



PARTNERSHIP

THIWASCO - NWSC

Mentee, Kenya

Mentor, Uganda



Peer-to-peer learning and benchmarking approach for improving water service delivering in Kenyan water supply utilities: The case of Thika Water and Sewerage Corporation (THIWASCO), Kenya; mentored by National Water and Sewerage Corporation, Uganda

BACKGROUND

The most common emerging challenge faced by water utilities in Africa is Non-Revenue Water (NRW). NRW is water lost through leakage from distribution networks or water not invoiced due to inadequate metering, theft or corruption. It is largely attributed to poor or inefficient asset management practices, and hinders performance by limiting the quantity of water available and causing significant financial losses to the organization. Reducing losses related to NRW would help improve not only the quantity and quality of water supply to the population, but also commercial gains that could be reinvested to tackle some of the issues faced by utilities.

The WOP-Africa program is used as a platform to build the capacity of water operators to address the challenge of NRW. The rationale behind the WOPs mechanism is that most of the capacity for improving water and sanitation services lies with the operators themselves. It aims therefore at fostering collaboration among water and sanitation utilities, and promoting exchange of experiences and good practices between performing (mentor) and non-performing utilities (mentee). Thus, the National Water and Sewerage Corporation (NWSC) of Uganda was identified as a suitable mentor, with relevant experience and expertise, in fostering operational performance improvement for Thika Water and Sewerage Company Ltd (THIWASCO) of Kenya.

CHALLENGES

Most water operators in developing countries have many interrelated institutional weaknesses including, inadequate cost recovery compounded by a low customer base, limited physical coverage, dilapidated physical infrastructure, high levels of unaccounted for water, low skill levels of the staff and poor customer relations amongst others. This has contributed to the inability to serve the needs of poor people, one of the main targets of the Millennium Development Goals (MDGs).

The above is also true for THIWASCO. The Company is financially viable and has relatively well trained and experienced workforce. However it has been facing a number of challenges of which: poor raw water quality during the rainy season and low river levels during the dry season, high energy costs,

aged equipment prone to bursts and leakages, 33% of NRW, incorrect customer database leading to difficulties in debt collection, and lack of network mapping. THIWASCO expressed the desire to learn from the experience of NWSC, which resulted into a signed MOU in March 2012 between the two utilities under the WOP-Africa program.

DESCRIPTION OF THE PARTNERSHIP

The aim of the WOP THIWASCO-NWSC is for NWSC to assist THIWASCO to improve its operational performance so as to result in better service delivery. The main components of the partnership are:

Relations of exchange and mutual visits

In April 2013, a team of experts from NWSC travelled to THIWASCO to conduct a rapid diagnosis and prioritize interventions through a one year Performance Improvement Plan (PIP). A review of the performance of the utility was carried out to establish the status of the Key Performance Indicators (KPIs). The KPIs gave an insight on the performance of THIWASCO and guided in the formulation of targets to be achieved during the period of the PIP. A field visit to some of the key installations of THIWASCO and strategic customers was made to appreciate the utility's setup and operations. It enabled the NWSC team to have a better understanding of the intricacies and challenges of THIWASCO. The main findings of the diagnosis are listed below:

Strategic planning and management

- Weak staff involvement in preparation of the strategic business plan
- Business plan without an M&E framework and not communicated widely
- No central and comprehensive database and data validation mechanism
- Inadequate definition of some KPIs and missing KPs for key functions/ processes
- Irregular meetings to review performance

NRW Management

- Inappropriate strategy for NRW Reduction and deficiency in leakage detection equipment
- Lack of Asset Management Policy and old distribution network
- Poor meter management and lack of DMA installed in the network due to vandalism
- Lack of GIS/mapping for the network and customers
- Lack of water audit and water balance

Revenue Enhancement

- Unmapped customer accounts making accounts tracing difficult
- Inaccurate and delays in meter readings
- Unfriendly debt management procedure
- Performance targets for revenue collection not adequate

Customer Care Improvement

- Manual customer complaint register
- Poor utilization of customer complaints software for easy capture and follow up
- Absence of a call center and a toll free line to encourage the Public to report anomalies
- Unclear customer care targets

The **benchmarking visit** by the team from THIWASCO was carried out in NWSC in June 2013. The main objective was to create enthusiasm and stakeholder buy-in to initiate the desired operational performance improvement within THIWASCO on a sustainable basis. An overview of NWSC was given, including the reform programs adopted. Field visits were also organized for visual appreciation of NWSC operations and good practices. Participants were then able to make comparisons between the two water utilities and discuss important lessons learned.

Development of the PIP

The PIP was formulated during the diagnosis mission and reviewed during the benchmarking visit. The two parties agreed on four priority areas for improvement that included :

Performance planning and management :

strengthening the strategic planning process with wider staff involvement and having an effective monitoring and evaluation system

- Develop and communicate a timetable for the preparation of the Business plan 2015-19
- Conduct at least two business planning workshops involving staff
- Review KPIs of the Business Plan and establish an M&E Framework for key business processes
- Establish an operational database for the utility
- Redefine the composition and responsibilities of the M&E Team
- Carry out monthly performance evaluations and provide feedback to management

NRW Management :

reinforcing the management of NRW within the company by developing a clear strategy and institutionalizing NRW management

- Establish a GIS/Mapping unit and train staff
- GIS/Mapping of network to ensure effective identification of mains & service pipes
- Routine surveillance of distribution network to discover unreported but visible leakages
- Procure leakage detection equipment to facilitate tracing of leakages and train staff
- Strengthen the data capture and management system for a faster response to handling leakages
- Develop/implement an Asset Management Policy
- Annual servicing and calibration of meters for accurate determination of NRW
- Procure portable meter testing equipment to facilitate field testing of meters and guide replacement activities
- Carry out Water Audit and Water Balance to prioritize and target NRW interventions
- Reinstall and secure District Meters to facilitate monitoring of DMA and targeting of NRW Reduction activities

Revenue Enhancement : strengthening the Revenue Management process within the Company in an effort to improve the liquidity flow position of THIWASCO

- Liaise with Technical to ensure mapping of all accounts and train staff in reading the maps
- Strengthen debt management procedures by introducing reminders and customer visits before disconnection
- Explore the possibility of on spot billing
- Strengthen the zonal concept by giving the zones more responsibilities and setting targets
- Put in place clear performance targets for commercial KPIs and monitor them monthly

Customer Care Improvement : reinforcing customer care management in an effort to increase customer satisfaction and their willingness to pay

- Put in place a Call center and a computerized customer complaints handling
- Negotiate a Toll free line with Service Providers
- Conduct regular customer satisfaction surveys
- Staff training in customer care and benchmarking of good practices
- Put in place clear customer care targets

Capacity building

During the benchmarking visit, two specific training sessions took place:

Session on NRW Management, GIS/Mapping: consisted in presentations and discussions on Management Information Systems, surveying and mapping, including GIS data management, customer database management, data analysis and call centre support. The team also shared experiences on water balance, meter management, leak detection/control and illegal use reduction.

Sessions on Billing, Revenue and Customer Care Management: The team was taken through NWSC business models for the billing, revenue and customer care management as well as finance systems. The discussions centered on challenges and opportunities related to e-water and various payment modes,

pre-requisite for easy revenue collection, revenue collection strategies, increasing payment options, minimizing illegal use, critical revenue management reports and marketing of services.

Monitoring and evaluation

THIWASCO continued to receive coaching from NWSC via telephone and email exchanges, and during WOP-Africa program meetings and conferences of water and sanitation operators. The utility constituted a PIP implementation committee to monitor the implementation of the PIP internally. An external assessment of the implementation of the PIP took place during the mid-term evaluation workshop of the WOP Africa Program in July 2014. The final evaluation will occur in December 2014.

RESULTS

Water is a devolved function in the county government and the transition period for devolution affected some operations of THIWASCO. The Board of Directors was dissolved hence hindering some of the PIP implementation. Despite these challenges, the utility managed to improve on some areas as agreed in the PIP, and results so far are:

- **Strategic Planning and Management** : recruitment of a consultant to assist in the development of a new strategic plan 2015-2019; review of the organization structure and job descriptions; improvement in relationships between management and staff through regular breakfast meetings, trainings, listening/resolving grievances

- **NRW** : sustained reduction on NRW from 33.6% in 2012 to 32.2% in 2013 and 30.4% in 2014. This is due to the improvement in the response time to

leaks and bursts, frequent servicing of water meters and accurate meter reading; ongoing installation of district meters

- **GIS/Mapping** : creation of a GIS/Mapping unit and training of officers, including benchmarking visits to various companies; purchase of Arc GIS software for creating, compiling and analyzing geographic data; procurement of data loggers and start of the mapping process of all facilities

- **Billing Management** : training of officers on billing issues and benchmarking visits to various water operators; purchase of a platform for mobile meter reading; creation of a cloud computing system for bill enquiry via mobile phone; integration of a 'M-pesa' system for bill payment; operational e-billing system and installation of on spot billing

- **Call Centre** : provision of a line by a service provider and on-going negotiations on logistic issues

Timetable of activities

Period	Activities
27th April 2012	Signature of MOU
14th-21st April 2013	Diagnostic visit
17th -21st June 2013	Benchmarking visit and training
20th -21st July 2014	Mid-term evaluation workshop
17th -21st November 2014	Monitoring visit and on-job training
1st - 5th December 2014	PIP evaluation

LESSONS LEARNT

The following lessons were drawn by THIWASCO from the partnership with NWSC :

- **Staff empowerment and autonomy** : decentralization and empowerment of units improve performance by promoting innovation and staff commitment. Involving staff in the business plan development helps ensure buy-in whilst staff capacity building leads to higher productivity

- **Non-Revenue Water** : Importance of having streamlined procedures to investigate illegal connections and discipline staff found involved. Identification of leakages/bursts and effective monitoring to reduce losses related to NRW

- **Water Treatment** : using common salt to generate chlorine as a disinfection method and tagging equipment at the Water treatment plant clearly showing its status (operational, defective, etc.); Water balance is key to water distribution and pumping

- **GIS System** is a tool to be in technical and commercial services to assist in mapping and easy monitoring of field operations

- **Commercial model** : a Call Center with skilled staff is necessary for easy recording and follow -up. On-spot billing system is economic and maximizes efficiency and effectiveness. E-bill payment through mobile phones and banks reduce transaction costs

WAY FORWARD

THIWASCO has shown strong commitment in the implementation of its PIP and was able to achieve significant progress within a year. Apart from the establishment of a PIP committee, the utility integrated the PIP budget into its annual budget 2013-2014 and made sure the activities were communicated to all staff.

Efforts to improve performance will be pursued through continuous implementation of PIP activities of which: (i) integration of the call centre and GIS; (ii) setting up of a meter reading system whereby all meters are read using mobile phones which is faster and cost effective; (iii) installation of web-based meters in all industries for hourly reading via internet; (iv) installation of a web-based pressure control system



Overview of the Mentee

Thika Water and Sewerage Company Ltd (THIWASCO) evolved from the Thika water project, commissioned in 1956, to limited company. Initially, the project operated as a water department under the Thika Municipal Council covering an area of 93km².

The company was incorporated in July 2009 and began operations in September 2009 as a water service provider under the Athi Water Services Board. The company has approximately proposed. Its mandate is to ensure efficient and sustainable provision of quality and affordable water and sewerage services in a service area of around 254km². Its main functions include :

sourcing of water; treatment and conservation of water; water distribution; provision of sewerage services; billing and revenue collection; infrastructure management and minor investments.

Overview of the Mentor

NWSC is a Public Corporation which is 100% owned by the government of Uganda. NWSC runs autonomously and operates on a commercial and financially viable basis. It is mandated to manage water & sewerage services in currently 66 urban centers and plans to expand to 80 by 2018.

Some key figures on NWSC

Population in service area :	4.32 Million
Population served with water :	3.37 Million
Number of connections :	352,625
Number of billed connections :	314,258
Length of water distribution Network:	3,847 km
Production capacity (m ³ /day) :	341,529
Volume of water produced (m ³ /day) :	259,462
Volume of water billed (m ³ /day) :	160,174
Non Revenue Water (%) :	33.5
Collection ratio (%) :	96

The WOP-Africa program was launched in 2009 as a sub-program of the African Water Association (AfWA), with support from UN-HABITAT/GWOPA, WSP/World Bank and the International Water Association (IWA). Partnerships between water operators are relations of exchange/mutual visits between operators of the water and sanitation sector.

They are conducted on a non-profit basis, with the aim of mutually strengthening their capacity to improve their performance in sustainable and equitable delivery of water and sanitation services to all, thereby helping to reach the Millennium Development Goals.

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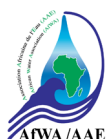
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