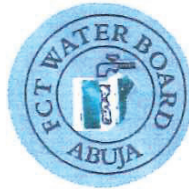


Annex 21:

Follow-up Documents for Monitoring
from the end of the Project



FEDERAL CAPITAL TERRITORY WATER BOARD

P.M.B. 164, Garki - Abuja F.C.T. Tel: 09-2341559. E-mail: fctwb@alpha.linkserv.com

19/10/18



The Director FCT Treasury

Through

DD Budget

INCORPORATION OF MEDIUM TERM STRATEGIC PLAN FOR NON REVENUE WATER REDUCTION

The FCT Water Board governing Board has approved the above Subject matter for your incorporation in the Board's Budget expenditure for the year 2019.

Above is for your consideration and approval.


Engr. A. A. Nahuche

General Manager, FCT Water Board

COMMUNIQUE AT THE END OF SEMINAR FOR NON-REVENUE WATER REDUCTION IN FCT, HELD AT BOLTON WHITE HOTEL & APARTMENT, 7 GWANDU STREET, OPPOSITE SAHAD STORES, AREA 11, GARKI-ABUJA ON MONDAY, 22ND OCTOBER, 2018

Preamble:

Technical Cooperation Project on Non-revenue Water Reduction was implemented by FCT Water Board in collaboration with Japan International Cooperation Agency (JICA) from October, 2014 – September, 2018.

The signed Record of Discussions for the Project, stipulates that there should be information sharing seminars for FCT Water Board, FCTA and other relevant stakeholders.

The Final Seminar for the Technical Cooperation Project on Non-Revenue Water Reduction was declared opened by the Chairman FCT Water Board (Engr. K. A. Ali FNSE, mni, President of COREN) ably represented by Engr. Zekeri Momoh, FNSE which started at 10:30am with a short prayer by Mr. Dada J. O. In attendance were representatives of FCT Water Board, FCTA, JICA, FCDA, States Water Boards, and International Development Partners etc. See attendance list attached.

The objective of the seminar is to share awareness of project orientation, results, impact, findings, challenges and way forward.

Proceedings:

Below are the proceedings of the seminar:

- The Welcome Address was delivered by the Project Director, Mr. Sani Pai, (Director, EPRS/FCTA), ably represented by Mr. Emmanuel Obi Okonkwo
- The Goodwill Message was delivered by the representative of the Chairman FCT Water Board, Engr. Zekeri Momoh, FNSE
- The Keynote Address was delivered by Mr. Katsutoshi Komori, Chief Representative, JICA Nigeria Office ably represented by Ms Makiko Okumura

- **Session 1 The Medium-Term Strategic Plan for NRW Reduction (2019-2023)**
 - Current Status of Water Services and FCTWB (Mr. Bamidele Olatunji)
 - Project Outline (Engr. Aliyu Usman, Deputy Director, FCTWB)
 - The Medium-Term Strategic Plan of NRW Reduction (Engr. M. Kabir Rabi)
 - Approval of the Medium-Term Strategic Plan of NRW Reduction and Driving Force of implementing NRW Reduction (General Manager, Engr. A. A. Nahuche, FCTWB)

- **Session 2-1 Results and Impact of the Federal Capital Territory Reduction of Non-Revenue Water Project**
- NRW Calculation/Estimation and Monitoring (Engr. Abdullahi Masaud)
- Results of NRW Reduction Pilot Projects (Engr. Ozumi)
- Distribution Management (Engr. Abdulrahman)

- **Session 2-2 Results and Impact of the Federal Capital Territory Reduction of Non-Revenue Water Project**
- Findings and Lessons learnt (Engr. M. Kabir Rabiou)
- Case Sample of Voluntarily-initiated NRW Reduction (Engr. Masaud & Engr. Ozumi)

- **Questions & Answers, Discussion and Way Forward**
- Questions & Answers, and Discussion
- Way Forward
- Closing Remarks (Project Manager, General Manager, Engr. A. A. Nahuche, FCTWB)

Questions Raised/Clarification Sought by Participants

Subsequent to the presentations and discussions, the participants raised questions/sought clarification on some aspects of the presentations as follows:

The participants sought for Clarification on Customer Categorisation:

The Head of Department Commerce responded that, customer category can not only be restricted to commercial and domestic customers, because you cannot categorise in same place major consumers, mini hotels, car wash, garden, plazas and institution looking at their commercial orientation. He also said that, streamlining customer category is a management issue and it will be presented to the management for consideration.

Also, the participants enquired whether the result of the pressure calibration obtained from the hydraulic analysis corresponds to that measured at the site.

It was responded that the project conducted the calibration of pressure obtained from the result of hydraulic analysis to that measured at site (Zone 4), the two results were found to be almost similar.

The participants sought for clarification on why cost effectiveness of scenario "d" (1.8) was selected and how the revenue generated was calculated.

It was responded that, Scenario "d" was selected considering technical personnel for sub-surface leakage detection, cost implication of the scenario. Costs of non-revenue water reduction operations (manpower, fuelling, materials and other logistics) in the pilot areas were used as a basis for calculating expected revenues of the different scenarios. Also, the ratio of expected revenue generation to expenditure were used obtained the effectiveness of the different scenarios.

Clarification was sought on when is the real time for minimum night flow

It was responded that, minimum night flow measurement is one of the activities of non-revenue water reduction and is carried out concurrently with 24hrs flow measurement. It is aimed at knowing the consumption trend of a particular area within 24hrs. Real-time for minimum night flow occurs at mid-night when consumption is virtually zero.

Clarification was sought on Water Production Cost as against tariff of N80/m³


It was responded that, cost of water production encompasses cost of electricity, man power, chemicals, transmission and distribution etc. The cost of water production is higher than the tariff of N80/m³ & N150/m³ for domestic and commercial customers respectively, thus Government subsidises the tariff to N80/m³ & N150/m³.

The participants suggested for development and institutionalisation of the Medium-Term Strategic Plan

Recommendations:

In conclusion, the participants suggested the following as the way forward:

- The Implementation of the Board's Act and Road Map to Self-Autonomy.
- The Implementation of the Medium-term Strategic Plan for NRW Reduction prepared with support from JICA.
- Efforts on fundamentals in place such as customer data, facility/pipeline data and GIS with accuracy
- The need for more Collaboration with Development Partners.


Engr. A. A. Nahuche
General Manager, FCT Water Board

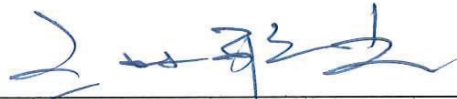

Akinori Miyoshi
Chief Advisor, JICA Expert Team

MEMORANDUM OF UNDERSTANDING
FOR
THE FEDERAL CAPITAL TERRITORY
REDUCTION OF NON-REVENUE WATER PROJECT

1st November 2018



Engr. A. Al Nahuche
Project Manager,
General Manager
Federal Capital Territory Water Board
(FCTWB),
Federal Republic of Nigeria



Mr. Akinori Miyoshi
Chief Advisor,
The Federal Capital Territory Reduction
of Non-Revenue Water Project,
Japan International Cooperation Agency
(JICA) Expert Team



Engr. A. R. Lawal
Head of Department: Distribution
Federal Capital Territory Water Board
(FCTWB),
Federal Republic of Nigeria



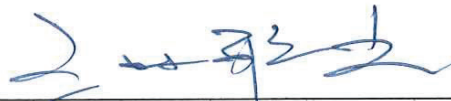
Mr. Katsutoshi Komori
Chief Representative,
JICA Nigeria Office

MEMORANDUM OF UNDERSTANDING
FOR
THE FEDERAL CAPITAL TERRITORY
REDUCTION OF NON-REVENUE WATER PROJECT

1st November 2018



Engr. A. Al Nahuche
Project Manager,
General Manager
Federal Capital Territory Water Board
(FCTWB),
Federal Republic of Nigeria



Mr. Akinori Miyoshi
Chief Advisor,
The Federal Capital Territory Reduction
of Non-Revenue Water Project,
Japan International Cooperation Agency
(JICA) Expert Team



Engr. A. R. Lawal
Head of Department: Distribution
Federal Capital Territory Water Board
(FCTWB),
Federal Republic of Nigeria



Mr. Katsutoshi Komori
Chief Representative,
JICA Nigeria Office

Attached Document

This memorandum of understanding was signed by Federal Capital Territory Water Board (FCTWB) and Japan International Cooperation Agency (JICA) Expert Team to confirm that FCTWB committed implementation of the following works, procurement and understanding conditions of using project vehicles and equipment donated by JICA.

1. Works to be implemented

- 1.1 Relocation of an existing bulk flowmeter along to trunk main to Tank 3 & 4

FCTWB shall construct new chamber at the downstream of the relocated trunk main junction for the flowmeter, then relocate the existing bulk flowmeter with cable re-installation by utilizing remaining cable stored at FCTWB Headquarters before the end of December 2018.

- 1.2 Consistent follow-up and solution of issues on non-full flow of water in trunk main to Tank 2 & 5



FCTWB shall continue to follow up issues on non-full flow of water in trunk main to Tank 2 & 5 by detail checking of bulk flow metering, data logging and also by taking necessary measures with advisory support from JICA Expert Team. Then, FCTWB shall solve issues before the end of December 2018.

- 1.3 Repair of portable ultrasonic flowmeter

FCTWB shall repair a defective portable ultrasonic flowmeter due to submergence by heavy rain during measurement before the end of December 2018. Currently, the flowmeter is being checked and repaired by electronics supplier based in Abuja. FCTWB procured boxes for protection since this problem occurred.

- 1.4 Repair of data loggers and inverter

FCTWB shall repair defective data loggers and an inverter before the end of December 2018, due to any possible causes such as unstable power supply from grids (extreme voltage fluctuation, inrush current), lightning,

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harsh environment for accurate instrument as well as quality of locally-procured electrical devices including solar system. The table shows data loggers and an inverter to be repaired.

Table 1: Data Loggers and an Inverter to be repaired

Location	Nos.	Status
Data logger		
LUD-WTP	1	No recording. The data logger was removed and has been stored temporarily at the FCTWB headquarters. Data logger of Tank 4 has substituted it. So, data logger is not in Tank 4.
Tank Kubwa	1	No recording. Data loggers were removed and has been stored temporarily at the FCTWB headquarters.
Tank 3.2	1	
Tank 4.1	1	
Tank 4.2	1	It seems to be button failure. The data logger is still at the site.
Invertor		
Tank 3.2	1	Malfunctioning. The inverter is still at the site.

1.5 Reporting to JICA Expert Team

FCTWB particularly NRW Reduction Unit shall report progress and updates of the above works bi-weekly as well as submit monitoring data of bulk and zonal flow meters to JICA Expert Team monthly until the end of January 2019.

2. Procurement of a vehicle by FCTWB

FCTWB shall procure a vehicle for the purpose of NRW reduction operations before the end of March 2019, in replacement of the project vehicle damaged by the accident in March 2017.

3. Conditions of using project vehicles and equipment

FCTWB shall follow the below-stated conditions of using project vehicles and equipment which were or will be donated by JICA including the above vehicle to be procured by FCTWB for replacement.

- Purpose: Official use only for NRW reduction operations and related affairs.
- Daily-usage administrators: General Manager, Head of Department: Distribution, Head of Unit: NRW Reduction

- Maintenance: To be serviced and maintained adequately, and vehicles to be insured by insurance company
- Other: If any JICA officials or experts are dispatched to FCTWB, they are allowed to use them.

4. Handing over of an additional project vehicle and a generator

JICA will hand over an additional project vehicle and a project office's generator in the attached list, which had been utilized for this Project to FCTWB as soon as this memorandum of understanding is signed.

5. Final Report

FCTWB shall cooperate with JICA Expert Team to draft the final report of the Project until the middle of January 2019.

(End)

Appendix: List of Equipment

Appendix: List of Equipment

Equipment	Model/Specification
4WD Car	HONDA PILOT
10KVA Generator	Firman 10KVA Subaru Engine

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