

Country Name	<b>Project for Water Supply of Guinea Worm Eradication in the Region of Tillaberi</b>
Republic of Niger	

## I. Project Outline

Background	More than 33,000 people were infected with guinea worm parasites in Niger in 1990s, most of whom were in the Regions of Zinder and Tillaberi. The Government of Niger started the programs for guinea worm eradication with support from donors including Japan, and as a result the number of the patients drastically decreased. No incidence of guinea worm has been confirmed in Zinder since 2006, while there were still more than 100 patients in Tillaberi Region, especially in the Departments of Tillaberi and Tera. Safe water supply was indispensable to tackle with this issue. However, the water coverage ratio in Tillaberi Region was the second worst in the country, and in particular the ratios in Tillaberi and Tera Departments were low, where safe water supply was an urgent issue.				
Objectives of the Project	To provide safe and stable water for additional 60,000 persons in Tillaberi and Tera Departments in Tillaberi Region by constructing 120 boreholes (deep wells) in 79 villages, in order to reduce water borne diseases in the target departments.				
Contents of the Project	1. Project Site: Departments of Tera and Tillaberi in the Region of Tillaberi 2. Japanese side: Construction of 120 boreholes in 87 villages and technical training for the residents of the target villages on establishment and management of the water management committee and hygiene. 3. Nigerien Side: Provision of land for well construction, etc.				
Ex-Ante Evaluation	2008	E/N Date	June 11, 2009	Completion Date	July 8, 2011
		G/A Date	June 11, 2009		
Project Cost	E/N Grant Limit: 730 million yen, Actual Grant Amount: 648 million yen				
Implementing Agency	Ministry of Water Resources				
Contracted Agencies	Eight-Japan Engineering Consultants, Inc., Water & Geo-Tech Engineers Nissaku, Tone Engineering Corporation				

## II. Result of the Evaluation

< Special perspectives considered in the ex-post evaluation >

- In the project planning sheet, the effectiveness indicator was set as the “number of the people served with safe and stable water in the target 79 villages.” However, after the project started, they were changed to 87 villages due to the shortage of underground water and unsafe access. At the ex-post evaluation, this indicator is changed to the “number of the people served with safe and stable water in the target 87 villages” (the target figure remains same (70,000 in 2011)), because the target number of the drilled boreholes did not change (120 boreholes).

1 Relevance
<p>&lt;Consistency with the Development Policy of Niger at the time of ex-ante and ex-post evaluation&gt;</p> <p>The project has been consistent with the development policy of Niger, as the supply of safe water in the rural areas has been prioritized in the Strategies for Rural Development (2003-2015), National Hydraulic Program (1999-2010) and Hygiene and Sanitation Sector Program (2016-2030).</p> <p>&lt;Consistency with the Development Needs of Niger at the time of ex-ante and ex-post evaluation&gt;</p> <p>There were still patients of guinea worm infections in Tillaberi Region in 2007, while they were eradicated in other regions. Even though guinea worm was eradicated thereafter in 2013, there have been continuously great needs for safe water to sustain the situation and decrease other water borne diseases.</p> <p>&lt;Consistency with Japan's ODA Policy at the time of ex-ante evaluation&gt;</p> <p>According to ODA Databook 2008, assistance priority areas were set forth as education, health, water supply and rural development, which the project was in accordance with.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is high.</p>
2 Effectiveness/Impact
<p>&lt;Effectiveness&gt;</p> <p>The quantitative indicator was set as the number of the people served with safe<sup>1</sup> and stable water in the target 87 villages, but it did not reach the target by 2011. Among the drilled 120 boreholes, 36 which had been planned in Tillaberi were actually drilled in Terra because of the shortage of the water volume and security matters. Since the sites in Terra are less populated than Tillaberi, the beneficiary population was less than planned. The water supply coverage ratio slightly did not reach the target by 2011 (planned year) but has exceeded it by 2015. The reason why the coverage ratio in Tillaberi in 2015 increased much from the previous year was not confirmed. Also, it was not exactly verified why the beneficiary people were increasing even though some boreholes are not functioning, either. It was possible that more water supply facilities were constructed in Tillaberi by other projects than in Terra. In 17 of the 21 interviewed villages, the villagers answered they can get a sufficient daily volume of water from the constructed borehole.</p> <p>As qualitative effects, the project training effects have been partially confirmed. First, the villagers have improved hygiene attitudes and behavior since they received training given by the project. They have improved hygiene customs to keep the water supply facility clean by not washing cloths nearby and constructing the fence to protect from the animals' entry, in 16 of the 21 interviewed villages. They have also improved hygiene customs in the house, such as keeping the house clean, washing hands with soap, constructing household toilets, etc.</p>

<sup>1</sup> In the project, boreholes were selected in the sites where the water quality satisfied the criteria set by the Ministry of Water Resources, and technical training was conducted for the villagers to maintain the water supply facility clean. In the ex-post evaluation survey, no particular water quality test was conducted to verify the water safety.

Second, 20 of the 21 interviewed water point management committees (CGPEs) answered that they understood the technical training of operation and maintenance (O&M) of the water supply facility and applied learnings from the training. On the other hand, according to CGPEs and departmental technicians, the commune officers do not have necessary knowledge and skills for O&M of the water supply facility and do not understand their management functions and other actors' (CGPE members, agents of the town council, village chiefs, etc.) roles, which is attributed to the lack of the site monitoring.

<Impact>

First, water borne diseases have decreased. There has been no guinea worm infection case since 2011 except in three cases in 2012 which was imported from Mali. The eradication was certified by WHO in 2013. The patients of cholera have increased to 4,791 in 2012 but then drastically decreased to 22 by 2015. Cases of shigellosis have been on a decreasing trend, too (205 in 2011 to 77 in 2015). Secondly, the burden of fetching water on women and children has been reduced. After the project completion, the distance to the water point decreased from 0.1-3km to 0.01-1km, and so the required time decreased from 10-300 minutes to 5-90 minutes.

There was no land acquisition and no resettlement and no negative impact on the natural environment

<Evaluation Result>

In light of the above, expected effects have been partially confirmed in terms of both quantitative and qualitative aspects. The beneficiary population and water supply coverage were not achieved by the target year but has been improved, while the effects of the project training have been partially confirmed. Expected impacts have been confirmed. Therefore, the effectiveness/impact of the project is fair.

Quantitative Effects

Indicator		2008 Actual	2011 Plan	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual
Number of the people served with safe and stable water in the target villages		10,000	70,000	N.A.	46,000	47,380	48,760	50,140	51,520
<Supplementary data> Water supply coverage ratio	Tillabéri	34%	38%	34.1%	37.0%	37.6%	37.5%	43.2%	NA
	Terra			37.2%	37.6%	44.7%	43.9%	42.6%	NA

Source: Tillabéri Regional Directorate of Water and Sanitation (DRHA), Census of Population and Housing 2012

3 Efficiency

Both the project cost and period were within the plan (ratio against the plan: 89% and 81%, respectively). Therefore, the efficiency of the project is high.

4 Sustainability

<Institutional Aspect>

The responsibilities of CGPEs, communes and Tillabéri Regional Directorate of Water Resources have not basically changed since the project completion. The one change is that the contract between each CGPE and commune was once cancelled and exchanged again so that the communes could supervise the fund management of CGPEs more precisely. No personnel has been assigned to the new hydraulic service section at the commune offices as it is still new. The number of the personnel at the hydraulic section of Tillabéri Regional Directorate of Water Resources was not available, but it answered that it was not sufficient. In Tillabéri and Tera, there are 34 pump repairers, but only 18 were trained and equipped with necessary tools, which is not sufficient to perform the required responsibility. At the village level, 13 of the 21 interviewed CGPEs have necessary members (leader, secretary, accountant and hygiene worker). Other CGPEs do not assign necessary members because new members have not been selected after some left the committee, and they lacked motivation or there was no leader's appropriate management, etc.

<Technical Aspect>

According to the Tillabéri Regional Directorate of Water Resources, 18 of 34 pump repairers have sufficient techniques, as the pump type has not changed and they have repeatedly practiced repair skills. At the village level, 20 of the 21 interviewed CGPEs answered that the members have sufficient knowledge and skills for daily O&M because of good fund management from assured fee collection, village cohesion, respect for hygiene, etc. All of the interviewed CGPEs answered that the members understand the importance of having safe water for better health and well-being.

<Financial Aspect>

Among the 21 interviewed CGPEs, 16 answered that they have collected the user's fee from the villagers without difficulty and the revenue is sufficient to cover the expenses of O&M of the water supply facility. Reasons for other CGPEs for having revenue difficulties include some villagers' unwillingness to pay, lack of cash to pay, highly set fees, etc. 19 CGPEs have kept an accounting book, but only 4 CGPEs have a bank account to manage the committee fund. Most CGPEs have not opened the bank account because they did not have confidence in the bank, they worry about the drawing for the emergency repair, or the bank is far from the village, etc. The collected funds have been used exclusively for the purpose of O&M of the water supply facility. The commune offices have not secured a sufficient investment budget for awareness raising and technical support to CGPEs.

<Current Status of Operation and Maintenance>

Among the constructed 120 boreholes in the target 87 villages, the current status of 35 boreholes in 25 villages was investigated at the ex-post evaluation. It was found that 27 boreholes are being operated and 26 are providing sufficient water volume, while 8 are not functioning. Reasons for the non-use of the facility are unavailability of timely repairers for deteriorated parts, new connection to Niger's water Management Company, change of the pump type introduced by the District Water Department<sup>2</sup>, etc. Following the committee regulation, 19 of the 25 visited CGPEs answered that they perform their functions such as fee collection, conduct regular meetings, book keeping and daily check-up. 22 CGPEs answered that they can easily purchase the spare parts and repair parts when there is a pump breakdown. Only 7 CGPEs have periodic monitoring visits by the commune officers.

<sup>2</sup> Pumps have been changed in two sites by the District Water Department and development partner such as UNICEF. The District Water Department has no particular plan of changing other pumps unless they are provided by development partners.

<Evaluation Result>

In light of the above, a few problems have been observed in terms of the institutional and financial aspects of the implementing agency and in the current status of operation and maintenance. Therefore, the sustainability of the project effect is fair.

5 Summary of the Evaluation

Water supply facilities were constructed as planned by the project, and the water supply coverage expanded in Tillaberi and Terra. The safe and stable water is provided from approximately three-quarters of the constructed boreholes. On the other hand, the beneficiary population did not reach the target due to the change of the sites which are less populated. Though this still has not reached the target at the time of ex-post evaluation, it has been on an increasing trend. Expected impacts such as the decrease of the water borne diseases and burden of fetching water were confirmed. Regarding the sustainability, most of CPGEs are functioning for O&M of the constructed water supply facility including financial management. However, more technical support such as periodical monitoring and assignment of more repairers are needed at the commune and regional level.

Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations to the implementing agency:

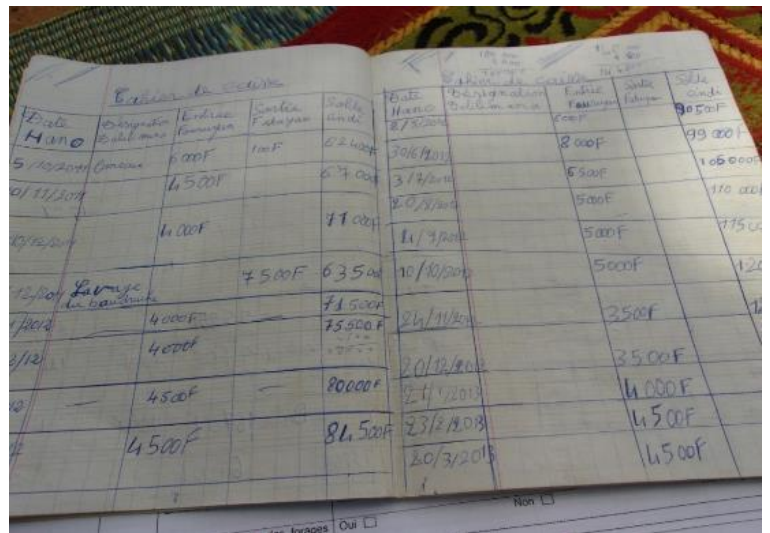
- It is recommended for the Ministry of Water Resources to give direction to the District Water Departments so that broken boreholes be immediately repaired in the village without connection to Niger’s Water Management Company. If they are abandoned because of technical problems, repairers should be sent to the villages from the commune or department offices. If some boreholes are not functioning due to non-technical reasons such as new water supply connection by Niger's Water Management Company, the installed pumps should be considered to be re-installed to other boreholes or other measures for proper functioning.
- It is recommended to the commune offices to which the target villages belong to conduct monitoring visits. While the majority of the target villages use the constructed water facility with functioning CGPEs, some do not. Through the monitoring, it is necessary to detect the reasons of malfunction in those villages and give direction for improvement by sharing successful experiences of other villages.

Lessons learned for JICA:

- It was expected that CGPEs would open a bank account to keep the collected fees so that the committee fund for O&M of the water facility would be stored in a safe way and not be used for other purposes easily. However, only a few CPGEs opened a bank account. The reasons include CGPEs’ little confidence in the bank, far distance to the bank from the village, less convenience of using the bank account, etc. Instead, some CGPEs manage the fund through the credit union, because they usually use it which requires less administrative process than the bank. When the project plans to introduce the fund management for the village committees, besides opening a bank account, some alternatives should be provided so that each committee can choose a suitable one in terms of the access, convenience and benefits.
- The ex-post evaluation survey revealed that, among the 35 visited water facilities constructed by the project, approximately one-quarters have not been used. Reasons for the non-use of the facility include inappropriate maintenance of CGPE (village level water management committee) and unavailability of timely repairers for deteriorated parts. Also, there have been factors which were out of control of CGPEs such as new connection to Niger’s water Management Company and change of the pump type introduced by the District Water Department. So that the facilities constructed by the project would be kept utilized, local or central administrative agencies need to supervise the use of the facility and members’ respect of the rules through regular monitoring, at least once a year, and give direction for repair when repairs are needed. At the project designing phase, it is necessary to carefully examine technical level of the repairers and availability of spare parts at the local market so that the installed pumps would not be easily changed by those of the different type.



(Well maintained borehole in Bagney Koira in Tillaberi Department)



(Accounting notebook of CPGE of Tondobon Sabeydo in Tillaberi Department)