluation criteria shown below. In the joint evaluation committee meeting the members from both Japanese and Malawian sides discussed on the evaluation results, which were finally summarized in this joint evaluation report.

No.	Criterion	Description
1	Relevance	The relevance of the Project is reviewed in terms of the validity of the Project purpose and the overall goal in connection with the development policy of the GoM, the aid policy of the GoJ, needs of beneficiaries, and logical consistency of the Project plan.
2	Effectiveness	The effectiveness of the Project is assessed by evaluating the extent to which the Project had achieved its purpose and by clarifying the relationship between the purpose and outputs.
3	Efficiency	The efficiency of the Project implementation is analyzed with emphasis on the relationship between outputs and inputs in terms of timing, quality and quantity of inputs.
4	Impact	The impact of the Project is assessed on the basis of both positive and negative influences caused by the Project.
5	Sustainability	The sustainability of the Project is assessed in terms of political, institutional, financial and technical aspects by examining the prospect of continuity and expansion of the activities after the termination of the Project.

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## 4. EVALUATION RESULTS

### 4.1. Achievements of the Project

#### 4.1.1. Input

##### <Japanese side>

##### (1) Experts

Experts dispatched by JICA are as follows:

##### a) Long-term experts

	Title	Name	Assignment Period
1	Chief Advisor/Human Resource Development	Mr. H. Okada	March 2006 – present
2	Monitoring and Evaluation/Coordinator	Mr. K. Shiraishi	July 2006 – present

##### b) Short-term experts

	Title	Name	Assignment Period
1	Irrigation Development Advisor	Mr. D. Tsurumaki	October 2006
2	Irrigation Development Advisor	Mr. T. Haneishi	November 2006 – February 2007
3	Farm Management Advisor	Mr. T. Nakamura	October 2006 – February 2007

##### (2) Machineries and Equipment

As listed in APPENDIX 5, JICA provided the Project with a number of machineries equipment since the commencement of the Project. All the equipment is fully used in good condition.

##### (3) Training

A total of 12 GoM officers were sent to Japan for a month and participated in the Joint Training Program for Counterpart Personnel in Irrigation and Drainage in 2006 and 2007. A list of officers participated in the training program in Japan is attached in APPENDIX 6.

##### <Malawian side>

##### (1) Provision of counterparts from the DoI and the DAES

The Project counterpart personnel provided by the GoM are as follows:

Department of Irrigation, MoIWD			
	Title	Name	Assignment Period
1	Irrigation Officer	Mr. J. Chikhungu	March 2006 – present
2	Irrigation Officer	Mr. M. Ngwira	March 2006 – present

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Department of Agricultural Extension Services, MoAFS			
	Title	Name	Assignment Period
1	Extension Officer	Mr. A. Mtengezo	April 2007 – April 2008
2	Extension Officer	Mr. H. Nkhoma	May 2008 – present

## (2) Provision of other Human Resources

The GoM has provided the Project with the support by sending some government officers such as Irrigation Officers (hereinafter referred to as “IO”), Extension Methodology Officers (hereinafter referred to as “EMO”), Agricultural Extension Development Coordinators (hereinafter referred to as “AEDC”) and AEDOs through ADD, District Agricultural Development Office (hereinafter referred to as “DADO”) and EPAs.

## (3) Provision of Facility

The facilities provided to the Project by the GoM are as follows:

- Adequate office space (2 rooms and 2 storages)
- Facilities for the Project’s training activities

### 4.1.2. Output and Activities

#### (1) Output 1

***“Extension system for small-scale irrigation development package established at all potential EPAs.”***

#### <Verifiable Indicators>

- 1-1. Small-scale irrigation development package is smoothly extended by AEDOs in potential EPAs throughout the nation.
- 1-2. Monitoring and evaluation on extension of small-scale irrigation farming conducted at each potential EPA.
- 1-3. Extension materials and tools for construction are utilized by farmers at each potential areas.
- 1-4. 488 extension workers trained in small-scale irrigation development package.

#### <Evaluation Results>

The total number of the extension officers (AEDO/AEDC) who were trained through the Project’s annual three-session training program on small-scale irrigation development package has increased from 152 to 491, which is beyond the target number (see Table 2).

The performance of the trained extension officers’ activities for extending small-scale irrigation farming technologies contained within the irrigation development package varies between the two basic components, namely, “irrigation development technologies (e.g. construction of irrigation facilities)” and “agricultural technologies (e.g. on-farm water

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**Table 2 : Number of EPAs/extension officers trained on the package**

		EPA	AEDO /AEDC	IO/EMO /Others
<b>Baseline (by 2005)</b>		<b>38</b>	<b>152</b>	<b>10</b>
2006	(Central region)	27	108	7
2007	(Northern region)	27	110	11
2008	(Southern region)	30	121	33
Sub-total (3yrs)		84	339	51
<b>Grand Total</b>		<b>122</b>	<b>491</b>	<b>61</b>

management, soil conservation)".

The irrigation development technologies have remarkably been extended throughout the country. By February 2008, the number of developed irrigation sites reached to 1,449 in total, 1,020 sites of which have been reported as being in operation. On the other hand, the Table 3 shows that extension officers' activities for demonstrating some low-cost agricultural technologies (i.e. *bocashi* compost making, botanical pesticide) in 2006 and 2007 have not been conducted as much as expected.

Extension materials and tools listed in APPENDIX 5 have been distributed by the Project to 84 EPAs for facilitating small-scale irrigation scheme development. According to the monitoring record of the Project, most of the distributed tools for construction have been kept by respective EPA and frequently utilized by farmers.

The Project has been conducting additional training on monitoring and evaluation several times for 122 EPAs (including 38 EPAs targeted by former cooperation activities by JICA). Although the monitoring and evaluation activities have been conducted by the trained AEDOs, the timeliness and accuracy of their monitoring report have not been ensured yet. The reliability of the monitoring and evaluation exercise within their extension system still requires an improvement.

**Table 3: Numbers of demonstration activities conducted by EPAs**

Agricultural Technology		Central 27 EPAs (2006)	Northern 27 EPAs (2007)
Bocashi Compost Making	Planned	696	1,018
	Achieved	582	774
	(%)	84%	76%
Botanical Pesticide	Planned	628	1,243
	Achieved	502	767
	(%)	80%	62%
Liquid Fertilizer	Planned	563	975
	Achieved	497	600
	(%)	88%	62%

Source: Project Progress Report 4 & 5

## (2) Output 2

***"Adaptation of small-scale irrigation farming technologies and experiences systematized."***

### <Verifiable Indicators>

2. Technical issues and adaptation experience of technologies for small-scale irrigation farming documented.

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### <Evaluation Results>

The small-scale irrigation development package to be revised by the Project was originally composed of: 1) *comprehensive guideline*, 2) *technical manual*, 3) *leaflet*, 4) *posters*, and 5) *picture stories*. The Project has been modifying the package mainly by adding two items, which are 6) *handouts* for training sessions and 7) *monitoring sheets*.

The short-term experts dispatched as an irrigation development advisor and a farm management advisor in 2006 jointly carried out a field study at 50 small-scale irrigation sites, compiling various technologies invented by farmers themselves according to the condition of their sites. Based upon the suggestion made by the irrigation development expert, the Project has revised the “irrigation development technologies” components of the package, incorporating “safety” measures against landslide problem into the contents.

As for the “agricultural technologies” components of the package, however, experiences of those farmers applying a range of water and farm management methods still mostly remain unexamined. Although the dispatch of additional short-term experts was planned in 2007 and 2008, as of October 2008 it has not been realized due to JICA's annual budget constraints.

### 4.1.3. Project Purpose

***“Nationwide extension system for comprehensive small-scale irrigation farming established.”***

### <Verifiable Indicators>

Irrigation groups increased to 1,220.

### <Evaluation Results>

Assuming that at least one irrigation group is organized per site, the total number of irrigation groups increased to 1,449 by February 2008 (see Table 4 and APPENDIX 7).

**Table 4: Irrigation Sites developed (by February 2008)**

		No. of EPAs monitored	No. of sites developed	Irrigation area developed (ha)	No. of irrigation group members
<b>Baseline (by 2005)</b>		<b>38</b>	<b>665</b>	<b>1,378</b>	<b>14,678</b>
<b>Achievement by the Project</b>	2006	65	329	732	8,078
	2007	92	455	654	8,933
	Sub-Total (2yrs)	-	784	1,386	17,011
<b>Grand Total (by February 2008)</b>		<b>92</b>	<b>1,449</b>	<b>2,764</b>	<b>31,689</b>

\* The data on achievements of 2008 will be updated by the end of the Project

Source: Project Monitoring Record

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However, the Project purpose, i.e. the establishment of nationwide extension system for small-scale irrigation farming, cannot be realized until the institutional capacity of those 122 EPAs to formulate, implement, monitor and evaluate their extension activities is enhanced. As already mentioned above, "smooth extension of agricultural technologies" and "proper operation of monitoring and evaluation activities" are still challenges facing the extension officers of those EPAs. The Project purpose is likely to be achieved after overcoming those remaining issues.

#### 4.1.4 Overall Goal

***"Small-scale irrigation farming promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security."***

##### **<Verifiable Indicators>**

1. Demonstrated irrigation group members increased to 21,960
2. Demonstrated irrigation area increased to 1,830 ha.

##### **<Evaluation Results>**

As shown in the Table 4 above, the total number of small-scale irrigation group members and the size of small-scale irrigation area have increased from 14,678 members to 31,689 members, and from 1,378 ha to 2,764 ha, respectively. The Team confirmed during the field survey that introduction of small-scale irrigation farming has enabled farmers to ensure food security with increased income. Once the Project purpose can properly be attained, the overall goal is likely to be achieved.

#### **4.2. Implementation Process of the Project**

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The Project has annually implemented a three-session training on small-scale irrigation development package for extension officers (i.e. AEDOs) of 84 EPAs nationwide, targeting 27 EPAs in the central region in 2006, 27 EPAs in the Northern region in 2007, and 30 EPAs in the Southern region in 2008. Additional training on monitoring and evaluation were also conducted for a total of 122 EPAs.

The training has been implemented by the Japanese long-term experts, Malawian counterpart from the DoI and the DAES in collaboration with a total of 23 trainer of trainers (TOT) consisting of IO, AEDC/AEDO and Crop Officers from various areas. The timing, duration, methodology and contents of those training sessions have continuously been modified by integrating lessons learned from the experiences of project implementation.

It is to be noted that the Project has introduced the practical exercise in the field as a part of the training, which was not included in the small-scale irrigation development package that was originally compiled through the foregoing Development Study. The extension officers and farmers were to work in the field to learn actual ways of constructing irrigation facilities and applying the agricultural technologies. These practical sessions were highly appreciated by the trained extension officers as very effective and useful for their extension work after the training.

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In parallel with the training, the Project has also conducted a field study and examination of technologies in the small-scale irrigation development package, mainly through the efforts of the short-term experts. The outcomes of their study have also been reflected in the undertaking of the succeeding training sessions.

Another aspect to be noted in terms of the project management is the introduction of the team meetings. At the time of the Mid-term Evaluation, some issues related to the coordination among the Project personnel were raised, and it was recommended to the Project to take any measures to improve the communication within the Project team. As the response to the recommendation, the Project introduced the regular team meeting, with which the up-to-date information sharing and practical decision-making at the working level have been realized.

### **4.3. Evaluation by Five Criteria**

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Through the evaluation study, the Team jointly assessed the Project's relevance, effectiveness, efficiency, impact and sustainability.

#### **4.3.1. Relevance**

The Project is considered to be highly relevant to the policies and programs of both the GoM and GoJ, as well as to the needs of the target beneficiaries.

##### **(1) Relevance to the policies of the GoM**

The Project is consistent with the Malawi Vision 2020, the overall long-term development plan of the GoM, which focuses on sustainable growth, improvement of food and nutrition, and the equitable distribution the income and wealth. The Malawi Growth and Development Strategy (MGDS) also emphasizes the importance of the food security for the attainment of which the promotion of the small-scale irrigation is essential. Promotion of winter cropping is emphasized as a priority area in the Agricultural Development Programme (ADP), while the importance of the participation of the beneficiaries in the development and maintenance of irrigation facilities is clearly stipulated in the National Irrigation Policy and Development Strategy (NIPDS). Therefore, the direction of the Project is considered to be quite relevant to the policy thrust of the GoM.

##### **(2) Consistency with the ODA policies of the Japanese Government**

The Japanese ODA policy that is currently under formalization focuses on three major priority concerns, i.e. sustainable economic growth, social development and infrastructure development. Agricultural and rural development is recognized as one of the contributing sector to the sustainable economic growth. The Country Program of JICA for Malawi also makes importance of the sustainable economic growth for which there are three programs formulated, namely, irrigation promotion program, food security program, and rural livelihood diversification program, and this Project is included in the irrigation promotion program as a vital part of it. Thus, the Project is considered to be quite consistent with the aid policies and programs of the GoJ.

### (3) Relevance of the Project design

The Project had been designed to disseminate the small-scale irrigation development package to the entire part of the country. Activities of the Project have been concentrated on the training of the frontline extension officers who are directly interacting with the smallholder farmers, and on the monitoring and evaluation of the developed irrigation sites. The Project applied an approach to focus on the capacity development while minimizing the physical inputs. Considering the budgetary and human resource constraints of the implementing agencies, the design of the Project is considered to be quite appropriate in order to attain the Project purpose.

### (4) Relevance to the needs of target beneficiaries

It is said that more than 70% of the rural population in Malawi are the smallholder farmers, who compose a large part of the poor strata of the society. Those smallholder households have been suffering from the chronic food shortage in the beginning of the rainy season in general. With introduction of the irrigation facilities, the food shortage problems can be solved or greatly minimized, as the irrigated farming enables farmers to obtain more food crops and additional income, with which they can afford the food throughout the year. The Team confirmed during the field interviews that the beneficiary farmers appreciate this aspect as the most important change brought about by irrigation. Thus, the Project is evaluated as very much relevant to the needs of the beneficiaries.

### 4.3.2. Effectiveness

The effectiveness of the Project is considered to be moderate based on the following analysis:

#### (1) Achievement of the Project purpose

The Project has trained 339 extension officers at 84 EPAs in the areas where the small-scale irrigation potential is high, thus the total number of the trained officers has reached to 491 at 122 EPAs. It has been reported that those trained extension officers have already developed 784 sites by February 2008. However, it is necessary to confirm whether these developed sites would continuously be in operation, as the small-scale irrigation schemes may be altered depending upon the local settings in each dry season, for which further strengthening of the monitoring system is essential. Also, the examination of the agricultural components of the small-scale irrigation development package has not yet been conducted, and the rate of dissemination of the said components is much less when compared with the number of irrigation sites so far developed. Thus, it is evaluated that nationwide extension system is yet to be established, and that the Project purpose has only partially been achieved.

#### (2) Contribution of outputs to the achievement of the Project purpose

Both of the outputs are to contribute to the achievement of the Project purpose as a whole. However, as discussed the section 3.1.2 above, systematization of agricultural components i.e. a part of the output 2, as well as the improvement of the monitoring system as a part of the output 1, have not yet been accomplished to the expected degree, thus their contribution to the achievement of the Project purpose is evaluated as partial.

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### (3) Analysis of factors

#### a) Promoting factors

As a part of the training, extension officers were requested to formulate the action plans that they will implement after the training. The monitoring and evaluation are conducted in accordance with their action plans so that the details of the small-scale irrigation sites developed by each extension officers are closely monitored. The Project also gives awards to the outstanding extension officers in terms of their performance of irrigation development. This supervision has enhanced the motivation among the trained extension officers, thus encouraged their efforts to promote the small-scale irrigation in their respective areas.

Another factor to be noted is the team operation among the trainers upon conducts of training activities. As they are to meet and discuss to prepare for each training session as a team in the field, they had frequent occasions to share their experiences and learn from each other. Such collaboration has been beneficial not only for the conduct of training activities, but also for the guidance to the activities by the extension officers after the training.

#### b) Hampering factors

The Project utilized the existing mechanism of agricultural extension for the dissemination of small-scale irrigation development package throughout the country. In the current setting, however, the extension officers are not equipped with adequate means of transportation for their services to the farmers in the rural areas. This given condition also affected the process of the Project implementation negatively, as the extension officers felt that they could have developed more irrigation sites if proper mobility had been provided.

There is also a question on the allocation of human resources to achieve the nationwide extension. As the Project was to conduct a series of training activities within the dry season at various scattered places all over the country, the full-time Project personnel were to carry out the vast task within the limited time. They had to take care of the sundry tasks of preparation and coordination needed for each training session while they are simultaneously engaged in the systematization of the small-scale irrigation development package by reflecting the feedback from the actual experiences. Although the Project could manage all of the activities with considerable efforts of the trainers who are the part-time counterpart personnel, this issue of human resource allocation may be considered as a potentially hampering factor for the Project implementation.

### (4) Important Assumptions

There has not been any notable changes in the policy direction of the GoM on the promotion of small-scale irrigation throughout the cooperation period, thus there has not been influences of the important assumptions to the Project implementation.

#### 4.3.3. Efficiency

The efficiency of the Project is assessed to be moderate, with evaluation of the appropriateness and utilization of the inputs made by both Japanese and Malawian sides. The

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inputs were mostly adequate in terms of the quality and timing of their provision to produce the intended outputs, but the unprecedented changes and delay of some of the planned inputs had negatively affected the implementation of the Project:

(1) Japanese Experts

Both long-term and short-term experts have properly carried out their expected roles and worked closely in harmony with the counterpart personnel. However, the dispatch of the short-term experts in the field of farm management was cancelled, due to the unprecedented budgetary problem for the part of JICA. Because of the absence of the short-term experts in that particular field, the agricultural components of the small-scale irrigation development package have not been examined to date, as a result of which the Project purpose could not fully be attained.

(2) Equipment and machinery

The equipment and machinery required for the Project activities and technical transfer have duly been provided. Counterpart and other relevant personnel have become capable of handling these equipment and machineries by their own and most of the equipment provided has fully been utilized and kept in good conditions.

(3) Training of counterpart personnel in Japan

The duration and subject of counterpart training were adequate. Those who have attended the training consider that their learning from those training has been helpful in carrying out not only the activities of the Project but also their regular duties.

(4) Assignment of counterpart personnel

As for the full-time counterpart, the personnel from DOI were assigned to carry out the Project activities in accordance with the planned schedule, while the assignment of the counterpart personnel from the DAES had delayed for about one year. The absence of the counterpart personnel in the initial year had created some difficulties in the startup of the Project and affected the Project management, which, however could be made up by the counterpart personnel who were assigned to the Project in the later years.

Aside from the full-time counterpart, there were also the trainers who participated in the project activities on the part-time basis. Most of them had worked in the foregoing JICA cooperation, i.e. Development Study and dispatch of short-term experts, thus they have already had knowledge and experience of the small-scale irrigation development package. It is evaluated that the involvement of those already trained personnel in the Project considerably contributed to the efficiency of the Project implementation.

#### 4.3.4. Impact

Impact of the Project is evaluated as fairly positive based on the results of the following analysis:

(1) Impact on overall goal level

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Further promotion, dissemination and practices of small-scale irrigation farming to increase food security is the overall goal of the Project to be achieved by the time at three years after the completion of the Project. It was confirmed in the process of this terminal evaluation that the introduction of the irrigation facilities would contribute to minimize the food insecurity, and to avail additional income in the smallholder households. Therefore the Team assessed that the prospect of achieving the overall goal would be high once the Project purpose is properly attained i.e. the establishment of the nationwide extension system for the small-scale irrigation development package. It is anticipated that through the established extension system, larger number of small-scale irrigation sites would be developed throughout the country.

## (2) Positive Impacts

During the interviews, the beneficiary farmers reported to the Team that there have been a lot of changes in their livelihood resulting from introduction of the small-scale irrigation farming. Most of them are no longer suffering from the food shortage in those crucial months of a year; they can obtain additional cash income out of the sale of the winter crops with which various improvements of their living standard were made, such as improvement of roofing materials, clothing, household appliances and so forth. Some of them also pointed out the impacts on the farming activities such that they can now afford livestock rearing or application of agricultural inputs, which was not possible before.

Aside from those tangible benefits to the participating farmers and their households, there are other ripple effects observed in the areas where the small-scale irrigation was introduced. Other farmers in the vicinity of the developed sites have also become interested and approached to the extension officers. There are also the cases where the farmer groups are voluntarily teaching the neighboring farmers the technologies of small-scale irrigation.

## (3) Negative Impacts

There has not been any negative impact of the Project reported or observed at the time of the terminal evaluation. There have however been the reports from a few sites on the examples of problems such that the irrigation group received complains from the community people who is using the same source of water for their domestic use, and that the non-member farmers broke the irrigation facilities out of jealousy to their successes. Although proper measures have already been taken to address these reported cases such as the alteration of the weir design, community meeting with initiatives of the traditional authorities and so forth, there is an implication to the future development. As the small-scale irrigation facilities inevitably have limitation in their geographical coverage and would possibly create any service or income disparities among the community members, it is essential to ensure the conducts of preparatory discussions and information dissemination to the communities where the potential sites are to be identified.

### 4.3.5. Sustainability

The sustainability of the Project is considered to be high based on the following analysis:

#### (1) Policy and Institutional Sustainability

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As the enhancement of food security is the prime focus of the development policies of GoM, the policy support would continuously be secured for the coming years. Together with the policy direction on promotion of irrigation farming in agriculture sector and emphasis on the small-scale irrigation development under the irrigation development strategy, sustainability in terms of development policy seems to be secured. As for the institutional sustainability, agricultural extension system is of the prime importance, which is quite likely to be sustained even under the on-going decentralization of services. Since there is not much changes anticipated in the existing institutional set up of the agricultural extension services, institutional sustainability of the Project is also assessed as high.

## (2) Organizational and Financial Sustainability

The activities of the Project have been carried out in line with the existing organizational structures of the implementing agencies within the scopes of their mandates. The Project have already trained extension officers in most of the EPAs in the potential areas, and those EPAs with trained extension officers have already included the activities of small-scale irrigation development as part and parcel of their annual work plans. Therefore it is anticipated that the activities to further promote the small-scale irrigation would be carried out as a part of the regular duties of the extension officers. At the beneficiaries' level, the irrigation groups have been organized with representatives and official members, who can properly manage their activities to keep their irrigation facilities functional. They have strong sense of ownership on the small-scale irrigation facilities that they themselves have constructed. With these confirmations, the Team evaluated that the organizational and financial sustainability would adequately be secured, once the monitoring mechanism on the irrigation sites is properly modified and duly integrated in the existing agricultural extension system.

## (3) Technical Sustainability

Through the regular meetings at the EPAs, DADO, and ADD, the knowledge and technologies learned by the extension officers who were trained by the Project have been shared to their colleagues, and the other extension officers have also started developing small-scale irrigation facilities in the areas of their jurisdiction. With these periodic review and in-house experience sharing upon regular meetings, the technical transfer and dissemination among the relevant officers would likely be continued. At the level of the beneficiary farmers, adoption of the technologies on construction and maintenance of irrigation facilities is observed to be very high. There are reported cases in which the farmers themselves improved the design of weir, or introduced permanent structure in a part of the scheme by obtaining external assistance, even without much help from the extension officers. In addition, all of the interviewed farmers were confident to continue the irrigation farming by their own in the future. However, as for the technologies categorized under the agricultural component such as on-farm water management, compost and liquid fertilizer, herbal pesticide and so forth, level of adoption is much lower. The team also observed problems in the farming technologies applied in the irrigated plots. Thus, technical sustainability is assessed as secured only for the irrigation component of the package, while the technologies under the agricultural components may not be sustainable enough without efforts for further examination and dissemination.

#### 4.4. Conclusion

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The Team reviewed the achievement and implementation processes of the Project, based on which the evaluation by five criteria was conducted. The Team found out that there were some adverse effects caused by the change of the planned inputs and that some parts of the expected outputs have not yet achieved, so that the Project would not be able to achieve the Project purpose within the scheduled cooperation period. Thus, the Team concluded that it is necessary to examine the possibility of extending the cooperation period and/or providing additional inputs for the due attainment of the Project purpose.

### 5. RECOMMENDATIONS

For the attainment of the Project purpose and also for the future orientation, the Team recommends the following:

#### 5.1. Recommendations to attain the Project purpose

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- (1) Examination of the agricultural component of the small-scale irrigation development package

As has been discussed in the previous sections, the examination of the agricultural component was not sufficiently undertaken, largely due to the cancellation of dispatch of the short-term experts in the field of farm management. In order to systematize the small-scale irrigation farming technologies, it is necessary to conduct a field study to investigate the actual undertakings by the farmers, to examine the applicability of the certain technologies to be included in the package, and also to assess the possible constraints to the application by the farmers. The results of the study are to be disseminated to the extension officers through additional training to reinforce the application of those technologies at the farmers' level. They should also be compiled not only in the study reports but also in the form of training and extension materials that would be made available to the EPAs in their future extension activities.

- (2) Selection of the monitoring data and training on data collection

During the Project, detailed monitoring and evaluation was conducted with 10 different formats and the data were collected through the training sessions. These monitoring data include basic information of the developed facilities, which are useful for the implementing agencies for their program formulation in the future. It is considered to be essential to continuously gather and accumulate such data in usable forms. Therefore it is recommended to select the data items that are useful for the implementing agencies, to compile the selected data from those accumulated so far, and to hand over the data to the respective implementing agencies. It is desirable if the Project would provide the implementing agencies with any format for future collection of those selected data, by simplifying the ones currently used by the Project. It is also essential to train the respective stakeholders on the accurate collection of those selected data before the end of the Project so that the meaningful monitoring would continuously be undertaken in the future.

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## **5.2. Recommendations for the future (after the completion of the Project)**

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### **(1) Further dissemination and integration of the outcomes of the Project in the future programs**

It is estimated that the potential areas for small-scale irrigation in the entire country is about 10,000 ha., while the Project has already developed nearly 800 irrigation sites by February 2008, with additional target of around 350 sites for the current dry season, and it is assumed that more than 1,800 ha. would be covered within the cooperation period. The farmers themselves constructed all of these irrigation facilities with locally available materials, by applying the low cost and simple technologies introduced by the Project. Compared with the other larger irrigation scheme, the impact is large enough for considerably small, or even nominal costs of inputs. This accomplishment of the Project should be known to the implementing agencies, to the decision makers in particular, so that the outcomes of the Project would widely be disseminated and adequately reflected in the formulation of future plans and programs.

### **(2) Official inclusion of the small-scale irrigation development package in the agricultural extension mechanism**

As some of the EPAs have already initiated the efforts, inclusion of the small-scale irrigation development package in the agricultural extension plans and programs is essential to systematically continue and promote the efforts for the extension on small-scale irrigation farming in the country. To ensure continuity of the activities, it is desirable to officially include the package as the designated components in the instruction from ADD to DADOs and EPAs for their formulation of annual work plans. Once the official channel is established, it would also become easier to collect the monitoring information, as they will be obligatory part of the periodical reporting. The monitoring formats to be modified by the Project should also be used in this official reporting so as to maintain the consistency of the data. It is also desirable to enhance the mobility of the extension officers through provision of additional supports from the GoM so as to maximize their field operations to attain the planned targets.

### **(3) Proposed revision of the PDM**

In the discussion among the members of the Team related to the achievement of the Project, it was noted that the descriptions in the PDM in terms of the overall goal should be revised, as the indicators may slightly be misleading and seem to be difficult to obtain the data to confirm the achievement. Since the ex-post evaluation is scheduled three years after the completion of the Project, it is recommended that the PDM should further be revised so as to avoid any controversy regarding the target of the Project in the future. The proposed revision of PDM for the purpose of ex-post evaluation is attached in APPENDIX 8.

## **6. LESSONS LEARNED**

For effective planning, implementation and evaluation of future projects in the similar field as well as in the other fields, the following lessons are drawn from the Project.

### **(1) Definition of the project purpose and selection of appropriate indicators**

It was found out during this evaluation study that there was not a concrete definition of the

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nationwide extension system that was agreed and understood among the Project personnel, although it was the very purpose of the Project. Similarly, there was not common and clear understanding on the small-scale irrigation development package in terms of how the additions and modification would be made on the original package developed by the foregoing cooperation of JICA, what kind of contents the final packages would be composed of, and even what form of the documents it would become. As most of the stakeholders of the Project activities have been concentrated on the conduct of training and monitoring on the actual irrigation site development, this question had not been raised until this terminal evaluation. The absence of the clear definition also influenced the selection of objectively verifiable indicators: in the case of the Project, the indicator covers only an effect to be derived from the functioning of the system, but indicator to measure the degree of establishment of a nationwide extension system itself was lacking. Therefore, it is essential to clearly define the project purpose at the time of planning, as well as to discuss among the project personnel to foster the common understanding upon the commencement of the project.

## (2) Significance of the simple and low-cost technologies

The small-scale irrigation technologies introduced and disseminated by the Project was those “simple, quick, cheap and safe.” The construction materials are to be availed locally, and recommended technologies are all simple and low-cost. By limiting the level of technologies, they could be disseminated through the ordinary agricultural extension activities. The farmers themselves could construct, maintain and improve the irrigation facilities, and in some cases these technologies were transferred from farmer to farmer. It also has positive implication in terms of the sense of ownership, as the farmers regard those irrigation facilities as their own properties. These simple and low-cost technologies can widely be accepted and their tangible benefits can be recognized in relatively short period of time, thus they can bring about a large impact to the farmers. However, there is often a tendency among the high level decision makers to make light of these appropriate technologies as they are not as conspicuous and “good looking” as the high level or advanced technologies. It is therefore necessary for the implementers to consciously advertise the technologies and their impacts in an attractive manner so as to generate interests from a wide range of relevant stakeholders.

END

APPENDIX 1.	List of Participants in a series of meetings
APPENDIX 2.	Project Design Matrix (PDM)
APPENDIX 3.	Evaluation Schedule
APPENDIX 4.	Evaluation Grid
APPENDIX 5.	List of Equipment and tools provided by JICA
APPENDIX 6.	List of Officers in the training program in Japan
APPENDIX 7.	No. of irrigation sites developed
APPENDIX 8.	Proposed Revision of PDM for Ex-post Evaluation

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# APPENDIX 1

## List of participants in a series of meetings

Name	Title	Organization
<b>【The Ministry of Irrigation and Water Development】</b>		
Mrs. A. Mchiela	Principal Secretary	
Mr. S.C.Y Maweru	Director	Department of Irrigation
Mr. K. Noda	JICA Expert in Irrigation Policy Monitoring & Evaluation	Department of Irrigation
Mr. M.R. Msukwa	Senior Assistant Irrigation Officer	Chitipa District Agricultural Development Office
Mr. W.M. Mkumbwa	Senior Assistant Irrigation Officer	Nkhata-Bay District Agricultural Development Office
Mr. A.B. Cheyo	Senior Assistant Irrigation Officer	Ntcheu District Agricultural Development Office
Mr. E. Banisi	Irrigation Officer	Dowa District Agricultural Development Office
Mr. M.B. Chilimbiri	Assistant Irrigation Officer	Zomba District Agricultural Development Office
Mr. I.S.W. Sakaika	Assistant Irrigation Officer	Thyolo District Agricultural Development Office
Mr. C.M. Banda	Assistant Irrigation Officer	Mzimba District Agricultural Development Office
Mr. F.F. Mzalule	Assistant Irrigation Officer	Ntchisi District Agricultural Development Office
Mr. M.N. Kumasala	Assistant Irrigation Officer	Lilongwe District Agricultural Development Office
<b>【The Ministry of Agriculture and Food Security】</b>		
Mr. G.S.V.K. Nyandule-Phiri	Controller of Agriculture Investment Programmes	
Mr. K.J.N. Msukuwa	Agricultural Extension Development Coordinator	Chikwina Extension Planning Area, Nkhata-Bay District Agricultural Development Office
Mr. L.R.W. Lingani	Agricultural Extension Development Coordinator	Nsipe Extension Planning Area, Ntcheu District Agricultural Development Office
Mr. K.M. Ngwira	Agricultural Extension Development Coordinator	Khosolo Extension Planning Area, Mzimba District Agricultural Development Office
Mr. D.J. Kaonga	Agricultural Extension Development Coordinator	Changira Extension Planning Area, Mzimba District Agricultural Development Office
Mrs. L.P. Msukwa	Agricultural Extension Development Coordinator	Chikangawa Extension Planning Area, Mzimba District Agricultural Development Office
Mr. M.A.A. Kaipanyama	Agricultural Extension Development Coordinator	Mvera Extension Planning Area, Dowa District Agricultural Development Office
Mr. S.T.C. Suga	Agricultural Extension Development Coordinator	Thondwe Extension Planning Area, Zomba District Agricultural Development Office
Mr. T. Chimpondo	Agricultural Extension Development Coordinator	Mphompha Extension Planning Area, Rumphi District Agricultural Development Office
Mr. Phiri	Agricultural Extension Development Coordinator	Chivala Extension Planning Area, Dowa District Agricultural Development Office
Mr. M. Nirongo	Assistant Agricultural Extension Development Coordinator	Chisenga Extension Planning Area, Chitipa District Agricultural Development Office

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Mr. J. Katema	Assistant Agricultural Extension Development Coordinator	Chilwatula Extension Planning Area, Ntchisi District Agricultural Development Office
Mr. P.G. Mangani	Agricultural Extension Development Coordinator	Masambanjati Extension Planning Area, Blantyre District Agricultural Development Office
Mr. B. Nkhata	Agricultural Extension Development Officer	Kalira Extension Planning Area, Ntchisi District Agricultural Development Office
Mrs. J.G. Chavula	Agricultural Extension Development Officer	Mpeni Extension Planning Area, Lilongwe District Agricultural Development Office
Mr. M. Luhanga	Agricultural Extension Development Officer	Champira Extension Planning Area, Mzimba District Agricultural Development Office
Mr. C. Mkhoma	Agricultural Extension Development Officer	Kaluluma Extension Planning Area, Kasungu District Agricultural Development Office
<b>【JICA Malawi Office】</b>		
Mr. R. Manda	Programme Officer	
Mr. V.A.L Mkwandire	Aid Coordinator	
<b>【The Project Team】</b>		
Mr. H. Okada	Chief Advisor/Human Resource Development	Development of Smallholder Irrigation Scheme Technical Cooperation Project, JICA
Mr. K. Shiraishi	Coordinator/Monitoring and Evaluation	Development of Smallholder Irrigation Scheme Technical Cooperation Project
Mr. J. Chikhungu	Counterpart	Development of Smallholder Irrigation Scheme Technical Cooperation Project
Mr. M. Ngwira	Counterpart	Development of Smallholder Irrigation Scheme Technical Cooperation Project
Mr. H. Nkhoma	Counterpart	Development of Smallholder Irrigation Scheme Technical Cooperation Project

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## APPENDIX 2

Project Design Matrix (PDM) for Development of Smallholder Irrigation Scheme Technical Cooperation Project

Duration : 2006 to 2009

Target Beneficiaries / Groups : AEDOs and Smallholder farmers in Potential EPAs,

Implementing Organization : Department of Irrigation

Super Goal: Dissemination of small – scale irrigation farming contributes to poverty reduction

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> Small – scale irrigation farming promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security.	1. Demonstrated irrigation group members increased to (21,960) 2. Demonstrated irrigation area increased to (1,830) ha Note 1	1. Project Reports 2. Post Evaluation	1. Malawi maintains political stability 2. The small scale irrigation farming keeps playing important role in poverty reduction. 3. The price of agricultural produce does not extremely change
<b>Project Purpose</b> Nation wide extension system for comprehensive small scale irrigation farming established ✧ See Note 2	Irrigation groups increased to (1,220) Note 3	1. Project Reports 2. Terminal Evaluation	There is enough rainfall to supply water for small scale irrigation.
<b>Outputs</b> 1. Extension system for small scale irrigation development package established at all potential EPAs	1.1 Small scale irrigation development package is smoothly extended by AEDOs in potential EPAs throughout the nation. 1.2 Monitoring and Evaluation on extension of small scale irrigation farming conducted at each potential EPA 1.3 Extension materials and tools for construction are utilized by farmers at each potential areas 1.4 (488) extension workers trained in small scale irrigation development package	1. Project Reports 2. Terminal Evaluation	Malawi Government holds current policy on promoting small scale irrigation in national development strategy.
2. Adaptation of small scale irrigation farming technologies and experiences systematized	2 Technical issues and adaptation experience of technologies for small scale irrigation farming documented		

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Activities	Input	Malawian Side	1. Incidents which discourage the AEDOs' extension work such as the decrease of their salary and the extreme increase of their work load do not occur 2. Distributed tools and extension materials are not lost or stolen
<p>1.1 Conduct training of small scale irrigation development package for extension workers in all potential EPAs.</p> <p>1.2 Train extension workers on project formulation, monitoring and evaluation</p> <p>1.3 Formulate programs for dissemination of small scale irrigation farming at each potential EPA</p> <p>1.4 Distribute tools and training materials for dissemination of small scale irrigation farming to potential EPAs</p> <p>2.1 Examine and systematize the experience of development and application of methods and skills on small scale irrigation farming at different EPAs</p> <p>2.2 Examine and systematize the experience of development and application of farm management and farming practice for sustainability of small scale irrigation farming at different EPAs</p> <p>2.3 Examine and systematize the experience and various socio-economic factors at different EPAs which influence sustainability of small scale irrigation farming</p> <p>2.4 Revise the contents of small scale irrigation development package based upon results of systematization from activities mentioned above and establish improved comprehensive package for nationwide dissemination of small scale irrigation farming</p>	<p><b>Japanese Side</b></p> <p>1. Experts</p> <p>1.1 Long term Experts</p> <p>a) Chief Advisor</p> <p>b) Evaluation &amp; Monitoring Coordinator</p> <p>1.2 Short term Experts in Farm Management (according to the needs.)</p> <p>2. Machinery &amp; Equipment</p> <p>2.1 Tools for constructing irrigation facilities (Hoes, spades, hammers, saws, axes, etc)</p> <p>2.2 Equipments for extension and monitoring &amp; Evaluation: bicycles, Technical manuals, posters, leaflets.</p> <p>2.3 4 WD Vehicles (To be bought as needs arises)</p> <p>2.4 Office equipments (To be bought as needs arises)</p> <p>3. Training</p> <p>3.1 Training AEDOs in Malawi</p> <p>3.2 Training Irrigation Technicians in Japan</p> <p>◇ Note 3</p>	<p><b>Preconditions</b></p> <p>Rural societies in Malawi continue to accept farming in dry season as a means of livelihood</p>	

- ◇ Note 1 – The actual indicators (in blackened blackest) will be further discussed and approved by JCC with the advice of PMU when starting the Project.
- ◇ Note 2 – Comprehensive Small – Scale Irrigation Farming refers to (Small- Scale Irrigation Development Package) with systematized experiences from different areas.
- ◇ Note 3 – The inputs will be further discussed and might be modified by JCC with the advice of PMU when starting the project

# APPENDIX 3

## Schedule of the Terminal Evaluation on the Development of Smallholder Irrigation Schemes Technical Cooperation Project (from Sep 27 to Oct 12, 2008)

	Date	Time	Malawi			Japan			Accommodation
			Mlowoka	Chikabadwa	Mizutani	Sonoyama	Itagaki (from Tokyo)	Hoshi (from Tokyo)	
1	27 Sep	Sat					Leave from Tokyo		
2	28 Sep	Sun					13:55 Arrival in Lilongwe (SA170)		Lilongwe
3	29 Sep	Mon					Courtesy call & meeting at JICA Malawi Office		Lilongwe
		8:30					Courtesy call to the Ministry of Irrigation and Water Development (MoIWD)		
		10:00					Courtesy call to the Ministry of Agriculture and Food Security (MoAFS)		
		11:00					Courtesy call to the Project Team		
		14:00							
		15:30							
4	30 Sep	Tue					<b>Joint Evaluation Committee (JEC) meeting</b>		
		8:00					Site visit in Chikwatula EPA (Nehisi)		Lilongwe
		13:00					Site visit in Chivala EPA (Dowa)		
5	1 Oct	Wed					AEDO Workshop at Lilongwe STC		Mzuzu
		8:00					Leave from Lilongwe		
		13:00					Arrival in Mzuzu		
		18:00							
6	2 Oct	Thu					Site Visit in Mphompha EPA (Rumphi)		Mzimba
		8:00					Site Visit in Chikangawa EPA (Mzimba)	13:55 Arrival in Lilongwe (SA170)	
		13:00					Arrival in Mzimba	14:30 Leave from Lilongwe	
		17:00						19:30 Arrival in Mzimba	
7	3 Oct	Fri					Site visit in Champira EPA (Mzimba)		Kasungu
		8:00					Site Visit in Kaluluma EPA (Kasungu)		
		13:00					Arrival in Kasungu		
		17:00					Leave from Kasungu		
8	4 Oct	Sat					Arrival in Lilongwe		Lilongwe
		8:00							
		10:00					Drafting a Joint Evaluation Report (JER) & Minutes of Meeting (M/M)		
		14:00					Meeting on the draft JER & M/M		
9	5 Oct	Sun							Lilongwe
10	6 Oct	Mon					<b>Joint Evaluation Committee (JEC) (Examining the draft JER and M/M)</b>		
		9:00					Revision of the draft JER & M/M		Lilongwe
		14:00							
11	7 Oct	Tue					Revision of the draft JER & M/M		Lilongwe
		10:00						7:00 Leave from Lilongwe (QM201)	
		14:00							
12	8 Oct	Wed					Revision of the draft JER and M/M, reflecting the comments from PSs and SC members		Lilongwe
13	9 Oct	Thu					<b>Joint Coordinating Committee (JCC) (Explanation and revision of the final draft JER &amp; M/M)</b>		Lilongwe
		10:00					Finalization of the JER and M/M, reflecting the comments from JCC members		
		14:00					Signing of the M/M, Preparation of Evaluation Summary & Report in Japanese		
14	10 Oct	Fri					Courtesy Call to the Embassy of Japan		Lilongwe
		15:00							
15	11 Oct	Sat					9:05 Leave from Lilongwe (QM201)		
16	12 Oct	Sun					Arrival in Tokyo		

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## APPENDIX 4: Evaluation Grid of the Terminal evaluation for the Development of Smallholder Irrigation Scheme Technical Cooperation Project

Evaluation Criteria	Evaluation question		Basis of judgement	Data needed	Data source	Data collection method
	Main question	Sub question				
Achievement	Is the overall goal likely to be achieved?	Is the overall goal likely to be achieved three years after the Project completion?		Indicators, Prospects of achieving the overall goal	Opinion of the Project personnel, Project records	Interview, discussion with Project staff
	Is the Project purpose achieved?	Is the Project purpose likely to be achieved by the end of the cooperation period?		Indicators, Prospects of achieving the project purpose	Opinion of the Project personnel, Project records	Interview, discussion with Project staff
		Is the extension system for small scale irrigation development package established?		Understanding on and practical function of the system	Project records and personnel, extension officers	Interview, discussion with Project staff
		Are irrigation technologies (e.g. construction of weir, canal & ancillary facilities) of the package smoothly disseminated by the extension workers?	comparison with the target figure	Output indicators, No. extension officers conducted the extension and No. of irrigation groups organized	Project records and personnel, sample beneficiaries	Interview, field visit, discussion with stakeholders
		Are farming management technologies (e.g. compost making, pest control) of the package smoothly disseminated by the extension workers?		Output indicators, No. extension officers conducted the extension and No. of demonstration conducted	Opinion of the Project personnel, Project records	Interview, field visit, discussion with Project staff
		Are monitoring and evaluation properly conducted by the extension workers?	comparison with the target figure	No. of EPAs conducting monitoring and evaluation activities in a proper manner	Project records and personnel, extension officers	Interview, field visit, discussion with stakeholders
		Are the extension materials and construction tools utilized by farmers?	comparison with the target figure	No. of EPAs providing the extension materials and construction tools	Project records and personnel, extension officers	Interview, field visit, discussion with stakeholders
	Have the outputs been produced properly?	Have the extension officers been sufficiently trained on the package?	comparison with the target figure	Output indicators, opinion of the extension officers	Project records and personnel, extension officers	Interview, field visit, discussion with stakeholders
		Have the effectiveness and applicability of farm irrigation technologies (e.g. construction of weir, canal & ancillary facilities) been examined accurately?	Existence and quality of the examination results	Results of examination on irrigation methods	Project personnel, Project records	Interview, discussion with Project staff
		Have the effectiveness and applicability of farm management technologies (e.g. compost making, pest control) been examined enough?	Existence and quality of the examination results	Results of examination on farm management methods	Project personnel, Project records	Interview, discussion with Project staff
		Have various socio-economic factors (e.g. gender) which could influence sustainability of irrigation farming been examined enough?	Existence and quality of the examination results	Results of examination on socio-economic factors	Project personnel, Project records	Interview, discussion with Project staff
		What are the modification made by the Project on the original small scale irrigation development package formulated by the development study?	comparison with the original package	contents of the modified package	Project personnel, Project records	Interview, discussion with Project staff
		Have the small scale farming technologies been documented with reference to the examination results?	existence and contents of the documents	Output indicators	Project records and personnel, sample beneficiaries	Interview, field visit, discussion with stakeholders
		Have the Japanese experts been dispatched as planned?	Comparison with the planned figures	Records on Japanese experts	Project records	Document review, interviews

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Evaluation Criteria	Evaluation question		Basis of judgement	Data needed	Data source	Data collection method
	Main question	Sub question				
Implementation processes	Were the inputs made as planned?	Has the counterpart training been conducted as planned?	Comparison with the planned figures	Records on counterpart training	Project records	Document review, interviews
		Have the equipment and machinery been provided as planned?	Comparison with the planned figures	Records on equipment provision	Project records	Document review, interviews
		Have the counterpart personnel been assigned as planned?	Comparison with the planned figures	List of counterpart personnel	Project records	Document review, interviews
		Have the physical facilities been provided as planned?	Comparison with the similar projects	Information on the facilities	Project records, opinions of experts	Interviews, ocular visit
	Have the activities been implemented as scheduled?	Were the activities timely implemented?	Comparison with the PO	Actual implementation schedule	Project personnel, Project records	Document review, interviews
		Was there any change in the activities and schedule of implementation from the original PO?	Comparison with the PO	Information on the changes that took place	Project personnel, Project records	Document review, interviews
		Were the Project activities monitored properly?	Frequency and contents of monitoring	Monitoring mechanism, monitoring results	Project personnel, Project records	Document review, interviews
	Have there been any problem related to the management of the Project?	Were the communication among the project personnel smooth?		Ways and contents of the daily and regular transactions among the Project personnel	Project personnel, Project records	Interview, discussion with Project staff
		Were the counterpart personnel committed and involved actively in the Project activities?		Examples of the activities that were mainly conducted by the counterpart personnel	Project personnel, Project records	Interview, discussion with Project staff
		Has the decision making mechanism of the Project been functional?	How the problems faced were addressed	Information on the JCC, PMU, TM and other decision making mechanisms	Project personnel, Project records	Interview, discussion with Project staff
	Are the implementing agencies well aware of the Project?	What are special measures taken in terms of the managerial aspects of the Project?		Information on the measures taken by the Project	Project personnel, Project records	Interview, discussion with Project staff
		Are the implementing agencies committed to the Project?		Cases that indicate their commitment	Project personnel, Project records	Interview, discussion with Project staff
		Have there been any special measures taken in terms of implementation mechanism?		Information on the measures taken by the Project	Project personnel, Project records	Interview, discussion with Project staff
		Has there been any special consideration given in terms of dealing with the target groups?		Information on the measures taken by the Project	Project personnel, Project records	Interview, discussion with Project staff
	Does the Project address the needs of the country, sector and the target groups?	Is the Project consistent with the development plans of Malawian Government?	Existence of the consistent stipulation in the document	Development plan of Malawi	Policy documents	Document review
		Does the Project appropriately address the sectoral issues of the development plan?	Existence of the consistent stipulation in the document	National policies & programs, policies and programs of implementing agencies	Policy documents	Document review
		Does the Project address the need of the target groups?		Baseline information, opinion of stakeholders	Project reports and personnel, sample beneficiaries	Document review, interviews
	Is the Project priority in the Japan's foreign assistance policy?	Is the project relevant to the Japan's Aid Policies?	Existence of the consistent stipulation in the document	Priority directions in Japan's Aid Program	Japan's Foreign Assistance Policy	Document review

**APPENDIX 4: Evaluation Grid of the Terminal evaluation for the Development of Smallholder Irrigation Scheme Technical Cooperation Project**

Ver. Sep. 22, 2008

Evaluation Criteria	Evaluation question		Basis of judgement	Data needed	Data source	Data collection method
	Main question	Sub question				
Relevance	Is the selection of target groups appropriate?	Is the project relevant to the JICA's Program?	Existence of the consistent stipulation in the document	JICA's Program	JICA's Irrigated Agricultural Development Program	Document review, discussion with JICA staff
		Was the size of the target group appropriate?		No. and area of potential irrigation sites, No. of beneficiaries	Project personnel, statistics, other secondary documents	Document review, interviews
		Has the Project equitably brought about the benefit?		Project benefits enjoyed by different strata of target groups	Project records and personnel, sample beneficiaries	Document review, interviews
		Has the cost been equally shared by the stakeholders?		Expenditure and source of funds	Project records and personnel, sample beneficiaries	Document review, interviews
	Have the relevant Japanese experience been utilized?	Is there any advantage of Japanese technologies? How are the experiences of Development Study (capacity building and development of smallholder irrigation scheme) utilized and		Technologies transferred through the Project	Project personnel, Project records	Document review, interviews
Effectiveness	Is the Project purpose achieved?	Has the Project purpose been specific enough?		Definition, understanding on the Project purpose among the Project personnel	Project personnel, Project records	Interview, discussion with Project staff
	Has the achievement of Project purpose been resulted from the outputs?	Have there been any factors contributing to the achievement of the Project purpose other than the Project activities?		Information on the related events, programs/projects of other organizations in the target area	Project personnel, Project records, relevant documents	Interview, field visit, discussion with Project staff
	Has there been any influence of important assumptions?	Are there any tools and extension materials lost or stolen?		Data on the tools and extension materials distributed	Project personnel, Project records	Document review, interviews
	Have there been any other hindering or contributing factors?	Were there any incidents that discourage the AEDO's extension work?		Information on such incident, if any	Project personnel, Project records	Interview, discussion with Project staff
	Were the activities appropriate to produce outputs?			Information on any relevant events in the course of Project implementation	Project personnel, Project records	Interview, discussion with Project staff
Efficiency	Were the inputs appropriate to produce the outputs?	Were the timing, number, duration, and fields of Japanese experts dispatched appropriate?	Comparison with the planned figures	Records on Japanese experts	Project records	Document review, interviews
		Were the timing, duration, contents of counterpart training appropriate?	Comparison with the planned figures	Records on counterpart training	Project records	Document review, interviews
		Were the timing, volume, and specification of provision of equipment appropriate?	Comparison with the planned figures	Records on equipment provision	Project records	Document review, interviews
		Were the timing, number, fields and competency of the counterpart personnel appropriate?	Comparison with the planned figures	List of counterpart personnel	Project records	Document review, interviews
	Were the physical facilities sufficient to implement the Project activities?	Were the physical facilities sufficient to implement the Project activities?	Comparison with the similar projects	Information on the facilities	Project records, opinions of experts	Interviews, ocular visit

**APPENDIX 4:** Evaluation Grid of the Terminal evaluation for the Development of Smallholder Irrigation Scheme Technical Cooperation Project

Ver. Sep. 22, 2008

Evaluation Criteria	Evaluation question		Basis of judgement	Data needed	Data source	Data collection method
	Main question	Sub question				
Impacts	Were there any factors hindering or contributing to the efficiency of the Project?	Was the scale of Project budget appropriate?	Comparison with the similar projects	Budget and expenditure, local cost by Malawian side	JICA staff	Interview, discussion with JICA staff
		Was there any influence from important assumptions?		Information on the coordination with other partners, security situations	Project personnel, Project records	Interview, discussion with Project staff
		Was there any other factors affecting the efficiency?		Information on any relevant events in the course of Project implementation	Project personnel, Project records	Interview, discussion with Project staff
		Can the small scale irrigation farming be promoted through extension of the developed package?	Comparison with the baseline	Information on the sample cases in target area	Project personnel, sample beneficiaries, partner agencies	Interview, discussion with stakeholders
		Would the the developed package contribute to increase the food security in Malawi?	Comparison with the baseline	Institutional, financial and technical applicability of the model	Project personnel, partner agencies	Interview, discussion with stakeholders
	Is the overall goal likely to be achieved?	Are the commitment of government secured?		Current program, future plan of the government, opinion of the Project staff	Government officers, Project personnel	Document review, interviews
		Is there any possible factors that hinder or contribute to the achievement of the overall goal?		Information on any relevant events in the course of Project implementation	Project personnel, Project records	Document review, interviews
		Has there been any effects beyond the target groups?		Information on the sample cases in target area and other areas	Project personnel, Project records	Document review, interviews
		Has there been any unexpected effect on the policies and programs of implementing agencies?		Information on the relevant policies	Relevant documents, Project records	Document review, interviews
		Has there been any changes or formulation in terms of relevant organization, laws, rules and regulations?		Information on the changes and new setup	Project personnel, staff of relevant institutions, Relevant documents	Document review, interviews
	Have there been any other ripple effects?	Has there been any unexpected changes in technical and/or methodological innovations?		Information on the changes that took place	Project personnel, Project records	Document review, interviews
		Has there been any unexpected effect in terms of gender, human rights, poverty gap, peace and conflicts?		Information on the cases of relevant events	Project personnel, Project records	Document review, interviews
		Has there been any unexpected effect on environmental concerns in the target areas?		Information on the cases of relevant events	Project personnel, Project records	Document review, interviews
		What are the factors that brought about the above mentioned positive and negative effects?		Information on the other interventions and events in the target areas	Project personnel, sample beneficiaries	Interview, discussion with relevant staff, document review
		Is the possibility of continuation of the policy to promote smallholders irrigation scheme high?	Policy commitment	Current program, future plan of the government, opinion of the Project staff	Policy documents, government officers, Project personnel	Interview, discussion with relevant staff, document review
Handwritten marks	Will the policy on smallholders irrigation scheme continue to be functional?	Is there any alternative programs that can integrate the outcomes of the Project?		Current program, future plan of the government, opinion of the Project staff	Policy documents, government officers, Project personnel	Interview, discussion with relevant staff, document review
		Are the relevant institutions committed to continue the activities?		Opinions of the stakeholders from relevant institutions	Project personnel, staff of relevant institutions	Interview, discussion with Project staff
	Are the implementing agencies	Are the counterpart personnel capable of carrying out the activities?	Comparison with the baseline	Levels of competence, confidence, experiences and performance	Project personnel, sample beneficiaries	Interview, discussion with Project staff

# APPENDIX 4: Evaluation Grid of the Terminal evaluation for the Development of Smallholder Irrigation Scheme Technical Cooperation Project

Ver. Sep. 22, 2008

Evaluation Criteria	Evaluation question		Basis of judgement	Data needed	Data source	Data collection method
	Main question	Sub question				
Sustainability	capable to continue or further expand relevant activities of the Project?	Are the necessary budget allotted for the continuous provision of extension services, monitoring and evaluation?	Budget allocation, planned volume	Budget plan of implementing agencies	Relevant staff of implementing agencies, budget documents	Interview, confirmation of documents
		Are the irrigation groups capable to continue and expand their activities initiated during the Project?	Comparison with the baseline	activity records and future plan of the irrigation groups	Sample beneficiaries (irrigation groups), Project personnel	Interview, discussion
		Are the small scale irrigation development package properly comprehended and well accepted among the stakeholders?		Understanding on the package among stakeholders	Project personnel, sample beneficiaries	Interview, discussion
	Will the technologies and methodologies introduced by the Project continuously be utilized?	Is there any mechanism within the implementing agency to continue / further disseminate / modify the package in the future?		Information on the organizational setup and programs for further continuation and dissemination	Project personnel, staff of relevant institutions, organizations	Interview, discussion with Project staff, document review
		Are the small scale irrigation farming technologies developed by the Project accepted and applied by the farmers?		Degree of acceptance and application among the target beneficiaries	Project personnel, sample beneficiaries	Interview, discussion with sample beneficiaries
		Is there any mechanism to further disseminate the package to other areas?		Information on the organizational setup and programs for further dissemination	Project personnel, staff of relevant institutions, organizations	Interview, discussion with Project staff, document review
	Are there any factors that may affect the sustainability of the Project?	Is the necessary equipment properly maintained?		Budget allocation, experiences of maintenance	Project records, Project personnel	Document review, interviews
		Is there any negative influence on the social and cultural aspects that may become obstacles in carrying out the activities?		Information on the cases of relevant events	Project personnel, Project records, sample beneficiaries	Interview, discussion
		Is there any negative influence on the environment that may inhibit the continuation of the activities?		Information on the cases of relevant events	Project personnel, Project records, sample beneficiaries	Interview, discussion

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# APPENDIX 5

## List of equipment and tools provided by JICA

### <Equipment>

	Time of Provision	Equipment	Type	Maker	Purpose
1	March, 2006	Vehicle	PATROL/4WD	NISSAN	Training/ Business Trip
2	March, 2006	Vehicle	PATROL /4WD	NISSAN	Training/ Business Trip
3	March, 2006	Personal Computer	LATITUDE 110L	DELL	Administration/ Training/ Monitoring and Evaluation
4	March, 2006	Personal Computer	LATITUDE 110L	DELL	Administration/ Training/ Monitoring and Evaluation
5	March, 2006	LCD Projector	LV-S3	CANON	Training
6	March, 2006	LCD Projector	LV-S3	CANON	Training
7	April, 2006	Cabinet	Steel		Administration
8	April, 2006	Cabinet	Wood		Administration
9	April, September, 2006	Office Desks (4)	Wood		Administration
10	April, December, 2006	Office Chairs (7)	SDN BHD	JJ CHAIRS	Administration
11	June, September, 2006	Cabinets (3)	Steel		Administration
12	May, 2006	Photocopier	COPYCENTRE 256	XEROX	Administration/ Training
13	October, 2006	Printer	LBP 3460	CANON	Administration/ Training
14	July, 2006	Digital Cameras/ Batteries/ Battery Chargers (20 each)	POWER SHOT A420	CANON	Training/ Monitoring and Evaluation
15	November, 2006	Personal Computer	DEMENTION E310	DELL	Training
16	November, 2006	Personal Computer	DEMENTION E310	DELL	Training
17	December, 2006	Safe	Steel	Ninshengda	Administration
18	December, 2006	Printer	iX 5000	CANON	Administration/ Training

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**<A set of construction tools provided to each EPA>**

	Items	Number
1	Shovel	5
2	Blackboard	1
3	Panga knife	10
4	Hoe	5
5	Pick	5
6	Wheel barrow	8
7	Hammer (4 lbs)	3
8	Hammer (14 lbs)	5
9	String	5
10	Saw	5
11	Gumboots	20
12	Measuring tape (50m)	5
13	Line level	10
14	Push bike (without gear)	4
15	Pump for push bike	1

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## APPENDIX 6

### List of officers participated in the training program in Japan

Training Program	Joint Training Program for Counterpart Personnel in Irrigation and Drainage 2006	
Training Period	From August 9 to September 10, 2006	
Name	Title	Organization
1 Mr. J.O.T. Chikhungu	Irrigation Officer	The Department of Irrigation Services
2 Mr. W. Singano	Irrigation Officer	Ntcheu District Agricultural Development Office
3 Mr. L. Banda	Irrigation Officer	Kasungu District Agricultural Development Office
4 Ms. R. Kulugomba	Assistant Irrigation Officer	Lilongwe District Agricultural Development Office
5 Mr. J. M. Chabuka	Agricultural Extension Development Officer	Kalira Extension Planning Area
6 Mr. J. M. Malunga	Crop Officer	Ntcheu District Agricultural Development Office

Training Program	Joint Training Program for Counterpart Personnel in Irrigation and Drainage 2007	
Training Period	From August 15 to September 15, 2007	
Name	Title	Organization
1 Mr. F.M. Kumchulesi	Agricultural Extension Development Officer	Kalira Extension Planning Area
2 Mr. R.M. Musukwa	Assistant Irrigation Officer	Chitipa District Agricultural Development Office
3 Mr. E.A. Mabedi	Assistant Irrigation Officer	Mchinji District Agricultural Development Office
4 Mr. L.R.W. Lingani	Agricultural Extension Development Coordinator	Ntcheu District Agricultural Development Office
5 Mr. D.F.C. Kamendo	Senior Assistant Irrigation Officer	Blantyre District Agricultural Development Office
6 Mr. E.W. Kilimbe	Agricultural Extension Development Officer	Mpenu Extension Planning Area

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**APPENDIX 7. No. of small-scale irrigation sites developed (by February 2008)**

Region	ADD	DADO	No. of EPA	No. of developed irrigation sites						No. of Sites in Operation
				JICA Development Study			JICA Project			Grand Total
				2003	2004	2005	2006	2007	Total (2yrs)	
North	1	Karonga	4					100	100	100
		Karonga	4			14	2	9	11	25
	2	Rumphi	4			32	8	25	33	65
		Nkhata-Bay	6					83	83	83
		Mzimba	13					160	160	160
Central	3	Lilongwe	15	8	60	19	56	11	67	154
		Dedza	8	7	48	66	22	21	43	164
		Ntcheu	7				76	9	85	85
	4	Dowa	9	4	94	122	30	3	33	253
		Ntchisi	4	3	49	31	8	8	16	99
		Mchinji	4				35	9	44	44
		Kasungu	4				36	2	38	38
	5	Salima	2			12	9	2	11	23
		Nkhota-kota	2				12	5	17	17
		Zomba	2			43	15	2	17	60
South	6	Machinga	2							23
	7	Blantyre	2			28	14	0	14	42
	8	Shire Valley	2			25	6	6	12	37
Grand Total				22	251	392	329	455	784	1,419
				92						1,020

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## APPENDIX 8. Proposed Revision of PDM for Ex-Post Evaluation

### Project Design Matrix (PDM)

The Development of Smallholder Irrigation Scheme Technical Cooperation Project

Duration: 2006 to 2009

Target Beneficiaries / Groups: AEDOs and Smallholder farmers in Potential EPAs

Implementing Organization: Department of Irrigation and Water Development and Department of Agricultural Extension Services (Ministry of Agriculture and Food Security)

Super Goal: Dissemination of small-scale irrigation farming contributes to poverty reduction

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> Small-scale irrigation farming is promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security.	1. No. of irrigation group increased at least to 2,080 by March 2012. 2. Irrigation areas developed by AEDOs increased at least to 3,730 ha. by March 2012. <b>See Note 4</b>	1. Reports of EPAs, DADOs & ADDs 2. Post Evaluation	1. Political stability is maintained in the country 2. The small-scale irrigation farming continues to be a focus area of the policies for poverty reduction. 3. The price of agricultural produce and agro-inputs do not change extremely.
<b>Project Purpose</b> Nationwide extension system for comprehensive small-scale irrigation farming established <b>See Note 2</b>	Irrigation groups increased to (1,220) <b>See Note 1</b>	1. Project Reports 2. Terminal Evaluation	There is enough rainfall to supply water for small scale irrigation.
<b>Outputs</b> 1. Extension system for small scale irrigation development package established at all potential EPAs	1.1 Small scale irrigation development package is smoothly extended by AEDOs in potential EPAs throughout the nation. 1.2 Monitoring and Evaluation on extension of small scale irrigation farming conducted at each potential EPA 1.3 Extension materials and tools for construction are utilized by farmers at each potential areas 1.4 (488) extension workers trained in small scale irrigation development package	1. Project Reports 2. Terminal Evaluation	Malawi Government holds current policy on promoting small scale irrigation in national development strategy.
2. Adaptation of small scale irrigation farming technologies and experiences systematized	2 Technical issues and adaptation experience of technologies for small scale irrigation farming documented		

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Activities	Input	Malawian Side	1. Incidents which discourage the AEDOs' extension work such as the decrease of their salary and the extreme increase of their work load do not occur 2. Distributed tools and extension materials are not lost or stolen
1.1 Conduct training of small scale irrigation development package for extension workers in all potential EPAs. 1.2 Train extension workers on project formulation, monitoring and evaluation 1.3 Formulate programs for dissemination of small scale irrigation farming at each potential EPA 1.4 Distribute tools and training materials for dissemination of small scale irrigation farming to potential EPAs	<b>Japanese Side</b> 1. Experts Long term Experts a) Chief Advisor b) Evaluation & Monitoring Coordinator Short term Experts in Farm Management (according to the needs.) 2. Machinery & Equipment Tools for constructing irrigation facilities (Hoes, spades, hammers, saws, axes, etc) Equipments for extension and monitoring & evaluation: bicycles, Technical manuals, posters, leaflets. 4 WD Vehicles (To be bought as needs arises) Office equipments (To be bought as needs arises) 3. Training Training AEDOs in Malawi Training Irrigation Technicians in Japan <b>See Note 3</b>	<b>Malawian Side</b> 1. Provision of unskilled labor from the beneficiary farmers 2. Provision of locally available materials for construction of small scale irrigation facilities (dam, water, canal) 3. Provision of Human Resources at each of ADDs, RDPs and EPAs level 4. Provision of office space 5. Provision of counterparts from Department of Irrigation	
2.1 Examine and systematize the experience of development and application of methods and skills on small scale irrigation farming at different EPAs 2.2 Examine and systematize the experience of development and application of farm management and farming practice for sustainability of small scale irrigation farming at different EPAs 2.3 Examine and systematize the experience and various socio-economic factors at different EPAs which influence sustainability of small scale irrigation farming 2.4 Revise the contents of small scale irrigation development package based upon results of systematization from activities mentioned above and establish improved comprehensive package for nationwide dissemination of small scale irrigation farming			<b>Preconditions</b> Rural societies in Malawi continue to accept farming in dry season as a means of livelihood

☆ Note 1 – The actual indicators (in blackened blackest) will be further discussed and approved by JCC with the advice of PMU when starting the Project.

☆ Note 2 – Comprehensive Small – Scale Irrigation Farming refers to (Small- Scale Irrigation Development Package) with systematized experiences from different areas.

☆ Note 3 – The inputs will be further discussed and might be modified by JCC with the advice of PMU when starting the project

☆ Note 4 – The target figures for the overall goal are set based on the estimation that at least one-third of the annual accomplishment by the cooperation period (including the numbers developed by the foregoing assistance over 6 years in total) can be attained by the continuous efforts of the implementing agencies every year. (Accomplishment by February 2008 plus target figure for FY 2008 divided by 6 years times 30% times 3 years)

Plan of Operation (PO) : Work Schedule for Development of Smallholder Irrigation Scheme Technical Cooperation Project

Job Description		1st Year(2006)				2nd Year (2007)				3rd Year (2008)			
		3-5	6-8	9-11	12-2	3-5	6-8	9-11	12-2	3-5	6-8	9-11	12-3
		Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
1.Extension system for small scale irrigation development package established at all potential EPAs	1.1	Conduct training of small scale irrigation development package for extension workers in all potential EPAs.											
	1.2	Train extension workers on project formulation, monitoring and evaluation.											
	1.3	Formulate programs for dissemination of small scale irrigation farming at each potential EPAs.											
	1.4	Distribute tools and training materials for dissemination of small scale irrigation farming to potential EPAs.											
2.Adaption of small scale irrigation farming technologies and experiences systematized	2.1	Examine and systematize the experience of development and application of methods and skills on small scale irrigation farming at different EPAs.											
	2.2	Examine and systematize the experience of development and application of farm management and farming practice for sustainability of small scale irrigation farming at different EPAs.											
	2.3	Examine and systematize the experience and various socio-economic factors at different EPAs which influence sustainability of small scale irrigation farming.											
	2.4	Revise the contents of small scale irrigation development package based upon results of systematization from activities mentioned above and establish improved comprehensive package for nationwide dissemination of small scale irrigation farming.											
3.Others	3.1	Publication of the project News Letter and distribution to ADDs, RDPs, EPAs and all stake holder.											
	3.2	Conducting meeting of steering committee and joint coordinating committee.											
4.Report	4.1	To draw up the work plan based on the discussion with MoIWD , MoAFS and JICA.											
	4.2	To submit the progress report to MoIWD, MoAFS and JICA.		P(1)	P(2)	P(3)	P(4)	P(5)	P(6)				
	4.3	To submit the final report to MoIWD, MoAFS and JICA.											





**Evaluation Grid for Final Terminal Evaluation  
The Development of Smallholder Irrigation Schemes Technical Cooperation Project in the Republic of Malawi**

Evaluation Criteria	Evaluation question		Results
	Main question	Sub question	
Achievement	Is the overall goal likely to be achieved?	Is the overall goal likely to be achieved three years after the Project completion?	Once the project purpose is properly achieved, the prospects of attaining the overall goal is high.
	Is the Project purpose achieved?	Is the Project purpose likely to be achieved by the end of the cooperation period?	The Project purpose is only partially achieved.
		Is the extension system for small scale irrigation development package established?	The nationwide extension system is yet to be established as there are insufficiencies in monitoring system and examination of agricultural components of the development package.
		Are irrigation technologies (e.g. construction of weir, canal & ancillary facilities) of the package smoothly disseminated by the extension workers?	Under the Project, the extension officers could develop 784 irrigation sites by the end of February 2008, and another 365 sites are to be developed in current year.
		Are farming management technologies (e.g. compost making, pest control) of the package smoothly disseminated by the extension workers?	Level of dissemination and adoption are not to a satisfactory level. Need further examination of the technologies and enhancement of extension activities.
		Are monitoring and evaluation properly conducted by the extension workers?	The Project provides monitoring sheet, and gather the data upon training sessions. However, further improvement is necessary in terms of the timing of data submission and accuracy of the
		Are the extension materials and construction tools utilized by farmers?	The extension materials and tools provided to the EPAs are properly managed and frequently utilized by the farmers.
	Have the outputs been produced properly?	Have the extension officers been sufficiently trained on the package?	As for the conducts of the training, the extension officers are given proper training both on irrigation and agricultural components of the package.
		Have the effectiveness and applicability of irrigation technologies (e.g. construction of weir, canal & ancillary facilities) been examined enough?	Short-term experts in the field of irrigation development have conducted field study, the results of which have duly been incorporated in the training materials.
		Have the effectiveness and applicability of farm management technologies (e.g. compost making, pest control) been examined enough?	Due to the cancellation of the planned dispatch of the short-term experts in the field of farm management, examination was not sufficiently conducted.
		Have various socio-economic factors (e.g. gender) which could influence sustainability of irrigation farming been examined enough?	As women plays important role in securing food for the family, there a large number of women farmers participated in the irrigation activities as members of irrigation clubs.
		What are the modification made by the Project on the original small scale irrigation development package formulated by the development study?	The Project has modified the package mainly by adding handouts for training sessions and monitoring sheets to the original package developed by the foregoing Development Study.
		Have the small scale farming technologies been documented with reference to the examination	Additional documentations were made only on the irrigation development technologies of the package, such as safety measure to prevent land slide in construction of the irrigation canal.
		Have the Japanese experts been dispatched as planned?	The planned dispatch of the short-term experts in the field of farm management was cancelled for 2007 and 2008.
		Has the counterpart training been conducted as planned?	12 personnel were sent to Japan to participate the Joint Training Programme for Counterpart Personnel in Irrigation and Drainage in 2006 and 2007.
	Were the inputs made as planned?	Have the equipment and machinery been provided as planned?	All of the equipment and machinery have duly been provided.

		Have the counterpart personnel been assigned as planned? Have the physical facilities been provided as planned?	Counterpart personnel from DoI were assigned as scheduled, while the assignment of DAES staff was delayed for about a year. Office space for the Project personnel and facilities for the training in the field were provided. Activities of the Project were implemented as scheduled, except for the examination of the agricultural component of the small-scale irrigation development package. Activities have been mostly implemented as described in the PO.
Implementation processes	Have the activities been implemented as scheduled?	Were the activities timely implemented? Was there any change in the activities and schedule of implementation from the original PO? Were the Project activities monitored properly?	Detailed monitoring was conducted to review the actual extension work after the training. However the timeliness and accuracy of the monitoring data still need to be reinforced. It was pointed out as a problem at the time of Mid-term Evaluation, upon which the project has introduced regular team meeting with which the communication among the Project personnel has been improved.
	Have there been any problem related to the management of the Project?	Were the communication among the project personnel smooth? Were the counterpart personnel committed and involved actively in the Project activities? Has the decision making mechanism of the Project been functional? What are special measures taken in terms of the managerial aspects of the Project?	Degree of commitment differs among individuals, but most of the counterpart personnel have actively participated in the Project activities, particularly in the conducts of the training session. The JCC, PMU, Steering committees are adequately organized to discuss and supervise the activities of the Project. The regular team meeting and preparatory meeting with trainers before the training session were organized for smooth implementation of the activities.
	Are the implementing agencies well aware of the Project? Were there any special measures taken to ensure the smooth implementation of the Project?	Are the implementing agencies committed to the Project? Have there been any special measures taken in terms of implementation mechanism? Has there been any special consideration given in terms of dealing with the target groups?	Both DoI and DAES are generally supportive, particularly in the field level (DADOs, EPAs) Inclusion of the practical exercise in the field as a part of the training is effective measure to ensure the learning of the training participants. Some of the leaflets were translated in the local language when the training in the northern region was conducted.
	Does the Project address the needs of the country, sector and the target groups?	Is the Project consistent with the development plans of Malawian Government? Does the Project appropriately address the sectoral issues of the development plan? Does the Project address the need of the target groups?	It is consistent both with Malawi Vision 2020 and Malawi Growth and Development Strategy (MGDS), thus it is in line with the development thrust of the Malawian Government. It is relevant to the Agricultural Development Programme (ADP) and National Irrigation Policy and Development Strategy (NIPDS), thus the relevance to the sectoral programmes are The project properly addresses the issue of food security at the smallholders household, thus is evaluated as the relevant to the needs of the beneficiaries.
Relevance	Is the Project priority in the Japan's foreign assistance policy and JICA's country programs?	Is the project relevant to the Japan's Aid Policies ? Is the project relevant to the JICA's Program?	It is well in line with the Japanese ODA policy to Malawi that is currently under formalization, The Project is to contribute to one of the prime concerns of the policy, i.e. sustainable economic growth. It is relevant to the Country Program of JICA for Malawi, as included in the cooperation program entitled as "Irrigation Promotion Program"
		Was the size of the target group appropriate?	As the Project is aiming at the establishment of a nationwide extension system for comprehensive small-scale irrigation farming, the target was quite large. However, the main activities of the project have been concentrated on the training and monitoring, the design is considered to have been appropriate.

Relevance	Is the selection of target groups appropriate?	Has the Project equitably brought about the benefit?	There have been some reported cases of problem within the communities where small-scale irrigation facilities were developed such that the irrigation club received complains from the community people who is using the same source of water for their domestic use, and that the non-member farmers broke the irrigation facilities out of jealousy to their successes. it is essential to ensure the conducts of preparatory discussions and information dissemination to the communities where the potential sites are identified.
		Has the cost been equally shared by the stakeholders?	Costs of construction of the small-scale irrigation facilities have been born by the farmers, with some additional assistance from existing programs of agricultural extension of the Malawian Government. The groups reported that the members equally share the costs and
	Have the relevant Japanese experience been utilized?	Is there any advantage of Japanese technologies?	As the technologies disseminated through the Project was those simple and low-cost technologies, there is not much to do with the advantage of Japanese technologies.
		How are the experiences of Development Study (capacity building and development of smallholder irrigation scheme) utilized and applied?	The small-scale irrigation development package was originally developed by the foregoing Development Study, and the Project is improving the contents with feedback from actual experiences in the field.
Effectiveness	Is the Project purpose achieved?	Has the Project purpose been specific enough?	The "nationwide extension system" was not clearly defined and the common understanding was not sufficiently made among the Project personnel.
	Has the achievement of Project purpose been resulted from the outputs?	Have there been any factors contributing to the achievement of the Project purpose other than the Project activities?	There has not been much external influence observed or reported during the project implementation.
	Has there been any influence of important assumptions?	Have there been any change in the government policy on the promotion of small-scale irrigation?	There has not been any policy change in terms of promoting small-scale irrigation in the country.
	Have there been any other hindering or contributing factors?		Inclusion of action plan formulation as a part of training, as well as provision of awards to outstanding AEDOs by the Project seem to have promoted the efforts of the AEDOs in developing small-scale irrigation schemes.
Efficiency	Were the activities appropriate to produce outputs?		Planned activities are sufficient to achieve the expected outputs.
		Were the timing, number, duration, and fields of Japanese experts dispatched appropriate?	Long term experts were dispatched as scheduled and carried out the designated roles. However, planned dispatch of the short-term experts in the field of farm management in JFY 2007 & 2008 has been cancelled due to the budgetary problems of JICA.
		Were the timing, duration, contents of counterpart training appropriate?	The counterpart training in Japan was conducted adequately.
		Were the timing, volume, and specification of provision of equipment appropriate?	Selected equipment and machineries were adequate, and provision was made timely. Most of them are frequently used by the Project personnel and generally kept in good conditions.
	Were the inputs appropriate to produce the outputs?	Were the timing, number, fields and competency of the counterpart personnel appropriate?	Absence of a full-time counterpart personnel from DAES in the initial year created some difficulties in the startup of the Project. The involvement of the trainers from ADD, DADO and EPAs who had already been trained on the small-scale irrigation development package during the foregoing JICA cooperation was very helpful for Project implementation.
		Were the physical facilities sufficient to implement the Project activities?	These has not been any notable problem in this regard.
		Was the scale of Project budget appropriate?	As for the local cost sharing by JICA, the volume is assessed adequate. However, in the current agricultural extension programme of the Malawian government, the AEDOs are not provided with sufficient means of transportation for their services in the field, which somewhat discouraged actual extension & dissemination of small-scale irrigation in the field..

Impacts	Were there any factors hindering or contributing to the efficiency of the Project?	Was there any influence from important assumptions? Was there any other factors affecting the efficiency?	There has not been any notable incidence to discourage the AEDOs work. Some of the AEDOs raised the mobility problem, which has, however, been a chronic issue, thus should not be considered as important assumption. There is no cases of stealing or loss of extension materials and construction tools, though some of the construction tools have become no longer usable. No.
	Is the overall goal likely to be achieved?	Can the small scale irrigation farming be promoted through extension of the developed package?	Farmers are adopting the technologies and benefited from introduction of small-scale irrigation. Thus, it is anticipated that once the system is properly established and the contents of the package, especially on agricultural components, further examined, the small-scale irrigation farming would further be disseminated.
		Would the developed package contribute to increase the food security in Malawi?	Most of the beneficiary farmers reported that they are no longer suffering from food shortage in those once crucial months, the contribution of small-scale irrigation to the increase of food security is assessed high.
		Are the commitment of government secured?	At policy and programme level, the promotion of irrigated farming and small-scale irrigation are highly likely to be continued.
	Have there been any other ripple effects?	Is there any possible factors that hinder or contribute to the achievement of the overall goal?	As is stipulated in the PDM, drastic climate change may be the possible factor.
		Has there been any effects beyond the target groups?	Not applicable. (There have been many reported cases of ripple effect to other farmers in the vicinity of the developed schemes, however, they are also considered as the part of the target group, since the Project is aiming at the nationwide extension.)
		Has there been any unexpected effect on the policies and programs of implementing agencies?	No.
		Has there been any changes or formulation in terms of relevant organization, laws, rules and technical and/or methodological innovations?	No.
		Has there been any unexpected effect in terms of gender, human rights, poverty gap, peace and conflicts?	No. Nonetheless, it was noted as precaution that the introduction of small-scale irrigation, as it inevitably benefits only a part of a community, may create or widen income gap. There were also cases of conflicts because of the conspicuous benefit of the irrigation. Although these reported problems have already been addressed with proper countermeasures, careful explanation, coordination and information dissemination in the community at the initial introduction of small-scale irrigation to any potential site is deemed to be essential.
	Are the impacts brought by the Project?	Has there been any unexpected effect on environmental concerns in the target areas?	No environmental effects were observed. But some very minor landslides along the canals and erosion in the farm ditches have been reported in a few sites. Careful examination and proper design of the canal and farm ditch should be reinforced.
		What are the factors that brought about the above mentioned positive and negative effects?	Most of those impacts are attributed to the introduction of small-scale irrigation facilities and technologies.
	Will the policy on smallholders irrigation scheme continue to be functional?	Is the possibility of continuation of the policy to promote smallholders irrigation scheme high?	Yes. (refer to the description related to the RELEVANCE above.)
		Is there any alternative programs that can integrate the outcomes of the Project?	No. As the Project has been trying to incorporate the small-scale irrigation development package in the existing agricultural extension system, further promotion of the outcomes of the Project should be included in the ordinary extension activities as their integral part.

Sustainability		Are the relevant institutions committed to continue the activities?	Yes. The activities to be continued are within the scope of already designated mandates of the implementing agencies.
		Are the counterpart personnel capable of carrying out the activities?	Yes. They are confident to continue the activities, except for the monitoring activities.
	Are the implementing agencies capable to continue or further expand relevant activities of the Project?	Are the necessary budget allotted for the continuous provision of extension services, monitoring and evaluation?	As the continuation of the activities would be integrated in the ordinary activities of agricultural extension in respective EPAs, they would be covered by the normal budget allocation. (Volume may not be sufficient enough, which is again a chronic problem of the implementing agency.)
		Are the irrigation groups capable to continue and expand their activities initiated during the Project?	Yes. The beneficiary farmers have strong sense of ownership on the facilities that they have developed, and they are very confident on their own technical competency in terms of construction and maintenance, eager to continue irrigation farming.
		Are the small scale irrigation development package properly comprehended and well accepted among the stakeholders?	There has not been clear definition of the package until the terminal evaluation. There do not seem to have been common understanding on how the additions and modification would be made on the original package developed by the foregoing cooperation of JICA, what kind of contents the final packages would be composed of, and even what form of the documents it contains. Further dissemination may be expected through ordinary channel of agricultural extension.
	Will the technologies and methodologies introduced by the Project continuously be utilized?	Is there any mechanism within the implementing agency to continue / further disseminate / modify the package in the future?	Monitoring may be a challenge, which should be done both by DAES and DoI. Modification of package may not be done by single institution but rather by respective EPAs in accordance with the local settings.
		Are the small scale irrigation farming technologies developed by the Project accepted and applied by the farmers?	The acceptance in terms of technologies under the irrigation components are very high, while the farming related technologies have not been disseminated to a satisfactory degree.
		Is there any mechanism to further disseminate the package to other areas?	It is anticipated that the contents of the package would be integrated in the annual work plan of the EPAs. Formal instruction from the ADD and DADO to EPA is desirable.
		Is the necessary equipment properly maintained?	In some EPAs, the construction tools provided by the Project had been exhausted. Replacement may be expected with the regular budgetary allocation to those EPAs.
	Are there any factors that may affect the sustainability of the Project?	Is there any negative influence on the social and cultural aspects that may become obstacles in carrying out the activities?	There is a need to take sufficient precautions and necessary measures to avoid possible conflicts and disparities within the communities due to the unequal distribution of water, income gap and so forth. (refer to the description related to the IMPACT above)
		Is there any negative influence on the environment that may inhibit the continuation of the activities?	Further reinforcement both to the AEDOs and farmers is needed in terms of technical design of canals and farm ditches to avoid negative effects such as landslides and erosions. (refer to the description related to the IMPACT above.)



**LIST OF QUESTIONS FOR INTERVIEWS AND DISCUSSIONS  
TERMINAL EVALUATION ON  
THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEME TECHNICAL COOPERATION  
PROJECT**

**FOR FARMERS / MEMBERS OF THE IRRIGATORS CLUBS**

**<Irrigation facilities and organization>**

- (1) When have you decided to build small scale irrigation facilities?
- (2) When did you join / organize the irrigators club?
- (3) What is the type of the small scale irrigation facilities do you have?
- (4) Was there any problem in organizing farmers into the group?
- (5) Was there any problem in construction of the irrigation facilities?
- (6) What was the most difficult part in construction of the irrigation facilities?
- (7) What was the most useful technology that you have learned for construction of irrigation facilities?
- (8) Did you have experience of working as a group before the organization of the irrigators club?
- (9) Do you have any regular meeting among the members of the club?
- (10) Do you have any written rules and regulations of the club?
- (11) What are the responsibilities of the members of the club? (i.e. participation in the meetings and maintenance activities, water distribution, payment of water charges, etc.)
- (12) What are the activities of the irrigators club at present?
- (13) Do you have any problems in the operation of the irrigators club?
- (14) What kind of activities is the irrigators club planning to undertake in the future?
- (15) Are you confident to carry out the activities of the irrigators club by yourselves? What support do you still need in the future?

**<Farming Activities>**

- (1) What were the cropping patterns before you have irrigation facilities? What are the current cropping patterns?
- (2) What are the farming technologies that you have newly learned?
- (3) What are the most useful farming technologies for you?
- (4) Was there any change in the yields of major crops because of the new technology?
- (5) Have there been any changes in securing the food for self consumption?
- (6) Have there been any changes in cash income from the crops?
- (7) Did the expenses on agricultural inputs increase/decrease by introducing the new technologies?
- (8) What is the most important change in farming activities brought about by irrigation?
- (9) What is the most important change in farming activities brought about by introduction of new farming technologies?
- (10) What have been the obstacles for you to apply the newly learned farming technologies, if any?
- (11) What is the prospect of your farming activities in the future?

**<Socio-cultural and other changes>**

- (1) Has there been any change in the relationship among the community members after organizing the irrigators club?
- (2) How often had you met with the government officers such as extension officers and irrigation engineers before the Project? Have there been any changes in the relationship with them?
- (3) Has there been any change in the intra-household relationship, i.e. relationship among the family members after the introduction of irrigation facilities and new farming technologies?
- (4) Has there been any change in the relationship between the better-off and the worse-off in the community that was brought about by the Project?
- (5) Do you find any change within yourself through participation in the Project activities?



**QUESTIONNAIRE FOR IRRIGATION OFFICERS**  
**TERMINAL EVALUATION ON**  
**THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEME TECHNICAL COOPERATION PROJECT**

**Name:** \_\_\_\_\_ **RD**      **P:** \_\_\_\_\_

(1) What do you think is the aim of this Project?

(2) Do you have regular contacts with extension officers in your area?

(    ) Yes: How often do you meet / have report from them? \_\_\_\_\_

(    ) No

(3) What are the aspects of small scale irrigation development that has been difficult to be understood by the extension officers?

(4) Do you think that the extension officers are guiding the farmers properly on the construction and maintenance of the irrigation facilities?

(    ) Yes

(    ) No: What shortcomings do you find in their guidance? \_\_\_\_\_

(5) Do you think that the farmers properly construct and maintain the irrigation facilities?

(    ) Yes

(    ) No: What shortcomings do you find in their activity? \_\_\_\_\_

(6) How many times did you visit the irrigation sites for last one month?      (    ) times

(7) What are the changes do you find among the farmers in the irrigation sites?

(8) How do you assess the effectiveness of the small scale irrigation?

(    ) Very effective      (    ) effective      (    ) Not so effective      (    ) Not effective at all

Please describe the reasons for your assessment:

(9) Can you continue your guidance to the extension officers on the regular basis after the completion of the Project?

(    ) Yes: Please describe how you will provide guidance

(    ) No: Why you will not be able to continue?

(10) What is the most important aspect that you could learn through your participation in the Project?

(11) What do you think are the necessary measures to be taken to further promote the small scale irrigation?

(12) Please write any comments on the achievement and process of Project implementation, if any.

Thank you very much!

**QUESTIONNAIRE FOR EXTENSION OFFICERS  
TERMINAL EVALUATION ON  
THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEME TECHNICAL COOPERATION  
PROJECT**

**<Extension activities under the Project>**

(1) What do you think is the aim of this Project?

(2) Was the training by the Project useful for you to carry out your extension work on small scale irrigation development?

( ) Yes

( ) No: Why do you think it was not useful? \_\_\_\_\_

(3) Are the construction tools and extension materials provided to your EPA?

( ) Yes

( ) No

Are they maintained well?

( ) Yes

( ) No: what are the items so far lost/broken? \_\_\_\_\_

Are they regularly borrowed/used by the farmers?

( ) Yes: please describe the way to keep the transaction record \_\_\_\_\_

( ) No

Have there been any problems in terms of utilization of the tools and extension materials?

( ) Yes: please describe the problems \_\_\_\_\_

( ) No

(4) Is there any opportunity for you to share your learning from the training and field experience to your colleagues in the EPA?

( ) Yes

( ) No

If Yes,

How often do you have such opportunities?

What are the aspects that you have ever shared to your colleagues in such occasions?

(5) What were the major difficulties for you to carry out your extension work to promote small scale irrigation in your area of jurisdiction?

How have you overcome the difficulties?

(6) Is the promotion of small scale irrigation included in the extension current and future plans/programs of your EPA?

☐ Yes: please provide copies of the relevant documents.

☐ No

(7) Are you confident to carry out by yourself the extension of small scale irrigation development package after the completion of the Project?

☐ Yes: Please describe how you will carry out the extension in future

☐ No: What are the aspects that you need further support?

(8) What is the most important aspect that you could obtain by participating in the Project?

**<Field Activities>**

(1) How many irrigation sites have been developed in your area of jurisdiction?

No. of irrigation sites completed (      )

No. of irrigation sites currently being constructed (      )

Please describe the types of irrigation with respective number.

(2) Are all of the irrigators clubs actively undertaking their activities?

☐ Yes

☐ No: No. of groups that are not active (      )

(3) How often do you visit each of the irrigators club?

(3) Is the farmers' understanding on the construction and maintenance of the small scale irrigation facilities satisfactory?

( ) Yes

( ) No: What aspects do they need further understanding? \_\_\_\_\_

(4) Do the farmers properly construct and maintain the small scale irrigation facilities?

( ) Yes

( ) No: What are the problems? \_\_\_\_\_

(5) Have there been any problems encountered by the farmers upon their construction and maintenance of the small scale irrigation facilities?

( ) Yes

( ) No

If Yes,

What have been the problems?

How did the farmers overcome the problems?

(6) Have there been any problems for you to disseminate the technologies on construction of small scale irrigation facilities?

( ) Yes

( ) No

If Yes,

What were the problems?

How did the farmers overcome the problems?

(7) Is the farmers' understanding on the farming technologies introduced by the Project satisfactory?

( ) Yes

( ) No: What aspects do they need further understanding? \_\_\_\_\_

(8) Do the farmers apply the farming technologies introduced by the Project?

( ) Yes

( ) No

What are the farming technologies popularly applied by the farmers?

What are the farming technologies rarely applied by the farmers?

(9) Have there been any problems for you to disseminate the farming technologies?

( ) Yes ( ) No

If Yes,

What were the problems?

How did the farmers overcome the problems?

(10) Have there been any economic changes among the farmers in your area?

( ) Yes: please describe the changes\_\_\_\_\_

( ) No

(11) Have there been any social changes among the farmers in your area?

( ) Yes: please describe the changes\_\_\_\_\_

( ) No

(12) Have there been any other changes that you can notice among the farmers in your area?

( ) Yes: please describe the changes\_\_\_\_\_

( ) No

(13) Have there been any problems brought about during the implementation of the Project?

( ) Yes: please describe the problems\_\_\_\_\_

( ) No

(14) Are the representatives/official members of the irrigators clubs capable enough to continue the activities by themselves?

( ) Yes

( ) No: What are the aspects that they need further support?\_\_\_\_\_

(15) What do you think are the necessary measures to be taken to further promote the small scale irrigation?

Thank you very much!

**LIST OF QUESTIONS FOR INTERVIEWS AND DISCUSSIONS**  
**TERMINAL EVALUATION ON**  
**THE DEVELOPMENT OF SMALLHOLDER IRRIGATION SCHEME TECHNICAL**  
**COOPERATION PROJECT**

**FOR JAPANESE EXPERTS / COUNTERPART PERSONNEL**

**1. Overall Project Implementation**

(1) Have there been any problems / circumstances that caused any delay or alternation in the planned activities of the Project?

- (    ) Yes: please describe the problems\_\_\_\_\_
- (    ) No

(2) What was the internal mechanism of decision making within the Project?

Has there been any problem related to the decision making within the Project?

- (    ) Yes: please describe the problems\_\_\_\_\_
- (    ) No

(3) What was the system within the Project to monitor the progress of activities?

How often and through what method were the monitoring activities undertaken?

Was there any problems related to the monitoring of project activities?

- (    ) Yes: please describe the problems\_\_\_\_\_
- (    ) No

(4) Have there been any other institutions that have rendered support to the Project?

- (    ) Yes                      (    ) No

If Yes,

What institutions rendered support?

What kind of support rendered?

How these support benefited the implementation of the Project?

(5) Has there been any problem in terms of the communication among the project personnel (experts,

counterpart personnel, relevant institutions, beneficiaries)?

( ) Yes: please describe the problems\_\_\_\_\_

( ) No

Was the coordination among the project personnel at working level effective and smooth?

( ) Yes

( ) No: Why the coordination was not smooth?\_\_\_\_\_

(6) Have the counterpart personnel and other stakeholders actively participated in the project implementation?

( ) Yes

( ) No: Why their participation was not active?\_\_\_\_\_

(7) What are the relationships between the Project and other institutions supporting the smallholder irrigation scheme?

(8) Have there been any special measures taken to address the specific needs of the target beneficiaries or specific conditions of the locality?

( ) Yes: please describe the measures taken\_\_\_\_\_

( ) No

## **2. Achievement of the Project Purpose**

(1) What is the agreed definition of "the small scale irrigation development package"?

(2) What are the current status of formulation / modification and contents of the small scale irrigation development package?

(3) What is the extension system for small scale irrigation development package?

Has the system been established sufficiently to serve the target clientele?

( ) Yes

( ) No: what are the shortcomings of the system at present?\_\_\_\_\_

(4) Have there been any factors contributing to the achievement of the Project purpose?



(5) Have there been any factors / obstacles hampering the achievement of the Project purpose?

### **3. Possibility of achieving the Overall Goal**

(1) Would the overall goal be achieved by 2011?

(    ) Yes                      (    ) No

Why do you think the overall goal would / would not be achieved?

(2) Are there any current or upcoming plans / activities by the implementing agencies for achieving the overall goal?

(    ) Yes: please provide information on these plans and activities

(    ) No

(3) Who are anticipated to take initiatives for the achievement of the overall goal?

(4) Are the stakeholders equipped with sufficient financial, technical and managerial capacities to carry out the activities to achieve the overall goal?

(    ) Yes                      (    ) No

What is the basis for your opinion?

(5) Are there any other necessary measures to be taken to achieve the overall goal?

(    ) Yes: please describe the measures to be taken \_\_\_\_\_

(    ) No

### **4. Levels of Outputs**

Output 1:

Please provide the final update of the indicator 1-1

No. of EPAs that has been undergone training of the small scale irrigation development package

No. of extension officers demonstrated/disseminated the package

No. of irrigation groups organized and No. of those actively undertaking the group activities

Please provide the final update of the indicator 1-2

No. of EPAs that are conducting monitoring and evaluation activities

Prototype formats of monitoring and evaluation, if any

Please provide the final update of the indicator 1-3

No. of EPAs that rent out the extension materials and tools for construction to farmers

No. of cases that the irrigation groups utilize the construction tools

Ways how the extension materials are utilized

Please provide the final update of the indicator 1-4

No. of extension workers trained on small scale irrigation development package

Output 2:

a. What are the small scale irrigation farming technologies so far documented?

b. What are the farm management and farming practice for sustainable small scale irrigation farming from different EPAs?

c. What are the revised contents of the training materials prepared by the Projects?

d. Have the actual experiences and learning from the Project been reflected in the training materials?

( ) Yes: please provide actual examples.

( ) No

## 5. Inputs

(1) Have there been any problems related to the amount, quality and timing of inputs from either Japanese or Malawian side?

( ) Yes

( ) No: What were the shortcomings? \_\_\_\_\_

Why the input was inadequate? \_\_\_\_\_

(2) Have the subjects of training for counterpart personnel in Japan been relevant to the Project activities?

( ) Yes

( ) No: What were the shortcomings? \_\_\_\_\_

How have their knowledge and learning from the training been applied and effectively utilized in the implementation of the Project?

## 6. Policy Background and Rationale

(1) What are the development policies and programs of the Malawian governments (national plans and programs, plans and programs of department of irrigation, plans and programs of the department of extension) in relation to the small scale irrigation scheme and small scale irrigation farming?

(2) Are the annual or multi-year plan / program of the implementing agencies still relevant to the Project activities?

( ) Yes: Please indicate the relevant policy documents

( ) No

(3) Are the needs for promoting the small scale irrigation scheme sufficiently recognized by relevant government officials and farmers?

( ) Yes

( ) No: Why the need is not recognized? \_\_\_\_\_

## 7. Impacts

(1) Have there been any unexpected favorable impacts brought about in the course of project implementation?

( ) Yes: please describe the impacts \_\_\_\_\_

( ) No

(2) Have there been any unexpected negative impacts brought about in the course of project implementation?

( ) Yes: please describe the impacts \_\_\_\_\_

( ) No

## 8. Sustainability

(1) Are the government policies to promote small scale irrigation scheme likely to be continued?

( ) Yes

( ) No

What is the basis for your opinion?

(2) What are the operational programs to be executed by the implementing agencies after the completion of the Project?

Have there already been any budgetary plans for the programs?

( ) Yes: Please indicate the relevant policy documents

( ) No

(3) Are the implementing agencies capable to continue the activities by their own?

( ) Yes

( ) No

What is the basis for your opinion?

What are the necessary supporting measures to ensure the continuity of the activities?

(4) Are the farmers (irrigators clubs) capable to continue the activities by their own?

(    ) Yes                      (    ) No

What is the basis for your opinion?

What are the necessary supporting measures to ensure the continuity of the activities?

(5) Have the knowledge and skills fostered through the Project been applied and utilized by the relevant government officers?

Would they possibly be extended and further widespread to the other areas?

(    ) Yes                      (    ) No

Why do you think that they would / would not be extended and further widespread?

(6) Have the knowledge and skills fostered through the Project been applied and utilized by the farmers in the field?

Would they possibly be extended and further widespread to the other areas?

(    ) Yes                      (    ) No

Why do you think that they would / would not be extended and further widespread?

Thank you very much!

# 供与機材リスト

	供与時期	機材名	型式	メーカー	設置場所	現地/ 本邦調達	使用目的	稼働・管理状況
1	2006 年 3 月	車両	PATROL/4 WD	NISSAN	灌漑局ワーク ショップ	現地	研修 出張	頻度大/良好
2	2006 年 3 月	車両	PATROL/4 WD	NISSAN	同上	現地	同上	頻度大/良好
3	2006 年 3 月	パソコン	LATITUDE 110L	DELL	プロジェクト 事務所	現地	研修 評価 モニタリング	頻度大/良好
4	2006 年 3 月	パソコン	LATITUDE 110L	DELL	同上	現地	同上	頻度大/良好
5	2006 年 3 月	プロジェクター	LV-S3 CANON		同上	現地	研修	頻度大/良好
6	2006 年 3 月	プロジェクター	LV-S3 CANON		同上	現地	研修	頻度大/良好
7	2006 年 4 月	書籍キャビ ネット	金属製		同上	現地	研修	頻度大/良好
8	2006 年 4 月	書籍キャビ ネット	木製		同上	現地	研修	頻度大/良好
9	2006 年 4,9 月	机(4)	木製		同上	現地	研修	頻度大/良好
10	2006 年 4,12 月	椅子(7)	SDN BHD	JJ CHAIRS	同上	現地	研修	頻度大/良好
11	2006 年 6,9 月	3 段キャビ ネット(3)	金属製		同上	現地	研修	頻度大/良好
12	2006 年 5 月	コピー機	COPYCEN TRE 256	XEROX	同上	現地	研修	頻度大/良好
13	2006 年 10 月	プリンター	LBP 3460	CANON	同上	現地	研修	頻度大/良好
14	2006 年 7 月	デジタルカ メラ・バッテ リチャージャー、 バッテリー(20)	POWER SHOT A420	CANON	同上	現地	研修	頻度大/良好
15	2006 年 11 月	パソコン	DEMENTI ON E310	DELL	同上	現地	研修	頻度大/良好
16	2006 年 11 月	パソコン	DEMENTI ON E310	DELL	同上	現地	研修	頻度大/良好
17	2006 年 12 月	金庫(1)	鉄製	Ninshengda	同上	現地	研修	頻度大/良好
18	2006 年 12 月	プリンター	iX 5000	CANON	同上	現地	研修	頻度大/良好

