

Nigeria

Project for Enhancement of Business Management Capacity of Federal Capital Territory Water Board

- Escaping Deficit Management and the Challenge of Becoming a Water Board Trusted by Residents -

April 2026



Problem Analysis Workshop
on Revenue Collection



C/P listening to a Japanese expert explaining the
proper positioning of water distribution pipelines

1. Project Background and Challenges

The Nigerian government, through the "Nigeria Agenda 2050," aims to become a high-middle-income country by 2050 and is promoting infrastructure development and the improvement of public health. However, as of 2024, the access rate to safe drinking water in urban areas, including the Federal Capital Territory (FCT), remains at only 36.1%, which is significantly lower than the sub-Saharan African average of 68.0%. In the FCT, while the population continues to grow at an annual rate exceeding 5.0%, the water supply coverage is only 29.4%. Consequently, facility development by the Federal Capital Development Authority (FCDA) has not kept pace with the rapid increase in demand. The Federal Capital Territory Water Board (FCTWB), which is responsible for the operations of the water supply business, faces serious management challenges. The

Non-Revenue Water (NRW) ratio is approximately 60.0%, which is high compared to the capitals of neighboring countries (approximately 40%), and the revenue collection ratio is extremely low at around 57.9%. This situation not only pressures business management but also creates a sense of inequity among residents who pay appropriate tariffs. Therefore, in addition to maximizing the use of existing facilities and ensuring proper operation and maintenance (O&M), the optimization of customer management and revenue collection is an urgent priority. Since the enactment of the "FCTWB Establishment Act" in 2017, FCTWB has been working on organizational restructuring toward functioning as body corporate. JICA has also supported management improvements through technical cooperation projects and the dispatch of experts, including NRW reduction, support for transition to body corporate, and the introduction of the "Smart Billing" system in

collaboration with startups.

However, even though more than eight years have passed since the enactment of the Act, the Federal Capital Territory Administration (FCTA) still holds actual control over financing of FCTWB. Consequently, this situation prevents the results of management improvements from being reflected in financial management and staff compensation and benefits, and makes autonomous business operations difficult. Specifically, investment in the expansion of the distribution network has stagnated, and customers are forced to purchase water meters that should originally be provided by FCTWB. FCTA holds authority over budget management; therefore, FCTWB is required to apply to FCTA for operational and maintenance expenses, as well as for any necessary repairs. This prevents FCTWB from responding promptly to improvement of service delivery. Furthermore, because FCDA is responsible for constructing new facilities such as water treatment plants and distribution networks, it is difficult for FCTWB to implement systematic maintenance and management. Despite the enactment of the act, FCTWB has not yet functioning as a body corporate. The situation where those three organizations are involved in the water supply illustrates the reality of the complexity in business operations.

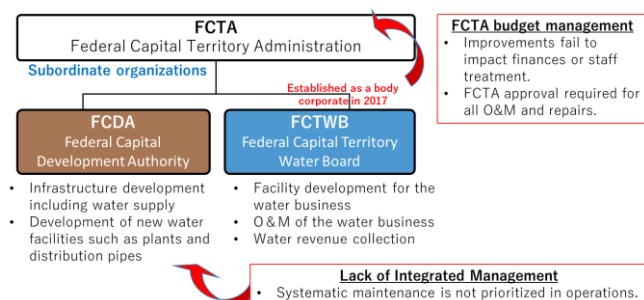


Figure 1 Relationship between FCTWB and Related Organizations

Based on this background, the Project supports the strengthening of financial management and business planning capacity for functioning of FCTWB as body

corporate. By achieving the following three outputs, the Project aims to reach the Overall Goal, “the FCTWB operates water supply business with its own revenue.” The relationship between Project Outputs, the Project Purpose, and the Overall Goal is shown in Figure 2.

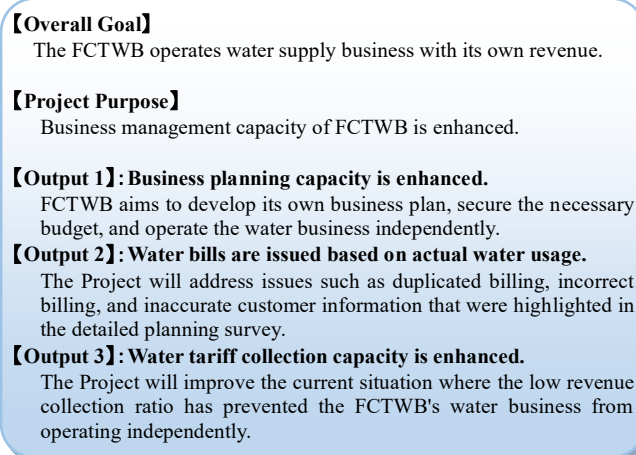


Figure 2 Project Outline

The Project contributes to strengthening FCTWB’s long-term business management foundation. It is aligned with the cluster strategy for "Supporting the Growth of Water Utilities" under the JICA Global Agenda for "Sustainable Water Resources Management and Water Supply."

Furthermore, the Project directly contributes to SDG Goal 1 (No Poverty), Goal 3 (Good Health and Well-being), and Goal 6 (Clean Water and Sanitation). Nigeria has added the water resources sector as a new priority sector in its updated May 2021 version of the adaptation measures under its Nationally Determined Contribution (NDC) based on the Paris Agreement. Moreover, the NDC 3.0 (September 2025) enhances the framework to a more comprehensive adaptation strategy that includes energy, agriculture, logistics, health, land use, and gender, in addition to water resources. Therefore, the Project also contributes to climate change adaptation through supporting the achievement of Nigeria's NDC targets, and its implementation is consistent with the Nigeria's latest

policy direction.

2. Project Approach to Tackle the Challenges

As shown in the Project outputs mentioned above, achieving the enhancement of business planning capacity, increasing the accuracy of water bills, and improving revenue collection capacity in the FCT requires extensive study across various fields. To this end, FCTWB serves as the implementing agency, with FCTA and FCDA as the primary relevant organizations. For the implementation, a Working Group (WG) consisting of representatives from relevant departments was established under the Joint Coordinating Committee (JCC), as shown in Figure 3. In selecting the WG members, strong emphasis was placed on ensuring gender equity and diversity, actively promoting women's participation. Consequently, the WG operates in a manner that ensures diverse perspectives and women's voices are effectively reflected in various discussions and the formulation of action plans.

The Project is being implemented based on the Local Scenario (a scenario aiming for a self-growing water utility) and the Theory of Change (ToC), a visualization of the behavioral change trajectories and conditions required to achieve the ultimate goal, agreed upon with the Nigerian side prior to the Project's commencement. In order to spiral up the growth cycle indicated in the local scenario, activities in two major aspects are planned to lead to FCTWB's behavioral changes: "creating an environment that enables business operations as a body corporate" and "improving business operation capacity". Figure 4 shows the portion of the ToC relevant to the Project. The conditions for the enhancement of business planning capacity under Output 1 include two points: planning capacity and asset management capacity.

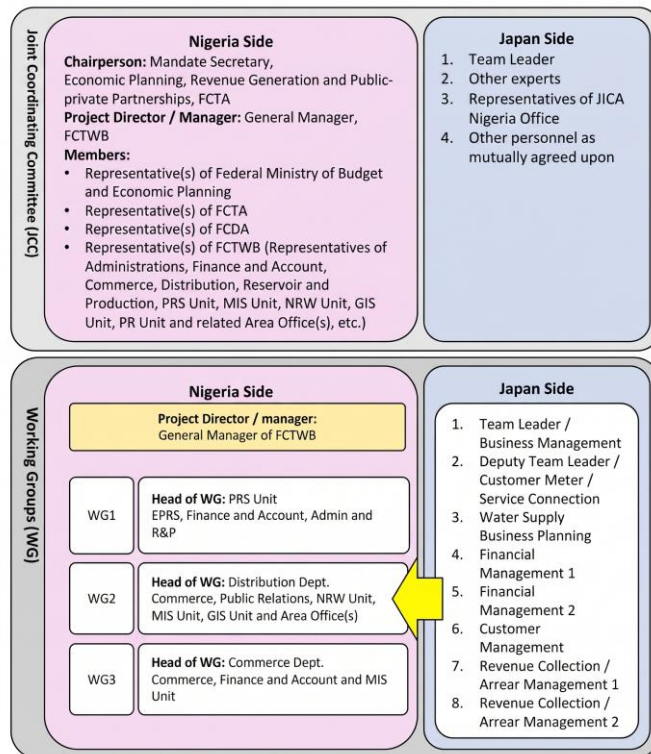


Figure 3 Project Implementation Structure

However, developing the Mid-Term Business Plan and setting the Key Performance Indicators (KPIs) to evaluate the achievement of goals outlined in the plan does not guarantee the attainment of the ToC. A structure is required within the organization to monitor and evaluate the implementation status and results, thereby driving improvement of unmet targets and the spiral of growth. Furthermore, since the FCTWB's key management posts such as general manager (GM) and heads of department and units change due to retirement, transfers, and other reasons, it is also necessary to foster a corporate culture that enables continuous improvement. Regarding Outputs 2 and 3, which lead to the improvement of business operation capacity, it is essential to drive the spiral of improvement and growth not only at the headquarters but also at the area offices that have daily contact with customers. To achieve this, even in an environment where budget execution for service improvement cannot be carried out in a timely manner, it is important to create an environment where staff can create their own approaches tailored to their specific issues to improve customer satisfaction and increase revenue.

To realize the pathway of behavioral change shown in the ToC, a mechanism enabling the behavioral change must

be established. Therefore, the Project forms the WGs for each Output, and aims for a chain of achievement where the accumulation of small successes leads to the attainment of higher-level goals through the individual activities of those WGs (see Figure 5).

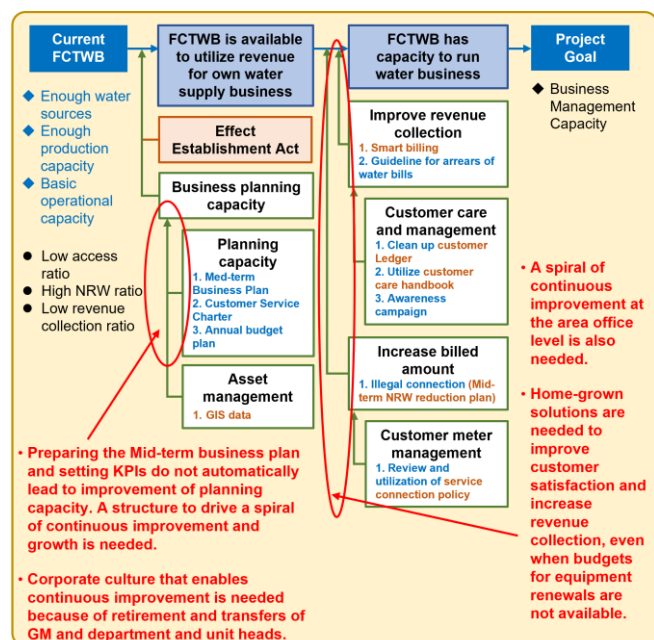


Figure 4 Expected outcomes in ToC through the support provided by the Project

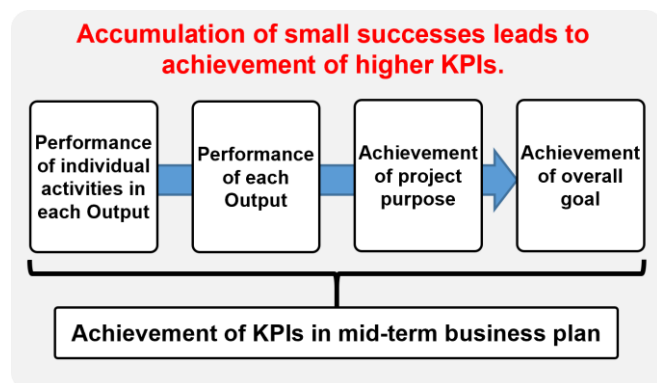


Figure 5 Chain of Achievement

3. Results of Project Approach

(1) Formation of WGs (Entire Project)

Three WGs have been formed to advance activities for each Output and proceed with business improvements. Each WG includes members from relevant departments

and units within FCTWB. Among them, WG1 also includes a member from FCTA, as it handles the mid-term business plan and budget plan during its activities.



Photo1 Kick-off meeting at FCTWB

(2) Development of mid-term business plan (Output 1)

a. Identification of Core Problem

In developing the mid-term business plan, the WGs first assessed the actual status of water business operations and used problem analysis methods to identify a core problem. As a result, "low revenue collection ratio" was identified as the core problem of business operations. The WG members identified the factors creating this problem and the phenomena caused by it, and established a shared understanding among relevant departments and units regarding the matters requiring attention in the mid-term business plan.

b. Mid-term demand and income/expenditure forecast

Previously, FCTWB had little experience in planning based on demand forecasts and lacked clear performance indicators, resulting in a lack of business operations and improvements from a mid-to-long-term perspective. However, FCTWB itself, as the entity responsible for operation and maintenance, must develop its own demand forecasts and business plans to determine the appropriate

level of operations in response to actual increase in demand.

In the Project, WG1 conducted mid-term demand and revenue/expenditure forecasts to develop the business plan. Given that most departments lacked experience in demand and revenue-expenditure forecasting, the project utilizes the forecasting formats developed under the "Water Supply Business Advisor" project (hereinafter referred to as "the Advisor project") conducted prior to the project. The Advisor project aimed at improving the financial management and strengthening the capacity of FCTWB to operate the water supply business as a body corporate. Its activities provided guidance on the preparation of financial statements, support for establishment of a tariff review committee, and assistance in the formulation of annual plans based on the Mid-term Strategic Plan for NRW Reduction. As part of those efforts, a demand forecasting format was established as the basis for business planning. The project aims to update the existing format to make it more practical for the actual business operations and focuses on technology transfer through on-the-job-training so that FCTWB can utilize and update it autonomously.

While distribution network expansion is expected to increase the supply area and customers, accurate data remains difficult to obtain due to equipment malfunctions; therefore, the Project is pilot-testing to determine what data can be utilized to predict future demand and accumulates forecasting expertise that will serve as the foundation for planning in the future. Discussions are also being held with FCDA to confirm the transfer timing of new facilities, as demand forecasts requires consideration of the expanded water supply areas. Although the demand forecasts and facility development planning falls under the jurisdiction of FCDA, a data-sharing framework between FCDA and FCTWB has not been established. Consequently, data directly linked

to the FCTWB's revenue/expenditure forecasts is not provided in a timely manner. Therefore, the Project supports FCTWB in taking ownership to conduct simulations based on the existing facility development plans prepared by FCDA. The objective of this approach is to enhance business management capacity for autonomous business planning and financial forecasting, which is essential for functioning of FCTWB as body corporate. Furthermore, the project policy is to strengthen collaboration between the two agencies by involving representatives of the FCDA in the WG as necessary.



Photo2 Discussion on setting the basic assumptions for the medium-term business plan

c. Development of draft mid-term business plan

As developing a mid-term business plan was a first-time initiative for FCTWB, and the organization lacked knowledge of the required structure and contents. WG1 members are developing the plan that integrates the interrelated elements of "demand forecast, financial projections, and KPIs", which form the pillar of the mid-term business plan, by referring to the guidelines for water utilities in other countries. The focus is not merely on document creation but also understanding how each measure affects FCTWB's financial situation.

d. Recommendations for financial and asset management towards business independence

A detailed review of past financial statements revealed some undesirable accounting treatments. A good example is the recording of the subsidies from FCTA in the capital account, that are provided for the procurement of water treatment chemicals and other supplies due to recent price increases. This necessitates a recommendations for proper accounting methods. Regarding asset management, some major assets have not yet been transferred from FCDA, the agency in charge of facility development. The Project has recommended early asset transfer and a review of construction in progress. The project will identify the factors delaying the transfer of assets and take steps to expedite the process.

e. Proposed improvements to the budget planning process

Based on the review of the existing budget planning system, the following improvements were proposed:

- Establish a system that allocates budget to department to address the current situation where the budget from the higher authority, FCTA, arrives after the fiscal year begins without sharing the rationale, and is neither distributed nor shared within FCTWB.
- Formulate the annual budget plan, disclose and share it with all staff within FCTWB, and provide opportunities for briefing.

(3) Billing based on actual usage (Output 2)

a. Optimization of billing and collection processes and challenges

One issue underlying the low collection ratio is wrong billing and returned bills due to customer data errors. The primary factors behind these billing errors include duplicate billing due to the double registration of customers, distribution of bills to incorrect addresses caused by incomplete customer registration information,

continuous billing to already disconnected customers, and erroneous billing resulting from errors in meter reading and data entry. This leads to a decline in customer satisfaction, which in turn results in a decreased willingness to pay. Furthermore, some area offices have reported cases of bills being returned undelivered because the registered houses or offices are vacant or closed. To reduce such returned bills, it was decided to mandate that all area offices report factors behind non-delivery. To streamline this, the operation of a field officers app has commenced.

b. Visualization and standardization of customer information management

While Standard Operating Procedures (SOP) for tasks assigned to each department and unit exist at FCTWB, they are not sufficiently utilized. Because a unified workflow for customer information management had not been established, it was difficult to clarify which part of the flow caused customer data errors. Therefore, by visualizing the current flow, responsibilities for each part of the flow were clarified, and SOPs were revised to match the actual situation.

A data normalization committee will be established to improve the accuracy of customer information.

c. Gap analysis of water meter management and examination of improvements

Although a draft "Service Connection Policy" was prepared during the previous "Water Supply Business Advisor" project, it has not reached official approval. This has led to a lack of unified customer meter installation and management. Three types of meters (conventional, AMR, and prepaid) are installed in the service area; customers bear the cost for conventional meters, while FCTWB covers the other two. Due to budget shortfalls, replacement of faulty meters has not

progressed, resulting in estimated billing based on past usage. As of October 2025, 21.7% of customers are billed on an estimated basis.

A gap analysis of meter management identified the following solutions:

- Delegation of budget approval authority, clarification of responsibility allocation with customers, public awareness campaigns, and early approval of the Service Charter.
- Resolving technical staff shortages, enforcing penalties against non-compliant customers, and normalizing customer information.
- Strict application of the Service Connection Policy and introduction of a digital installation report process (including photos of installation status).
- Annual bulk purchase of meters and introduction of a digital inventory management system (Inventory assets have not yet been surveyed, and stationery, ledgers, etc., under the jurisdiction of the headquarters are currently managed manually).

d. Priority issues and specific measures in pilot areas

Garki and Jabi were selected as the two pilot area offices to implement improvement activities. Implementation plans are being developed to advance activities for reducing wrong billing and improving meter management in these areas.

e. Promotion of DX for countermeasures against illegal connections

Illegal connections cause water loss and hinder billing based on actual water usage. Identifying leakage points discovered during daily area office activities is crucial for illegal connection countermeasures. Promoting digital transformation (DX) is indispensable for efficiently accumulating and sharing information with limited resources. As part of DX, the Project is utilizing App

Sheet and BI (Business Intelligence) tools to visualize leakage points and build databases at a model area office.

(4) Enhancement of revenue collection capacity (Output 3)

a. Current status analysis and challenges for arrear collection

While it was confirmed that the causes of arrears include fundamental failures to bill appropriately, such as leaving faulty meters and illegal connections unaddressed, failing to read meters, and non-delivery of bills, it also became evident that responses to non-payers are inadequate, and sufficient arrear collection activities are not being carried out for the amounts already billed. Furthermore, interviews with the Debt Recovery Unit, which is responsible for collection arrears within FCTWB, and each area office revealed the following realities regarding the status of arrears collection:

- The Debt Recovery Unit does not have direct access to the customer database, making prompt inquiries difficult.
- There are no clear criteria or guidelines for legal actions, leading to ad-hoc activities.
- There is no budget for transportation costs or vehicles for field visits, forcing staff to use private funds.
- Due to the lack of unified guidelines, responses depend on the discretion of area office managers, resulting in significant disparities between offices.
- Arrears accumulate indefinitely because there are no deficit disposition standards, making the recovery of old receivables extremely difficult.

To resolve these issues, the Project has begun developing practical guidelines referring to the cases from other countries (e.g., East Timor, Cape Town). The guidelines include:

Workflow Definition: Clarifying procedures for payment reminders and suspension of water supply based

on a three-month arrear threshold, along with departmental role allocation and developing the document templates for customer notifications and internal reporting.

Flexible Collection Schemes: Proposing flexible collection schemes such as installment payments, debt forgiveness promotions, and offsetting arrears from customer deposits.

Incentive Systems: Adding to the draft the system of the awards and allowance plan for individuals or areas based on collection performance to incentivize motivation enhancement of FCTA staff.

To make the above possible and formulate an effective guideline, the approval of the executive team of FCTWB and FCTA is essential. In the future, working members aim to gain approval by explaining and sharing opinions with them.

b. Customer satisfaction survey implementation and analysis

The customer satisfaction survey was conducted through interviews with 248 customers (households and businesses). Analysis revealed the following:

Water Supply Status: Households generally have an average water availability of 15 hours a day, 6 days a week.

Satisfaction Trends: Overall satisfaction is "Fair," but there is strong dissatisfaction with the billing system and response times for repair requests.

Willingness to Pay: It was reconfirmed that customers have a willingness to pay if provided with reliable service and accurate billing.

c. Promotion and monitoring of customer care

Interviews with the Customer Care Unit and area offices revealed that the existing customer care handbook is not

recognized on the ground and is not being utilized or shared. Additionally, regarding complaint handling, the area office lacks inventory of materials, making it impossible to respond immediately to leakage complaints. Based on these findings and the customer satisfaction survey, the Project will consider the necessity of updating the handbook and examining methods for promoting and monitoring customer care activities. Regarding the availability of emergency leak repair equipment and water supply materials, leak repairs are primarily handled by the area offices. Therefore, equipment lists will be collected from all area offices to investigate the current availability of these materials and equipment.



Photo3 Customer satisfaction survey

Furthermore, visits to the area offices confirmed extremely poor working environments, such as holes in ceilings and inadequate lighting. Improving the

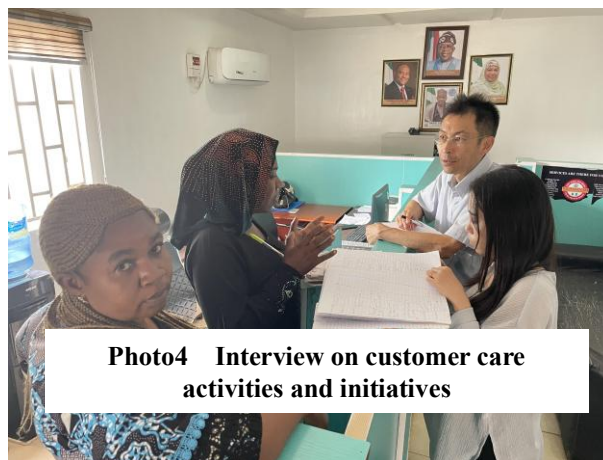


Photo4 Interview on customer care activities and initiatives

environment for staff (office renovations and provision of

transportation) is a challenge that must be addressed alongside improving collection rate and customer satisfaction.

4. Efforts and Lessons of Project Implementation

(1) Fostering C/P Ownership

The Project aims to enhance autonomous problem-solving capabilities so that FCTWB can achieve sustainable business operations. To achieve organizational self-sufficiency beyond the Project term, the Project emphasizes establishing a corporate culture where staff create their own approaches tailored to their specific issues. To this end, a working structure has been established where each WG takes the lead in planning and monitoring their activities through autonomous weekly meetings.

Furthermore, the higher-level agency, FCTA, strongly demands the strengthening of organizational functions and improvement of revenue collection to facilitate functioning of FCTWB as body corporate. In response, FCTWB has demonstrated a strong commitment to change by taking the lead in discussions on the establishment of a task force for financial autonomy, and by considering an increase in the target collection ratio from 52.1% to 90%, which is required for independent operations.

In this way, the Project supports "fostering ownership" by enabling FCTWB to autonomously envision its future and manage its budget and progress, aiming to establish a solid business foundation based on a self-financing system.

(2) Communication with FCTA as a higher authority

Since the Chairperson of the JCC for the Project is the Mandate Secretary of FCTA, and approvals from both the Mandate Secretary and the FCT Minister are required for

matters related to activities, building a relationship with FCTA is crucial. The Project team established a platform for consultation with the Mandate Secretary to explain the Project implementation policy, confirm their intention regarding functioning of FCTWB as body corporate, and hear their opinions on necessary improvements for that. Furthermore, at the 1st JCC meeting held in November 2025, the JICA Expert Team proposed the establishment of a task force to examine functioning of FCTWB as body corporate toward financial autonomy, and the proposal was approved. Regarding this proposal, it was discussed that since FCTWB is already legally defined as a body corporate, there is a need to examine the practical steps to enable its operation under a system of financial autonomy.



Photo5 Courtesy call
on the FCTA Mandate Secretary

(3) Budgetary measures for implementation

In order to put the results of the WG activities into practice and achieve actual improvements, the alignment budget with the plans are essential. However, there is a trend where a time lag occurs in budget execution even after FCTA approves the budget plan, or the budget is not released at all. Therefore, during meetings including FCTA, the Project consistently recommends that budget execution in accordance with the plans is vital for business improvement of FCTWB. In particular, to

achieve the Project purpose of increasing the revenue collection ratio, the cleaning of customer information data is essential, which in turn requires appropriate budget execution to advance these activities.

(4) Sharing knowledge and methodology with C/P

Activities currently in progress, such as demand forecasting and the development of the medium-term business plan (Output 1), and the customer satisfaction survey (Output 3) represent areas where FCTWB has had limited experience and know-how. Therefore, as for the demand and financial forecasts, the Project utilized the forecasting framework prepared by “Water Supply Business Advisor” project (2020–2022), with a WG 1 member who was originally in charge of creating the framework leading the update process. Explaining the contents and methodology to other members will deepen their understanding and also facilitate the transfer of forecasting know-how within the organization. Similarly, as there was no experience in developing a mid-term business plan, the Project provided examples of business plan structures, enabling WG members to autonomously conduct problem analysis and examine the contents of the plan. In the problem analysis, members identified various issues. Some of them are common across FCTWB and others are specific to their respective departments/units. By utilizing problem analysis methodologies to analyze the structure of these problems and their impacts, a common understanding of the core problem was formed. The Project conducted a customer satisfaction survey through local subcontracting. WG 3 members examined the questionnaire and coordinated with each area office for sampling and data collection. This process allowed them to accumulate know-how on survey implementation not only at headquarters but also at each area office. Furthermore, beyond simply sharing results with WG members, a workshop was held to transfer know-how of

the entire workflow from survey design to implementation and result analysis to ensure the survey can be conducted continuously in the future. The workshop commenced with an opening address by the General Manager (GM). The participation of department heads also provided a valuable opportunity for the management level to understand the operational challenges on the ground. Furthermore, in the Project, the heads of departments and units related to the improvement of business management serve as the leaders of each Working Group (WG). As a result, ongoing discussions are being held regarding the challenges associated with each Output, which extend beyond customer satisfaction.

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**Photo6 Post-survey workshop
on customer satisfaction survey**

(Project Period: April, 2025 to December, 2027)