

Country Name	Projet d'Amélioration de l'Approvisionnement en Eau Potable de la Partie Centrale en Hauteur de la Ville de Conakry
Republic of Guinea	

I. Project Outline

Background	<p>Guinea had been lagging behind in development of facilities to ensure stable supply of safe drinking water. Even in the capital city of Conakry, the water supply had not been able to cope with an increase in demand due to concentration of population in the capital. The water supply rate in 2012 remained at a low level of 46% if the newly expanded water supply area in the suburbs of Conakry was included.</p> <p>The water demand in Conakry was 294,000 m³/day but the nominal capacity of all existing facilities was only 166,000 m³/day, which was not even half of the demand, considering the water loss due to aging facilities. In particular, the population to be supplied in the central highlands of Conakry had been increasing remarkably, and the average daily water supply per person in the highlands was only about 30% of that in the lowland areas, making water supply disparity among areas a serious problem.</p> <p>In addition, there were ruptures of part of water transmission pipe in Conakry, which served as water transmission to the highlands, and an immediate response* was required to ensure resident safety and to meet water supply demand.</p> <p>*Considering the urgency, the pipe renewal was implemented partly under this project and partly under a non-project grant aid scheme.</p>					
Objectives of the Project	To meet the demand for water supply in the central highlands (Simbaya, Koloma, Kaloum, and so on) in Conakry where the population is increasing significantly by increasing the water transmission capacity, thereby contributing to correcting the gap in water supply between the central highlands and other areas.					
Contents of the Project	<p>1. Project Site: central highlands (Simbaya, Koloma, Kaloum, and so on) in Conakry (Construction sites : Matoto commune (Enta, Kissoso, Sangoyah))</p> <p>2. Japanese side (i) Construction: Renewal of 2.0km section of 1,100mm diameter to ductile iron pipe, (ii) Procured equipment: Water trucks (10m³, 20 units)</p> <p>3. Guinean side: Securing and clearing of the land necessary for construction, construction of access roads, and so on</p>					
Project Period	E/N Date	December 1, 2014	Completion Date (Plan)	March 2016	Completion Date (Actual)	August 30, 2017 (Completion of the construction)
	G/A Date	December 9, 2014				
Project Cost	E/N Grant Limit / G/A Grant Limit: 1,319 million yen Actual Grant Amount: 973 million yen					
Executing Agency	Guinea Water Company (Société des Eaux de Guinée: SEG)					
Contracted Agencies	Main Contractor(s): ES-WATERNET CO., LTD, ITOCHU Corporation Main Consultant(s): NIHON TECHNO CO., LTD					

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

- As the pipe renewal was implemented partly under the project and partly under a non-project grant aid scheme, it is not possible to separate the effects from both schemes.
- The project was scheduled to be completed in March 2016; however, was actually completed in August 2017. The target for three years after completion of the project was 2020, not 2019, and the effectiveness was verified based on the actual results of the same year and other factors.

1 Relevance/Coherence

[Relevance]

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

The project was consistent with the development policy of Guinea at the time of ex-ante evaluation. In the "Poverty Reduction Strategy Paper" (PRSP) formulated by the Government of Guinea in 2013, the target was to increase the water supply rate to safe water in Conakry to 92.8% by 2015, and this project was positioned as a project that would contribute to achieving the above target.

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

The project was consistent with the development needs of Guinea at the time of ex-ante evaluation. Guinea had been lagging behind in the development of facilities to ensure a stable supply of safe drinking water. There was a huge gap between the demand and supply of water in Conakry, and in particular, the central highlands were short of water supply. In addition, there was a rupture of part of water transmission pipe in Conakry, which served as water transmission to the highlands, and an immediate response was required.

<Appropriateness of Project Design/Approach>

The project design/approach was appropriate. As for the equity of benefits from the intervention, water supply by water trucks in a way that the vulnerable access water easily was planned and implemented.

No problem attributed to the project design/approach was confirmed.

<Evaluation Result>

In light of the above, the relevance of the project is ③¹.

[Coherence]

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

The project was consistent with the Japan’s ODA policy to Guinea at the time of ex-post evaluation which stated that the basic policy of was to provide assistance that contributes to sustainable development, focusing on the improvement of basic livelihoods that directly benefit the lives of the people, etc².

<Collaboration/Coordination with other JICA’s interventions>

Considering the urgency, the project was implemented in parallel with the non-project grant aid schemes, and positive effects produced jointly were confirmed at the time of ex-post evaluation.

Initially, the scope under the project included the construction of public water taps at 35 locations, it was canceled and implemented under JICA’s follow-up scheme. At the time of ex-post evaluation, out of 35 locations, only 13 locations were working, 10 needed to be rehabilitated (Tanks replacement), 10 locations needed to be relocated (Boreholes), 2 sites were destroyed as part of the government property recovery program to transfer certain ministerial departments to this site in order to decongest the administrative center of the capital city. Since the area concerned is a priority area because there is no other means of water supply, rehabilitation is planned with the 2023 budget, and we are waiting for the allocation of the budget.

<Cooperation with other institutions/ Coordination with international framework>

Any cooperation/coordination with development partners was not clearly planned at the time of ex-ante evaluation. nevertheless, the World Bank through the study of the Drinking Water Supply Master Plan for Greater Conakry took into account in the medium and long term the problem of drinking water supply in the central highland of Conakry. Agence Française de Développement (AFD, French Agency of Development) contributed to the improvement of drinking water supply in the central highlands of Conakry, as the non-revenue water in Matoto area was reduced as a part of AFD’s Technical Commercial Improvement Project (PACT 1).

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Effectiveness>

The project objectives were mostly achieved as planned. The targets of the quantitative effects have been mostly achieved as planned. At the time of ex-post evaluation, the pipes renewed under the project were in good condition, according to SEG. However, among the 20 water trucks procured under the project, 8 were not working. Of 8, six trucks were under repair at the time ex-post evaluation. However, the repair was on hold due to lack of payment of invoices from a contractor. Since the area concerned is a priority area because there is no other means of water supply, the repair of trucks is planned with the 2023 budget and is waiting for the allocation of the budget.

Water has been supplied to residents in the central highlands stably with sufficient flow and pressure since the water pipe has no longer been ruptured. However, in order to keep the effect, proper allocation of budget and the repair of the water trucks mentioned above are necessary.

Due to the increase in broken water trucks, the deterioration of public water taps (constructed under the follow-up scheme), and the preference for free water supply from private wells, which means that part of the facilities were not optimally used.

<Impact>

As impacts, (1) reduction in the hours spent on water fetching and decrease of domestic workload of women accordingly, (2) improvement of the sanitary environment of upland area residents, (3) elimination of damages due to breaks in the renewed section were expected.

Through interviews on the water users, reduction of time spent on water fetching and decrease in domestic workload of women were confirmed. Before the project, it was difficult to get water in these areas and time spend on water fetching was very long before the project completion (1-3 hours). But after the project completion it was very easy to get water in these areas. Accordingly, the domestic workload of women in upland areas has considerably decreased following the implementation of the project.

The sanitary environment of upland area residents has considerably improved because they have easy access to water now than before the project according to the water users interviewed. However, people have many possibilities to get water either from private bore holes which give water to people free. Therefore, this impact is not only attributed to this project.

The pipe renewed under the project have been in good conditions, but to date, the water trucks procured under the project and water taps under the follow-up scheme have been facing some failures. Since the area concerned is a rehabilitation priority area because there is no other means of water supply from SEG, the repair of trucks and rehabilitation of water tap are planned with the 2023 budget and is waiting for the allocation of the budget.

No negative impacts have been observed in the natural environment. Positive impacts have been observed in gender aspect. Most of family water problems are the responsibility of women. With the improvement of the water supply, his hardship related to the chore of water have been reduced considerably and allowed women to cope with other activities.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Quantitative Effects

Table 1: Water supply in Conakry

(Unit: m3/day)

2018	2019	2020	2021
156,438	16,793	151,443	151,140

¹ ④ : very high, ③ : high, ② : moderately low, ① : low

² Source: ODA databook 2012

Indicator	Ex-ante Year 2013 (Baseline)	Target Year 2019 (3 years after project completion)	Year 2018 1 year after project completion	Year 2019 2 years after project completion	Year 2020 3 years after project completion	Ex-post Year 2021	Source
1 Water supply amount (m ³ /day) to central highlands	22,610	32,903	73,466	79,347	80 386	80, 165	SEG
2 Average water supply amount per day per person in central upland area (litter)	21.1	25.7	29.7	34	38.3	42.6	SEG
(Supplemental information) Population	1,073,803	1,282,179.	2,473, 602	2,333, 735	2,098, 851	1,881, 807	SEG

3 Efficiency

Although the project cost was within the plan (the ratio against the plan: 74%), the project period exceeded the plan (the ratio against the plan: 122%). Due to the outbreak of the Ebola hemorrhagic fever in 2014, it was not possible to foresee when the project was able to be completed. Therefore, the project started without exactly specifying the project period. After the epidemic came to an end in December 2015, the contract period with the consultant and contractors was set (until October 2017). Thus, the period from the start of the project until December 2015 was excluded for the calculation of the project period, and the actual project period would be 20.7 months, which is 3.7 months longer than the plan. The project cost was below the plan due to the combined factors including the cancellation of construction of public water taps.

Outputs were modified to cancel construction of public water taps, which was later constructed under the follow-up scheme.

In the light above, the efficiency of the project is ③.

4 Sustainability

< Institutional/Organizational Aspect>

The organizational structure of Guinea water company (SEG) is in place. The departments responsible for the operation, maintenance of facilities and equipment are the Production and Network Department (Water source, water intake, water purification, water conveyance facility management), Equipment Maintenance and Construction Department (Equipment and Construction management for pump stations, water storage facilities, water pipes etc.), and Department of General Means (Procurement of all equipment, management of general equipment such as vehicles). At the time of ex-post evaluation 77 staff members were assigned for Operation and Maintenance; 40 have been for pipes and 37 have been for water tank trucks.

In 2022, 19 staffs have retired and two (2) were replaced. Currently, within SEG, all departments are asked to express their staffing needs to enable the general management to replace the remaining retirees during this year 2023. In February 2023, SEG plan is to regularize the situation of 182 contractual agents to be permanent employees within the framework of SEG Reform Plan (2022-2027) which was financed by the French Development Agency (AFD) and a part action of this plan will be financed by the same institution.

<Technical Aspect>

Though the related departments have had skills and experience in technical network operation and maintenance, there has been a need for capacity building with the departure of most staff members on retirement. On-the-Job Training (OJT) by internal personnel has been conducted for routine operations, though teaching methods need improvement. As regular training, 30 staffs were trained in 2021 and 48 in 2022. The training program for 2023 is being validated by the general management of SEG. Multiple training programs by external instructors have been underway as part of the AFD-supported SEG Reform Plan.<Financial Aspect>

SEG has been in a poor financial situation for several years, therefore, the budget for the maintenance plan of facilities is not allocated in a timely manner at present. SEG does not receive any government subsidies except for the funds necessary for large-scale related facility development and main source of income is the sale of water which tariff has remained the same for 20 years. The main customer is the government, which pays its bills late. In such a situation, it is currently in the process of improvement with the "SEG Reform Plan 2022-2027" supported by AFD and the "review of the tariff system" supported by the World Bank.

The collection of fees from government agencies tends to be delayed, but as a result of the SEG's new management teams strengthening lobbying against the government, the situation of delays has improved in 2022. In addition, a system was applied in which the unpaid portion of the government's water charges was first paid by the SEG and set off against the tax that the SEG should pay. The collection rate of charges from the private sector is 80%, but efforts are being made to improve it by strengthening the installation of charge meters.

SEG's budget

(Unit: Guinean franc)

O&M Cost Items	2019	2020	2021
Maintenance	1,173,430,871	1,839,515,963	2,222,439,598
Repair	24,142,431,990	2,037,237,742	19,035,179,922
Others	425,908,416	128,900,000	539,475,396
Total	25,741,771,277	4,005,653,705	21,797,094,916

<Environmental and Social Aspect>

At the time of ex-post evaluation, no negative impacts have been observed. It was expected that SEG carries out monthly monitoring for groundwater, and monitoring twice a year for noise and vibration. A permanent staff has been dedicated for monitoring in the project area.

<Current Status of Operation and Maintenance>

Due to budget constraint, trucks procured under the project have been unrepaired. SEG maintenance activities are planned during the year 2023 and their implementation is not fixed at the time of ex-post evaluation. Besides, preventive maintenance has been carried out for pipes. Repairs to other facilities and equipment which are not the scope of the project, including public water taps constructed under the follow-up scheme, remain temporary measures and are awaiting total measures through budget allocation.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional/organizational, technical aspects and serious problems in the financial aspect of the implementing agency. Although drastic reforms are being implemented to deal with these problems, but at present they have not yet overcome the problems. Therefore, the sustainability of the project effects is ①.

5 Summary of the Evaluation

The project almost achieved the project objectives as planned, as targeted water supply amount has been achieved. As for the sustainability, serious problems have been observed in the financial aspect. As for efficiency, the project period slightly exceeded the plan; however, the project cost was within 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 confirmed that some of the facilities and equipment provided by this project and other JICA projects have deteriorated and become unusable. However, at the time of this evaluation, the maintenance plan scheduled for fiscal 2023 is still awaiting budget allocation, so SEG needs to respond reliably and promptly.
- Regarding the maintenance and management of SEG's water supply facilities and equipment, SEG's own funds are used, but in recent years there has been a chronic shortage of maintenance and management budgets, mainly due to the fact that water tariffs have been left unchanged for 20 years. One of the key reforms is a review of the water tariff system that will allow SEG to secure the necessary maintenance costs. Under these circumstances, as of 2023, a review of the water tariff system is being conducted with the assistance of the World Bank. Regarding the survey, it is recommended that the target area of this project has many vulnerable people, so it is necessary to establish a tariff system that takes into account income levels.



Water truck ready for water supply