

Federal Republic of Nigeria

FY2016 Ex-Post Evaluation of Japanese Grant Aid Project

“The Project for Improvement of Rural Water Supply”

External Evaluator: Koichiro Ishimori, Value Frontier Co., Ltd.

0. Summary

The objective of the project was to enable access to safe water and the operation and maintenance of water facilities at 500 locations in five states¹ of Nigeria, by procuring equipment to construct water facilities and providing technical assistance in their operation and maintenance, thereby contributing to expanding access to safe water and improving the living environment in the entire regions through construction of water facilities other than the 500 locations. The project has been highly relevant to Nigerian development plan and development needs, as well as Japan’s ODA policy. However, it is difficult to say that the project plan has been appropriate enough. Therefore, its relevance is fair. Both the project cost and project period were within the plan. Therefore, efficiency of the project is high. Besides this, it is difficult to say that quantitative indicators for project effects and impacts regarding the constructed water facilities using the equipment procured by the project have been sufficiently achieved. However, the qualitative effects and impacts that the constructed water facilities have been bringing about to the users are great. In short, the project has achieved its objectives to some extent. Therefore, effectiveness and impact of the project are fair. Some minor problems have been observed in terms of the financial aspect. Therefore, sustainability of the project effects is fair.

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

1. Project Description



Project Locations



Truck mounted drilling rig

1.1 Background

Nigeria is situated in the center of West Africa and surrounded by Benin to the west, Niger to

¹ Kebbi State, Niger State, Taraba State, Enugu State, and Ondo State

the north, and Cameroon to the east and the south. It has approximately 0.92 million square kilometers of land, which is almost equivalent to 2.5 times the land area of Japan, and approximately 182 million people, which is almost equivalent to 1.5 times the population of Japan. Nigeria was one of the greatest agricultural countries in Africa, producing various agricultural products. However, after the discovery of oil in the late 1960s, the country has changed its economic structure from one dependent on agriculture to one dependent on oil. It then repeatedly experienced civil wars over oil and the domestic affairs of the country were unstable for a long time. Consequently, infrastructural development lagged and the development of water facilities such as wells to enable access to safe water that was basic human needs² significantly lagged in rural areas.

1.2 Project Outline

The objective of the project is to enable access to safe water and the operation and maintenance of water facilities at 500 locations in five target states of Nigeria, by procuring equipment to construct water facilities and providing technical assistance in their operation and maintenance, thereby contributing to expanding access to safe water and improving the living environment in the regions through construction of water facilities other than the 500 locations.

G/A Grant Amount / Actual Grant Amount	1,163 million yen / 879 million yen
Exchange of Notes Date /Grant Agreement Date	February 2012 / February 2012
Responsible Agency	Federal Ministry of Water Resources (FMWR)
Executing Agencies	Rural Water Supply and Sanitation Agency (RUWASSA) in Kebbi State, Niger State, Taraba State, Enugu State and Ondo State ³
Project Completion ⁴	March 2014
Main Contractor	Toyota Tsusho Corporation
Main Consultant	Yachiyo Engineering Co., Ltd.
Basic Design	June 2010 - February 2011
Related Projects	“Project for Enhancing the Function of the National Water Resources Institute (2010 - 2014)” “Advisor on Rural Water Supply and Sanitation (2010 - 2011)”

² Basic human needs are the minimum things, health, and education required in the basic lives of human beings, such as food, clothing, and shelter.

³ In Ondo State, Water and Sanitation (WATSAN) was the executing agency when the project began. It was then reorganized as RUWASSA in January 2017.

⁴ Since the project scope described in G/A was the procurement of construction equipment for water facilities and provision of technical assistance in their operation and maintenance on the Japanese side, the definition of project completion is the completion of these aspects.

2. Outline of the Evaluation Study

2.1 External Evaluator

Koichiro Ishimori, Value Frontier Co., Ltd

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: September 2016 – September 2017

Duration of the Field Study: November 27, 2016 - December 21, 2016 and February 19, 2017 - March 3, 2017

2.3 Constraints during the Evaluation Study

Because of security reasons, the external evaluator stayed only in the capital city of Abuja and remotely conducted the ex-post evaluation study by directing local consultants at the project sites. This constrained the collection and analyses of information to some extent.

3. Results of the Evaluation (Overall Rating: C⁵)

3.1 Relevance (Rating: ②⁶)

3.1.1 Consistency with the Development Plan of Nigeria

Nigeria Vision 20: 2020 of 2009, the national development plan of the government of Nigeria at the time of project planning, highlighted “access to safe water” and “construction of water facilities” as means to achieve its aims under one of three priorities, guaranteeing the well-being and the productivity of the people. The sector plan, *National Rural Water Supply and Sanitation Programme* in 2004 also highlighted “access to safe water” and “construction of water facilities” as means to achieve its aims.

The national development plan and sector plan were unchanged at the time of the ex-post evaluation; therefore, they are still valid.

Considering that the objective of the project was to enable access to safe water and operation and maintenance of water facilities in five target states, the project is judged to have been aligned to the development plan of Nigeria both at the time of project planning and ex-post evaluation.

3.1.2 Consistency with the Development Needs of Nigeria

The rate of access to safe water in Nigeria at the time of project planning was approximately 64% in 2011. The rate in rural areas was significantly lower at approximately 52%, whereas the rate in urban areas was approximately 80%⁷. Since *Nigeria Vision 20: 2020* in 2009 aims to achieve 100% by 2020, improving the rate was a great challenge. Under such circumstances,

⁵ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁶ ③: High, ②: Fair, ①: Low

⁷ World Bank, statistical data from *World Development Indicators* of 2015

the construction of water facilities in five target states was decreasing, because of deteriorating construction equipment, although they did have construction experience and capabilities.

The rate of access to safe water in Nigeria at the time of ex-post evaluation was approximately 68% in 2015. Although the gap between the rates in urban and rural areas is decreasing, the rate in rural areas is still low at approximately 57%, while that in urban areas is approximately 80%⁸. It is also far from the target of 100% by 2020 that the *Nigeria Vision 20: 2020* of 2009 is attempting to achieve.

In light of the above, the project is judged to have been aligned to the development needs of Nigeria both at the time of project planning and ex-post evaluation.

3.1.3 Consistency with Japan's ODA Policy

The *ODA Charter* in 2003, the aid policy of the government of Japan at the time of project planning, prioritized water and sanitation in one of its four pillars, "poverty alleviation". The *Mid-term Policy of ODA* in 2005 also prioritized the expansion of basic social services such as safe water in one of its four pillars, "poverty alleviation". Moreover, *JICA's project implementation plan* in 2006 prioritized assistance to improve the quality and quantity of water supply in rural areas in one of its two pillars, "infrastructural development in rural areas".

Considering that the objective of the project is to enable access to safe water and the operation and maintenance of water facilities in five target states, the project is judged to have been aligned to Japan's ODA Policy at the time of project planning.

3.1.4 Appropriateness of the Project Plan and Approach

The responsible agency for the project was FMWR. The executing agencies that actually constructed the water facilities using the equipment procured by the project were the RUWASSAs of Kebbi State, Niger State, Taraba State, Enugu State, and Ondo State. After procuring the equipment, each state government was supposed to allocate a budget to each RUWASSA, with which the RUWASSA was assumed to construct water facilities. However, construction of water facilities by the RUWASSAs has not progressed as planned, as described in section "3.3 Effectiveness," because the budget that each state government allocated was not sufficient, as described in section "3.5 Sustainability." In the Minutes of Discussions (M/D) at the time of project planning, the Nigerian counterparts (Acting Director of Department of International Cooperation at National Planning Commission, Acting Director of Department of Water Supply at FMWR, Honorable Commissioner of Ministry of Water Resources of Kebbi State, Honorable Commissioner of Ministry of Water Resources of Niger State, Honorable Commissioner of Ministry of Water Resources of Taraba State, Governor of Enugu State, and Executive Chairman of WATSAN of Ondo State) agreed to secure the budget necessary for

⁸ World Bank, statistical data from *World Development Indicators* in 2015

constructing water facilities, and signed the M/D. However, considering the fact that the success of the project depends on the budget allocation and that the governor of each state government has the ultimate administrative discretion on it, it was necessary to make detailed agreements with the governor as the final decision-maker for budget allocation at the time of project planning and every year during and after the project. It was also necessary to establish a system enabling stakeholders to check the budget allocation plans and construction plans according to the budget allocation plans of each state at the time of project planning. As such, JICA and FMWR could regularly monitor their progress and take measures to state governments based on their situation and needs from the project implementation stage. In light of the above, it is difficult to say that the agreement and the system at the time of project planning and project implementation were sufficient.

In conclusion, the project has been highly relevant to Nigerian development plan and development needs, as well as Japan's ODA policy. However, it is difficult to say that the project plan has been appropriate enough. Therefore, its relevance is fair.

3.2 Efficiency (Rating:③)

3.2.1 Project Outputs

The project consisted of procuring equipment to construct water facilities as “hard components”, and providing technical assistance in their operation and maintenance as “soft components”. Both components were achieved as planned.

【Hard Components】

Equipment in five target states	Planned outputs	Actual outputs
1. Equipment for drilling wells		
a) Drilling rig	1 unit in each state	Same as planned
b) High pressure air compressor		
c) Cargo truck with crane		
2. Equipment for survey and analysis		
a) Geophysical survey equipment	1 set in each state	Same as planned
b) Water analysis equipment		
c) Pumping test equipment		
3. Consumable materials for constructing water facilities		
a) Hand pump	100 sets in each state	Same as planned
b) Hand pump repair tool for villages		
c) Hand pump repair tool for Local Government Authority (LGA)	Kebbi State: 14 sets Niger State: 24 sets Taraba State: 15 sets Ondo State: 18 sets Enugu State: 9 sets	Same as planned
d) Casing pipes and screen pipes	100 sets in each state	Same as planned
e) Drilling chemicals	1 set in each state	Same as planned

Source: Documents provided by JICA and executing agencies

【Soft Components】

Planned outputs	Actual outputs
1. Improving techniques for operation and maintenance of the equipment for drilling wells	
a) Borehole structures depending on geological features are designed.	All of points a) to d) were performed at the RUWASSAs in five target states during the project implementation period.
b) Construction management plan to shorten the construction period is developed.	
c) Borehole inventories are made.	
d) Maintenance plan of the equipment and introduction plan of repair tools are made.	
2. Improving the operation and maintenance systems of water facilities	
a) Operation and maintenance systems of water facilities are established and the work content is clarified.	The operation and maintenance systems of water facilities were established in five target states and the work content was clarified during the project implementation period.
b) Operation guidelines for supporting villages between executing agencies and LGAs are made and the delineation of support is clarified.	The operation guidelines for supporting villages and the operation and maintenance manual for water facilities were made between by the RUWASSAs and LGAs in five target states. The delineation of support was clarified in five target states during the project implementation period.
c) Water, Sanitation, and Hygiene Committees (WASHCOMs) are established in model communities. At the same time, the RUWASSAs and LGA officers that manage model communities obtain the knowledge to organize and enlighten communities.	WASHCOMs were established in all 15 model communities ⁹ of the five target states during the project implementation period. In addition, the RUWASSAs and LGA officers managing the model communities in the five target states received training and successfully obtained knowledge to organize and enlighten communities on the collection of water tariffs.

Source: Documents provided by JICA and executing agencies

3.2.2 Project Inputs

3.2.2.1 Project Cost

Although the changes in deployment of experts regarding operation guidance for the procured equipment resulting from deteriorating security added approximately 3 million yen in construction supervision costs, competition in the bidding process reduced the procurement costs by approximately 281 million yen. Consequently, while the planned cost on the Japanese side was 1,163 million yen, the actual cost was 879 million yen and within the plan, at approximately 76% of the planned cost. The planned and actual costs on the Nigerian side were unknown.

Planned cost	Actual cost
Japanese side	
1,163 million yen (Procurement cost: 1,076 million yen, construction supervision cost: 87 million yen)	879 million yen (Procurement cost: 789 million yen, construction supervision cost: 90 million yen)
Nigerian side	
Unknown	Unknown

Source: Documents provided by JICA and executing agencies

⁹ Model communities in Kebbi State were Kwakwashe Fulani village, Shiyar Galbi Tiggi village, and Asarara village. Those in Taraba State were Jagampete village, Lanko village, and Bashin village. Those in Niger State were Gbata village and two other villages (unknown). Those in Enugu State were Ihunekweagu village, Obe Uno village, and Umuogba Gbata village. Those in Ondo State were Odudu village, Ipenmen village, and Igunsin village.

3.2.2.2 Project Period

The planned project period was 26 months from February 2012 (G/A date) to March 2014 (handover date of procured items). The actual period was 26 months, which was 100% of the planned period.

In conclusion, both the project cost and project period were within the plan. Therefore, efficiency of the project is high.

3.3 Effectiveness¹⁰ (Rating: ②)

The project was expected to enable access to safe water at 500 locations (100 locations in each state) within two years after procuring the equipment, by strengthening capabilities to operate and maintain the equipment as well as the constructed water facilities in five target states.

3.3.1 Quantitative Effects (Operation and Effect Indicators)

Operation Indicator ① The number of water facilities at target villages¹¹

		Baseline	Target ¹²		Actual achievement ¹³			
		2010	2014	2015	2013	2014	2015	2016
		Planned year	1 year after completion	2 years after completion	Completion year	1 year after completion	2 years after completion	3 years after completion
Kebbi State	Net increase (Grand total)	0 (0)	50 (50)	50 (100)	0 (0)	26 (26)	11 (37)	0 (37)
Niger State	Net increase (Grand total)	0 (0)	50 (50)	50 (100)	10 (10)	43 (53)	9 (62)	28 (90)
Taraba State	Net increase (Grand total)	0 (0)	50 (50)	50 (100)	0 (0)	22 (22)	57 (79)	21 (100)
Enugu State	Net increase (Grand total)	0 (0)	50 (50)	50 (100)	0 (0)	50 (50)	0 ¹⁴ (50)	0 (50)
Ondo State	Net increase (Grand total)	0 (0)	50 (50)	50 (100)	0 (0)	15 (15)	0 (15)	35 ¹⁵ (50)
Total	Net increase (Grand total)	0 (0)	250 (250)	250 (500)	10 (10)	156 (166)	77 (243)	84 (327)

Source: Documents provided by JICA and executing agencies

Note: In the project plan, the target number of constructed water facilities was planned to be achieved within two years after procuring the equipment. Since the handover of the procured items was in March 2014, the first year was from April 2014 to March 2015, the second from April 2015 to March 2016, and the third from April 2016 to March 2017. For convenience, the years in the table above are from April to March, and not as the Nigerian calendar year from January to December.

Actual achievements for 2013 (namely from April 2013 to March 2014)

As a result of providing technical assistance to construct water facilities in Niger State for the RUWASSA officers from five target states during the project implementation period, water facilities were constructed at 10 locations.

¹⁰ Sub-rating for Effectiveness is to be put with consideration of Impact.

¹¹ The number of water facilities means the number of hand-pump deep wells that were newly constructed using the equipment procured by the project.

¹² The target was 50 locations in each state, and therefore in total, 250 locations in five target states in each year.

¹³ Actual achievement means the actual number of water facilities that each state constructed in each year.

¹⁴ No water facilities were constructed using the equipment procured by the project after the replacement of the governor who signed the M/D in 2015.

¹⁵ The new governor who took office in February 2017 allocated a budget to the RUWASSA; therefore, RUWASSA constructed water facilities at 35 locations from February to March in 2017.

Achievement rate of the targets for 2014 (namely from April 2014 to March 2015)

The total number of water facilities as a net increase was 156, while the target was 250. Therefore, the achievement rate was approximately 62%. However, this differed widely by state from 30% in Ondo State to 100% in Enugu State.

The total number of water facilities as a grand total was 166, while the target was 250. Therefore, the achievement rate was approximately 66%.

Achievement rate of the targets for 2015 (namely from April 2015 to March 2016)

The total number of water facilities as a net increase was 77, while the target was 250. Therefore, the achievement rate was approximately 31%. However, this differed widely from 0% in Enugu State and Ondo State to 114% in Taraba State depending on the state.

The total number of water facilities as a grand total was 243, while the target was 500. Therefore, the achievement rate was approximately 49%.

In the project plan, the target for each RUWASSA was to construct water facilities at 50 locations each year within the first two years (from April 2014 to March 2016) after procuring items. However, as described later, the achievement rates of the targets as the net increase and the grand total for the first two years were approximately 52% on average,¹⁶ because each state government allocated an insufficient construction budget to each RUWASSA.

Operation Indicator② The number of population with access to water at target villages

(Unit: thousand)

		Baseline	Target		Actual achievement			
		2010	2014	2015	2013	2014	2015	2016
		Planned year	1 year after completion	2 years after completion	Completion year	1 year after completion	2 years after completion	3 years after completion
Kebbi State	Net increase	0	13.2	13.2	0	6.8	2.9	0
	(Grand total)	(0)	(13.2)	(26.4)	(0)	(6.8)	(9.7)	(9.7)
Niger State	Net increase	0	13.2	13.2	2.6	11.4	2.4	7.4
	(Grand total)	(0)	(13.2)	(26.4)	(2.6)	(14.0)	(16.4)	(23.8)
Taraba State	Net increase	0	13.2	13.2	0	5.8	15.0	5.5
	(Grand total)	(0)	(13.2)	(26.4)	(0)	(5.8)	(20.8)	(26.3)
Enugu State	Net increase	0	13.2	13.2	0	13.2	0	0
	(Grand total)	(0)	(13.2)	(26.4)	(0)	(13.2)	(13.2)	(13.2)
Ondo State	Net increase	0	13.2	13.2	0	4.0	0	9.2
	(Grand total)	(0)	(13.2)	(26.4)	(0)	(4.0)	(4.0)	(13.2)
Total	Net increase	0	66.0	66.0	2.6	41.2	20.3	22.1
	(Grand total)	(0)	(66.0)	(132.0)	(2.6)	(43.8)	(64.1)	(86.2)

Source: Documents provided by JICA and executing agencies

Note: The estimated formula for the population with access to water is 264 people per location multiplied by 50 locations, totaling 13,200 people. For convenience, the years in the table above are from April to March, and not as per the Nigerian calendar year from January to December.

The number of population with access to water for both the planned target and actual achievement was calculated by multiplying the assumed number of population with access to water per location (264 people) by the number of water facilities in Indicator①. Therefore, the achievement rates of the targets as the net increase and the grand total of Indicator② from 2014 to 2016 were approximately 52%, the same as Indicator①.

¹⁶ The achievement rates for net increase and grand total until March 2017, when the ex-post evaluation was conducted, were approximately 51% on average.

Effects Indicator The rate of access to safe water¹⁷ in target villages

(Unit: %)

	Baseline	Target		Actual achievement			
	2010	2014	2015	2013	2014	2015	2016
	Planned year	1 year after completion	2 years after completion	Completion year	1 year after completion	2 years after completion	3 years after completion
Kebbi State	24	—	—	—	34	39	39
Niger State	19	—	—	61	72	70	74
Taraba State	18	—	—	—	34	34	33
Enugu State	14	—	—	—	33	33	33
Ondo State	17	—	—	—	80	80	80
Average	18.4	—	—	61.0	50.6	51.2	51.8

Source: Documents provided by JICA and executing agencies

Note: For convenience, the years in the table above are from April to March, and not as per the Nigerian calendar year from January to December.

The average rate of access to safe water in the target villages of the five target states in 2010, before the project, was 18.4%. The average rate from 2014 to 2016, after the project, increased to about 51%. The details for each state are as follows:

- Kebbi State** The rate in 2014 after the project, increased by 10 points from that in 2010 before the project. The rate further increased from 2014 to 2015, although it remained the same in 2016 as in 2015.
- Niger State** The rate in 2013 when the project was completed, was 42 points more than that in 2010 before the project. The rate demonstrated an increasing trend since 2013, and has maintained a high level¹⁸.
- Taraba State** The rate in 2014 after the project, increased by 16 points from that in 2010 before the project. The rate has remained similar since 2014.
- Enugu State** The rate in 2014 after the project, increased by 19 points from that in 2010 before the project. The rate increased in 2014, but has remained the same since 2015.
- Ondo State** The rate in 2014 after the project, was 63 points more than that in 2010 before the project. The rate increased in 2014, and maintained a high level¹⁹ in 2016.

¹⁷ The rate of access to safe water means the rate of population with access to protected shallow and deep wells. The rate of the baseline in 2010 refers to the rate of population with access to protected shallow and deep wells that existed before the project. Meanwhile, the rate since 2013 refers to the rate of population with access to wells that existed before the project and wells that were constructed using the equipment procured by the project. However, the ex-post evaluation study found that the rate since 2013 was the rate of population with access to deep wells that were constructed by the project, because the project constructed deep wells with sufficient quantity and good quality of water. Consequently, people seldom use the protected shallow and deep wells that have existed before the project. The rate of access to safe water does not include contributions by other projects.

¹⁸ The reason why the rate of access to safe water was higher than that in other states is because the average population in the target villages of the state is smaller than that in villages of other states, while the population with access to water is 264 people per location.

¹⁹ Ditto.

【Performance】

As described in section “3.1.4 Appropriateness of the Project Plan and Approach,” considering the fact that the success of the project depended on the budget for constructing water facilities that each state government was supposed to allocate to each RUWASSA and that the governor of each state government had the ultimate administrative discretion on it, it was necessary to make detailed agreements with the governor as the final decision-maker for budget allocation at the time of project planning and every year during and after the project. It was also necessary to establish a system enabling stakeholders to check the budget allocation plans and construction plans according to the budget allocation plans of each state at the time of project planning. As such, JICA and FMWR could regularly monitor their progress and take measures to state governments depending on their situation and needs from the project implementation stage. Specifically, as suggested at the report meeting for completion of the soft component: 1) each RUWASSA should report its progress on the construction of water facilities to the JICA Nigeria Office monthly, and 2) FMWR should monitor budget allocations from each state to each RUWASSA and if there is any problem, approach the governor so that each RUWASSA can receive the necessary budget. However, regarding 1), the ex-post evaluation study revealed that each RUWASSA had not reported its progress to the JICA Nigeria Office monthly, and the JICA Nigeria Office had not monitored progress regularly—for example, monthly—after project completion even though they had monitored it irregularly. Regarding 2), it revealed that FMWR had monitored budget allocations from each state to each RUWASSA annually and in case of any problem, they had approached executives such as the Honorable Commissioner of the Ministry of Water Resources in each state to ensure that the RUWASSA could receive the necessary budget. However, any follow-up activity took place one year after the approach; therefore, they could not take additional measures, such as petitions to the governor or other means of facilitation, that would have been required during the year. It was also important for the JICA Nigeria Office to regularly share the progress with FMWR and each RUWASSA and take additional measures if required.

3.3.2 Qualitative Effects (Other Effects)

① Increase in water volume

Given the new water facilities, it was expected that the volume of water available for domestic use would increase. Therefore, the ex-post evaluation study implemented a beneficiary survey²⁰ on 100 people at ten villages in nine LGAs of the five target states,²¹

²⁰ Because it was mostly the role of women to fetch water, the external evaluator considered women as the main beneficiaries. When selecting women, the local consultant selected those whom he met in the villages by chance and who kindly consented to being interviewed.

²¹ The ten villages in the nine LGAs of five target states were as follows: Ubandawaki Village in Kalgo LGA and Kanzana Village in Bunza LGA of Kebbi State. Jita Village in Paikoro LGA and Gbata Village in Bosso LGA of Niger State. Gadalasheke Village in Yorro LGA and Kpanti Napu Village in Jalingo LGA of Taraba State. Ogbozinne

which were selected from all villages where water facilities were constructed. According to the results of the survey, 90 of 100 women responded that compared to the situation before the project, the volume of water available for domestic use “significantly increased,” 7 responded that it “increased,” and 3 responded that it “remained unchanged.” Therefore, it is considered that the project has contributed to increasing water volume.

②Improvement in water quality

Given the new water facilities, it was expected that the quality of water available for domestic use would improve. According to the results of the survey, 96 of 100 women responded that compared to the situation before the project, the quality of water available for domestic use “significantly improved,” and 4 responded that it “improved.”²² Therefore, it is considered that the project has contributed to improving water quality.

In addition, the survey asked the degree of satisfaction with the volume and quality of water. According to the results of the survey, 93 of 100 women responded that they were “highly satisfied,” and 6 responded that they were “satisfied.”²³ Therefore, it is considered that the degree of satisfaction with the volume and quality of water is high.



Water facility and beneficiaries in Gbata Village, Niger State



Water facility and beneficiaries in Kpanti Napu Village, Taraba State

③Improving techniques for drilling as well as operation and maintenance of the equipment

To continually drill wells, operation and maintenance techniques for the equipment after drilling are important. As a result of implementing the soft components, each RUWASSA was able to continually construct new water facilities in 2014 and 2015, one year and two years after the project respectively as mentioned above. Therefore, it is considered that

Ndiagu Akpugo Village and Amafor Agbani Village, both in the Nkanu West LGA of Enugu State. Araromi-Igoba Village in Akure North LGA and Apefon Village in Idanre LGA of Ondo State. To select villages, the local consultant selected those appropriate in consultation with the external evaluator in Abuja after obtaining information on security and considering accessibility to the villages in each state.

²² The ex-post evaluation study did not use an analysis kit to analyze water quality. The beneficiaries’ responses, “the quality of water available for domestic use significantly improved” and “the quality of water available for domestic use improved” was based on taste, odor, color, and turbidities perceived through the five senses.

²³ One person responded that she was “not satisfied” with the volume and quality of water. However, the reason was that the location of the new water facility was further away from the old one she used before the project, which was not related to water volume and quality. Therefore, the external evaluator considered that the response was irrelevant to the question.

operation and maintenance techniques for the equipment improved.²⁴ Although there were differences in the grand total of water facilities constructed by each RUWASSA, ranging from 37 in Kebbi State to 100 in Taraba State, this is considered to be attributed not to differences in the techniques of RUWASSAs, but to differences in the construction budget allocated by each state government to each agency.

④ Improving the operation and maintenance systems of water facilities

Since the aforementioned outputs were achieved by implementing the soft components, the operation and maintenance systems of constructed water facilities were improved among the RUWASSAs, the LGAs, and the WASHCOMs in the target villages in each state.

3.4 Impacts

The project intended to construct water facilities at 500 locations in the five target states (100 locations in each state) within two years after procuring the equipment. Thereafter, the intended impacts were that each RUWASSA would construct water facilities at locations other than the 500 locations by procuring consumable materials to construct wells themselves using the equipment procured by the project. This would expand access to safe water and improve the living environment of all regions.

3.4.1 Intended Impacts

① Quantitative Effects

The number of water facilities under rural water supply development plan in the five target states²⁵

		(Unit: water facility)		
		Baseline	Target	Actual achievement
		2010	2017	2016
Kebbi State	Grand total (Achievement rate)	—	410	50 (12%) Of which by the project 37 (9%)
Niger State	Grand total (Achievement rate)	—	650	1,758 (270%) Of which by the project 90 (14%)
Taraba State	Grand total (Achievement rate)	—	490	100 (20%) Of which by the project 100 (20%)
Enugu State	Grand total (Achievement rate)	—	250	611 (244%) Of which by the project 50 (20%)
Ondo State	Grand total (Achievement rate)	—	690	186 (27%) Of which by the project 50 (7%)
Ground total		—	2,490	2,705 (109%) Of which by the project 327 (13%)

Source: Documents provided by JICA and executing agencies

Note: For convenience, the years in the table above are from April to March, and not as per the Nigerian calendar year from January to December.

²⁴ According to FMWR and Enugu RUWASSA, Enugu RUWASSA currently retains its techniques for operating and maintaining the equipment and it is considered that they were also capable in 2015 even though it did not construct a water facility in 2015. Similarly, Ondo RUWASSA currently retains these techniques and constructed water facilities in 2016, although not in 2015. Therefore, it was considered that they were also capable in 2015.

²⁵ The number of water facilities under the rural water supply development plan refers to the number of hand-pump deep wells procured and constructed by the project and other donors.

The grand total of water facilities in 2016 (April 2016 to March 2017) was 2,705, which was approximately 109% of the planned target of 2,490 in 2017. On the other hand, the target was achieved mainly because of the number of water facilities constructed by other donors in Niger State and Enugu State. The achievement rates in Kebbi State, Taraba State, and Ondo State were low at 12%, 20%, and 27% respectively. Contributions by the project to achieving the target in 2017 were 327 as mentioned above, which is equivalent to approximately 13% of the total.

② Qualitative Effects

a) Relief from the labor of water collection

According to the aforementioned survey results, 83 of 100 women responded that the time spent collecting water “decreased,” because of the new water facilities constructed using the equipment procured by the project. The average time spent collecting water a day decreased from approximately 86 minutes before the project to approximately 30 minutes after the project. One woman was even able to decrease the time spent from approximately 240 minutes to approximately 5 minutes. Therefore, it is considered that the project has contributed to relieving women of the labor associated with water collection.

b) Decrease in the number of times waterborne diseases were contracted

According to the aforementioned survey results, 60 of 100 women responded that the number of times that the family members contracted waterborne diseases a year “decreased,” because they were able to access safe water after the project. The annual average number of times waterborne diseases were contracted per household decreased from approximately 1.4 times before the project to zero after the project. In one household, this number decreased from 5 to zero. Therefore, it is considered that the project has contributed to decreasing the number of times waterborne diseases were contracted to some extent.

c) Improving abilities to manage plans to drill wells

According to FMWR, each RUWASSA has improved its abilities to manage plans to drill wells such as construction plans, process management, and safety management by participating in the soft component activities that took place in Niger State. In 2016 (April 2016 to March 2017), three years after project completion, the RUWASSAs in Kebbi State and Enugu State did not construct new water facilities. Therefore, it is difficult to assess their current abilities to manage plans. However, the RUWASSAs in Taraba State, Niger State, and Ondo State developed construction plans and constructed new water facilities based on planned process management and safety management. Therefore, it is considered that they currently have abilities to manage plans.

d) Improving abilities to operate and maintain water facilities

According to FMWR, each RUWASSA has improved its abilities to operate and maintain water facilities by participating in the soft component activities that took place in Niger State. As described later, only 17 of 327 water facilities constructed in the five target states were currently out of service and is scheduled for repairs. Since this equals only to approximately 5% of the total, it is considered that each RUWASSA currently has abilities to operate and maintain water facilities.

3.4.2 Other Positive and Negative Impacts

①Impacts on the Natural Environment

None.

②Land Acquisition and Resettlement

None

③Unintended Positive/Negative Impact

According to the aforementioned survey results, 20 of 100 women started growing and selling agricultural products such as cassavas by using the time saved to collect water. Four women of the 20 who are interviewed said that they made an additional income of NGN 3,175 per month on average. Considering that the minimum monthly salary for government officers was NGN 18,000²⁶ in 2016 during the ex-post evaluation, the additional income of roughly NGN 3,000 per month was not a small amount to farmers. Therefore, it is presumed that the project has possibly contributed to improving livelihoods to some extent.

To summarize, the achievement rates of the number of water facilities as Operation Indicator① and the number of population with access to water as Operation Indicator②, which are both quantitative indicators for effectiveness, were approximately 52% on average. Therefore, some positive effects were observed. Meanwhile, the rate of access to safe water as Effects Indicator significantly improved from 18% before the project to 51% after the project (it is impossible to compare the planned target and actual achievement, because of a lack of target). Furthermore, the beneficiary survey reveals that ①the water volume and ②the water quality as qualitative effects increased and improved respectively. Implementation of the soft components also improved ③ the techniques for operation and maintenance of the equipment and ④operation and maintenance systems of water facilities, as qualitative effects.

Regarding the quantitative effects of impacts, the number of water facilities in the rural water supply development plan in the five target states achieved approximately 109% of the target for 2017 in March 2017. However, the achievement rates in states other than Niger State and Enugu State were low. Contributions by the project to achieving the target for the year 2017 were

²⁶ National Minimum Wage Amendment Act of 2011

limited to approximately 13% of the total. Meanwhile, the beneficiary survey reveals that qualitative effects, such as a) relief from the labor of water collection and b) decrease in the number of times waterborne diseases contracted, were improved. Replies from FMWR also confirm that the RUWASSAs c) improved their abilities to manage plans to drill wells and d) improved their abilities to operate and maintain water facilities. As another impact, it is presumed that the project has possibly contributed to improving livelihoods to some extent.

In light of the above, it is difficult to say that the quantitative indicators for project effects and impacts related to the constructed water facilities are sufficiently achieved. However, the qualitative effects and impacts that constructed water facilities have been bringing about to users are great.

In conclusion, the project has achieved its objective to some extent. Therefore, effectiveness and impact of the project are fair.

3.5 Sustainability (Rating:②)

This section analyzes the sustainability of the realized effects and impacts. As such, the external evaluator mainly analyzed the sustainability of effects and impacts related to the water facilities constructed at 327 locations.

3.5.1 Institutional Aspects of Operation and Maintenance

In the project plan, each RUWASSA (WATSAN in Ondo State) was meant to maintain the equipment procured and water facilities constructed by the project. Each RUWASSA (WATSAN in Ondo State) was also expected to establish WASHCOMs at all target villages in collaboration with the LGAs, while the WASHCOM was meant to operate and maintain water facilities daily.

①The RUWASSAs

There has been no change in the roles of the RUWASSAs, and the roles of the WATSAN of Ondo State have been transferred to the state's RUWASSA. At the time of ex-post evaluation study, most RUWASSAs had fewer staff than planned at Department of Water Supply in charge of operating the equipment and Department of Equipment Management in charge of maintaining the equipment. However, the institutional system of operation and maintenance of the equipment procured and maintenance of water facilities constructed by the project was maintained.

Staff at Dept of Water Supply and Dept of Equipment Management		
	Planned number	Actual number
RUWASSA of Kebbi State	18	17
RUWASSA of Niger State	72	45
RUWASSA of Taraba State	46	46
RUWASSA of Enugu State	69	40
RUWASSA of Ondo State	27	23

② WASHCOMs

According to the RUWASSAs, WASHCOMs have been established in almost all target villages,²⁷ except Enugu State. Furthermore, the WASHCOMs in the villages where water facilities were constructed operate and maintain the water facilities daily. The site survey conducted by the local consultant while performing the aforementioned beneficiary survey confirmed that WASHCOMs in ten villages in the nine LGAs of the five target states employed operation and maintenance systems for the water facilities daily. The staff composition of WASHCOMs at ten villages is described in the table below. These were structured in all WASHCOMs so that the voice of women, who were the main users, were reflected.

	LGA	Village	Staff
WASHCOM of Kebbi State	Kalgo	Ubandawaki	Chairman, accountant, female leader, and other members, in total 10 (of which women were 3)
	Bunza	Kanzana	Chairman, accountant, female leader, and other members, in total 8 (of which women were 2)
WASHCOM of Niger State	Paikoro	Jita	Chairman, accountant, female leader, and other members, in total 10 (of which women were 3)
	Bosso	Gbata	Chairman, accountant, female leader, and other members, in total 11 (of which women were 3)
WASHCOM of Taraba State	Yorro	Gadalsheke	Chairman, accountant, female leader, and other members, in total 11 (of which women were 3)
	Jalingo	Kpanti Napu	Chairman, accountant, female leader, and other members, in total 10 (of which women were 5)
WASHCOM of Enugu State	Nkanu West	Ogbozime Ndiagu Akpugo	Chairman, accountant, female leader, and other members, in total 9 (of which women were 4)
	Nkanu West	Amafor Agbani	Chairman, accountant, and other members, in total 7 (of which women were 1)
WASHCOM of Ondo State	Akure North	Araromi- Igoba	Chairman, accountant, and other members, in total 6 (of which women were 2)
	Idanre	Apefon	Chairman, accountant, and other members, in total 5 (of which women were 1)

In light of the above, it is presumed that there is no problem with the institutional aspects of operation and maintenance of the RUWASSAs and the WASHCOMs.

3.5.2 Technical Aspects of Operation and Maintenance

In the project plan, Department of Water Supply and Department of Equipment Management of each RUWASSA were expected to construct and maintain water facilities and maintain the procured equipment respectively. No problems were identified regarding their experience and abilities. Furthermore, in the project plan, the WASHCOMs established in villages under the guidance of the RUWASSAs and the LGAs were expected to operate and maintain the water facilities daily.

Meanwhile, JICA implemented a technical cooperation project, the “Project for Enhancing the Function of the National Water Resources Institute (NWRI)” from March 2010 to November 2014, when this grant aid project was being implemented. The technical

²⁷ WASHCOMs have been established even in villages without water facilities at this moment under the premise that one will be constructed in the future.

cooperation project developed curriculum modules for a geophysical survey, drilling, maintenance of equipment, and maintenance of water facilities in the NWRI of FMWR, and revised or developed text and other materials based on the modules. Partly because of this, the NWRI is able to train the RUWASSAs every year, and it is contributing to maintaining their technical skills.

①RUWASSAs

The RUWASSAs constructed water facilities from March 2015 to February 2017 based on *The Manual on Borehole Construction Management*, which was developed through the soft components of the project. They also performed small-scale maintenance activities such as replacing hand pumps and pipes for the constructed water facilities and large-scale activities such as repairing drainage. In addition, they maintained the procured equipment such as maintaining drilling equipment each time after drilling ten boreholes.

②WASHCOMs

According to the RUWASSAs, they provided the WASHCOMs with technical guidance, which enabled them to operate and maintain the water facilities daily, such as oiling the levers and tightening bolts of hand pumps. Therefore, it is presumed that there is no problem with the technical aspects of the WASHCOMs. The operation and maintenance situation of the water facilities managed by the WASHCOMs in ten villages in nine LGAs of the five target states, on which the local consultant conducted a site survey is elaborated later. However, the survey revealed no problem with the technical aspects of their daily operation and maintenance of water facilities.

In light of the above, it is presumed that there is no problem with the technical aspects of the operation and maintenance activities of the RUWASSAs and the WASHCOMs.

3.5.3 Financial Aspects of Operation and Maintenance

Each RUWASSA was expected to secure NGN 8 million to 31.5 million annually to construct water facilities within the first two years after procuring the equipment, and NGN 22 million to approximately 45.5 million within the next three years. It was also expected that they secure NGN 7.97 million annually to maintain the procured equipment and NGN 38,000 per water facility for maintenance. Furthermore, the WASHCOMs in the villages where water facilities were constructed were meant to collect NGN 132²⁸ per person annually from the water facility users for maintenance such as regularly replacing spare parts and other activities, and to save NGN 35,000 annually aside from the budget by RUWASSAs.

²⁸ It was presumed that the annual maintenance cost of a water facility was NGN 35,000. Since the assumed population with access to water per water facility was 264 people, the annual cost per person was NGN 132.

①RUWASSAs

RUWASSAs have not been able to completely or sufficiently secure the budget needed to construct water facilities and maintain them and the procured equipment. Since the insufficient budget for constructing water facilities was already negatively evaluated as a factor explaining the fewer number of constructed water facilities than planned in the sections on relevance and the effectiveness and impact, the external evaluator analyzed RUWASSAs' budgets to maintain the water facilities over the past three years.

RUWASSA of Kebbi State (NGN 10,000)	Target after 2014	Actual amount 2014	Actual amount 2015	Actual amount 2016
(1) Budget	—	535	604	144
(2) Construction cost of water facilities	—	391	460	0
(3) Running cost	—	144	144	144
Of which maintenance cost (achievement rate)	937	33 (4%)	53 (6%)	85 (9%)
(1)-(2)-(3) Balance	—	0	0	0

Source: Documents provided by executing agencies

Note 1: The years in the table above are as per the Nigerian calendar year from January to December.

Note 2: Since the planned budget was unknown, planned and actual maintenance costs were compared and the achievement rate analyzed.

The RUWASSA of Kebbi State was expected to annually secure about NGN 7.97 million to maintain the procured equipment and about NGN 1.4 million²⁹ to maintain the water facilities. However, the actual amounts were significantly lower than the target. In addition, the budget in and after 2017 and the future was unknown at the time of ex-post evaluation.

RUWASSA of Niger State (NGN 10,000)	Target after 2014	Actual amount 2014	Actual amount 2015	Actual amount 2016
(1) Budget	—	3,587	4,500	1,400
(2) Construction cost of water facilities	—	1,150	437	713
(3) Running cost	—	1,163	936	600
Of which maintenance cost (achievement rate)	1,139	1,163 (102%)	936 (82%)	600 (53%)
(1)-(2)-(3) Balance	—	1,274	3,127	87

Source: Documents provided by executing agencies

Note 1: The years in the table above are as per the Nigerian calendar year from January to December.

Note 2: Since the planned budget was unknown, planned and actual maintenance costs were compared and the achievement rate analyzed.

The RUWASSA of Niger State was expected to annually secure about NGN 7.97 million to maintain the procured equipment and about NGN 3.42 million³⁰ to maintain the water facilities. However, the actual amounts after 2015 were lower than the target. In addition, the budget in and after 2017 was unknown at the time of ex-post evaluation.

²⁹ NGN 38,000 per water facility x 37 water facilities (2016) = about NGN 1.4 million

³⁰ NGN 38,000 per water facility x 90 water facilities (2016) = about NGN 3.42 million

RUWASSA of Taraba State (NGN 10,000)	Target after 2014	Actual amount 2014	Actual amount 2015	Actual amount 2016
(1) Budget	—	4,338	3,970	3,220
(2) Construction cost of water facilities	—	722	459	2,099
(3) Running cost	—	3,496	529	1,121
Of which maintenance cost (achievement rate)	1,177	2,011 (170%)	529 (45%)	938 (80%)
(1)-(2)-(3) Balance	—	120	2,982	0

Source: Documents provided by executing agencies

Note 1: The years in the table above are as per the Nigerian calendar year from January to December.

Note 2: Since the planned budget was unknown, planned and actual maintenance costs were compared and the achievement rate analyzed.

The RUWASSA of Taraba State was expected to annually secure about NGN 7.97 million to maintain the procured equipment and about NGN 3.8 million³¹ to maintain the water facilities. However, the actual amounts after 2015 were lower than the target. In addition, the budget in and after 2017 was unknown at the time of ex-post evaluation.

RUWASSA of Enugu State (NGN 10,000)	Target after 2014	Actual amount 2014	Actual amount 2015	Actual amount 2016
(1) Budget	—	17,011	7,951	973
(2) Construction cost of water facilities	—	15,950	6,890 ³²	0
(3) Running cost	—	1,061	1,061	973
Of which maintenance cost (achievement rate)	987	500 (51%)	150 (15%)	60 (6%)
(1)-(2)-(3) Balance	—	0	0	0

Source: Documents provided by executing agencies

Note 1: The years in the table above are as per the Nigerian calendar year from January to December.

Note 2: Since the planned budget was unknown, planned and actual maintenance costs were compared and the achievement rate analyzed.

The RUWASSA of Enugu State was expected to annually secure about NGN 7.97 million to maintain the procured equipment and about NGN 1.9 million³³ to maintain the water facilities. However, the actual amounts after 2014 were lower than the target. In addition, the budget in and after 2017 was unknown at the time of ex-post evaluation.

³¹ NGN 38,000 per water facility x 100 water facilities (2016) = about NGN 3.8 million

³² Although NGN 68.9 million was spent constructing water facilities in 2015, these were constructed without using the equipment procured by the project. Therefore, the number of water facilities constructed as part of the project in 2015 was zero.

³³ NGN 38,000 per water facility x 50 water facilities (2016) = about NGN 1.9 million

RUWASSA of Ondo State (NGN 10,000)	Target after 2014	Actual amount 2014	Actual amount 2015	Actual amount 2016
(1) Budget	—	3,062	0	0
(2) Construction cost of water facilities	—	945	0	0
(3) Running cost	—	2,117	0	0
Of which maintenance cost (achievement rate)	854	2,035 (238%)	0 (0%)	0 (0%)
(1)-(2)-(3) Balance	—	0	0	0

Source: Documents provided by executing agencies

Note 1: The years in the table above are as per the Nigerian calendar year from January to December.

Note 2: Since the planned budget was unknown, planned and actual maintenance costs were compared and the achievement rate analyzed.

The RUWASSA of Ondo State was expected to annually secure about NGN 7.97 million to maintain the procured equipment and about NGN 0.57 million³⁴ to maintain the water facilities. However, the actual amounts in 2015 and 2016 were both zero. In 2017, Ondo State government allocated a budget to the RUWASSA of Ondo State, which enabled the RUWASSA to construct water facilities at 35 locations in January and February as mentioned earlier, though the amount was unknown.

② WASHCOMs

According to the RUWASSAs, some WASHCOMs in villages where water facilities were constructed could not preserve enough budget to maintain the water facilities, although they were expected to do so. Half the WASHCOMs in the ten villages in the nine LGAs of the five target states, on which the local consultant conducted the site survey, were unable to collect fees for the budget required to maintain the water facilities.

	LGA	Village	Situation of fee collection for maintaining water facilities
WASHCOM of Kebbi State	Kalgo	Ubandawaki	NGN 48,000 over annually planned NGN 35,000 was collected.
	Bunza	Kanzana	NGN 50,000 over annually planned NGN 35,000 was collected.
WASHCOM of Niger State	Paikoro	Jita	NGN 50,000 over annually planned NGN 35,000 was collected.
	Bosso	Gbata	NGN 150,000 over annually planned NGN 35,000 was collected.
WASHCOM of Taraba State	Yorro	Gadalasheke	NGN 84,000 over annually planned NGN 35,000 was collected.
	Jalingo	Kpanti Napu	Fee collection was not started yet, since the water facility was just constructed.
WASHCOM of Enugu State	Nkanu West	Ogbozinne Ndiagu Akpugo	Fee was not collected, because users thought that RUWASSA should cover the cost.
	Nkanu West	Amafor Agbani	Fee was not collected, because users thought that RUWASSA should cover the cost.
WASHCOM of Ondo State	Akure North	Araromi- Igoba	Fee was not collected, because users thought that RUWASSA should cover the cost.
	Idanre	Apefon	Fee was not collected, because users thought that RUWASSA should cover the cost.

3.5.4 Current Status of Operation and Maintenance

Current status of the operation and maintenance of water facilities constructed in villages in five target states is as follows:

Kebbi State 4 of 37 water facilities were out of service, because no budget was allocated to repair them. However, repairs were planned when the budget was

³⁴ NGN 38,000 per water facility x 15 water facilities (2016) = NGN 0.57 million

allocated. Furthermore, the site survey conducted by the local consultant on the water facilities constructed in Ubandawaki Village and Kanzana Village indicated no problems with their operation and maintenance.

- Niger State 2 of 90 water facilities were out of service. However, repairs were planned when the budget was allocated. Furthermore, the site survey conducted by the local consultant on the water facilities constructed in Jita Village and Gbata Village indicated no problems with their operation and maintenance.
- Taraba State 3 of 100 water facilities were out of service. However, repairs were planned when the budget was allocated. Furthermore, the site survey conducted by the local consultant on the water facilities constructed in Gadalasheke Village and Kpanti Napu Village indicated no problems with their operation and maintenance.
- Enugu State All 50 water facilities were in service. The site survey conducted by the local consultant on the water facilities constructed at Ogbozinne Ndiagu Akpugo Village and Amafor Agbani Village indicated no problems with their operation and maintenance, although a maintenance fee was not collected.
- Ondo State 8 of 50 water facilities were out of service, because no budget was allocated to repair them. However, repairs were planned when the budget was allocated. Furthermore, the site survey conducted by the local consultant on the water facilities constructed in Araromi-Igoba Village and Apefon Village indicated no problems with their operation and maintenance, although a maintenance fee was not collected.

As mentioned above, only 17 of the 327 water facilities constructed in villages of the five target states were out of service. As such, the out-of-service ratio was equivalent to approximately 5% of the total number and significantly lower than that of the water facilities constructed by other donors (approximately 30% two years after completion³⁵). In addition, since repairs were planned for the 17 out-of-service water facilities once the budget was allocated, it is considered that there is no problem with the current status of operation and maintenance of the water facilities.

In conclusion, some minor problems have been observed in terms of the financial aspect. Therefore, sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of the project was to enable access to safe water and the operation and maintenance of water facilities at 500 locations in the five target states of Nigeria by procuring

³⁵ World Bank, "Nigeria Water, Sanitation, and Hygiene (WASH) Poverty Diagnostics: Preliminary Report (2016)"

equipment to construct water facilities and providing technical assistance in their operation and maintenance, thereby contributing to expanding access to safe water and improving the living environment in the entire regions through construction of water facilities at more than the 500 locations. The project has been highly relevant to Nigerian development plan and development needs, as well as Japan's ODA policy. However, it is difficult to say that the project plan has been appropriate enough. Therefore, its relevance is fair. Both the project cost and project period were within the plan. Therefore, efficiency of the project is high. Besides this, it is difficult to say that quantitative indicators for project effects and impacts regarding the constructed water facilities using the equipment procured by the project have been sufficiently achieved. However, the qualitative effects and impacts that the constructed water facilities have been bringing about to their users are great. In short, the project has achieved its objectives to some extent. Therefore, effectiveness and impact of the project are fair. Some minor problems have been observed in terms of the financial aspect. Therefore, sustainability of the project effects is fair.

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

4.2 Recommendations

Recommendation to executing agencies and JICA

Considering that the number of water facilities in the five target states has not increased as planned, it is important for FMWR, the RUWASSAs, and the JICA Nigeria Office to establish a monitoring system that enables stakeholders to check their progress on constructing the water facilities, and share information on construction progress including budget allocations from state governments to the RUWASSAs³⁶ more frequently -at least quarterly- and regularly. This would enable them to take timely and joint measures towards state governments (especially the governor, who has the ultimate decision-making discretion) to discuss solutions, if problems emerge. If face-to-face meetings are difficult, documents should be submitted.

4.3 Lessons Learned

Securing budget allocations from the recipient government after procuring the equipment in the project plan

The project was a type of the project which intended to procure equipment for constructing water facilities. The recipient government was expected to construct them by using the procured equipment through its own budget. In other words, the effects, impacts, and sustainability of the

³⁶ It is appropriate to share the information at least until when water facilities are constructed at 100 locations in each state using all 100 sets of consumable materials for construction by the project, such as hand pumps. In other words, this is until water facilities are constructed at another 63 locations in Kebbi State, another 10 in Niger State, another 50 in Enugu State, and another 50 locations in Ondo State. Taraba State has already constructed water facilities at 100 locations.

project heavily depended on budget allocations from the recipient government after procuring the equipment. However, the agreement to secure budget allocations from recipient governments as well as the system monitoring the budget allocation and construction plans among the stakeholders and taking measures depending on the situation and needs were inadequate. Consequently, some problems have been observed in effects, impacts, and part of sustainability. When planning a similar project in the future, especially in Nigeria, it is imperative to make detailed agreements on the budget allocation plan. These should be formulated in collaboration with the final decision-maker at the recipient government at the time of project planning and every year during and after the project in order to secure budget allocations after procuring the equipment. It is also important to establish a system which enables stakeholders to check the budget allocation plans and construction plans based on the budget allocation plans promised in the agreements at the time of project planning. Progress should then be regularly monitored, and measures need to be taken during and after the project depending on the situation to match needs of the project sites from the project implementation stage.