

# Ground Water Development Project

## Project Sites

### North Kawinga



## 1. Background of Project

The lack of water due to drought had become a serious threat to the people of Malawi, and it had become an urgent issue to provide facilities to secure water for household and agricultural use. Under these circumstances, the Government of Malawi drafted a nationwide ground water development project and requested grant aid from Japan in order to secure an abundance of good-quality water.

Japan built wells in Kawinga North region where the problem was the acutest, and, as a follow-up, supplied the region with spare parts in FY1995.

## 2. Project Overview

### (1) Period of Cooperation

FY1987 to FY1989  
 FY1995 (follow-up)

### (2) Type of Cooperation

Grant aid

### (3) Partner Country's Implementing Organization

Department of Water, Ministry of Water Resources

### (4) Narrative Summary

#### 1) Overall Goal

To settle residents in rural areas of Malawi through ground water development.

#### 2) Project Purpose

To enable the supply of clean water to people of Kawinga area.

#### 3) Outputs

- a) To dig 164 wells.
- b) To construct 164 water supply facilities.
- c) To establish maintenance system for the wells.

#### 4) Inputs

##### Japanese Side

Grant	total 989 million yen (E/N amount)
Spare parts	7 million yen (follow-up)

##### Malawian Side

Staff to dig and maintain wells	27
Land and ground leveling for construction	
Local cost	3.01 million kwacha (approx. 9 million yen)

## 3. Members of Evaluation Team

JICA Malawi Office  
 (Commissioned to Adaran Johnson Associates)

## 4. Period of Evaluation

1 March 1999-26 March 1999

## 5. Results of Evaluation

### (1) Efficiency

Construction involving the digging of wells and the installment of pumps was conducted very efficiently and completed within the planned time period. 27 Malawian engineers received on-the-job training in well-digging from the Japanese side, and as a result of their improved abilities, were able to dig 164 wells instead of the 160 estimated in the original plan. Each well was established to supply water to 401 people in the target area.

### (2) Effectiveness

With the availability of wells, people in the target area were able to access clean water, and this project's goal was met.

### (3) Impact

In the project area, lack of water during the dry season was no longer a problem, hygiene was improved greatly, and women and children no longer had to carry large volumes of water over a long distance. The occurrence of diseases that were caused by drinking contaminated water has decreased greatly as well.

Through the provision of boreholes people of Kawinga area spend less time in fetching water and the time gained is used to improve agricultural productivity. Consequently, their living standards have also improved.

The improvement in the well-digging and maintenance technologies of the Water Department of the Ministry of Water Resources contributed to an increase in technical expertise in well construction and maintenance for not only staff of the Water Department but also the general public.

#### (4) Relevance

Securing drinking water is essential for human life. It is also important for Malawi's socioeconomic development as well as from the humanitarian aspect. This plan is relevant.

#### (5) Sustainability

From 1990 to 1995, it was decided that the maintenance of wells be done by the Water Department, using funds from District Development Committees, but these funds were meager, hardly any repairs were performed. This project also used French-made pumps as part of the United Nations Development Program (UNDP) formula, but because parts for the pumps could not be supplied in Malawi or in surrounding countries, the Malawian side had difficulty in procuring these parts and repairing the pumps.

However, because parts were supplied during follow-up cooperation conducted in FY1995, the majority of the wells are functioning properly even though more than ten years have passed since the start of the cooperation.

With assistance from the UNDP, the Government of Malawi has adopted "Community Based Management," which is designed to be managed by a 10-men community team. Its functions include raising funds for spare parts procurement and maintaining the wells. This method has been employed in many districts, and the project appears to be sustainable.

## 6. Lessons Learned and Recommendations

### (1) Lessons Learned

In accordance with the UNDP formula, this project respected the wishes of the Malawian Government and used French-made pumps. However, because spare parts could only be procured from France, the Government experienced financial difficulties in procurement. In cases such as this one, where the partner country is unable to procure appropriate materials in the country, all possible efforts should be made to select equipment whose spare parts can be obtained in neighboring countries.

In order to maintain the wells, it is also effective to organize and give responsibility to community groups.

### 7. Follow-up Situations

In similar well-digging projects conducted in Malawi following this project, the communities coordinated to use pumps that they could maintain themselves and the Malawian Government and NGOs implemented training in well maintenance.



Local residents coming to draw water from the wells



A scene of maintenance by Malawian counterparts

# Airport Equipment Maintenance Project

## Project Sites

### Lilongwe



## 1. Background of Project

Malawi's Lilongwe International Airport was opened in 1982 with a yen loan from Japan. Ten years after its opening, the Special Assistance for Project Sustainability (SAPS) was implemented by the Overseas Economic Cooperation Fund, Japan (OECF), and its assessment recommended the urgent rehabilitation and repair of superannuated facilities and equipment, as well as the recruitment and assignment of sufficient number of airport staff, to ensure airport safety.

For this purpose, the Government of Malawi requested cooperation from Japan in order to rehabilitate the function of Lilongwe International Airport.

## 2. Project Overview

### (1) Period of Cooperation

December 1993-December 1995

### (2) Type of Cooperation

Revitalization cooperation

### (3) Partner Country's Implementing Organization

Department of Civil Aviation, Ministry of Transport

### (4) Narrative Summary

#### 1) Overall Goal

To ensure safe operation and maintenance of Lilongwe International Airport.

#### 2) Project Purpose

To rehabilitate the function of Lilongwe International Airport.

#### 3) Outputs

- a) To repair and replace facilities and equipment at Lilongwe International Airport, including the air navigation system.
- b) To improve maintenance techniques of the staff members at Lilongwe International Airport.

#### 4) Inputs

##### Japanese Side

Long-term experts	1
Short-term experts	5
Trainees received	2

Equipment approx. 160 million yen

##### Malawian Side

Counterparts	22
Airport facilities	
Local cost	

## 3. Members of Evaluation Team

JICA Malawi Office  
(Commissioned to Adaran Johnson Associates)

## 4. Period of Evaluation

March 1999

## 5. Results of Evaluation

### (1) Efficiency

The dispatch of experts and the provision of equipment were conducted in a timely and appropriate manner. Practical training of the airport staff members and counterpart training in Japan were also implemented satisfactorily. Although there were no major problems in the airport's functioning, because of incompatibility between some of the newly-provided equipment and the previous equipment, there were differences in their performance.

### (2) Effectiveness

Through replacement and repair of the air navigation system and other equipment, Lilongwe International Airport has been brought up to international standards. Another project goal, the improvement of airport staff's maintenance technology, has also been achieved.

### (3) Impact

Through modernization of the air navigation system, Lilongwe International Airport has gained credibility. Aviation safety has contributed to the safe travel between Malawi and other countries, as well as the promotion of trade and tourism, which has contributed to Malawi's economic growth.

### (4) Relevance

This project was based on a SAPS proposal concerning

airport maintenance in order to have safe and effective operation. Because, at the time, Lilongwe International Airport's facilities were outdated, and it was therefore immediately necessary to rehabilitate equipment, this project was in accordance with Malawi's needs.

Also, because the safety and security of Lilongwe International Airport remains an important issue for Malawi even today, the relevance of this project is still high.

#### (5) Sustainability

At Lilongwe International Airport, aircraft departures and arrivals are few, and income is poor. Although the maintenance burden was lessened because of the replacement of equipment and facilities due to the devaluation of the Malawian kwacha, maintenance and operation of the airport is in a difficult financial situation.

In the aspect of personnel, because of retirements and transfers, of the 22 counterparts who received technology transfer, only six are still working at Lilongwe International Airport. Therefore, the facility maintenance system is not entirely adequate.

### 6. Lessons Learned and Recommendations

#### (1) Recommendations

In order to recover and improve the drop in technical ability attributed to changes in staff members, it is important to conduct after-care cooperation in maintenance of telecommunications equipment, training of radar operators and electricians and remote power monitoring system.

#### 7. Follow-up Situations

The JICA Malawi Office has proposed submitting a request document concerning necessary cooperation from Japan to the Government of Malawi.



A repaired observation system



A newly replaced air control radar

# Malaria Control Program

## Project Sites

Tanga, Dar es Salaam



## 1. Background of Project

In Tanzania, malaria is epidemic in almost all regions. It impaired public health, robbed the country of its human resources, and was a major obstacle to economic growth. For this reason, extensive activities to combat malaria were developed under the guidance of the World Health Organization (WHO). However, due to a lack of necessary materials, the activities did not produce the expected results, and infection rates continued to increase year after year.

Based on this situation, Japan provided the necessary resources to combat malaria with grant aid, focusing on the cities of Dar es Salaam and Tanga, which are centers for socioeconomic activities in Tanzania and where malaria infections were most severe. Japan also provided technical cooperation by dispatching experts and JOCV members. Additionally, Japan implemented five years of in-country training aimed at workers involved in malaria control in Tanzania.

This evaluation was conducted focused on the grant aid project.

## 2. Project Overview

### (1) Period of Cooperation

FY1986-FY1997

### (2) Type of Cooperation

Grant aid

### (3) Partner Country's Implementing Organization

Ministry of Health, Dar es Salaam City Office, Tanga City Office

### (4) Narrative Summary

#### 1) Overall Goal

To reduce the rate of malaria contraction in the cities of Dar es Salaam and Tanga.

#### 2) Project Purpose

To implement appropriate malaria control activities in the cities of Dar es Salaam and Tanga.

### 3) Outputs

- a) To provide resources for malaria control activities (insecticide, educational instruments, construction equipment).
- b) To curb the growth of malaria-carrying mosquitoes in the project areas through the construction of drains.

### 4) Inputs

#### Japanese Side

Grant total 2.189 billion yen (E/N amount)

#### Tanzanian Side

Local cost

## 3. Members of Evaluation Team

JICA Tanzania Office  
(Commissioned to Dr. F.D.E. Matengo)

## 4. Period of Evaluation

17 November 1998 to 7 January 1999

## 5. Results of Evaluation

### (1) Efficiency

As the resources provided through grant aid consisted of technology that befitted local conditions and chemicals that were environmentally friendly, they were appropriate.

### (2) Effectiveness

In the cities of Dar es Salaam and Tanga, the establishment of a total of 461,749m of drainage ditches, residual house spraying with fenitrothion in 61 neighboring villages, the securing a 3km wide corridor around both cities to ensure protection from re-invasion by the malaria vectors, regular aerial spraying of insecticides, the scattering of polyethylene beads on 14,727 lavatories and the distribution of 26,494 insecticide-treated mosquito nets at cost to the people of Tanga were all accomplished. Therefore, it can be said that this project has attained its desired effect.

### (3) Impact

In the project areas, the ratio of malaria-carrying

mosquitoes among all mosquitoes dropped from 17.4% in 1988 to 1.1% in 1994, and the malaria infection rate dropped between 25-30% compared to the past. The decrease in the malaria infection rate has decreased the amount of medical costs borne by local residents and has also reduced absentee rates at schools and workplaces. This project has resulted in less malaria occupied beds and less deaths due to malaria.

#### **(4) Relevance**

As measures to combat malaria have remained an important national issue in Tanzania's health field from the time of planning to the present day, the importance and need for this project is high.

Construction equipment and insecticides were provided for use against the source of the outbreaks at the start of this cooperation, but, taking into account the cost burden on the Tanzanian side and the sustainability of activities, the content of the cooperation was later flexibly revised to include the provision of mosquito nets, and the scattering of polyethylene beads. In this regard, this was a project that was relevant and met Tanzania's needs.

#### **(5) Sustainability**

Currently, Tanzania is undergoing decentralization through Local Government Reform. However, because the budgets of local governments are limited, allocation of an adequate budget for malaria control from the governments cannot be expected. Because it was determined that the city staff of Dar es Salaam and Tanga had the ability to implement and manage this project, in order to advance malaria control activities over the long-term, it will be necessary for these staff members to promote local residents' participating in and bearing expense for the activities.

## **6. Lessons Learned and Recommendations**

### **(1) Lessons Learned**

When implementing cooperation in this field, it is important to strengthen the capacities of the local governments responsible for the actual implementation of malaria control measures. In order to ensure that these activities continue, it is also important to establish residents' ownership by actively encouraging the participation of local residents.

In the case of providing cooperation in least developed countries (LLDC) like Tanzania, which have a difficulty in raising local costs in most cases, it must be assumed that the donor country will bear a large portion of the costs. It will be ideal to investigate a comprehensive assistance approaches that combines a variety of aid schemes, such as grant aid, dispatch of experts, and in-country training.