

Country Name	Project for Drinking Water Supply and Improvement of Hygiene Conditions in Rural Areas (le Projet de l'Approvisionnement en Eau Potable et de l'Amélioration des Conditions d'Hygiène dans les Zones Rurales)
Republic of Senegal	

**I. Project Outline**

Background	Drinking water supply and improvement of hygiene conditions in rural areas have been urgent national issues in Senegal. Particularly in the targeted regions of the project (Tambacounda, Matam and Kédougou), construction of water supply facilities had been significantly limited because of remoteness, high poverty rates, and difficulty of groundwater development due to base rock layers in the areas. The water supply coverage by raceway water supply facilities in 2010 were 35.9% in Tambacounda, 70.7% in Matam, and 13.5% in Kédougou, which fell far short of the national average of 60.4%. Although the coverage in Matam region was high, in Ranérou department <sup>1</sup> , one of the project sites, it was below 30%. As for hygiene conditions, most of the toilets in the regions were traditional ones which dissatisfied the standard targeted by the “Millennium Drinking Water and Sanitation Program” (PEPAM) set by the government of Senegal. Besides, because the people in the rural areas did not have hygiene practices such as handwashing, the infant mortality rate caused by waterborne diseases in the areas were high. The access rates to sanitary facilities in 2010 were 21% in Tambacounda, 14% in Matam, and 6% in Kédougou, which fell below the national average of 29.6%.					
Objectives of the Project	Through constructing raceway water supply facilities and sanitary facilities in the targeted sites in the regions of Tambacounda, Matam and Kédougou, the project aimed at increasing the population accessible to safe water and sanitary facilities in the sites, thereby contributing to the improvement of drinking water supply and hygiene conditions in the sites.					
Contents of the Project	<ol style="list-style-type: none"> <li>1. Project Site: 34 villages in 5 sites in the regions of Tambacounda, Matam and Kédougou</li> <li>2. Japanese side: <ol style="list-style-type: none"> <li>1) provision of grant necessary for construction of water supply facilities (level 2 water supply facilities, water stations for vehicles, public water stations, etc.) and sanitary facilities (public toilets and handwash stations) including transmission and distribution water pipes.</li> <li>2) technical assistance (soft component of grant aid for establishing Water Users Associations (ASUFORs) and Sanitation Works Management Committees (COGESs), training for ASUFORs and COGESs, signing of agreements between communities and the Ministry of Water and Sanitation, awareness-raising of teachers and students on hygiene, etc.)</li> </ol> </li> <li>3. Senegalese side: logistical arrangements and clearances</li> </ol>					
Project Period	E/N Date	March 7, 2015	Completion Date (ex-ante)	August, 2017	Completion Date (actual)	October 24, 2017 (construction completion ceremony)
	G/A Date	March 7, 2015				
Project Cost	E/N Grant Limit / G/A Grant Limit: 788 million yen, Actual Grant Amount: 780 million yen					
Executing Agency	Department of Water (DH), Department of Sanitation (DA), Rural Wells Office (OFOR), Ministry of Water and Sanitation (MHA)					
Contracted Agencies	Main Contractor: Nissaku Co., Ltd. Main Consultant: Nihon Techno Co., Ltd.					

**II. Result of the Evaluation**

1 Relevance
<p>&lt;Consistency with the Development Policy of Senegal at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with the development policies of Senegal at the time of ex-ante evaluation. Improvement of access to safe drinking water and sanitation facilities was highlighted as one of the human capital, social protection and sustainable development plans in the “Emergent Senegal Plan” (PSE) (2014-2018). In the “Millennium Water and Sanitation Program” (PEPAM) (2005-2015), which was the highest-level national policy for water and sanitation, it was planned to increase the access rate to safe drinking water in rural areas from 77.5% in 2010 to 82% in 2015 and the access rate to sanitation services from 29.6% in 2010 to 63% in 2015 through synergetic effects by a comprehensive approach for water and sanitation.</p> <p>&lt;Consistency with the Development Needs of Senegal at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with the development needs of Senegal at the time of ex-ante evaluation. According to the review of PEPAM conducted in 2010, the rate of safe drinking water supply targeted to be 82% by 2015 was expected to be achieved in 2011 or 2012 at national level. However, the achievement level largely varied from region to region. The rate of water supply by raceway water supply facilities was 35.9% in Tambacounda, 70.7% in Matam, and 13.5% in Kédougou, which fell far short of the national average of 60.4%. Although the rate in Matam region was high, the rate in Ranérou department where a site of the project located was below 30%. As for the access rate to sanitation facilities, the achievement in 2010 was 29.6% at national level to the target of 63% by 2015. The rate in the targeted regions of the project was 21% in Tambacounda, 14% in Matam, and 6% in Kédougou, which fell below the national average.</p> <p>&lt;Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with the Japan's ODA policy for Senegal at the time of ex-ante evaluation. In the “Country Assistance Policy for the Republic of Senegal” (May 2012 revised in April 2014) of the government of Japan, one of the two major goals was the improvement of basic social services in Senegal by assisting the achievement of MDGs in the sector of health and hygiene.</p>

<sup>1</sup> Department is an administrative district under region. Administrative hierarchy in Senegal is composed of region, department, commune, arrondissement, and village.

<Evaluation Result>

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

2 Effectiveness/Impact

<Effectiveness>

The project has achieved its objective by increasing the population accessible to safe water and sanitary facilities in 34 villages in five targeted sites in three regions of Tambacounda, Matam and Kédougou by constructing raceway water supply facilities and sanitary facilities. The safe water supplied population in the sites increases to 29,571 to the target of 26,000 by the end of the project in 2017. Although the data in 2020 was not available, according to ASUFORs and local residents, the water supply systems constructed by the project have been well maintained and the number of water users may increase but not decreased after the completion of the project. Therefore, the target population of 29,000 in 2020 which was three years after the completion of the project assumed to be achieved in 2020.

Most of the sanitary facilities constructed by the project have been well used in schools and health facilities. Only in some schools, e.g., in Saré Woka in Tambacounda, toilets are not well used by the students due to insufficient awareness of the benefits of using toilets. Although no quantitative data was available, according to the nurses in the project sites, the morbidity of waterborne diseases has considerably decreased through the improvement of water and hygienic conditions. In the field survey on project sites, some local residents answered that the work of water drawing by women and children has been largely alleviated because there were water connections in almost all houses in the villages.

<Impact>

Although no data was available, according to the Regional Sanitation Department and Health Posts, the infant mortality rate must be decreased in the project sites along with the decrease of morbidity of waterborne diseases including diarrhea, cholera, bilharzia, dermatological, and others. According to interviews with local residents, because the work of water drawing has significantly decreased, women and children spend more time on farming, housekeeping, schoolwork, and others. No resettlement and land acquisition were caused by the project, and no other negative impact on natural, social and economic environment has been observed.

<Evaluation Result>

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

Quantitative Effect

Indicator	Baseline 2015 Baseline Year	Target 2020 3 Years after Completion	Actual 2017 Completion Year	Actual 2018 1 Year after Completion	Actual 2020 3 Years after Completion	Source
The population supplied with safe and sufficient water	0	29,000	29,571	No data available.	No data available.	OFOR

3 Efficiency

Although the project cost was within the plan (the ratio against the plan: 99%), the project period slightly exceeded the plan (the ratio against the plan: 107%). The outputs were produced as originally planned by the end of the project period. Therefore, the efficiency of the project is fair.

4 Sustainability

<Institutional/Organizational Aspect>

Organizational structures and responsibilities and mandates of DH, DA, OFOR relating to rural water and sanitation development have not changed during and after the completion of the project. According to the questionnaire and interview surveys on DH, DA, and OFOR, the number of staff in charge of rural water and sanitation development has been sufficient for the duties. At the field level, as for water supply facilities, in Matam and Kédougou, daily operation and management are carried out by ASUFORs, and the facilities' monitoring and major maintenance works are done by the Water Brigades under the responsibility of the Regional Water Directors. In Tambacounda, operation and maintenance are outsourced to the Senegal Water Management Company (SOGES)<sup>2</sup>. As for sanitation facilities, facilities in the schools are managed by the School Management Committees (CGEs) and cleaned by the students, and facilities in the health posts and health huts are managed and cleaned by the Health Committees (CSs). Overall management is monitored by the Sanitation Works Management Committees (COGESs) and reported to Regional Sanitation Services (SRAs). No specific problem caused by the insufficient performance of institutions/organizations has been reported from the field level by the time of ex-post evaluation.

<Technical Aspect>

Water Brigades and SOGES are specialized teams and a company for water supply management, and they have sufficient technical skills and knowledge to operate and maintain water supply facilities. However, according to the Regional Water Director and local residents in the project sites in Tambacounda, the technical level of technicians of SOGES differ from person to person. According to the Regional Water Director, maintenance of water supply facilities in rural areas requires some special attentions and skills, and it may take a little time to get enough experience. ASUFORs are in charge of non-technical daily operation and management as stated above, while technical maintenance is taken cared by the Water Brigades and SOGES. As for the sanitation facilities, daily maintenance and cleaning do not require special technical skills and are carried out by the community members (CGEs and CSs) and the students. Repair works requiring technical skills have been outsourced to local business operators.

<Financial Aspect>

Water supply facilities constructed by the project have been maintained by water bills paid by the users. According to OFOR, because the project sites are in rural areas holding the population with social and financial difficulties, there are households having hardship in paying water fee. However, system of long-term payment or spread-over-time payment is prepared for low-income households, and their financial hardship has not been a big issue for maintenance and operation of the facilities. Sanitation facilities in schools and health

<sup>2</sup> SOGES is a public service delegation management company responsible for boreholes spread over in Tambacounda region.

facilities are managed by communes and community organizations as their common assets. Fund for maintenance is prepared by the communes' budget, plus CGEs and/or the Students' Parents Associations (APEs) for schools, and CSs for health facilities. Most of the community organizations including CGEs, APEs and CSs are managed without sufficient fund, and in some cases, local residents, teachers, and health staffs personally burden expenses. However, since daily maintenance such as cleaning do not cost much and costly works such as repairs are managed by the communes' budget, maintenance of the sanitation facilities are properly conducted in general. Revenue and expenditure data of operation and maintenance of the water supply facilities and sanitation facilities were not available.

<Current Status of Operation and Maintenance>

According to DH, DA, and OFOR, operation and maintenance of the facilities constructed by the project has been properly conducted after the completion of the project. In the filed survey conducted by the ex-post evaluation, no specific problem has been observed except some unclean toilets in some schools. Toilet cleaning is supposed to be conducted by the students in general. Spare parts, tools and utensils, and consumables for water supply facilities have been purchased in a timely manner and kept in stock to avoid suspension of water supply. Only in some areas such as Médina Diakha in Tambacounda, maintenance work faces some difficulties due to hard access to the communities especially in the rainy season, and in Kédougou, spare parts are not always available even in the capital of region due to some issues of business operation of suppliers.

<Evaluation Result>

Some problems have been observed in terms of the technical aspect, financial aspect, and current status of operation and maintenance. Therefore, sustainability of the project effects is fair.

5 Summary of the Evaluation

The project has achieved its objectives by increasing the population accessible to safe water and sanitary facilities in the project target sites through the construction of water supply facilities and sanitary facilities. Caused by those project effects, the morbidity of waterborne diseases has decreased, and the work of water drawing by women and children has been alleviated. As for sustainability, some problems have been observed in terms of the technical aspect, financial aspect, and current status of operation and maintenance. As for efficiency, the project period slightly exceeded the plan. Considering all of the above points, this project is evaluated to be satisfactory.

**III. Recommendations & Lessons Learned**

Recommendations to Executing Agency:

- In some schools, toilets constructed by the project have not been well used by the students due to insufficient awareness of the benefits of using toilets. And some unclean toilets were observed in some other schools. Therefore, it is recommended that SRA takes initiative in collaboration with SOGES to make the related communes conducts awareness raising activities on the significance of using toilet and good maintenance involving the students, parents, teachers, CGEs, and APEs.

Lessons Learned for JICA:

- In a grant aid project providing facilities operated and maintained by community organizations and local residents, the soft component of the project usually takes care of institutional setup for operation and maintenance and awareness raising to foster ownership and sense of responsibility of the people involved. Also in the project, the soft component implemented those activities. However, in the case of the project, although no major problem of operation and maintenance took place, some minor problems such as unused and unclean toilets were observed. In order to increase local residents' awareness for and ownership of the facilities, a participatory approach involving the beneficiaries at the earliest possible time of the project may be effective. For instance, through the early implementation of soft component, the people could be involved in the selection of type of facility, design of facility, location of installation, drafting and editing of manuals, and creation of technical, institutional, and financial system for operation and maintenance. Signing and exchange of memoranda of understanding between the project and the community may strengthen their ownership, sense of responsibility, and satisfaction with the project.



Elevated water tank in Mako in Kédougou Region



Well maintained toilets in a school in Mako in Kédougou Region

