



No. **02**
July
2015

Quarterly Newsletter

The Federal Capital Territory Reduction of Non-Revenue Water Project

Project Name

The Federal Capital Territory
Reduction of Non-Revenue Water
Project

Project Period

Phase-1: Oct. 2014 to Dec. 2016
Phase-2: Jan. 2017 to Mar. 2018

Project Area

Federal Capital Territory (FCT)
Pilot Areas: Garki I, Gudu and Jabi

Implementation by

FCT Administration (FCTA)
FCT Water Board (FCTWB)

Support by

Japan International Cooperation
Agency (JICA)



What is NRW?

According to International Water Association (IWA), "Non-revenue water (NRW)" is water that has been produced and is "lost" before it reaches the customer. Such losses may be caused through leaking and burst pipes, illegal connections and metering inaccuracies, for example.

Reduction of NRW is a key issue to increase revenue and availability of water sources.

It is now recommended that "Unaccounted-for Water (UfW)" be no longer used, which is equivalent to "Water Losses" as part of NRW in the Water Balance/Audit.



The new Project Director assumes his duties, as well as the new JICA Chief Representative.

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The Project is ongoing under the strong partnership between FCTA/FCTWB and JICA.

HIGHLIGHTS

Since the **Federal Capital Territory Reduction of Non-Revenue Water Project** (the Project) was launched officially in November 2014, a variety of activities have been implemented by the Federal Capital Territory Water Board (FCTWB) with support from Japan International Cooperation Agency (JICA).

Estimation of NRW

The Project estimated Non-Revenue Water (NRW) ratio at approximately **40%** in Year 2014, and this can be higher at **52% or more** if existing duplicated/return bills are invalidated or eliminated.

Bulk Flow Meter

Design and bill of quantities of chambers for bulk meters at outlet of Lower Usuma Dam Water Treatment Plant has been finalized.

NRW Reduction Operations

In three pilot Area Offices, namely Jabi, Gudu and Garki I, some Pilot Metering Areas (PMAs) were designed, and then a PMA was selected each for pilot project. In the selected PMAs, the Project will implement NRW reduction operations. Design and bill of quantities of chambers for flow meters and valves has been finalized and network drawings have been prepared.

Capacity Assessment

JICA conducted Capacity Assessment of FCTWB organizationally and individually as baseline, and then prepared Capacity Development Plan which delineates the direction for capacity development in NRW reduction.

Procurement of Equipment

Office equipment and GIS software has already been procured by JICA and handed over to FCTWB. Other items such as ultrasonic flow meters and leakage detection equipment will also be procured by JICA soon.

JCC, Workshop and Meetings

The Project has so far held two Joint Coordinating Committee (JCC) meetings on 2nd December 2014 and 23rd June 2015 respectively. The JCC is a decision-making process and chaired by Project Director, who is also the Director of Economic Planning, Research and Statistics Department, Federal Capital Territory Administration (FCTA). A workshop was also held on 4th December 2014. Quarterly and monthly meetings have regularly been held.

Participation in Trainings in Japan

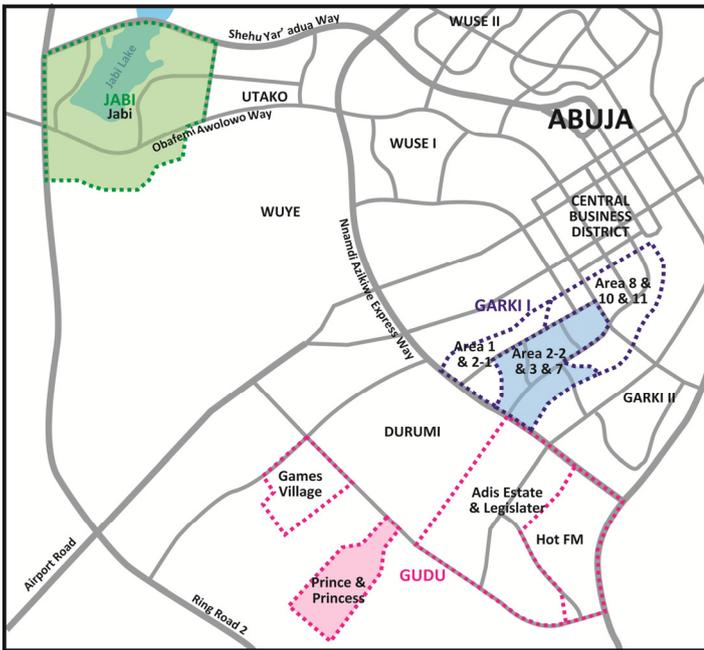
In May and June 2015, three participants from FCTWB, including the Director joined the group training in Japan, which were organized and sponsored by JICA. **1**

MAJOR TOPICS

Estimated NRW Ratio: 40% (52% or more)
Revenue Collection Ratio: 35% (44% or more)

NRW ratio was estimated at 40% by using water production data and billing data of Year 2014, and this can be higher at 52% or more if existing duplicated/return bills are invalidated or eliminated. NRW ratio will be calculated properly only after installation of bulk flow meters at water treatment plant and modification of billing system. In response to duplicated/return bills, which may lead to unreliable financial analysis including NRW and revenue collection ratio, FCTWB will deal with them under the leadership and initiative of FCTWB's management.

NRW Reduction Operations in Preparation: Active Participation of Area Offices is a Key.



Location of Pilot Metering Areas (PMAs)

Selected PMAs for NRW Reduction Operations

- "Jabi" under Jabi Area Office (900 customers)
- "Prince&Princess" under Gudu Area Office (1,100 cust.)
- "Area 2-2 & 3 & 7" under Garki I Area Office (1,400 cust.)



PMA/SMA Designing



Network Drawing Preparation



Meter/Valve Location Check

JICA welcomed the Director of FCTWB in Japan.



In May 2015, Mr. Hudu Bello (left), the Director of FCTWB and Mrs. Ololade Y. Okobi (right), Head of Water Quality Control Department participated in JICA group training course for "Water Supply Administration for Better Management of Water Supply Services" in Tokyo and Yokohama City.

A Feature of FCTWB

Total Bills printed: 48,300
 Flat Rate: 7,100 (15%)
 Mechanical Meter: 24,600 (51%)
 AMR Meter: 11,700 (24%)
 Prepaid: 5,000 (10%)

Estimate Bills

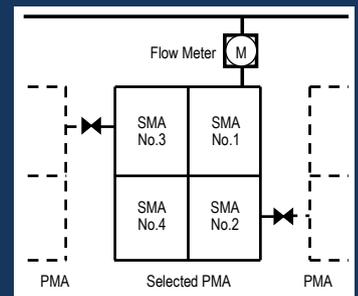
- 11,200 (45%) in Mechanical Meter
 - 5,800 (49%) in AMR Meter



What are PMA and SMA?

PMA is an abbreviation of "Pilot Metering Area", in which flow meter is installed at inlet and if necessary at outlet to measure in/outflow to calculate and monitor NRW. Some PMAs are created inside a Pilot Area Office's boundary.

SMA is an abbreviation of "Sub-Metering Area", in which NRW reduction operations such as leakage detection and measures against commercial loss are implemented. Some SMAs are created inside a PMA's boundary.



Editor's Note

Through training courses in Japan, the participants must have learned a lot and extended their knowledge. It is expected that Administration & Supply Dep't in charge of human resources development to take the initiative in organizing opportunity of debriefing with other relevant departments for sharing of their knowledge and experiences as well as contribution to success of the Project.

SCENES OF THE PROJECT

Project Member participated in JICA Training in Japan



In May and June 2015, Engr. Douglas Oloton, Head of Metering Unit, Distribution Dep't participated in JICA group training course for "Operation and Maintenance of Urban Water Supply System (Water Distribution and Services)" in Osaka City.

His contribution:

"The Training was a wonderful experience as it provided me with advance experiences on O&M using a lot of modern tools and equipment.

It unwrapped technically the reasons why we are experiencing high NRW and measures to be taken in order to reduce the NRW such as; Leakage Detection Methods using modern equipment, Technology for Monitoring of Pressure on distribution mains, Pipe line Design Technology, Build-up of Integrated Information Management System, Synergy between the Water Service Provider and other agencies for effective service delivery.

Though it is capital intensive and requires adequate planning, record keeping, dedication of staffs of the Board and cooperation of the Government in the area of funding but it is within reach.

The training has also exposed me to the Japanese spirit and attitude to work which in fact can be recommended for any organization to emulate for success story.

I unswervingly recommend that staff be sent on such trainings to change their psyche and improve their productivity."

The Project activities have been implemented with considering capacity development of FCTWB and members on various levels through lectures, interactive discussions, field surveys, on-the-job training (OJT) and so on by JICA Experts.

LECTURES & INTERACTIVE DISCUSSIONS



Presentations and Lectures

- Progress of the Project, Problems and Issues
- PMA/SMA Designing
- Leakage Detection (Leakage Sound, Methodology)
- Commercial Loss
- GIS, and etc.

FIELD SURVEY & ON-THE-JOB TRAINING



Location Check of Chambers for Bulk Flow Meters



Check of Bill of Quantities



Fact Findings about Customer Meters



Sharing Awareness about Complete Network Drawings

PROJECT MEMBERS as of July 2015

Project Director

Mr. Abubakar Sani Pai, Director of Economic Planning, Research and Statistics Dep't, FCTA

Project Manager

Mr. Hudu Bello, Director of FCTWB

Deputy Project Manager

Mr. S.T. Bello, Head of Administration and Supply Department, FCTWB

Technical Manager (Team Leader of NRW Management Team)

Engr. A. A. Nahuche, Head of Distribution Department, FCTWB

Mr. Adis S. Muhammad, Head of Commerce Department, FCTWB

Head of other relevant Departments and Unit (FCTWB)

Mrs. Hafsat Ahmed Lawi, Head of Finance and Accounts Department

Engr. Aliyu Usman, Head of Reservoir and Production Department

Ms. Bunmi Olowookere, Head of Planning, Research and Statistics Unit

Mr. Abbas A. Ahmed, Head of Public Relations Unit

Mr. Vincent Obeh, Head of Management Information System Unit

NRW Management Team (FCTWB)

Engr. Abolade. R. Lawal, Head of Special Projects Unit, Coordinator

Engr. Moh. Kabir Rabi, Head of Logistics Unit

Mr. Musa Dikko, Head of Pipeline Unit

Mr. Shehu Suleiman, Head of GIS Unit

Engr. Douglas E. Oloton, Head of Metering General

Engr. A.O. Akande, Head of Metering Unit (AMR Meter)

Engr. Yetunde Olaniyan, Head of Water Monitoring Unit

Engr. Abdullahi Masaud, Head of Metering Unit (Pre-paid Meter)

Mr. Abubakar Ubale Abubakar, Civil Engr. II, Logistics Unit

Mr. Mohammed Dauda, Technical Officer, Pipeline Unit

Mr. Ezech Hilary, Surveyor, GIS Unit

Mr. Isaac O. Owolabi, Head of Customer Care Unit

Mr. Danjuma Isah, Head of Monitoring and Detection Unit

Mr. Taiwo Adeyemi, Monitoring Staff, Monitoring and Detection Unit

Mr. Aliyu Maradun, Head of Major Consumers Unit

Mrs. Rose Akpan, Head of Billing Unit

Mr. Suleman Agbawn, Billing Officer, Billing Unit

Mrs. Francisca Samuel, Head of Training/ Welfare Unit

Mr. Akudike Ike D., Head, Facility Management Unit

NRW Action Team (Three Area Offices of FCTWB)

Jabi Area Office

Mr. Muhammed A. S. Ramat, Area Manager (Distribution), Team Leader

Mr. Sadiq Salihu, Assistant Area Manager (Distribution)

Mrs. Abawonse J. K., Assistant Area Manager (Commerce)

Mrs. Jummai Ugbodaga, Senior Commercial Officer (Commerce)

Mr. Mohammed Moh'd, Planning Officer (Commerce)

Mr. Aliyu Ibrahim, Senior Works Superintendent (Distribution)

Mr. Abubakar Danladi, Foreman (Distribution)

Ms. Raliat Zubairu, Higher Trade Officer (Commerce)

Mr. Mahmud Muhammed, Forman (Distribution)

Mr. Hassan Yelwa, STA (Commerce)

Gudu Area Office

Mr. Habib Ahmed Kiru, Area Manager (Distribution), Team Leader

Mr. Ogbu O. Williams, Assistant Area Manager (Commerce)

Mr. Abdul Ozumi, Assistant Area Manager (Distribution)

Mr. Adamu Ismaila, Unit Head (Commerce)

Mr. Umar I. Adamu, Assistant Tech. Officer (Commerce)

Mr. Kontagora Mohammed, Assistant Unit Head (Distribution)

Mr. Salisu Mohammed, Plumber (Distribution)

Garki I Area Office

Mr. Adesoji Adenuga, Area Manager (Commerce), Team Leader

Mr. Choji Pam, Assistant Area Manager (Commerce)

Mr. Mohammed Gana, Assistant Area Manager (Distribution)

Mrs. Olusegun Rose, Senior Trade Office (Commerce)

Mr. Abdulahi Ibrahim, Assistant Tech. Officer (Commerce)

Mr. Iliya Galadima, Higher Works Super intendant (Distribution)

Mr. Raymond Olowookere, Forman (Distribution)

Mr. Ibrahim Yelwa, Forman (Distribution)

Mr. Hassan Abubakar, Commerce Officer (Commerce)

Mr. Shehu Isa, Craftsman (Distribution)

Committee/Group/ Teams in the Project

Joint Coordinating Committee is chaired by Project Director, which consists of Project Managers, representatives from National Planning Commission, Executive Secretary of Federal Capital Development Authority and Federal Ministry of Water Resources, and also JICA Expert Team, representatives from JICA Nigeria Office and Embassy of Japan.

Working Group for NRW

Reduction Planning is a group for the Output-3, development of medium-term strategic plan of NRW reduction, which is composed of Project Managers, NRW Management Team members, and representatives from Federal Capital Development Authority.

NRW Management Team is a team responsible for all activities of the Project with theoretical and practical understandings.

NRW Action Team is a working-level team in three pilot areas, responsible for NRW reduction operations with use of equipment.

JICA Expert Team

Mr. Akinori Miyoshi

Chief Advisor /

NRW Reduction Planning

Mr. Taketoshi Fujiyama

Deputy Chief Advisor /

NRW Reduction Planning

Mr. Toru Toyoda

NRW Reduction Operations
Management

Mr. Kiyoshi Kiyama

Leakage Detection Technology

Mr. Takuji Okubo

Commercial Loss

Mr. Shinta Segawa

Hydraulic Analysis / GIS

Mr. Hiroki Niimura

Procurement Management /
Coordinator

Contact

Mr. Hudu Bello, Project Manager
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