Internal Ex-Post Evaluation for Grant Aid Project

conducted by Malawi Office: October 2021

Country Name	**The Project for Selected Market Centres and Rural Water Supply in Mchinji and Kasungu District**
Republic of Malawi	

I. Project Outline

Background	In Malawi, the access to safe water supply was low, especially in rural areas. As the water supply system in market centres, which are centres of local economic activities, still relied on boreholes with hand pumps and traditional shallow wells as in the case of rural areas, the number of water supply points was insufficient to cater for the population. Furthermore, many boreholes were broken down in addition to their general deterioration without any care, lowering the actual water supply rate. The poor state of water supply facilities had serious adverse socio-economic impacts in Malawi, which was closely connected to the development of rural areas, basic education and health care as well as the local economy.			
Objectives of the Project	The project aimed to improve the local residents' access to safe water in Mchinji and Kasungu districts in Malawi, by construction of piped water supply system in Mkanda area in Mchinji district and Santhe area in Kasungu district, rehabilitating existing boreholes and construction of new boreholes in Mchinji district, and conducting training on awareness raising activities for local people toward operation and maintenance (O&M), thereby contributing to the socio-economic development in the project sites.			
Contents of the Project	1. Project Site: Mkanda market centre in Mchinji district and Santhe market centre in Kasungu district, water points in Mchinji district 2. Japanese side 1) Provision of grant necessary for constructing piped water supply system (Mchinji district: reservoir (1), water distribution facility (1), boreholes (2), common faucet (6), buildings (2); Kasungu district: water tank (1), water distribution facility (1), boreholes (5), common faucet (8), buildings (2)) 2) Provision of grant necessary for rehabilitating existing boreholes and construction of new boreholes (rehabilitation of 280 existing boreholes, construction of 54 new boreholes)* *Equipment for rehabilitation of boreholes was included in the initial plan at the time of the ex-ante evaluation but it was cancelled in the grant actually provided. 3) Technical assistance (soft component of grant aid for O&M of water supply facilities, etc.) 3. Malawian side: land acquisition, convening participants in the training provided by the soft component			
Project Period	E/N Date	August 30, 2012	Completion Date	July 9, 2015 (completion date of the soft component)
	G/A Date	August 30, 2012		
Project Cost	E/N Grant Limit / G/A Grant Limit: 563 million yen, Actual Grant Amount: 562 million yen			
Executing Agency	Ministry of Agriculture, Irrigation and Water Development (MOAIWD)* *MOAIWD during the project. Ministry of Water Development and Irrigation (MOWDI) at the time of the ex-ante evaluation and reorganized into the Ministry of Forestry and Natural Resources in July 2020.			
Contracted Agencies	Main Contractor: Koken Boring Machine Co., Ltd. Main Consultant: Eight-Japan Engineering Consultants Inc.			

II. Result of the Evaluation

<Constraints on Evaluation>

・In this Ex-Post Evaluation, an evaluation judgment was made primarily by analyzing information acquired by sending and collecting questionnaires, and through telephone and e-mail interviews with persons concerned due to the impact of the COVID-19. Field survey was not conducted.

<Special Perspectives Considered in the Ex-Post Evaluation>

・In the Ex-ante Evaluation Sheet, (i) decrease of water-borne diseases and (ii) increase of education opportunities for children and employment opportunities for women through decreased labor of fetching water were listed as qualitative effects. Since these effects are considered as logical consequences of the improved access to safe water, this ex-post evaluation verified them as impacts. As more direct qualitative effects of this project before reaching the defined qualitative effects, the frequency of malfunction of water facilities, including the status of operation and maintenance activities of Water Point Committees (WPC), which is mentioned in the Preparatory Survey Report, and the status of labor of fetching water, which is mentioned as a prerequisite of the (ii) above, were additionally examined to evaluate effectiveness (supplemental information 1 and 2, respectively).

・Due to the electricity issue, the project completion was delayed. As a result, the target year for the Effectiveness, which is three years after the project completion as stated in the ex-ante evaluation sheet, is shifted to 2018.

1 Relevance

<Consistency with the Development Policy of Malawi at the Time of Ex-Ante Evaluation>

In the Malawi Growth and Development Strategy (MGDS) I (2006-2011), emphasis was placed on the development of small-scale towns and market centres in rural areas. In MGDS II (2011-2016), water resource development was listed as one of the key priority areas.

<Consistency with the Development Needs of Malawi at the Time of Ex-Ante Evaluation >

The Government of Malawi promoted construction of boreholes nationwide. At the same time, however, it was found that many boreholes had broken down without any care in addition to their general deterioration, lowering the actual water supply rate.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

One of the two priority areas of Japan's assistance for Malawi was improvement of basic social services and in water sector, renovation of the facilities and enhancement of their management system were mentioned[1].

<Evaluation Result>

In light of the above, the relevance of the project is high.

[1] Source: Ministry of Foreign Affairs, "ODA Country Data Book in 2012", "Country Assistance Policy for the Republic of Malawi" in April 2012.

2 Effectiveness/Impact

<Effectiveness>

The objective of the project has been achieved. The population served with safe water though rehabilitation and construction of boreholes reached the target, and the total population receiving safe water supply, through both piped water and boreholes, significantly increased. In addition, sufficient qualitative effects have been observed. With these facts, it is considered that the objective of the project has been achieved. All the planned facilities have been completed and utilized in good condition, according to monitoring reports by Central Region Water Board (CRWB) and monthly reports by WPCs to District Water Officer. Regarding the quantitative effects, the served population through construction of piped water supply system (Mchinji district and Kasungu district) has been increased, almost twice as the served population before the project, although it has not reached the target in the target year and at the time of ex-post evaluation. (Quantitative Indicator 1). As the water tariff has been considerably increased since the ex-ante evaluation, some community people found running individual connections expensive and have reservations in owning their own water connection[2]. Furthermore, while they use the water from the common faucets for drinking, they use unprotected water sources for other purposes like washing clothes. The number of served population through rehabilitation and construction of boreholes in Mchinji district reached the target as the boreholes were constructed and rehabilitated as planned[3], (Quantitative Indicator 2). Regarding the qualitative effects, as a result of the soft component, WPC has been newly established to each borehole constructed by the project (total: 54). Out of 54 WPCs established, about 10% of the WPCs are not active while 90% implement their duties actively and appropriately. Active WPCs have records of the households who contribute the water tariffs as well as records on how they use the money[4] and it is considered that the O&M capacity of WPCs has been improved. In addition, due to availability of multiple boreholes, malfunction of boreholes has decreased, as pumps are given a break in operation (supplemental information 1). Even if some pumps malfunctioned, they were replaced thanks to the improved O&M capacity. In addition, the labor of fetching water has been decreased (supplemental information 2). Most people, especially women, girls, and the elderly, can now access water at closer distances than before.

<Impact>

Various positive impacts are observed as expected. As to the education opportunity for children, due to decreased travel time and distance to water sources, more children now have a chance to go to school in good time and active since they do not hustle travelling long distances fetching water as it was previously when they were going to school already tired., according to the questionnaire to the Mchinji District Water Office, although the District Water Office has not specifically conducted a detailed quantitative survey to ascertain this. Regarding the employment opportunity for women, as time spent on fetching water has reduced greatly since the provision of the boreholes, now recovered time is spent on other economic activities. Some women have benefitted in terms of increased business opportunities in relation to water supply. For example, the increased number of hand pumps has enabled some women who work as Area Mechanics to earn additional income as entrepreneurs because they have some ample time to do other economic generating activities since water points are easily reachable and they spend less energy and time to fetch water. In addition, access to safe water has reduced the disease burden that caused school children to miss classes and also some mothers to stay home nursing their sick children. As a result of the improved water supply, no health issues caused by the water supply have been reported or recorded since the commissioning of the project and no outbreak of any water-borne diseases has been recorded. With all these facts, the qualitative effects defined at the ex-ante evaluation have been observed, although the indicators may involve some factors other than the project. No negative impacts have been reported. The project entailed land acquisition but CRWB worked in cooperation with District Offices using the applicable Land Laws to administer compensation and land acquisition according to the laws of Malawi.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Quantitative Effects

Indicators		Baseline 2010 Baseline Year	Target 2017 3 Years after Completion	Actual 2015 Completion Year	Actual 2018 3 Years after Completion	Actual 2020 5 Years after Completion
Population receiving safe water supply (persons)	Indicator 1: Construction of piped water supply system in Mkanda (Mchinji district) and Santhe (Kasungu district)	5,250	14,536*	No information	9,238	9,789
	Indicator 2: Rehabilitation and construction of boreholes in Mchinji district	52,250	83,500	56,000	73,480	85,170

* This figure is the planned figure for 2020 in line with the design target year.

Source : Ex-ante Evaluation Sheet, Questionnaire to MOAIWD, CRWB, and District Water Office in Kasungu and Mchinji

3 Efficiency

[2] During the Detailed Planning Study, it was estimated that approximately 80% of population were willingly to pay the water tariff and use the piped water facilities. The water tariff at that time (in 2010) was MK400/ Cubic meter. However, currently the water tariff is MK700/Cubic meter, which greatly affected the number of population using the water supply facilities. This fact is taken into consideration in evaluation judgment of effectiveness/impact.

[3] During the Detailed Planning Study, the target was calculated with the population basis of 250 per borehole. In the actual statistics, per borehole was set as 220 in 2018 and 255 in 2020. With this calculation basis, although the actual data in 2018 (target year) was slightly below the target set at the Detailed Panning Study, because of the population per borehole set below the planned target, it is considered that the target was completely achieved in the target year since all the boreholes were constructed and rehabilitated as planned.

[4] The project was partly benefitted from another technical cooperation project (Project for Enhancement of Operation and Maintenance for Rural Water Supply), which in a way strengthened O&M as a part of intervention.

While the project cost was within the plan, the project period significantly exceeded the plan (ratio against the plan: 100% and 164%, respectively). A part of planned output i.e., equipment for rehabilitation of boreholes, was cancelled[5]. The project period was extended due to the preparation of electricity required for the project. For the project to run there was need for electricity at the sites, but unfortunately the sites were not electrified at the time the project was supposed to start and it took some time for Electricity Supply Commission of Malawi (ESCOM) to connect the sites. After connection of electricity the transformers developed faults, which delayed the project further. Therefore, the efficiency of the project is fair.

4 Sustainability

<Institutional/Organizational Aspect>

The organizational structure related to water, sanitation and hygiene (WASH) is well developed among relevant agencies. At MOAIWD, under Water Supply and Sanitation Services, there are divisions responsible for Planning, Design, and Construction (PDC) and for Operations and Maintenance, Monitoring and Evaluation (OMME). District Coordination Teams (DCT) are responsible for implementation at district level following the national policy guidelines. The DCT comprises the Director of Planning & Development (DPD), the District Water Development Officer (DWDO), the District Monitoring & Evaluation (M&E) Officer and other officers. However, the number of government staff is not sufficient at the district level, and the overall leadership, monitoring and follow-up of the activities of WASH is affected. CRWB is responsible for actual implementation of O&M of piped water supply system and metered boreholes which were constructed by the project.

<Technical Aspect>

The staff at relevant agencies have the technical capacity to manage the water supply points and to train WPCs. Most WPCs have the capacity to maintain the water points. For WPCs, there are training manuals for O&M for boreholes which include repairing of the boreholes when they develop a fault, as well as bookkeeping to make sure that they have enough money to buy spare parts to maintain the boreholes. Trainings are provided for WPCs and shop owners who sale spare parts. These trainings are supposed to be implemented yearly not only for new members who join the committees, but also for old members to refresh the knowledge. The trainings are not sufficiently implemented at Mchinji district due to the lack of funding for refresher courses to the WPC. However, when choosing committee members, some old members usually teach new members how they manage the boreholes. The manuals provided by the project have been utilized in both Kasungu district and Mchinji district.

<Financial Aspect>

At the district level agencies, in both Kasungu district and Mchinji district, the government funds to cater for refresher trainings and monitoring for WPCs are not sufficient, but daily activities are conducted without major problem. In communities, most WPCs are collecting fee from the community and the O&M is conducted without major problem although there is no government funding. Financial management has been a challenge to some of the WPCs.

<Current Status of Operation and Maintenance>

O&M activities are conducted as planned at both Kasungu district and Mchinji district. However, some water users in communities have been experiencing financial challenges to contribute to O&M because adverse climatic conditions (droughts and dry spells) have affected their earnings from farm production. The situation has been made worse by the COVID-19, which, too, is eroding people's income earning opportunities at the moment. WPCs have the technical skills for simple faults but if the problem is complicated, Area Mechanics are involved to help them, which usually needs some budget since they have to pay the Area Mechanics and to buy a spare part to replace the damaged part, if any. Therefore, securing financial bases is an issue at WPCs. Moreover, the spare parts supply chain is not properly coordinated at the district level.

<Evaluation Result>

Slight problems have been observed in terms of the institutional/organizational aspect, financial aspect, and current status. Therefore, sustainability of the project effects is fair.

5 Summary of the Evaluation

The project achieved the objective of improved access by local residents to safe water. The number of served population through the constructed and rehabilitated boreholes has reached the target, the O&M capacity of WPCs has been improved, and malfunction of boreholes has been reduced. Regarding the sustainability, sustainability is high in technical aspect, but slight problems are observed in the institutional/organizational, financial aspects and current status, as the number of staff at relevant agencies is not sufficient and the budget for refresher training and O&M is not sufficient. As for the efficiency, the project period significantly exceeded the plan. Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations to Executing Agency:

・It was found out that there is the issue of lack of funding for O&M component in boreholes at district level agencies. Hence the government of Malawi should consider putting aside some budget to enhance sustainability of the project interventions. MOAIWD should ensure that the district could receive funding especially for O&M of rural water supply system which will enable the district staff to supervise and monitor the WPCs more often. Strengthening of funding would also enable the staff to conduct refresher courses for the WPCs.

Lessons Learned for JICA:

・During the implementation of O&M for rural water supply facilities in targeted sites of the project, it was noted that neighbouring villages began to copy the concept and replicate the activities in their villages without formal trainings as they saw the activities were useful and wanted to introduce in their own villages. This has demonstrated that the experiences of the project can be expanded easily and reached out to many communities and the concept is good and easy for locals to operate. Activities in the neighbouring villages go partially well, though not completely, and they are able to maintain the boreholes through contributions, which they contribute only when the borehole develops a fault and, the issues of bookkeeping are not well taken care of. The trainings provided by the project emphasized the importance

[5] The planned cost included the cost of equipment for rehabilitation of boreholes (21 million yen), however the equipment for rehabilitation of boreholes was not actually included in the grant as adjustment against the change of exchange rate.

of monthly contributions and proper bookkeeping, which has been helpful to secure the capacity of the maintenance.

・The project did not achieve one of the quantitative indicators, due to the increased water tariff and the changed economic situations, which affected people's capacity to pay the connection fee. To appropriately verify the project effects and effectively take measures for future sustainability after project completion, it is necessary to carefully define indicators taking various factors into consideration, such as economic projection, including water tariff, and people's willingness and capacity to utilize the facilities to be constructed. It is also necessary to consider the possibility that people's willingness to utilize the facilities may be affected by these economic and social conditions.

・The ex-post evaluation revealed that some community people still have reservations in owning their own water connection, because most of the people are afraid of connection fees. In this regard, it may be effective to lobby with implementing agency (in this case CRWB) to make connections free, to attract more people to connect, with careful consideration of the current status and policy at the implementing agencies.

Molosiyo No. 2 Water Point in Mchinji, one of the boreholes constructed by the project. WPC has benefitted from the O&M training during the project.

Water tank at Santhe market centre in Kasungu constructed by the project