

Water Operators' Partnerships in Africa

Case Study 2

GWOPA
Global Water Operators' Partnerships Alliance

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FOR A BETTER URBAN FUTURE



Dunea N.V.
Netherlands

Mwanza Urban Water
and Sewerage Authority
Tanzania

Water Operators' Partnerships in Africa

Case Study 2: Dunea N.V. and Mwanza Urban Water and Sewerage Authority

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◀ **Dunea N.V.** (Netherlands)

◀ **Mwanza Urban Water and Sewerage Authority (MWAUWASA)** (Tanzania)

Key facts



Partners

Dunea (Dune & Water) N.V.
A drinking water utility in the Netherlands.

Mwanza Urban Water and Sewerage Authority (MWAUWASA)
Tanzania.



Other Partners

Netherlands
Water Board of Rijnland; Abvakabo – FNV (largest Dutch public sector trade union, member of FNV, the confederation of Dutch trade unions); Het Waterlaboratorium (The Waterlaboratorium – Dutch water quality testing and research organization).

Tanzania

Lake Victoria Basin Water Office;
Trade Union of Government and Health Employees; Kilimanjaro Film Institute.



Facilitator

European Commission (European Union Water Facility – Partnerships for Capacity Development in the Africa Caribbean Pacific Water and Sanitation Sector).



Duration

2012–2016.



Cost

EUR €1.377 M with €0.964 M financed by the European Union and €0.413 M financed jointly by Dunea, Water Board of Rijnland and Abvakabo.



Investment

In recent years, MWAUWASA has received investment from KfW (German Financial Cooperation) and other donors through the Water Basket set up under the Tanzania Government Water Sector Development Programme; European Investment Bank funding for extending coverage started in September 2013.



Aim

Affordable and sustainable water and wastewater services for the Mwanza urban area and improved water governance, in support of the Tanzanian National Water Policy and the Millennium Development Goals (MDGs).



Approach

Capacity building, exchange visits, staff surveys supported by trade unions, training and demonstration, provision of materials and services including water meters, workshop equipment, billing software etc.



Results

First European Commission review forecasting good potential impact, June 2013 non-revenue water already down from 50% to 40% and some management recommendations already under implementation.



Long-term Outlook

Good ownership among the partners and active involvement from MWAUWASA and the Lake Victoria Basin Water Office including at Board level. The European Commission review of June 2013 is positive on sustainability though the main challenge for MWAUWASA is to secure major long-term infrastructure investment.

Introduction

A water operators' partnership (WOP) is a collaboration between two or more water or sanitation operators, conducted on a not-for-profit basis, in the aim of developing their capacity. These partnerships are being used as a way of helping the world's public operators to sustainably deliver adequate water and sanitation for all.

This is the second in a set of four Case Studies on WOPs in Africa, and follows a set of 3 Cases of WOPs in Asia published in 2012. The aim of the Case Studies series is to provide readable and accessible reports on WOPs in practice. The author has looked at how the partnerships were set up, implemented and monitored; the changes and improvements they brought about in the partner utilities; and their impact – both achieved and anticipated – on service delivery, future investment, and replication.

These studies were conducted for the Global Water Operators' Partnerships Alliance (GWOPA), hosted by UN-Habitat, under our obligation as the United Nations city agency to help the world meet the water and sanitation target of the Millennium Development Goals.

It also forms part of our remit to share and promote knowledge and understanding of water operator partnerships. By shedding light on how the partnerships are currently carried out and drawing lessons about what works and what doesn't, the Case Studies are meant to contribute to improved practice and wider adoption.

The WOPs presented here are not meant to be taken as prototypes or best practices, but as a sampling of the diversity of not-for-profit partnerships possible between water and sanitation operators. It is our fervent hope that they will inspire more operators to take up the practice, and also help financial supporters and facilitators build more effective partnerships.



Acknowledgements

The main author, Digby Davies, could not have produced the study without the goodwill, help and cooperation of many people and he wishes to express his gratitude to all of them. They include: Leo Nijland of Dunea; Anthony Sanga, Managing Director of MWAUWASA and all his staff who participated in the preparation of this case study; Birte Nelen and Wilma Berentsen of Abvakabo; Theo Godderz of GIZ and all the Dutch experts interviewed in Mwanza and the Netherlands. Special thanks are also due to

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The background

Tanzania is an East African country whose name derives from the former territories of Tanganyika and Zanzibar that united in 1964, shortly after the end of British colonial rule. It has a coast line on the Indian Ocean and land borders with Kenya, Uganda, Rwanda, Burundi, Democratic Republic of Congo, Zambia, Malawi and Mozambique. It has a population of 45 million people (2012 census) and includes about half the shore line of Lake Victoria. Mount Kilimanjaro, Africa's highest mountain, and Serengeti, the continent's oldest and best known National Park, are in Tanzania. The country's economy is based on agriculture, although there are natural gas resources and significant mineral deposits. Tanzania is Africa's third largest gold producer after South Africa and Ghana. The country is highly dependent on donors. The official capital city since 1996 is Dodoma but the coastal city of Dar es Salaam (pop. 4.36 million) is the main commercial centre and location of most government offices. Mwanza (pop. 860,000) is the second most populous urban area.

Tanzania has very poor service levels for water supply and sanitation. The water sector is dependent on donor funds and many urban utilities are not able to cover even their operating costs due to low tariffs and low efficiency. In 2002, with the help of donors including the World Bank, the Government of Tanzania adopted a new National Water Policy and in 2006 a National Water Sector Development Programme was initiated emphasizing Integrated Water Resources Management and a decentralized approach to water services provision supported by GIZ (German International Technical Cooperation). Urban water services are now provided by around 20 urban utilities, as in Mwanza, and there are over 100 district utilities as well as community owned suppliers in many rural areas. In 2003, on the recommendation of the World Bank, a private sector British-German consortium was awarded a 10 year lease contract to manage the water supply for Dar es Salaam. This was cancelled after two years with a resulting dispute between the Government and the private operator over performance and contract issues. Tanzania will probably fail to meet the Millennium Development Goals in 2015 for drinking water and sanitation, especially in rural areas of the country.

Mwanza, on the shores of Lake Victoria, is a rapidly growing urban centre due to high natural growth rates and intense rural to urban migration. An estimated 70% of the population live in informal settlements. The Mwanza Urban Water and Sewerage Authority (MWAUWASA) is responsible for water supply and wastewater services to the urban population. Investments in MWAUWASA's water supply and wastewater infrastructure have been made in recent years by German financial cooperation (KfW) and the European Investment Bank. UN-Habitat has commented, however, on an absence of planned urban development and there are real risks in Mwanza, as in many other Lake Victoria towns, of urban services being unsustainable, leading to environmental degradation and serious health problems. Various initiatives led by UN-Habitat and other organizations are helping these towns to plan and design infrastructure works on a sustainable basis through better policies, physical planning and improved governance.

The informal beginnings of the Water Operators' Partnership can be traced to personal contacts by Mr. Leo Nijland, Dunea's International Cooperation Programme Manager, who lived in Tanzania and worked in Mwanza some years ago. The formal background is set out in the Grant

Application made by Dunea to the European Commission's Water Facility in May 2011 for funds to support a partnership over five years to improve MWAUWASA's operational and financial performance. That European Commission Grant Application was supported by GWOPA and was based in part on the outcomes of participatory workshops in April 2011 with MWAUWASA and the Lake Victoria Basin Water Office. The Office is responsible for the raw water abstracted from the lake by MWAUWASA and for maintaining the quality of the lake's water resources which are affected by wastewater discharges and other effluents.

The Grant Application focussed on several key issues including the reduction of non-revenue water from about 50% to 25%, which was identified as a so-called "mandatory result". The application made it clear that achieving the mandatory result would require improved performance by MWAUWASA across the board, including technical, financial and administrative management processes. The Application was successful and the WOP began in January 2012. In June 2013, after 16 months of work, a European Commission review concluded that progress had been good.

The partners

Dunea

The Dune Water Company of Den Haag in the Netherlands was formed in 1884 and its successor Dunea was established in 1990 following a merger of several Dutch water companies. Dunea supplies drinking water to 1.2 million people with over 600,000 house connections (the Netherlands average household size is 2.2, one of the lowest among OECD countries) Dunea originally drew only on groundwater resources under the coastal dunes, but since 1976 has supplemented this with river

water from the Afgedamde Maas (French “Meuse”). The company is jointly owned by nineteen public municipalities which comprise Dunea’s service area. The natural pre-treatment of dune water in the 2,200 hectares of sand dunes managed by Dunea enables the company to supply very high quality drinking water. Dunea operates three large water treatment plants and manages 4,300 kilometres of distribution mains. Since 2001 Dunea has also managed the sewerage system of Noordwijkerhout municipality in the province of South Holland.





Dunea has over 500 employees and provides support to the global water sector by sharing its expertise through partnerships with service providers and non-profit organizations around the world. It works with newer European Union member states such as Romania and had experience in Indonesia and Sudan before this partnership in Tanzania. Dunea, like other Dutch water operators, is legally empowered to spend up to 1% of its turnover on overseas development cooperation. Dunea staff members are highly motivated to participate in this work. They cite personal satisfaction as a main factor.

MWAUWASA

MWAUWASA is a public water and wastewater utility, fully-owned by the Government of Tanzania, serving about 90% of the 860,000 urban population of Mwanza. The Authority is responsible to the Ministry of Water and Irrigation and is regulated by the Energy and Water Utilities Regulatory Authority with which it is under a performance contract. It was established by a Government decision in 1996, later backed by Act. No. 8 of 1997, with the objective of supplying reliable, affordable and sustainable clean water and sewerage services in Mwanza City. Policy

is generated and management is overseen by an Executive Board of Directors appointed every three years by the Minister of Water and Irrigation. The Board Membership is made up of representatives of domestic, large scale and commercial consumers, the City Council, the Regional Administration, and representatives of community stakeholder groups.

MWAUWASA's water production is estimated at 109,000 m³ per day (2011 data). The company is responsible for wastewater services and maintains a network of about 59 kilometres serving around 15% of the population. There are three sewerage pumping stations and a wastewater treatment plant based on 13 ponds and lagoons at Butuja on the Airport Road. The utility employs 276 staff. Management is in the hands of the Managing Director and the Managers of the four main departments – Technical, Commercial, Finance and Administration & Human Resources.

This Water Operators' Partnership has several other partners besides Dunea and MWAUWASA. On the Dutch side there are:

Water Board Rijnland

This is one of many Water Boards in the Netherlands. Its remit is primarily for surface water resources management. Water Board Rijnland operates in the two provinces of North and South Holland. It deals with flood protection, ensuring the quality of open bodies of water, optimising water levels and ensuring that polluted river-, canal-, and lakebeds are cleaned in order to balance the aquatic ecosystem. In the WOP its focus is wastewater.

Abvakabo FNV

Abvakabo is the largest Dutch trade union in the public sector. It was founded by a merger between ABVA (General Federation of Public Servants) and KABO (Catholic League of Government Personnel) in 1982 and today has a membership of over 350,000. Its priorities are fair rewards for all and a good life/work balance. Abvakabo has previous experience of overseas water sector cooperation partnerships in Ghana in 2009 and brings its experience to its seat on the Steering Committee of the Global Water Operators' Partnerships Alliance.

Het Waterlaboratorium

The Water Laboratory specializes in water quality research and testing which it carries out for Dunea and other water companies such as Waternet Amsterdam. It is a public limited liability company (NV) incorporated in the Netherlands.

In Tanzania there are:

Lake Victoria Basin Water Office (LVBWO)

The Lake Victoria Basin Water Office is the second Tanzanian partner in the WOP. The Lake Victoria Basin Water Office is in charge of water resources management for the Tanzanian part of Lake Victoria. Its laboratory carries out water analysis for MWAUWASA. It works with other water sector agencies in Tanzania and cooperates internationally with the other countries forming the Lake Victoria Basin. Internationally, Tanzania is part of the Nile Basin initiative.

Tanzania Union for Government and Health Employees

The Trade Union of Government and Health Employees is one of about 20 trades unions in Tanzania and has over 29,000 members. It is affiliated to the Trade Union Congress of Tanzania which has a membership of around 350,000 public and private employees.





Kilimanjaro Film Institute

The Institute is an audio-visual training institute based in Arusha where Tanzanian young people from poor families are educated to become film and television programme makers. The Kilimanjaro Film Institute will contribute to the WOP by helping to raise awareness through video messages and documentaries.

On the international level there are also:

GWOPA

The Global Water Operators' Partnerships Alliance (GWOPA) hosted by UN-Habitat is also mentioned in Dunea's European Commission Grant Application.

GWOPA supports the WOP by assisting in regional and global coordination and information sharing activities.

European Union

The European Commission, through the Asian Pacific Caribbean (ACP) Partnership window of its Water Facility, is funding approximately 70% of the total WOP cost of approximately EUR € 1.377 million between 2012 and 2016 and is providing management back-up from the European Union Delegation Office in Dar-es-Salaam.

The partnership

The European Commission Grant Application laid out the terms of partnership between all parties involved in the WOP. The application defined the partnership as “a relation of substance between two or more organizations involving shared responsibilities in undertaking the action funded by the European Commission.”

All partners duly signed the pro forma application statements provided by the European Commission. These, plus the offer and acceptance, form the legal basis between the parties of the WOP.

EU-ACP Water Facility Partnership Initiative

The European Union- Africa Caribbean and Pacific (ACP) Water Facility Partnership Window was opened in 2010 to contribute to capacity development activities on themes such as good water governance, integrated water resources management, and expanding access to the poor. In 2011, the Facility awarded €23million of grants to a total of 32 not-for-profit partnerships between ACP and EU water and sanitation utilities, local authorities and other water sector organisations.

The window provided a unique opportunity to fund WOPs that align with GWOPA principles (not-for profit partnerships, inclusivity, results-orientation) and that incorporate recognized success factors, such as well-planned design, explicit focus on capacity development and sustainability, financial obligations from partner organizations, and medium- to long-term duration.



Implementing the agreement

The objectives of the WOP are set out in the European Commission Grant Application and are based on the outcomes of the Participatory Workshop held in April 2011. The Workshop produced a classical logical framework analysis that set out the intervention logic, verifiable indicators, sources and means of verification and assumptions.

Overall Objective

To arrive at affordable and sustainable (financially and technically sound) water and wastewater services for the Mwanza urban area and to help improve water governance thereby supporting the Tanzanian National Water Policy and working towards achievement of the Millennium Development Goals.

Activities

The partners designed a WOP that comprises 10 main activity groups – six in Component A for MWAUWASA and four in Component B for the Lake Victoria Basin Water Office. The Activity areas and the roles of the respective partners are summarized in the following table.

Activities	Dunea	Waterboard Rijnland	Het Water- laboratorium	Abvakabo	TUGHE	Kilimanjaro Film Institute
Project Management	●					
Component A – MWAUWASA						
Reducing Non-Revenue Water	●					●
Improving revenue collection	●					●
Improving staff performance by providing knowledge and skills	●					●
Making manuals and guidelines available for operation and maintenance	●	●				
Raising employee satisfaction	●			●	●	
Raising customer satisfaction	●					●
Component B – Lake Victoria Basin Water Office (LVWBO)						
Preparing the laboratory for ISO 17025 certification	●		●			
Providing knowledge and skills on phytoplankton, microbiology and the use of modern laboratory equipment			●			
Providing knowledge and skills on prevention and mitigation of eutrophication		●				●
Improving data management, reporting and access to information		●				

● Lead partner responsible for the activity ● Partner involved in the activity

As of mid-2013, work on some of these activity groups is well under way; others will come later. There has been good progress, for example, on the new water meter workshop and commercial management improvements to reduce non-revenue water. The baseline study on the employee satisfaction survey is complete. The sections below deal with selected work that is either on-going or completed to date.

Approach – Short Term Visits and Informal Training

Dunea describes its approach as technical assistance on a “collegial” basis. As in most WOPs, a bulk of activity is accomplished during short incoming missions of staff from the mentor utility. Incoming experts engaged in a wide range of activities including data-gathering, assessing MWAUWASA’s operating procedures, on-the-job training etc. Over the first year there were more than 30 expert visits contributing to most of the 10 activity areas listed on page 15. These short missions were usually conducted by one or two experts. Ms. Berentsen from Abvakabo, who worked on the Employee Satisfaction Survey, stayed in Mwanza for 10 weeks but most missions were shorter. Thirteen missions focussed on MWAUWASA covering such topics as hydraulic modelling and calibration, customer database clean-up, the operations manual for wastewater, the water meter workshop and the employee satisfaction survey. Dunea also provided

guidance to MWAUWASA in establishing its water balance, necessary to assess non-revenue water correctly. Seven missions worked with the Lake Victoria Basin Water Office on prevention and mitigation of eutrophication, water quality data management and ISO certification. There were also four project management missions; essential since there was no resident WOP manager. A one-on-one coaching process with exchange of knowledge and direct advice based on experience is preferred by Dunea to more formal training, though some



classroom-based training has been given e.g. on the use of hydraulic modelling software (EPANET).

Water Meter Repair Workshop

Dunea at an early stage saw the need to establish a well-equipped meter repair workshop and this was included in the Grant Application. It was estimated that a water meter refurbishment programme could reduce non-revenue water by as much as 20%. From a water sales aspect, Dunea estimated that slow-running meters were costing MWAUWASA about

€470,000 per annum in lost revenue. MWAUWASA had no suitable existing premises for meter repair so in November 2012, following a visit from a Dunea expert, the decision was made to build a new low-cost workshop. An architect was appointed by Dunea. Construction soon started and the building was completed in March 2013. During April 2013 while the workshop was being equipped with meter test-bed, the MWAUWASA staff were being trained by Dunea. The operationalization of the meter repair workshop was an important element in reaching the WOP's mandatory result of reducing non-revenue water from about 50% to 25%.

Commercial Management

Commercial losses were estimated at 30% on average of the billable water production. Main causes included unread and faulty (non-functional and slow-running) water meters, illegal connections, undelivered bills, etc. As well as the meter refurbishment and replacement programmes, it was decided to address these problems through improved billing and collection systems and associated procedures. A Plan of Action was prepared in May 2012. This was based on data collected within a GIZ technical cooperation program and is being carried out in cooperation with the GIZ resident commercial adviser in MWAUWASA. The Plan of Action includes introducing data-loggers to replace water meter



reading-sheets, adjustments to meter readers' routes, better reporting systems, improved supervision and inspection and cleaning up the data-base. Stronger administrative measures against the 3,000 customers not allowing access to premises for meter-reading are also being taken.

Operational Manuals and Guidelines

The main Mwanza Wastewater Treatment Plant at Butuja is in good general condition but the lack of "field suitable and specific" manuals for operation and maintenance of both the sewerage collection system and the wastewater treatment plant was holding back efficiency. Proper manuals and guidelines were also determined to be necessary for the improvement of engineering standards and practices. The wastewater manuals will be developed with assistance from the Water Board of Rijnland. MWAUWASA's capacity to write its own manuals will also be developed. On the water supply side, MWAUWASA is now in the process of certification under ISO 9001. Dunea will support MWAUWASA through the process on the basis of its own ISO experience.

Employee Satisfaction Survey

Although it is well known that worker satisfaction and attitude are important factors in work performance, this is the first documented WOP case to give employee satisfaction explicit attention, and to use employee suggestions in the design of

improvements. Supporting partners for this WOP component are Abvakabo, the largest Netherlands public sector trade union and the Trade Union of Government and Health Employees, a Tanzanian trade union with over 29,000 members. Issues in employee satisfaction revolve around managerial and supervisory skills, staff assessment and feedback, internal communications and so on.

To identify the key interventions and support needed, a two-stage survey exercise is going on. A baseline survey was conducted over a period of 10 weeks in 2012 and had two objectives: first, to explore current satisfaction in terms of working time and payment, organization of work tasks, work environment, health and safety and the workers' council; and second, to produce recommendations on interventions on how to improve employee satisfaction in MWAUWASA. It is then up to MWAUWASA management to negotiate with its employees and implement recommendations where agreed and feasible. An evaluation survey will be done by the partners in the last year of the WOP that will measure the results of those interventions that were implemented.

Lake Victoria Basin Water Office

Missions to the Basin Water Office have so far concentrated on developing the knowledge and skills of laboratory staff to work with the new equipment, e.g. using the new microscope camera on

phytoplankton and storing images in the computer. Support has also been given on microbiology and eutrophication. It has been found that more support is needed on documentation of practices and findings and information exchange amongst concerned institutions. So far it has not been possible to make much headway on the plan for proposed ISO certification which will be supported

by Het Laboratorium. An important finding has been made regarding water quality data management and information reporting/distribution: there is a real need for an IT strategy and plan. Development of such a plan will need to be done in collaboration with the Lake Victoria Basin Water Office and the Ministry of Water and Irrigation, and decisions need to be made on how best to proceed.



Partnership outcomes

While the European Commission review team in June 2013 correctly said that “the project (WOP) is in its first steps and it is too early to analyse its effectiveness”, it is already possible to report on some exemplary achievements. This case study will report on two of these early outcomes – the employee satisfaction survey and the commercial management work that is leading to non-revenue water reduction.

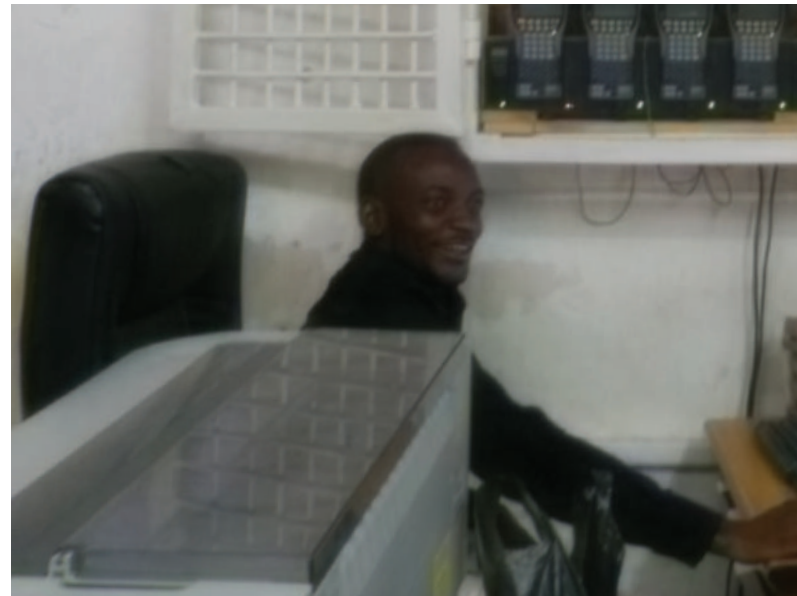
The Employee Satisfaction Survey

The active participation of Labour Unions and the development of an employee satisfaction survey are exceptional features of this WOP. Abvakabo FNV worked together with people in MWAUWASA and Dunea to design the survey, and drew upon its own experience and that of the Tanzanian trade union. The first need was to ensure relevance to the MWAUWASA employees. The survey form was made available both in English and Kiswahili. As well as multiple-choice questions, open questions where employees could express opinions were included.

Key Issues

The partners agreed on the following main points that the survey would address.

- Working hours, wages and benefits
- Organization of work
- Health and Safety
- The Workers’ Council



The following sections summarize selected key points of the Abvakabo Report of January 2013 (Berentsen and Nelen):

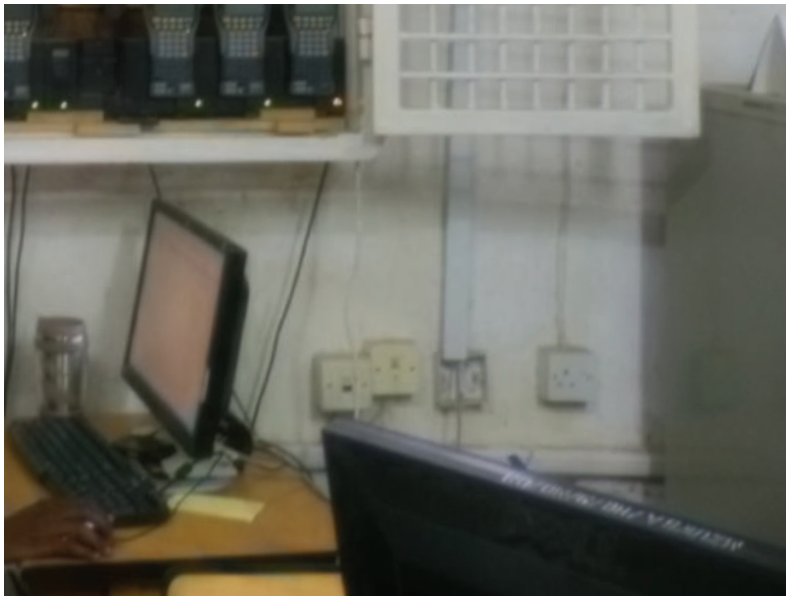
Response

The survey forms were given to 200 employees at all levels, including management, through the MWAUWASA Human Resources Management Department. It was made clear the survey was anonymous. 127 forms were returned – a response of 63.5% which was judged sufficiently

representative to draw general conclusions. 79% of the responses came from men; this reflects the balance of male employees in MWAUWASA (82%). Most participants were between 25 and 40 in age and were distributed across the organization from most departments. Levels of education were primary school (13%), technical school (22%), secondary school (30%) and university (35%). Most had worked in MWAUWASA for 1–5 years and 10% had another job in addition to working in MWAUWASA.

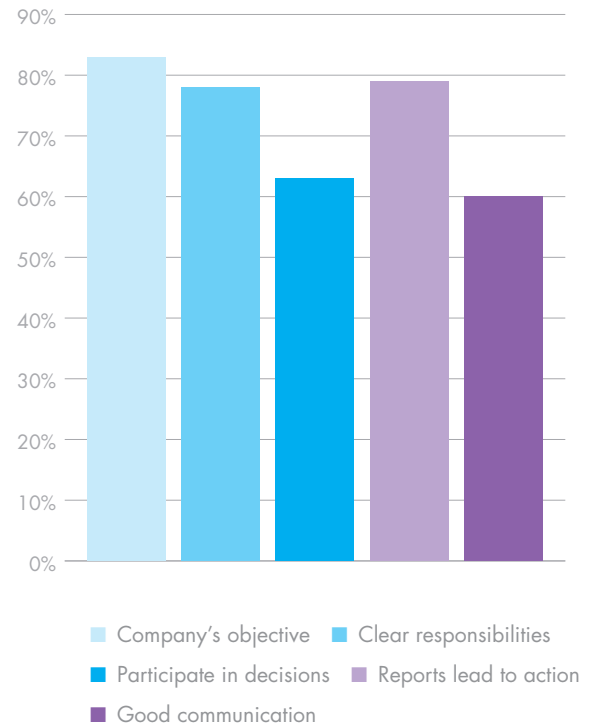
Quantitative Results

The respondents nearly all found MWAUWASA to be a good company to work for (98%) while 73% thought their work was appreciated and were satisfied with their jobs. Men were much more positive about career opportunities in MWAUWASA than women – 65% compared to 35%. Working time was around 45 hours a week and 8–9 hours a day, though 82% had worked over 10 hours a day on occasions during the last month. Working hours fit the social and family commitments of most men (61%), but this was not true for women (35%). Earnings were between €210 and €470 (paid in Tanzanian shillings) per month for 67% and a majority (62%) felt that this was not enough reward for work performed.

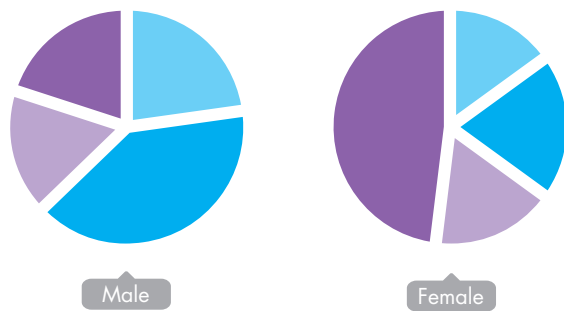


Most employees were positive about the way work is organized, though rather less positive about issues of participation and good communication. On health and safety the picture was generally positive though there were concerns about high temperatures in the workplace and tiredness. 35% had experienced "disturbance" (e.g. people continuously walking in and out of office) while 10–15% had experienced bullying and violence of various kinds. 66% of respondents said they were trained to do their job. Only 18% had been trained by MWAUWASA during the last year. 75% considered the workers' council valuable and 79% were interested in joining it.

Organization of work



Career opportunities



- ▼ A lot of career opportunities
- ▼ Career opportunities
- ▼ Hardly any career opportunities
- ▼ No career opportunities

Qualitative Results

Not surprisingly, many of the comments related to wages and salaries. Respondents, especially the lower paid, wanted higher wages. Many also mentioned paid overtime, incentive schemes and travel allowances for commuting to and from work. Many wanted rewards to be based on performance and work output and felt that promotion should be based on merit. Some also suggested financial benefits such as reduced water bills and interest-free or low-interest loans for staff in addition to wage increases. Respondents suggested a basic/induction course for new employees.

The management climate was criticized and there were suggestions that more participation be introduced, as well as a suggestion that managers should spend more time visiting worksites. There were many requests relating to the health, safety and comfort of the work environment, including for good working gear – boots, overalls, tools – written instructions for using equipment, better hygiene and reducing noise and dust. There were complaints about expectations of unreasonably high working speeds.

In the survey responses, the workers' council was regarded as very useful and respondents felt it fairly represented their interests though it should be more proactive in enquiring about and responding to workers problems. They felt that working conditions

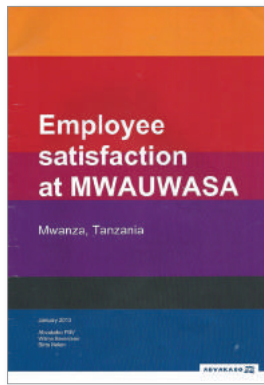
should be a central focus for the workers' council. To address these points, respondents suggested that the workers' council should meet more frequently with the employer. Meetings with the employer should be preceded by meetings with workers to ensure that their concerns are properly understood. Overall, the workers' council and the Trade Union of Government and Health Employees should do more to provide training and information for workers on their rights and obligations and to help develop skills in discussion and bargaining.

Findings and Recommendations

The result of the Employee Satisfaction Survey was compiled into a series of 27 recommendations and an action plan. A few examples of recommendations are as follows:

- *Organization of Work* Employees expressed a wish for clear job descriptions.
Recommendation Write job descriptions for all employees at all levels.
- *Safety* Working conditions at the water treatment plant are unsafe and need improvement.
Recommendations Install safety rails and provide earplugs for employees.
- *Training* Employees felt that all new staff should have basic/induction training.
Recommendations Organize an introductory course for new employees and train some existing employees as trainers.

- *Workers' Council* There is a need for more frequent meetings and better preparatory discussions with employees.
Recommendation (to the Council) Organize meetings with all members (in groups) at least every three months before meetings with the MWAUWASA Board.



Action Plan

Abvakabo, in discussion with the other WOP partners, developed an employee action plan for both the short-term (2013) and the longer term (2014–15). This plan has been adopted and identifies the key actors and goals for each

of the 27 recommendations including those for the Workers' Council and the trade union. Some of these actions are very specific and achievable, such as providing safety rails and organizing quarterly meetings. Others, such as creating a more open management style and examining the cause(s) of the difference in career opportunities between male and female employees are more challenging. In any event, there is no doubt that achievement of the action plan will be an important contribution to performance improvement in MWAUWASA. It

should be of interest to other WOP practitioners to observe how the employee satisfaction survey was conducted and followed-up, and what influence it may have on the achievement and maintenance of WOP results.

Commercial Management – Improving Revenue Collection

Early on, Dunea calculated “the business case for replacing/refurbishing the current 26,000 MWAUWASA water meters that are non-functional or slow-running shows clearly that the revenue losses could be reduced by €1.0 million per annum.” (Dunea – Results-Oriented Monitoring Report 2 of 2012). In addition to upgrading the meters, reducing non-revenue losses would require addressing a range of other commercial management issues. It was in this perspective that the partners drafted and adopted the “Plan of Action for Improvement of Billing, Collection Systems and Procedures.”

This Plan of Action draws on earlier data gathered and analysed by the GIZ Commercial Adviser in MWAUWASA and presented in the document “MWAUWASA Business Plan, July 2011 – June 2014.” It responds to the findings of Pöyry (consultants) Non-Revenue Water Assessment in Mwanza (Workshop Report, December 2nd 2009). The Finnish consultants' study revealed that while physical losses from the production and distribution

system were of the order of over 7,100 m³ a day, far more was disappearing through commercial losses which amounted to over 28,500 m³ a day. These figures were a dramatic indication of where MWAUWASA management needed to act to address the non-revenue water problem.

The major causes of the commercial losses were identified by Pöyry as illegal connections, faulty meters (some of which had been tampered with), unbilled consumption etc. The Business Plan set out some of the actions already being undertaken before the start of the WOP; these include introducing Water Loss Inspectors, improving the billing cycle and cleaning up the customer data-base. But the WOP gave a new impetus and dynamic to the commercial improvements needed. The Project's European Commission Grant Application mentioned three areas of focus:

- Improving billing and collection systems and procedures;
- Training and coaching in revenue collection;
- Raising awareness and better customer communication.

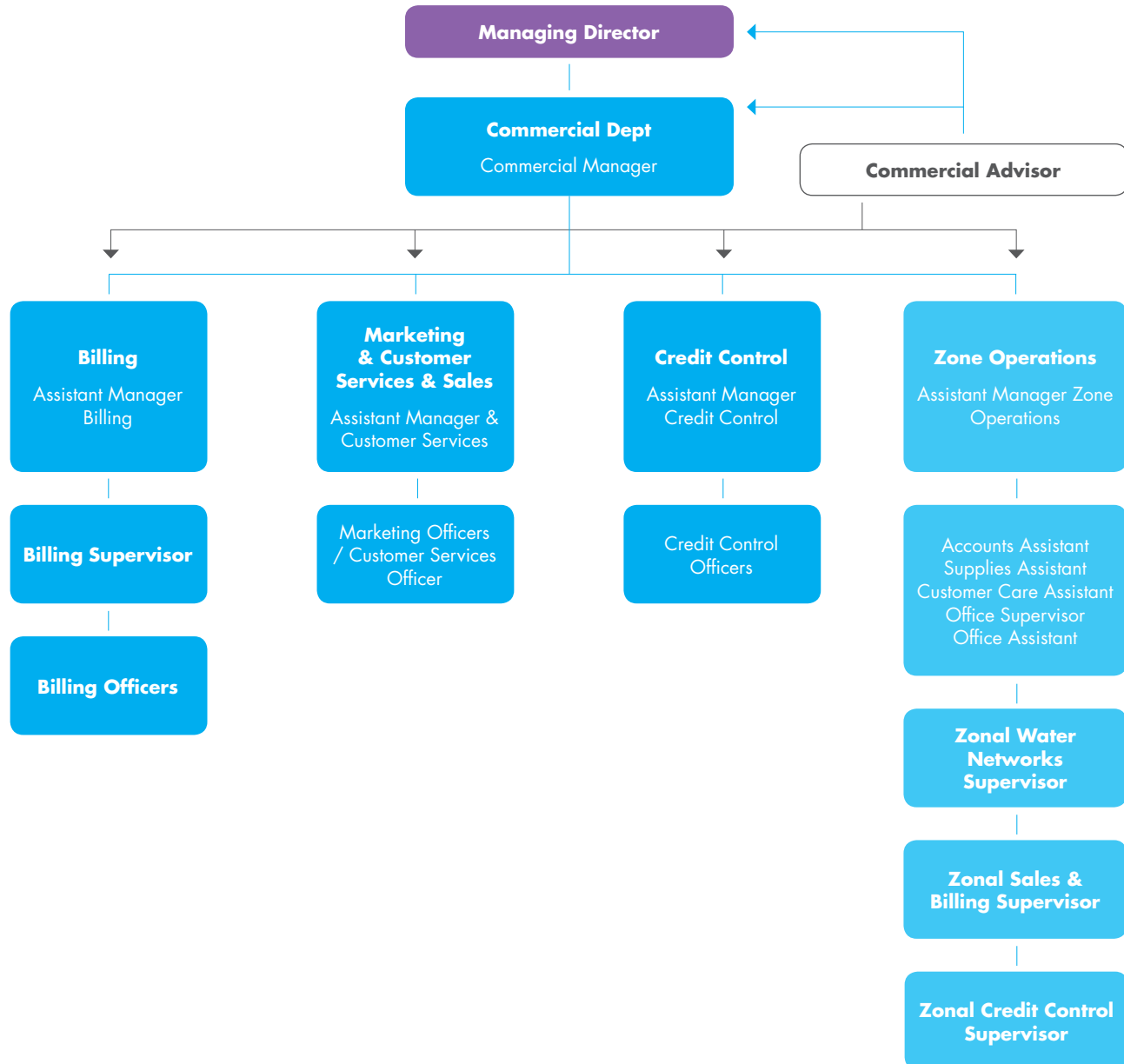
In the May 2012 Plan of Action, these focus areas were translated into practical interventions. These interventions, including such things as making better

use of the Smart Billing Manager software and improving the reporting system on meter reading issues, were already having an impact on revenue collection at the time of writing (see flow-chart page 27).

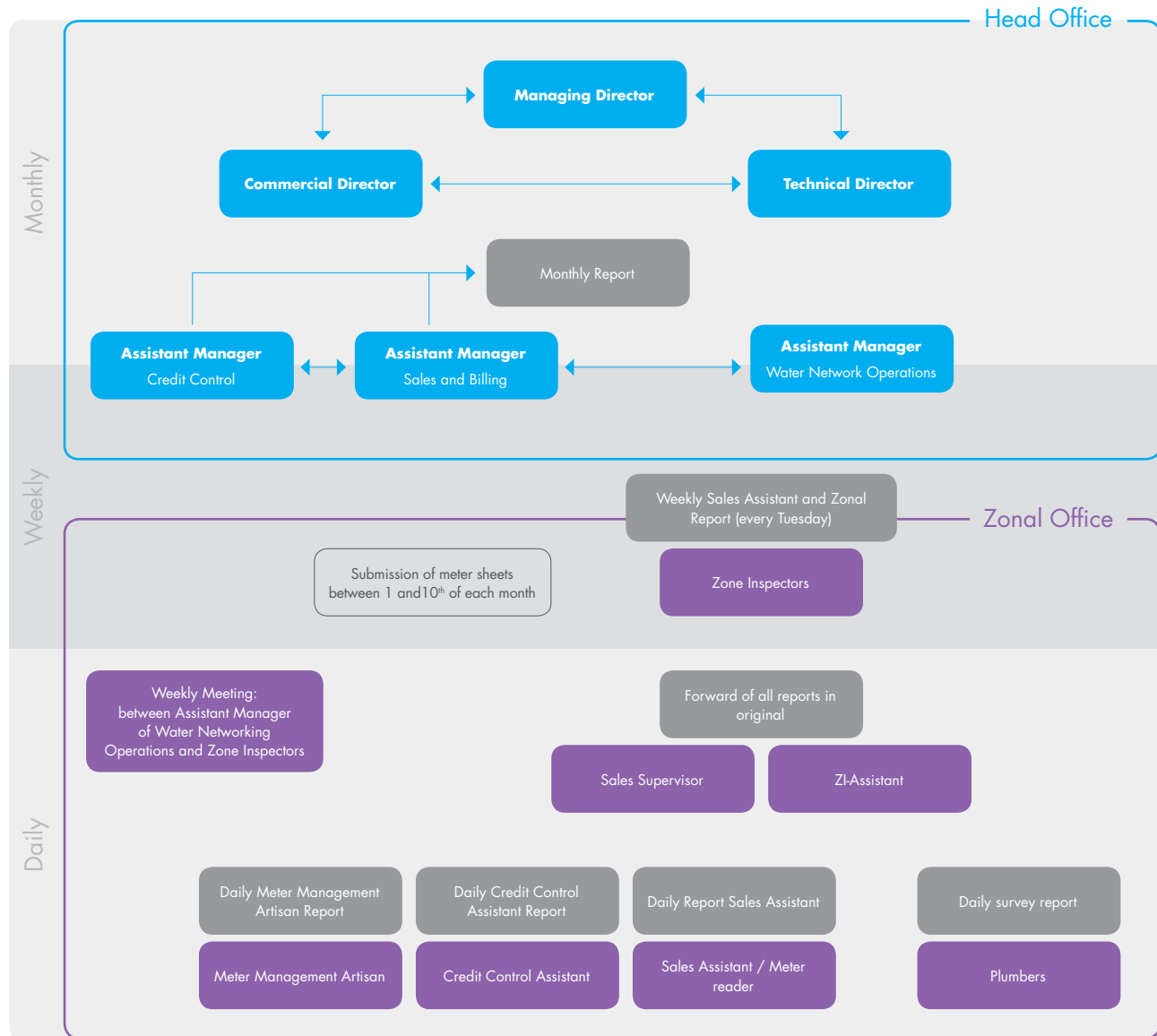
The Plan of Action gave specific attention to improving the key interface between the meter reading and customer administration/billing. A series of WOP activities are going on to improve the working processes involved. Recommendations being implemented include training workshops for meter reading and proper use of the data logger, creating reports in Smart Billing Manager based on remarks in the data loggers and use of the parameter efficiency report which analyses month-by-month non-revenue water, Production/Sales volume, number of billings and billed consumption, number of payments and revenue collected.

An awareness and customer communication action plan has also been put into place to be led in large part by the Kilimanjaro Film Institute. One WOP film has been produced and work on an awareness video is on-going. More video production is expected in 2013–14.

Commercial Department Organization chart



Reporting System chart



What the partners say

“From the start of the project onwards the partner colleagues worked together on their assignments. The confidence between the partners increased rapidly and the basis was created for a fruitful cooperation.”

[Dunea report to European Commission, December 2012](#)

“How can these people ever get any work done in this freezing weather?”

[MWAUWASA staff member on study tour to Zoetermeer, Netherlands, March 2013](#)

“I realise how difficult it is for people doing manual work in this hot climate and I really sympathise with them.”

[Dunea staff member on assignment in Mwanza, April 2013](#)





"We need to take strong action against people who don't pay their water bills. MWAUWASA has to focus on discipline."

MWAUWASA staff member, April 2013

"Sales assistants (meter readers) need to understand they should be good ambassadors for the company."

MWAUWASA manager, April 2013

"It is too early to analyse [the WOP's] effectiveness...the expected one is good as per implementation till now."

European Commission review team, June 2013

Success factors

It is still early in the partnership but both Dunea and MWAUWASA as the main partners, together with the supporting partners and the donor, regard the WOP as a success so far. Dunea reports that the work is on track despite some minor setbacks. Progress has been made in transferring knowledge and already non-revenue water is falling. Some of the factors that have made this possible are:

Good Preparation

The Dunea European Commission Grant Application format has compelled the WOP partners to look closely and methodically in advance at the objectives of the WOP, the relevance of the various actions proposed and the costs. The European Commission requirement that every application should be accompanied by a logical framework analysis is also likely to improve the chances of success.

Duration and Scope

The WOP duration of 5 years is long enough for genuine change to take place and for a degree of sustainability to be built into the improvements gained. The scope is wide – necessarily so since the overall aim is affordable and sustainable water supply and sanitation in Mwanza – and there is the potential for innovation and modification if things do not go according to plan.

Multiple Partners

It is too early to assess the contributions of some of the WOP partners – such as the Kilimanjaro Film Institute who will come more into play later on – but already it is clear that the Abvakabo contribution has been very helpful and is a genuine success factor. The Employee Satisfaction Survey has brought attention to issues that might have otherwise been overlooked.

In-country Experience

The WOP is fortunate to have a Mentor Partner manager who knows both MWAUWASA and the Mwanza region well and has worked there for a number of years. There is no substitute for such experience and it has enabled the WOP to get off to a quicker start since there was no time lag for learning to take place.

Parallel Investment

The need to extend coverage and to replace assets means that MWAUWASA will require substantial investments in the coming years. However, funding for the District Metering Areas and meter replacement proposed in 2009 by Pöyry (Consultants) was not available for inclusion in the 2013 budget. On the positive side, the European Investment Bank investment in the infrastructure starting in late 2013 has the potential to considerably augment the benefits of the WOP in its mid and later stages. It is important that Dunea have a part to play in the implementation of that investment programme, if possible. A combination of financial and technical cooperation through the WOP would have great advantages in getting the new assets up, running and being managed for sustainability.

Good Working Relations

In preparing this case study, it was necessary to talk with a wide range of actors on both the Dutch and Tanzanian sides. It was observed that working relations were open and cordial with both partners respecting the other's point of view. It may be expected that the relationship will grow and develop further over the coming years. The May 2013 visit of the Dunea Board members to Mwanza was a good step and should help gain commitment down the line.

Observations and recommendations

Because this WOP is at a relatively early stage, it is not possible to go much beyond the positive factors noted above. There are as yet few lessons to be learned here compared with WOPs such as the WOP between Vitens-Evides International (VEI) and Fundo de Investimento e Património de Abastecimento de Água (FIPAG) in Mozambique where there is already a ten-year history of achievements on which to draw. The outstanding exception is the work in Mwanza on the Employee Satisfaction Survey which is already complete in part and which could immediately be disseminated within the professional water community for others to assess and possibly take up in existing or upcoming WOPs.

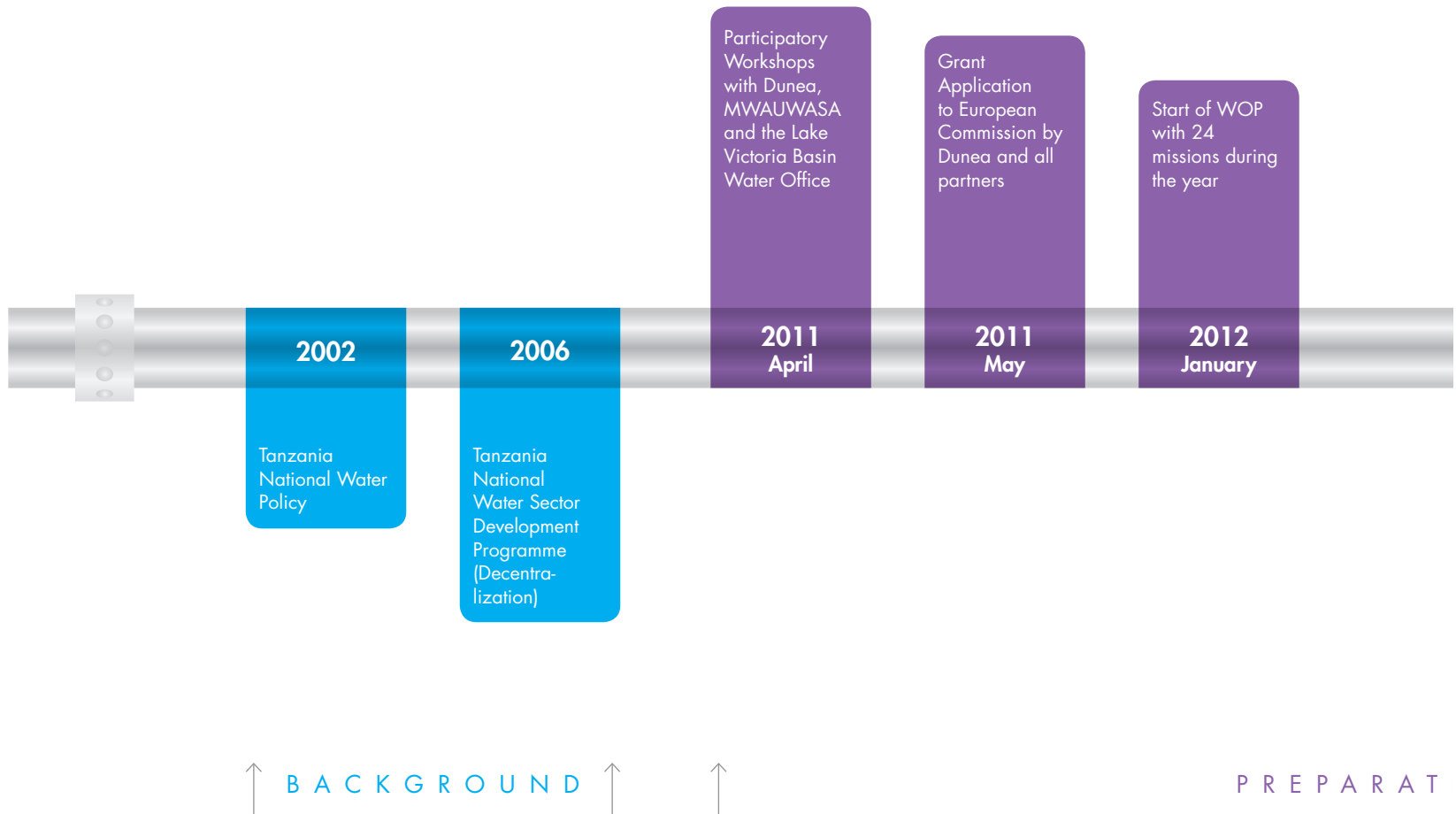
Replication and Scaling-up

Perhaps the most useful issue with which to close this case study is that of replication. Can a WOP such as this be replicated in other places and with other actors? What is the potential for scaling-up? The European Commission Grant Application form asks applicants to address replication and scaling-up before the application is approved. Dunea and the other partners addressed this in their application by mentioning the possible role of the Ministry of Water and Irrigation of Tanzania. Their proposal suggested that the Ministry of Water and Irrigation would be the prime responsible agency for replication and scaling-up in Tanzania as it is well positioned to communicate and organize workshops with other urban water utilities in Tanzania. Dunea also mentioned the regional role of the Lake Victoria Basin Water Office which is active in water resources management and has contacts with many regional and international agencies.



Timeline

This timeline is not exhaustive, but highlights some key events in the WOP.



Construction of
Water Meter
Workshop
started

2012
December

Publication
of Employee
Satisfaction
Survey Report

2013
January

Visit of
MWAUWASA
Senior
Management
Group to the
Netherlands

2013
March

Water Meter
Workshop
Commissioned

2013
April

Visit to
Mwanza of
Dunea Board
members

2013
May

ATION AND IMPLEMENTATION

Annex 1

	Intervention logic	Objectives verifiable indicators of achievement	Sources and means of verification	Assumptions
Overall objectives	<ul style="list-style-type: none"> Contributes to achievement of MDGs Contributes to the implementation of Tanzania National Water Policy 	Tanzanian MDG indicators <ul style="list-style-type: none"> Access to safe and clean water of urban population Sewage coverage in urban areas 	<ul style="list-style-type: none"> National statistics WHO-UNICEF Joint Monitoring programme WSS Sector reports 	
Specific objective	Affordable and sustainable (financially and technically sound) water supply and wastewater services for Mwanza urban area and (contributions to) improved water governance	<ul style="list-style-type: none"> Drinking water supply coverage urban Mwanza $\geq 90\%$ Sewerage coverage urban Mwanza $\geq 34\%$ Operating ratio MWAUWASA < 1 Water quality parameters Mwanza areas as monitored by LVBWO are within desired range 	<ul style="list-style-type: none"> Company reports Energy and Water Utilities Regulatory Authority (EWURA) statistics Water sector report Water quality reports LVBWO Tanzania Standard TZs 769:2008 	<ul style="list-style-type: none"> Sector framework remains affective MWAUWASA secures budgets for operations and investment/expansions Cooperation regarding water resources management on local, regional and international level
Expected results	MWAUWASA Component			
	<ul style="list-style-type: none"> Non-revenue Water reduced from about 50% to 25% 	<ul style="list-style-type: none"> NRW percentage determined with IWA water balance 	<ul style="list-style-type: none"> MWAUWASA reports EWURA statistics 	All Results <ul style="list-style-type: none"> Continued implementation of good practices by MWAUWASA Tariffs approved which are according to the needs of MWAUWASA Budgets for operation and investment secured
	<ul style="list-style-type: none"> Improved collection of revenues 	<ul style="list-style-type: none"> Billing collection ratio 97% 	<ul style="list-style-type: none"> MWAUWASA reports EWURA statistics 	
	<ul style="list-style-type: none"> Improved work performances of WWAUSA staff (skills, knowledge) 	<ul style="list-style-type: none"> After training, 50% of participant pass test on skills & knowledge 	<ul style="list-style-type: none"> Training reports, progress reports 	
<ul style="list-style-type: none"> Operational manuals, procedures and guidelines available and in use 	<ul style="list-style-type: none"> Key O&M manuals, information for sewerage system available in English and Swahill and in use 	<ul style="list-style-type: none"> Printed O & M manuals, guidelines, procedures on respective work location 		

	Intervention logic	Objectives verifiable indicators of achievement	Sources and means of verification	Assumptions
	<ul style="list-style-type: none"> Employee satisfaction survey implemented 	<ul style="list-style-type: none"> Report on Employee Satisfaction Survey (baselines and final) 	<ul style="list-style-type: none"> Reports Employee Satisfaction Surveys 	<ul style="list-style-type: none"> Survey results used for improvement measures
	<ul style="list-style-type: none"> Customer satisfaction survey implemented 	<ul style="list-style-type: none"> Report on Customer Satisfaction Survey (baseline and final) 	<ul style="list-style-type: none"> Reports Customer Satisfaction Surveys 	<ul style="list-style-type: none"> Survey results used for improvement measures
	Lake Victoria Basin Water Office (LVBWO) Component			
Expected results	<ul style="list-style-type: none"> Plan for ISO 17025 	<ul style="list-style-type: none"> Certification plan approved by LVBWO 	<ul style="list-style-type: none"> Formal management decisions 	<ul style="list-style-type: none"> Contract with certifying agency concluded <p>All Results:</p> <ul style="list-style-type: none"> Budgets, staff, resources available to guarantee continuity Skills and knowledge LVBWO effectively makes use of its mandate Budget and resources for implantation of certification plan safeguarded Certification plan implemented and certification acquired
	<ul style="list-style-type: none"> Increased knowledge and skills of laboratory staff in phytoplankton identification, microbiology and use of new modern equipment 	<ul style="list-style-type: none"> Application of the right methods and standards as laid down in job descriptions, guidelines, manuals and (external) standards 	<ul style="list-style-type: none"> Direct observation on work procedures, quality Training reports Reports from lab staff 	<ul style="list-style-type: none"> Knowledge and information actively used and made available by LVBWO New laboratory equipment delivered by Ministry
	<ul style="list-style-type: none"> Increased knowledge on methods of preventions and mitigation of eutrophication 	<ul style="list-style-type: none"> LVBWO is able to assess properly sources and nature of eutrophication as well as determining appropriate actions for preventions/ mitigations 	<ul style="list-style-type: none"> Direct observation on work procedures, quality Training report Report and documented advises from LVBWO 	<ul style="list-style-type: none"> Knowledge and information actively used and made available by LVBWO
	<ul style="list-style-type: none"> Plan for improvement of water quality data management, reports and access/ distribution through internet 	<ul style="list-style-type: none"> Definition study/functional design+ implementation strategy decided upon by LVBWO 	<ul style="list-style-type: none"> Documents and management decisions 	<ul style="list-style-type: none"> Budget and resources available for ICT implementation

Key references

1. Dunea: Grant Application to the European Commission – Mwanza Urban Water and Sewerage Authority – Partnership for Financial and Operational Improvement Programme, October 2010
2. Abvakabo FNV: Report on Employee Satisfaction at MWAUWASA, January 2013 (Wilma Berentsen and Birte Nelen)
3. MWAUWASA: Business Plan July 2011 – June 2014 (Theo Godderz – GIZ)
4. Dunea/MWAUWASA: Results Oriented Monitoring Reports (via web site)
5. Pöyry (Consultants): Non-Revenue Water Assessment in Mwanza (Workshop Report, December 2nd 2009)



Water Operators' Partnerships (WOPs) are peer support relationships between two or more water or sanitation operators, carried out on a not-for-profit basis in the objective of capacity development. This is one of a series of four impact-oriented case studies conducted on WOPs in Africa. It is intended for water and sanitation service providers, governments, development banks, donors, WOPs facilitators and all who are interested in gaining a better understanding of this solidarity-based approach to helping public operators improve their capacity to sustainably deliver water and sanitation services for all.



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