

Country Name	The Project for Rural Water Supply (Phase IV)
Cameroon	(Projet d'hydraulique rurale (Phase IV))

I. Project Outline

Project Cost	E/N Grant Limit: (Phase I) 515 million yen, (Phase II) 478 million yen	Contract Amount: (Phase I) 416 million yen, (Phase II) 388 million yen
E/N Date	(Phase I) June, 2006, (Phase II) August, 2007	
Completion Date	(Phase I) March, 2008, (Phase II) March, 2009	
Implementing Agency	The Ministry of Energy and Water (Ministère de l'Energie et de l'Eau)	
Related Studies	Basic Design Study: June, 2005-March, 2006	
Contracted Agencies	Consultant(s)	(Phase I and II) Japan Engineering Consultants Inc.(current Eight-Japan Engineering Consultants Inc.)
	Contractor(s)	(Phase I)Koken Boring Machine Co., Ltd. (Phase II) Tone Engineering Corporation
	Supplier(s)	None
Related Projects (if any)	<u>Cooperation by Japan</u> <ul style="list-style-type: none"> • The Projects of Rural Water Supply Phase I-III (Grant Aid, 1983-1996) • The Follow-up Cooperation for the Third Project of Rural Water Supply (Grant Aid, 2004-05) <u>Cooperation by Other Donors</u> <ul style="list-style-type: none"> • Provillage (KfW, 1992-2008) 	
Background	<p>The government of Cameroon set the national target to increase the coverage of rural water supply to 75% by 2015. However, only 42% of the rural population had access to safe water in 2003 since the limited budget constrained the basic infrastructure development in rural areas. There were more than 8,800 villages with less than 1,000 population which had no water supply facilities in the country. In such villages, people had no choice to depend on contaminated water sources which had been inducing spread of water-borne diseases. Therefore, since the development of water supply facilities was a key development issue in the country, the government of Cameroon requested Japan to support the development of water supply facilities in 4 provinces in south-central Cameroon.</p>	
Project Objectives	Outcome	To increase the population receiving safe and stable water supply by construction of deep wells and establishment of water users associations in 184 villages in provinces of Adamaoua, Littoral, Sud and Centre.
	Outputs(s)	<p>Japanese Side</p> <ul style="list-style-type: none"> • Construction of 184 deep wells • Establishment of water users associations, awareness campaign and trainings for pump repair persons (Soft Component) <p>Cameroon Side</p> <ul style="list-style-type: none"> • Procuring sites for deep well construction • Repair of access roads to the sites

II. Result of the Evaluation

Summary of the Evaluation

In Cameroon, the poverty reduction strategy targeted 75% of access to safe water in rural areas by 2015. However, the rural water supply covered only 42% of the rural population while the coverage of urban water supply reached 77%. Although the most villages in the 4 target provinces have been utilizing spring water or traditional shallow wells since there are abundant surface water, the most of water sources were contaminated. The contaminated water has been causing water-borne diseases, including diarrhea in such villages. In addition, the dried-up water in the dry season induced problems such as heavy burden of fetching water as well as conflicts.

The project has achieved the objectives of the increase in the population with access to safe water by the construction of rural water supply facilities. Also the project resulted in increase in the water consumption volume in the target villages, improvement of water quality, decrease in water-borne diseases as well as reduction of work burden on women and children for fetching water. As for sustainability, problems have been observed in terms of structural, technical, financial aspects as well as current status of operation and maintenance due to the insufficient operation and maintenance (O&M) activities led by the villagers, the insufficient technical level of pump repair persons trained by the project as well as the insufficient water tariff collection by the water management committees supported by the project.

For relevance, the project has been highly relevant with Cameroon's development policy, development needs, as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency, the project period slightly exceeded the plan.

In the light of above, this project is evaluated to be partially satisfactory.

1 Relevance

This project has been highly relevant with Cameroon's development policies of the Poverty Reduction Strategy (PRSP or GESP) and the Energy Sector Policy ("the coverage of rural water supply of 75% by 2015"), development needs

("ensured access to safe and stable water supply by deep well construction), as well as Japan's Country Assistance Strategy to Cameroon for supporting rural water supply which is one of the priority areas at the time of both ex-ante and ex-post evaluation. Therefore, its relevance is high.

2 Effectiveness/Impact

This project has achieved its objectives of the number of available deep wells, the water consumption and the population with access to safe water as mostly planned despite that the activities of the water management associations established by the project were below the target. Out of 184 deep wells constructed by the project, 168 wells, more than 90% of the total wells constructed were operational as of 2009/10. The water consumption volume in the target villages reached 15-20 liter per person per day in average. As a result of the site survey in 50 villages in 2011, it was confirmed that the deep wells had been operated in 45 villages (90%)¹.



The people fetching water from the deep well constructed by the project in Boyamagagne Village, Centre province

In addition, water qualities were improved by the project. Since it was confirmed that the water qualities of all the deep wells constructed by the project met the water quality standards of Cameroon, the population with access to safe and stable water supply in the target villages increased from 3,600 in 2005 to approximately 76,500 in 2011 (estimation based on the village populations). As for impact of the project, according to the interviews with the villages in the 3 villages where the site visits were conducted for the ex-post evaluation, use of safe water decreased water-borne diseases. In addition, the shorter distance to the water source reduced the work burden of women and children for fetching water.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

	Actual (2005, BD)	Target (2008)	Actual (2008)	Actual 2009/10 (Inspection)	Actual (2011)
Indicator 1: The number of deep wells available to use which were developed by the project.	(Actual) 0	(Plan) 184 wells	(Actual) N.A.	(Actual) 168 wells	(Actual) 45 wells out of 50 wells surveyed
Indicator 2: The intake volume of water from the deep wells developed by the project (person/day in average)	(Actual) 【Drinking Water】 Rainy Season : 20 litter Dry Seasons : 11 litter	(Plan) 25 litter ⁽¹⁾	(Actual) N.A.	(Actual) 15~20 litter ^{(1) (2)}	(Actual) 15~20 litters ⁽¹⁾⁽²⁾
Indicator 3: The population with access to safe and stable water in the target villages	(Actual) 3,600 people	(Plan) Approximately 82,800 people, including 3,600 people using the existing deep wells.	(Actual) N.A.	(Actual) Approximately 72,100 people	(Actual) Approximately 76,500 people

(Source) The post-observation survey report (March, 2011), and the information collected by the site visits for the ex-post evaluation

(Note 1) The intake volume of water from the deep wells, including drinking water and other uses.

(Note 2) According to the site surveys of the three villages in 2012, the intake volume from the deep wells in the dry season increases by 2-3 times of the volume shown in the table above due to the decrease in the surface water.

3 Efficiency

Although the project cost was within the plan (81% against plan), the project period exceeded the plan (114% against plan) because of redoing the construction mainly caused by insufficient technical level of the local sub-contractors. The outputs were mostly as planned except minor changes in some parts. Therefore, efficiency of this project is fair.

4 Sustainability

The facilities constructed by the project are maintained by the water management committees which are organized by the villagers using the deep wells under the supervisions of communes (municipalities). The Ministry of Energy and Water, the executing agency of the project, provides technical advices when necessary. 90% out of 50 wells which were checked by the site visits in 2011 were available to use; however, such good maintenance status was due to the fact that the site visits had been conducted one year after the repair according to the results of the defect inspection.

Although the awareness activities for the villagers, including technical training for maintenance and hygiene education how to utilize water safely, were conducted by the soft component of the project, such activities were not sufficient to make the villagers appropriately understand how to adequately operate and maintain the deep wells by themselves because the

¹ Although the executing agency does not have information of current operational status of the deep wells, the post-observation survey conducted the site visits in 50 sites (26 sites of Phase I and 24 sites of Phase II), which accounted for about 27% of the total sites of 184.

activities were only 2 days per village. Therefore, the most of the water management committees have neither been carrying out the necessary daily maintenance, nor the water tariff collections and the reserves for repair of the deep wells². In addition, 28% of the villages surveyed in 2011 did not have the pump repair person though 3 pump repair persons in each village had been trained by the project in order to implement necessary maintenance of the pumps, including overhaul. On the other hand, many villages requested the retraining for the repair persons because the 4-day-training including on-the-job was not enough for the repair person to obtain necessary technical capacity. In the case that there is no repair person or the repair person is not capable enough, some water management committee requests the private company when the pump of the deep well breaks down. However, there are cases that the pump has not been repaired when the villagers have alternative water sources (even though not safe) and are not willing to pay the water tariff.



Commune staff and a trained pump repair person in Ezedouan (chefferie) village, Centre province

The project has problems in structural, technical and financial aspects as well as the current status of operation and maintenance due to the issues mentioned above. Therefore, sustainability of this project is low.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

After the execution of the decentralization policy in 2011, the responsibility for management of water supply facilities was transferred from the Ministry of Energy and Water, the executing agency of the project, to local government of communes (municipalities). However, each commune does not have enough financial and human resources for management of the water supply facilities. Therefore, it is recommended that the Ministry of Energy and Water establish necessary arrangement and system to provide guidance and support to the communes based on the appropriate situation analysis. Also, it is requested that the Ministry conduct regular monitoring for all the sites and provide technical and financial supports to repair the broken deep wells according to the needs.

Lessons learned for JICA³:

- It is pointed out by the Ministry of Energy and Water and the beneficiaries of the project that the soft component of the project, which is important to ensure sustainability of project effects, is not sufficient to make the water management committee function adequately and continuously operation and maintenance of the pumps of the deep wells by themselves. It is essential to design optimum O&M system and trainings based on sufficient assessment in each site including availability of repair persons or companies in the sites or the regions and their technical level.
- It is observed at the time of ex-post evaluation that the implementing agency does not have enough information about the current status of pump in each site, including operation and maintenance. Therefore it is suggested that, in addition to examine the monitoring system at the planning stage, JICA should seek action from the implementing agency for maintaining the monitoring system after the project completion so that the project effects would be sustained.

² Regular cleaning and maintenance had been carried out only in 7 sites out of 50 sites in 2011. The number of villages where problems had not been observed regarding water tariff collections and the reserves for repair was 13 sites.

³ (1) Providing technical support to the local contractor is out of JICA's scope under the Grant Aid, the following sentences are deleted. "Insufficient technical level and reliability of some local sub-contractors induced redoing of the construction which resulted in the excess of the planned project period. In addition to assessment of technical level of local contractors, the adequate construction management and technical support are necessary for compliance of the planned project period." (2) Some information is added to specify the problems to be tackled with. Before the revision, the sentence was as follows; It is necessary to check the monitoring system at the planning stage since the implementing agency does not have enough information about the current status of pump in each site, including operation and maintenance. (Revised in November 2014)