

# Terminal Evaluation

## Africa

### 1. Outline of the Project

**Country:**

Malawi

**Project title:**

Bwanje Valley Irrigation Development Project

**Issue/Sector:**

Agriculture and Irrigation Development

**Cooperation scheme:**

Grant Aid

**Division in charge:**

Project Monitoring and Coordination Division, Grant Aid Management Department

**Total cost:**

1,935 Million Yen (E/N amount)

**Period of Cooperation**

1996 - 1999

**Partner Country's Implementing Organization:**

Department of Irrigation (DOI), Ministry of Agriculture and Irrigation (MOAI)

**Supporting Organization in Japan:****Related Cooperation:****1-1 Background of the Project**

The Malawian Government has given priority to agricultural development in its National Development Policies (1987 - 1996). The government has been concentrating on the management of irrigation facilities and promoting agricultural research and improvement in areas of distribution, stock breeding and agricultural processing.

In the Bwanje Valley Region surrounding Dedza District, Central Region Mtakatika, rain-fed farming in small-holdings has mainly been conducted. However, the region has tended to be easily affected by the weather, especially the differences in precipitation of the rainy and dry seasons. However, the region meets the criteria favorable for the development of agriculture in terms of water resources and land condition. Since the site has favorable conditions such as being close to the capital city, which facilitates the country's agricultural development, the Japanese government provided a development study entitled the "Bwanje Valley Smallholder Irrigation Development Project".

Against this background, the Malawian Government laid plans for the "Bwanje Valley Smallholder Irrigation Development Project" and requested Grand Aid from the Japanese Government for a Grant Aid in order to carry out the Project.

**1-2 Project Overview**

The Project is aimed at improving the agricultural productivity of smallholders in Dedza District, Central Region Mtakatika, Malawi by constructing irrigation and drainage facilities, rural infrastructure and installing post harvest facilities.

**(1) Overall Goal**

The standard of living of the smallholders in Bwanje Valley is improved through increased agricultural production.

**(2) Project Purpose**

The irrigation and drainage facilities and rural infrastructure are developed in the Bwanje Valley Region.

**(3) Outputs**

- 1) Irrigation and drainage facilities and agricultural fields are developed.
- 2) Roads and water supply facilities are established as rural infrastructure.
- 3) Rice mill machines and warehouses are established as post harvest facilities.

#### (4) Inputs

Japanese side:

1,936 Million Yen (E/N amount)

Malawian Side:

Counterparts

Land and Facilities

Local Cost

## 2. Evaluation Team

### Members of Evaluation Team

Team Leader: Narihide NAGAYO, Senior Advisor, Institute for International Cooperation, JICA  
Planning and Coordination: Motoharu WAKABAYASHI, 4th Project Management Div., Grant Aid Management Dept., JICA  
Analysis: Tomihide CHISHINA, Sekkei Keikaku Co., LTD.

### Period of Evaluation

27 February 2002 - 9 March  
2002

### Type of Evaluation:

Terminal Evaluation

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

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#### (1) Relevance

The Republic of Malawi assigned priority to "rural poverty alleviation" in its National Development Policies. Relevance of the Project Purpose is considered as high as it is aimed at improving the standard of living of the poor by establishing irrigation facilities and rural infrastructure facilities.

The production of maize, a staple food of Malawi, was in deficiency of supply of 1.71 million tons to meet demand, and an urgent solution was needed for food supply to cover the shortage. The promotion of the Project as the model for the agricultural development by carrying out irrigated agriculture in the Bwanje Valley is expected to help relieve the food shortage and upgrade the standard of living.

#### (2) Effectiveness

At the time of evaluation (three years after the inauguration), the crop yields of those areas under cultivation among the target areas increased to 143000 Mk/ha for rice (Mk = Malawi Kwacha = 1.5 Yen), 253 000 Mk/ha for maize and to 16300 Mk/ha for other crops; however; the total harvest has not yet reached the level of the initial target areas.

#### (3) Efficiency

During the construction, discussions with and cooperation on the Malawian side went smoothly, and the irrigation and drainage facilities, rural infrastructure, post harvest facilities, and the rice mill and rice mill facilities were constructed within the time initially planned.

Appropriate operation guidance was given when the supplied machinery was delivered and the machinery has been effectively utilized since. The active use was observed especially on the rural roads, wells and rice mill.

#### (4) Impact

Rice irrigation became possible at the Project site, and led to a harvest increase for some of the beneficiary farmers. The sales performance of rice is 203.7t (annual sales performance of rice, in the rainy season of 2001). This was achieved mainly by private-based small-scale distribution as a collection action for selling crops and distribution channels have not been established.

The well of the rural water supply plant has been used daily as the supply source of domestic noncommercial water, and has also improved the sanitation of the area. The domestic work loads/workloads of women were reduced due to the decrease of time for water drawing. In addition, the daily workload of the farmers in the benefited area was reduced by the maintenance of rural roads and rice mills and, hence, the Project has contributed to improving the standard of living of the smallholders.

#### (5) Sustainability

In relation to the administration system and ability to maintain the installed system, Salima Agricultural Development Division and Extension Project Areas (EPA) were established under the Ministry of Irrigation and Agriculture, and technical personnel were assigned. As for the beneficiary farmers, a management system was established by the personnel assigned to well and rice mill machinery. In addition, experts and Japanese Overseas Cooperation Volunteers are now working on the issues of maintenance in order to improve the farmers' ability to maintain and manage the irrigation facility and improvement programs are currently underway.

The access to trunk roads was improved by the construction of rural roads. This has improved the distribution routes for getting the agricultural products to market. Improvement of the distribution channels for agricultural products is expected to contribute to the improvement of agricultural production.

In order to maintain the effect of the Project, the appropriate maintenance and management of the facilities are required. Since the inauguration of the facilities in the year 2000, a budget has been allocated continuously in DOI, though its amount has not been sufficient. In the farmers' organization, running fees for the rice mill machinery were collected to cover the cost of maintenance, and the collection of water costs was planned as well. However, it is important to increase the irrigated areas through the promotion of land leveling as soon as possible and agricultural productivity, in order to cope with maintenance costs by collecting the above-mentioned fees from the further increase in the number of beneficiaries.

### 3-2 Factors that promoted realization of effects

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#### (1) Factors concerning Planning

N/A

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

Provision of the site, which was a prerequisite of the Project, was done by the traditional chief magistrate system without any problems. In addition, training of the farmers by the technical instructors, and land leveling of DOI using the heavy equipment of DOI was performed appropriately. Timed with the accomplishment of the facilities, two experts and two Japanese Overseas Cooperation Volunteers were dispatched and three local water managers were assigned. The improvement of the technology for water management by the farmers and the increase in production in the irrigated area were achieved via Japan's technical support following the Grant Aid.

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

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#### (1) Factors concerning Planning

Initially, the preparation and maintenance of fields including land leveling was to be implemented by the Malawian side. However, since those activities were assigned to the farmers of the target area right after the inauguration of the Project, land leveling has not been smoothly implemented as planned.

Also, the irrigation plan and design of the facilities were premised on rotational irrigation, which requires elaborate water management. Therefore, the Project may need time to achieve the planned results because irrigation farming is new to most of the farmers.

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

The following difficulties of the Malawian side affected realization of the Project's impact; lack of technical and financial support to the irrigation section management, lack of fuel for the machinery, and the delay in distribution of the machinery and materials for the land leveling.

### 3-4 Conclusion

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The relevance of the Project is high, and also the construction went efficiently. An increased harvest, improved sanitation and reduced farmer workload were achieved, as far as the area where irrigation was possible is concerned.

### **3-5 Recommendations**

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- (1) The repair work on dikes for floor control needs to be done.
- (2) In order to expand the area of irrigation, land leveling needs to be quickly carried out by the Malawian side.
- (3) In order to achieve sustainability in the administration of the irrigated area, the management system should be restructured in a way so that operation of the main facilities is performed by the government and that of the end-facilities by the farmers.

### **3-6 Lessons Learned**

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- (1) Flexible measures should be devised taking the limitation of self-help efforts of the Malawian side and the local people into consideration for realization of the Project impact.
- (2) Grant Aid should also be well-coordinated with the technical cooperation on issues such as maintenance and water management, which recipient country is mainly responsible for, if necessary.

### **3-7 Follow-up Situation**

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The Japanese follow-up team carried out emergency measures to repair the damage to dikes caused by the concentration of heavy rains in January 2002.