



- This project has been highly relevant to the country's development plan and development needs, both at the time of planning and at the time of ex-post evaluation. As well, the Project was in line with Japan's ODA policy at the time of planning. Therefore, its relevance is rated high. There was a slight delay in completion (105% of the planned value), which was due to the late approval of the land clearance by the LCC. Despite the issue, the delay in the project completion was contained within 20 days. Considering that the Project attained all the Outputs within the planned budget with less than twenty-day delay, the efficiency is rated high. The Project has reached most of its planned targets, except for one essential indicator, water production volume, which hampered part of the effects. Thus, the effectiveness is rated fair. Positive impacts are observed, including: 1) decreased time for fetching water; 2) increased access to safe water source, both in terms of numbers of people and areas; and, 3) increased capacity of community-based organization in maintaining levy collection system. There was a comment in the questionnaire response from MLGH on increased disposal of grey water on streets in the area. One of the intended indirect effects, a decrease in water-borne diseases, could not be confirmed because the data could not be obtained. In terms of the management and maintenance of the facilities, it is expected that the water-supply scheme can be sustained, at least in two compounds, although they do have some minor institutional and technical issues. In the other compound, however, financial sustainability seems to be at issue. Given these conditions, the sustainability of effects brought to by his Project is rated fair.
- In light of the above, this project is evaluated to be satisfactory.

<Recommendations to MLGH, LCC and LWSC>

- To secure funding for comprehensive projects including not only water-supply facilities but also with sewage and waste-water treatment (MLGH).
- To render conciliatory support for both the Ward Development Committees (WDCs) and the Water Trust (former Water Supply Management Committees: WTs) to improve their relationship, and also technical support for improvement of financial management capacity among WTs.
- To continue provision of technical support and advisory for WTs (Lusaka Water and Sewage Company, or LWSC).

<Recommendations to JICA>

To consider further support for the area of water-supply and waste-water management based on Zambia's new "National Urban Water Supply and Sanitation Programme (draft 2009)", given the continuing population increase in UUSs.

<Constraints of this evaluation study>

- 1) This study was conducted based on the document review and the questionnaire survey to the counterparts and the consultant, and did not include data such as those obtained by direct observation or through interviews by the evaluator.
- 2) When indicator data in response to the questionnaire was used, the raw data and types of formula were not confirmed.
- 3) There was no avenue to discuss appropriateness and feasibility of the recommendations with the counterparts.
- 4) The ex-post evaluator did not exercise strict control over who should respond to the questionnaire, nor anonymity of the response.
- 5) There were numerous similar interventions to improve living conditions and health status of residents in urban unplanned settlements both prior to and during the Project, and either by JICA or by other development assistance organisations, which inferably contributed to effective Project design and success in developing capacity of the executing agency and the community. However, this evaluation did not conduct a causality assessment between such interventions and Project's achievement.

## 1 Relevance

### (1) Relevance with the Development Plan of Zambia

MLGH's "Peri-Urban Water Supply and Sanitation Strategy (2001)" ultimately aims at reduction of water-borne diseases, and enlisted 1) improvement of structure and institutional arrangement, 2) appropriate selection of the area, and 3) promotion of community participation for improvement of water-supply and environmental hygiene-related services, as means of achievement of the aim. Thus, the contents of this Project are in line with the sector policy of the time. Furthermore, Zambia's "Vision 2030 (2006)" as well as its commitment to the Millennium Development Goals identifies the improvement of water-supply and environmental hygiene services as main target objectives. At the same time, as MLGH has renewed its commitment to achieve the said aim by preparing "National Urban water Supply and Sanitation Programme (draft 2009)," the successor to its 2001 policy, the Project is considered to be highly relevant to Zambia's development plan both at the time of planning and at the time of ex-post evaluation.

### (2) Relevance to the Development Needs of Zambia

At the time of planning, very few households had access to safe water sources; and diarrhoea has a share of 23~29% among all diseases in the target areas. Thus, the Project is considered to be responsive to the needs of beneficiaries. Although the population with access to safe water sources increased in the area at the time of ex-post evaluation, this particular development needs still persist as the demand for water supply also expanded due to continued influx of migratory population in the areas.

### (3) Relevance with Japan's ODA Policy

The Japan's ODA policy towards Zambia had included support for "cost-effective public health and medical services" as one of five priority areas, which punctuated construction of water-supply facilities in improving public health of poor households to control communicable diseases, as well as promotion of community participation for improved capacity for maintenance and management of such facilities: Therefore, this Project is in line with Japan's ODA Policy at the time of planning. In addition, Zambia positively appraised the comparative advantage of this Project as being 1) a grant, instead of loan, for infrastructure development in the peri-urban areas with the most vulnerable population; and 2) equipment of high quality with an expected long life span.

Based on the above, this project has been highly relevant with the Zambia's development policy/strategy, development needs, as well as Japan's ODA policy. Therefore, its relevance is rated high.

## 2 Efficiency

### (1) Project Outputs

The Outputs of the Japanese side were mostly as planned. Changes made to the Basic Design in the number of water supply facilities and equipment were considered adequate, as they were based on the estimates of water yield volume by test-drilling a well. Construction of one water facility and a community centre had to be put off for some weeks in order to secure proper legal requirements through a local government, but the Project had resolved the issue by the change in construction site.

### (2) Project Period (Project Inputs)

Actual Project took twenty-one months (20 months and 20 days), as opposed to the plan (20 months), slightly longer than planned (105%). According to the JICA Zambia Office, the reason for the delay was due to the unavailability of clean title on the land initially allotted for construction of community centre by the Zambian side. Considering the land issue was cleared swiftly and the delay was contained within just twenty days, the project period is considered as in reasonable line with the plan.

### (3) Project Cost (Project Inputs)

The actual Project Cost was 449 million yen (97.4%), lower than the planned 461 million yen. Thus, the project cost was as planned (100% of the planned).

Given the above factors, since the project has largely achieved its planned Outputs within the planned cost and with the period consistent with the plan, the overall efficiency of the project is rated high.

## 3 Effectiveness / Impact

### (1) Quantitative Effects

While prior to the Project, no more than 0.6% of households in the area had access to safe water (piped water), the situation improved significantly after the Project. Approximately 80% of residents (about 72,000 people; 11,380 households) are now able to access the public water taps within five to ten minutes. Using the actual water production volume and the unit water consumption in 2008, the number of beneficiaries is estimated at 92,400 people each day, exceeding the target population of 86,000. Time required for fetching water, including waiting time and return trip, also achieved the expected value, improving from 35~60 minutes in 2003 to less than 25 minutes in 2008, <35 minutes in 2009 and <40 minutes in 2010. Nevertheless, due to poor aquifer especially in one compound, average daily water supply volume came short, with 19%~73% of the expected value. Hence, actual unit water consumption stagnated at around 8.4~9.6 litres per capita per day (lpcd) between 2008~2010, far short of the expected value of 30 lpcd.

### (2) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, Unintended Positive/Negative Impact)

All water-supply facilities and equipment as well as community centres are fully utilized. Community-based management of water supply scheme is adequate, with all compounds securing 78%~89% of revenue ratios between 2008~2010. While access to sanitary toilets increased five-fold to 41% of households, water disposal facilities within residences are very rare. The questionnaire response from MLGH mentioned an increase in grey water disposed on streets. However, whether these sanitary conditions in the area have any bearings with project's interventions is not examined due to the lack of information. Regarding the land acquisition process, no negative impacts on residents were reported. (Data on the incidence level of water-borne diseases in the Project area could not be obtained through the questionnaire or web-based research. Thus, impact in this regard is not examined here.)

Therefore, given both that the Project enabled access to safe water for greater size of population than the expected, and that actual amount of water was less than expected, this project is considered to have somewhat achieved its objectives. Therefore, its effectiveness is fair.

#### 4 Sustainability

##### (1) Structural Aspects of Operation Maintenance

After the Resident Development Committees (RDCs) were abolished, management responsibility of the community centres has shifted to the Ward Development Committees (WDCs), or bodies with mandates in areas beyond single compound. However, due to the lack of WDC budget, resources required for repairs, utility and security personnel are paid by the water schemes. While organisational arrangement for the maintenance of water-supply facilities and equipment provided by the Project, including 1) human resource allocation, 2) clarity in duties and responsibilities, and 3) emergency response plan, are rated excellent by the executing agenc(ies), that for the maintenance of community centres was rated 'partly satisfactory', due to such issues as WDC's demanding rent from the Water Trusts.

##### (2) Technical Aspects of Operation Maintenance

According to LWSC, technical capacity, including 1) general management of the water supply functions; 2) management of water quality of the Water Trusts, are 'satisfactory', and so is the use of manuals in operation and maintenance developed by the Project. It also observes that WTs have yet to secure capable technical staff due to their poor remuneration. As a result, LWSC often has to provide technical staff in doing borehole pump uplifting/repairs and electrical repairs. This leaves WTs' technical sustainability as partly unsatisfactory. It is worthy of note, however, that LWSC responds to and renders support for these community organizations as they require, including advising on network extension, constructions, and prospects for increasing water supply production.

##### (3) Financial Aspects of Operation Maintenance

According to LCC, WTs not only utilize the Manual in financial management (formulated by the Project), but their transparency and accountability in financial management is 'satisfactory.' Looking at the revenues and expenditures of each WT, two of three compounds have the expenditure in excess of the revenue (8% and 50% more of the expenditure), requiring improvements in financial aspects. Whether WTs receive subsidies from the government that makes the organisation financially viable could not be confirmed.

##### (4) Current Status of Operation Maintenance

At the time of ex-post evaluation, the facilities and equipment provided by the Project are mostly reported to be in "good" condition, with the exception of a chlorinator, which is currently under repair. In addition, WTs conduct sensitisation of community on dangers of using unsafe water from shallow wells, as well as on keeping the water points clean, by utilising proceeds from the water supply.

Considering that: 1) some problems have been observed in terms of structural and technical aspects, 2) for one compound, a major problem is observed in terms of financial aspects; and, 3) for two other compounds, financial issues do not appear to hamper the continuation of water supply schemes. On the whole, the sustainability of effects brought to by the Project is fair.