

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Malawi office: Jan, 2014

Country Name	Development of Smallholder Irrigation Schemes Technical Cooperation Project
Republic of Malawi	

I. Project Outline

Background	<p>The agricultural sector was and is still an important sector in Malawi for sustainable economic development and poverty alleviation. In 2002 about 72% of farmers were categorized as small scale farmers holding less than 1ha of agricultural land and their agricultural productivity was low and vulnerable against natural disasters such as drought since most of farmers were subsistence farmers mainly depending on rain fed agriculture. The country, however, has significant irrigation potential that remains largely underdeveloped due to lack of budget, limited human resources and technical capacity of Malawi government. Because of this situation, the Development Study on Capacity Building and Development for Smallholder Irrigation Scheme was conducted by JICA in 2002-2005, and a small scale irrigation development package was developed.</p>										
Objectives of the Project	<ol style="list-style-type: none"> Overall Goal: Small-scale irrigation farming is promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security. Project Purpose: Nationwide extension system for comprehensive small-scale irrigation farming ^(Note 1) is established. Steps for achieving the project goals: This project established the comprehensive small scale irrigation farming characterized as a low-cost irrigation farming method and techniques ^(Note 1) and provided training for the Ministry of Agriculture and Food Security (MoAFS) and the Ministry of Irrigation and Water Development (MoIWD) members of staff (extension workers ^(Note 2) in all Extension Planning Areas (EPAs) ^(Note 3). Through these activities, MoAFS and MoIWD strengthened their capacity to promote the comprehensive small-scale irrigation farming in all potential irrigation areas in Malawi. Farmers in all potential irrigation areas in Malawi applied and practiced the comprehensive small-scale irrigation farming, and then they increased the agricultural production, which eventually contributed to improved food security of Malawi. <p>Note 1: The comprehensive small scale irrigation farming is established based on the small scale irrigation development package developed by the precedent JICA's development study "Study on Capacity Building and Development for Smallholder Irrigation Scheme" (2002-2005). The "Small scale irrigation development package" refers a package of low-cost technologies for self-help irrigation development, which enables smallholder farmers to embark on irrigation farming without any external inputs. This package was composed of (i) comprehensive guideline, (ii) technical manual, (iii) leaflet, (iv) posters, and (v) picture stories. This package was developed by JICA's Development Study on Capacity Building and Development for Smallholder Irrigation Schemes (2002-2005).</p> <p>Note 2: Extension Workers in this project refers to staffs from MoAFS and MoIWD and it included Agricultural Extension Development Coordinators (AEDC), Agricultural Extension Development Officer (AEDO), Extension & Methodology Officer (EMO), Irrigation Officer (IO) and Irrigation Assistants.</p> <p>Note 3: In this report, terminology of "EPA" refers to an administrative unit or a field office of MoAFS where the extension workers are dispatched. There are 8 Agriculture Development Divisions (ADDs), 28 District Agricultural Development Office (DADOs) and 195 Extension Planning Areas (EPAs) under MoAFS in Malawi.</p>										
Activities of the project	<ol style="list-style-type: none"> Project site: Malawi nationwide Main activities: Trainings for extension workers in all EPAs, development of dissemination program and tools for small scale irrigation farming, examination and revision of experience and application of small scale irrigation development package, and establishment of improved comprehensive package for nationwide dissemination of small scale irrigation farming. Inputs (to carry out above activities) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Japanese Side</td> <td style="width: 50%; border: none;">Malawi Side</td> </tr> <tr> <td style="border: none;">1) Experts: 5 persons (2 for Long term, 3 for Short term)</td> <td style="border: none;">1) Staff allocated: 27 persons</td> </tr> <tr> <td style="border: none;">2) Trainees received: 14 persons</td> <td style="border: none;">2) Land and facilities: project office, electricity, water supply</td> </tr> <tr> <td style="border: none;">3) Equipment: 4WD vehicle x 2, PCs, projectors, printers, scanners, desk, chair, cabinet</td> <td style="border: none;">3) Local cost: salaries to counterpart personnel</td> </tr> </table> 			Japanese Side	Malawi Side	1) Experts: 5 persons (2 for Long term, 3 for Short term)	1) Staff allocated: 27 persons	2) Trainees received: 14 persons	2) Land and facilities: project office, electricity, water supply	3) Equipment: 4WD vehicle x 2, PCs, projectors, printers, scanners, desk, chair, cabinet	3) Local cost: salaries to counterpart personnel
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Project Period	March 23, 2006 –December 22, 2009	Project Cost	284 million yen								
Implementing Agency	<ul style="list-style-type: none"> Department of Irrigation (DOI), Ministry of Irrigation and Water Development (MoIWD) Department of Agriculture Extension Service (DAES), Ministry of Agriculture and Food Security (MoAFS) 										
CA ¹ y in Japan	None										
Related Projects (if any)	<p>Japan's cooperation:</p> <ul style="list-style-type: none"> Study on Capacity Building and Development for Smallholder Irrigation Scheme (Development Study, 2002-2005) Project for Development of Medium Scale Irrigation Scheme (Technical Cooperation, 2011-2014) 										

¹ Cooperation Agency

II. Result of the Evaluation²

1 Relevance

This project has been highly relevant with Malawi's country's development policy ("food self-sufficiency through promotion of irrigation farming" in the National Irrigation Policy and Development Strategy (2000), Malawi Vision 2020 (1997), the Malawi Growth and Development Strategy II (2011-2016)), development needs ("promotion of small scale irrigation farming"), as well as Japan's ODA policy for Malawi with the priority area of food security, at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project focuses on establishing the dissemination system of the comprehensive small-scale irrigation farming in Malawi by strengthening the capacity of MoAFS and MoIWD staff (extension workers) through developing a low-cost irrigation farming method and techniques to be applicable in all potential irrigation areas. The total number of irrigation groups formed by project completion in 2009 was 2,535, which surpassed its target of 1,220. It was confirmed that the major irrigation and agricultural techniques of the comprehensive small scale irrigation farming have been practiced in the irrigation sites. For example, gravity fed irrigation, canal alignment and reshaping, river diversion, weir construction, ancillary bed construction, botanical pest control, compost manure making, rice transplanting, and sasakawa maize and mulching planting, and so on were practiced at five sites visited. It is likely that the comprehensive small-scale irrigation farming were introduced and the monitoring and evaluation activities were generally institutionalized at most of the EPAs after project provided the training to MoAFS and MoIWD staff (in 125 EPAs out of total 195 EPAs) in Malawi. However, it was revealed that the monitoring and evaluation capacity of EPAs needed to be further strengthened particular in quality of reporting and data recording. In addition, limited background of AEDOs in irrigation and inadequate technical support by District irrigation engineers towards AEDOs are constraints.

As for the overall goal, 1,873 sites were developed by AEDOs during the project period (2006-2009) and cumulatively 2,535 sites with 4,877 ha of irrigation areas were developed from 2003 to 2009 including the project period of the precedent JICA's development study. However, the data after 2009 till now is not available. Moreover, the actual data for the following indicators: percentage of irrigation areas developed by AEDOs among the potential irrigation area in Malawi, irrigation areas where irrigation agricultural farming is actually implemented during the dry season among irrigation areas developed by AEDOs, and volume of agricultural outputs/products produced in the dry season among irrigation areas developed by AEDOs are not available. Therefore, the achievement of overall goal was not verifiable at the time of ex-post evaluation. On the other hand, in all the five sites visited, farmers cited increased crop production due to two cycle irrigation farming. This has improved household food security and household income from sales of irrigation crops. The income from crop sales has been used for payment for school fees for children, buying clothes for family members, building houses, buying livestock and so on. These sites were supported not only by this project but also other donors/NGOs projects.

In this way, this project has mostly achieved the project purpose. It was confirmed that the five irrigation sites visited during the ex-post evaluation survey, continuously practiced comprehensive small-scale irrigation farming that brought about some positive impacts. However, it could not be confirmed with the tangible figures as to what extent the comprehensive small irrigation farming has been disseminated and practiced in the potential irrigation areas in Malawi due to lack of data set as indicators. Therefore, effectiveness of the project is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Nationwide extension system for comprehensive small-scale irrigation farming is established.	Irrigation groups increased to 1,220	(Project Completion) 2,535 irrigation groups (Ex-post evaluation) No information
(Overall goal) Small-scale irrigation farming is promoted, disseminated and practiced in appropriate areas in Malawi in order to increase food security.	Demonstrated irrigation group members increased to 21,960	(Ex-Post Evaluation) No information
	Demonstrated irrigation area increased to 1,830 ha	(Ex-Post Evaluation) 1,873 sites were developed from 2006 to 2009, but its dimension was not available. Cumulatively 4,877 ha of irrigation areas were developed at 2,535 sites from 2003 to 2009. Although no statistical data at national level is available regarding the irrigation area after 2009, statistics of division level indicates that an increase in irrigation area in Lilongwe ADD, and Kasungu ADD.

Source: Project Completion Report, Interviews with counterparts

3 Efficiency

While the inputs were mostly appropriate for producing the outputs of the project, and the project cost was within the plan (ratio against the plan: 81%), the project period was extended for 9 months (ratio against the plan: 127%) because short-term experts in the field of farm management were not dispatched as planned. Therefore, efficiency of the project is fair.

² Constraint of Evaluation: The ex-post evaluation reexamined the appropriateness of the indicators for project purpose and overall goal, and modified their indicators by providing several additional indicators as well as deleting the duplicate indicators in order to assess their achievement appropriately.

4 Sustainability

In policy aspect, this project is still given importance in the current development policy as the National Irrigation Policy and Development Strategy (2000), which aims at poverty reduction and food self-sufficiency through small scale irrigation. Regarding the institutional aspect, the Malawi government has increased the recruitment of AEDOs over the years, and the number of extension officers has been expanded to disseminate the package. However, there is still need of increasing the number of irrigation extension officers at EPA level since most of the AEDOs at EPAs have limited background in irrigation. In addition, the backup system on irrigation technology from DADOs to EPAs must be strengthened. Regarding the technical aspect, no training has been initiated by ADDs/DADOs to AEDOs due to budget constraints, however, other development projects of Malawi government and NGO's initiatives maintain and disseminate the knowledge and skills for small-scale irrigation farming. It is worth noting that most of bikes to be used for extension activities are broken down and not -serviced due to lack of budget for spare parts. Regarding financial aspect, inadequate fund are allocated to AEDOs to carry out all agricultural extension services. From these findings, the project has some problems in institutional, technical and financial aspects, however, the fact that other initiatives supported by development projects funded by GoM and NGO's, have continued to maintain and disseminate knowledge and skills for small scale irrigation farming amongst AEDO's nationwide, therefore sustainability is fair.

5 Summary of the Evaluation

The project has mostly achieved the project purpose. The number of irrigation groups formed by project completion was 2,535 groups, which surpassed its target value of 1,220, many types of the comprehensive small-scale irrigation farming were applied by the irrigation groups, and the basic extension system for comprehensive small scale irrigation farming was established at most of the EPAs by the project completion. However, it could not be verified at the time of ex-post evaluation to what extent the comprehensive small-scale irrigation farming has been actually disseminated and practiced in the potential irrigation areas in Malawi due to lack of information. As for sustainability, the project has some problems in institutional, technical and financial aspect such as shortage of irrigation extension officers, lack of training to extension officers, and limited budget, however, the initiatives to promote small scale irrigation farming technologies have been maintained through support from other development projects funded by GoM and NGOs. As for efficiency, the project period was longer than planned because the dispatch of short-term experts in the field of farm management was delayed. In light of the above, this project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- It is recommended to increase the number of irrigation extension officers at EPA level to provide technical support to AEDOs who have limited knowledge in irrigation, so that EPA will be able to provide more technical support to farmers in the aspect of irrigation techniques.
- In order to increase frequency of field visits by the extension officers, securing funding for transport costs as well as availability of means of transport are urgent issues. It is suggested efforts be made to allocate the appropriate funding for transport cost as well as maintenance cost for vehicles and motorcycles that are non-runners in order to improve the mobility of extension officers for better provision of extension services. If possible, it is also recommended to consider the possibility of raising financial resources through other means such as collection of service fees from farmers in order for the extension services to be self-sufficient.
- This ex-post evaluation faced difficulties in data collection for number of irrigation sites, irrigation areas, volume of agricultural outputs/products, etc. and could not verify the achievement of overall goal partly due to weak monitoring and evaluation capacity of extension offices. Since they are key information to know the outcomes of the extension services and important baseline data for future sector policy, it is suggested that efforts be made to improve the monitoring and evaluation capacity of extension officers by provision of training based on the analysis of issues.

Lessons learned for JICA:

- The ex-post evaluation revealed a financial difficulty for AEDOs to carry out all agricultural extension services due to lack of O&M budget allocated from MoIWD. In the planning stage, JICA should carefully examine whether implementing agency has enough capacity to finance the necessary O&M budget for AEDOs to disseminate small-scale irrigation farming nationwide after project completion. If it is assumed that securing the O&M budget for AEDOs is difficult after project completion, it is necessary to take some measures for fund raising in advance such as setting up a system of fee collection from service users or collaboration with other donors working for agricultural development in Malawi in dissemination of small-scale irrigation farming.

Chamkhuta Irrigation Site in Mitunda EPA



Tisaukilanji Irrigation Site in Chiwamba EPA

