



The Water Herald

Learn from your peers

The Water Herald, Vol. 1, Issue 2



Inside this Issue >>>

A Pictorial of the commissioning of Entebbe water supply system by H.E. Yoweri Kaguta Museveni, President of Uganda [pp. 22]



AfWA science and Technical Council (STC) deliberations, 23rd – 26th November 2009 at Speke Resort Munyonyo [pp. 21]

How Can Mobile Technology Support Utility Management Processes in Developing Countries? [pp. 18]

Inside this Issue >>>>

Event Update

15th International African Water Congress and Exhibition, 15th – 18th March 2010 [pp. 9]

The Newly Appointed NWSC Board: Member Profiles [pp. 4]





Managing Director's Message

Dr. William T. Muhairwe, MD-NWSC

Dear Readers, we once again welcome you all to our issue of the Water Herald (WH), for the period October – December 2009. First and foremost, we wish to convey our continued thanks to our readers who have taken great interest in the information we convey through our WH.

This issue comes at a time when we as a Corporation, are halfway the financial year 2009/2010. Indeed as an attempt to keep our stakeholders and esteemed customers well informed about our activities, this bulletin highlights a number of key issues and activities that have gone on in the first half of the financial year.

The articles contained in this bulletin include; an overview of the Performance of the Corporation for the first half of the year, an outlook of where we are heading to as a Corporation, new developments such as the Water Safety Plans, and an overview of the new NWSC Board of Directors, and various articles related to organizational best practices, but to mention a few.

Key among the activities that transpired during the first half of the year was the formulation of a new Performance Contract with Government for the period 2009–2012. The Contract formulation was spearheaded by the Ministry of Water and Environment (MoWE), with the overall objective of ensuring sus-

tained growth within the Corporation and accountability in terms of key performance indicators.

The Performance Contract will form the framework for our strategic orientation for the next three years, and therefore as a first step, we harmonized our Corporate Plan with the Performance Contract, and thereafter aligned our Division activities and Goals with those in the Performance Contract.

Suffice it to say that customer satisfaction remains one of our cardinal objectives, and it is for that purpose that a Customer Satisfaction Index was included as one of the Key Performance Indicators.

In summary, the first half of the year has exhibited a better start for the Corporation compared to last year, with improvements noted in the operational and financial performance.

Let me conclude by reiterating the fact that NWSC always seeks to ensure that its customers have good services, and it is my wish that you enjoy this output of WH.

Thank you!

For God and My Country

Editor's Note



Dear Readers, we once again welcome you all to our issue of the Water Herald (WH), for the period October – December 2009. First and foremost, we wish to convey our continued thanks to our readers who have taken great interest in the information we convey through our WH.

This issue comes at a time when we, as a Corporation, are halfway the financial year 2009/2010. Our passion is to keep our stakeholders and esteemed customers well informed about our activities, thus this bulletin highlights a number of key issues and activities that have gone on in the last quarter of 2009.

The articles contained in this bulletin include; an overview of the Performance of the Corporation for the first half of the year, an outlook of where we are heading to as a Corporation, new developments such as the Info-tech innovations, and an overview of the new NWSC Board of Directors, and various articles related to organizational best practices, among others.

Your comments, ideas and constructive critiques are welcome. Our goal - as the WH editorial team - is to produce issues that are exciting and worth reading.

Wishing you an adventurous and pleasant reading...

Contents

Managing Director's Message	2
Editor's Note	3
The Newly Appointed NWSC Board: Member Profiles	4
An Overview of NWSC Performance, July – Dec 2009.	6
15 th International African Water Congress and Exhibition	9
The NWSC Turn Around Story: A Benchmark for WATSAN Utilities	10
How Can Mobile Technology Support Utility Management Processes in Developing Countries?	18
Pictorial:	21
Elgon Water Partnership, Mbale Wins Certificate for Best Customer care Corporate Category	24
Implementation of Water Safety Plans in NWSC – Past, Present and Future	26
Exploring Uganda's Oil Resource: The Link to Water and Sanitation Service Delivery	28
The Challenges of Information Integrity in NWSC	31
The Battle against Illegal Water Consumption in Mbale is on and the Harvest is Bounty	34
Disturbing Global Trends: A Biblical Perspective	35
Areas Performance Score Card, July – Sept 2009	39
July - Sept 2009 Performance	41
Indeed Water is Life!	42

Editorial Team

Dr. Martin Kalibbala	Editor-in-Chief
Sonko Kiwanuka	Benchmarking/Learning Editor
Susan Nanyange	Staff Issues/News Editor
David Isingoma	Editor – Corporate Affairs
Miriam Kadaga	Public Relations Editor
Nicholas Tayebwa	Production Editor
Samalie Mutuwa / Joseph Ndegeya	Distribution Coordinator(s)

The Newly Appointed NWSC Board: Member Profiles

By Sarah Irene Walusimbi

In exercising of her powers under the National Water and Sewerage Corporation (NWSC) Act, the Minister for Water and Environment, Hon. Maria Mutagamba appointed a new board, with effect from 1st September 2009 – to work for 3 years. The following are the members of the board: Ms. Christine Nandyose Kasirye (Chairperson), Mr. Ganyana Miiro (Deputy Chairperson), Dr. William Tsimwa Muhairwe (Managing Director), Mr. Victor Paul Kobel (Member), Eng. Sortie Bomukama (Member), Mr. David Ssebabi (Member), Ms. Florence Namayanja Mukasa (Member), Dr. Charles Wana-Etyem (Member), Mr. David Mpango Kakuba (Member). Below is a brief exposé of their profiles.

Ms. Christine Nandyose Kasirye – Mrs. Nandyose Kasirye is a graduate of Economics from Makerere University and also holds a Masters in Economic Policy and Planning of Makerere University. Additional professional qualifications include a Diploma in Tax Administration and Management. She is currently the National Executive Secretary, St. John Ambulance Kampala. Mrs. Kasirye was appointed as the Chairperson of the Board with effect from 1st September 2009.



Mr. Ganyana Miiro – Mr. Miiro holds a Masters degree in Development Economics of the University of Wisconsin, USA. He worked with the Institute of Public Administration where he taught Development Economics from 1971–1975. Thereafter, he worked with Tropical Africa Bank Limited as Chief Economist, Director and General Manager respectively for a period of thirteen years. He worked as a member of the Public Service Commission, Uganda for a period of six years and is currently a Commissioner with Amnesty Commission in Charge of West Nile Region. Mr. Miiro served as Chairman of the previous Board and was re-appointed to the Board as Deputy Chairperson in September 2009.



Dr. William Muhairwe – Dr. Muhairwe is a Business Management Economist. He was appointed Managing Director of National Water and Sewerage Corporation in 1998. Prior to this appointment, he was General Manager of East Africa Steel Corporation Ltd (1989–1994) and General Manager of Steel Corporation of East Africa Ltd (1994–1995). He also served as the Deputy Executive Director and Ag. Executive Director of the Uganda Investment Authority (1995–1998). Dr. Muhairwe holds a PhD in Business Management and has competences in private sector development strategic planning and policy formulation, among others. Recently, he was awarded honorary professorship from Makerere University.



Mr. Victor Paul Kobel – Mr. Kobel is a graduate of Business Administration. He is a fellow of the Institute of Chartered Secretaries and Administrators and an associate of the British Institute of Management. He has held high profile positions in the civil service, including those of Secretary of the Central Tender Board, Commissioner for Industry and Permanent Secretary. Mr. Kobel has served on many boards, including Uganda Manufacturers Association, Uganda Investment Authority, Uganda Electricity Board and the Uganda National Chamber of Commerce and Industry. Since retiring from public service, Mr. Kobel has been operating in private business. He was re-appointed as a member to the Board in September 2009.



Eng. Sortie Bomukama – Eng. Bomukama holds a BSc. (Hons) Degree in Civil Engineering from Makerere University (1976) and an M.Sc. Degree in Water and Waste Engineering from Loughborough University of Technology (1983). He is a member of the Institute of Public Health Engineers (UK), a member of the Institution of Water and Environment Management UK and a fellow of the Uganda Institution of Professional Engineers. He has served as a member of the Engineers' Registration Board for 5 (five) years and presently is the Director for Water Development (DWD) in the Ministry of Water and Environment. (MoWE). He was re-appointed as a member to the Board in September 2009.



Mr. David Ssebabi – Mr. Ssebabi holds the position of Director in Uganda's largely successful Privatization and Utility Reform Project under the Ministry of Finance, Planning and Economic Development. He is an experienced financial analyst with extensive experience in Banking, Parastatal Monitoring, Utility Reform and Restructuring. He possesses a Bachelor of Commerce (Hons) degree of Makerere University, Kampala, and an MSc. Finance from Strathclyde University, Glasgow. Mr. Ssebabi was re-appointed as a member of the Board in September 2009.



Ms. Florence Namayanja Mukasa – Ms. Namayanja Mukasa holds a Bachelors Degree in Industrial and Organizational Psychology from Makerere University, and is currently the Deputy Mayor of Kampala city. Prior to that, she served in National Water and Sewerage Corporation in the areas of Administration, procurement and projects. Ms. Namayanja was re-appointed as a full member of the Board in September 2009.



Dr. Charles Wana-Etyem – Dr. Wana holds a BSc. (Hons) Degree in Civil Engineering from Makerere University (1976), an MSc. in Water Resources Engineering, Colorado State University USA (1978) and PhD in Water resources Engineering, Colorado State University, USA (1982). He is a Chartered engineer, Engineering Council and Technology Board, UK, Fellow of the Uganda Institute of Professional Engineers and has over thirty years of post-graduate experience in the field of academia, infrastructure and water resources development. He has served as Chairman and member on many boards. Dr. Wana was appointed as a new member of the Board in September 2009.



Continued to Page 7

An Overview of NWSC Performance, July – Dec 2009.

By David Isingoma

The National Water and Sewerage Corporation (NWSC) performance for the first half of the financial year 2009/10 comes at the backdrop of a very challenging year 2008/09. The FY 2009/10 marks a turning point as it coincides with the beginning of the New Corporate Plan and the Government of Uganda (GoU) Contract for the period 2009 – 2012, which are the overarching guiding policy documents for the Corporation.

In line with the broader Corporate Goals and strategic direction enshrined within the two overarching policy documents, NWSC formulated a number of strategies to ensure that the expectations of the Corporation during the FY 2009/10 are met. Among these were the reformulation and reinvigoration of the Internally Delegated Area Management Contracts (IDAMCs), and the formulation of the Kampala Declarations as a means of addressing the challenges being faced by the Corporation.

Some of the key targets the Corporation set out to achieve during the year 2009/10, were the reduction in water losses (from 35.8 % – 34.7 %), improvement in billing efficiency (from 64.2 % – 65.3 %) and collection ratio (target 98 %), the increase in service coverage through increased connection of new customers (target 23,484), and the alleviation of the areas with intermittent water supply from dry zones to wet zones. Furthermore, the Corporation set out to enhance its customer care and ensure response to customer complaints within 12 hours. Special thanks go to Kampala area which has consistently met its targets in regard to collections.

The results for the half year are promising with improvements exhibited in most areas of operation. The water losses as at the end of the half year was at an average of 34.3 %, which surpasses the target for the year, while collections have surpassed the target with a collection ratio of about 102 %. New connections have grown at an average of 1,975 per month, which when prorated for the year implies that we are

on course towards achieving the annual target. Furthermore, our customer care objectives have been enhanced through the establishment of a 24-hour free call center, improved ambience at the front desk offices and reduction of response time to complaints (8 – 12) hours. Arrears have also been reduced from US\$ 41 Billion to US\$ 39.1 Billion against the target of US\$ 39.5 Billion. Also, the Universal metering target of 99 % was met by end of September 2009.

On the External Services front, the Corporation has continued with benchmarking and collaborating with other utilities within the region. During the half year, a contract was signed with the Ogun State of Nigeria, bringing the total number of active contracts to 4, as at December 2009. In addition, the state of the art training academy took shape during the reporting period, with most of the accessories and ambience worked upon.

Concerning infrastructure development, the Corporation continued carrying out flagship investments with funding from its internally generated funds in the areas of Bushenyi, Arua, Mukono and Gulu. Furthermore, a number of interventions were carried out in Kampala to alleviate the water scarcity plight in some of the peri-urban areas of supply. Another key milestone was the commencement of the intake projects of Gaba and Jinja for which the Corporation secured a concessionary loan and Grant from the French Development Agency (AfD) to carry out the works.

Donor-funded projects that were undertaken during the first half of the year included the Urban Poor Project, and the Out-based Project (OBA) in which a total of 3,015 new water connections to the poor were made. The Corporation is also piloting the use of prepaid meters in the urban poor settlements as a means of ensuring that customers are not exploited by middle men (vendors), and payment compliance.

However, one of the major challenges still faced by the Corporation is lack of sufficient funding to undertake

major capital investments. This is in light of the rapid rate of urbanization and population growth within urban centres, exacerbated by the conurbation of adjacent urban growth centres. Key among the urgent requirements is the need for the reconstruction and expansion of the network in Kampala, which is critical to the elimination of dry zones and intermittent supply of water in the fringe areas of Kampala. However, on a positive note, detailed studies and reviews are already being undertaken by independent consultants to establish the exact investment requirements and costs for the Kampala network project. These will then be forwarded to our development partners for possible funding.

At this juncture we wish to thank the Board and management for steering the Corporation's activities. Special thanks go to the indefatigable staff, who have ensured that the Corporation remains a shining star in Uganda.

The half year performance notwithstanding, NWSC is not going to bask in its laurels, but is gearing up

momentum for a more ambitious driven second half. One of the first activities to be undertaken is the alignment of the Corporate Goals to the GoU Performance Goals, a process which will increase accountability at all levels - towards the achievement of the GoU Performance Targets.

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nWSC.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

Continued from Page 5

The Newly Appointed NWSC Board Member Profiles

Mr. David Mpango Kakuba – Mr. Kakuba holds a Masters degree in Public Administration and Management from Makerere University, LLB (Hons), Post Graduate Diploma in Legal Practice and is a fellow of the Institute of Chartered Secretaries and Administrators. He is currently the Deputy Managing Director of Civil Aviation Authority (CAA). He has also served as Chief Manager Management Services/ Corporation Secretary of National Water and Sewerage Corporation (1997 – 2009). He was appointed as a new member of the Board in September 2009.

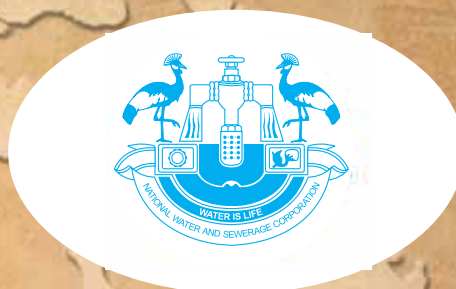


Ms Sarah Irene Walusimbi (NWSC Corporation Secretary) – Ms. Walusimbi holds a Masters Degree in Business Administration from the Eastern and Southern African Institute of Management (ESAMI), a Bachelor of Laws (LLB) from Makerere University and a post Graduate Diploma in Legal Practice from the Law Development Centre. She was appointed as the Secretary to the Board of NWSC in October 2009.



WHAT DO YOU THINK?

To comment on this article, please e-mail up to 500 words to the editor at watereditorial@nWSC.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

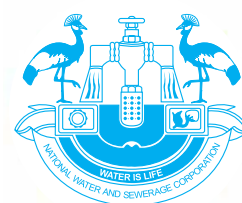


The 21st Century Water Utility Company

**Continually Innovating to lead.
Continually Improving to delight our customers**

Any ideas, views or comments? Email us at watereditorial@nWSC.co.ug.

National Water & Sewerage Corporation
Plot 39, Jinja Road, Kampala. P.O. Box 7053 Kampala, Uganda
Tel: +256 414 315 138 Fax: +256 414 265 929
Email: watereditorial@nWSC.co.ug Website: www.nWSC.co.ug

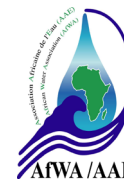


The Water Herald
Learn from your peers.



15th International African Water Congress and Exhibition

Water and Sanitation: Perspectives and Challenges relating to Energy and Climate Change



P.O.Box 7053, Plot 39 Jinja Road, Kampala, Uganda

Tel.: +256-414-315 107 / 111 ; Fax.: +256-414-258 299 / 345 531/256 929

email: afwacongress2010@nWSC.co.ug

Event Update – 15th International African Water Congress and Exhibition, 15th – 18th March 2010

By Martin Kalibbala

We reiterated in the previous issue of the Water Herald (WH) that the African Water Association (AfWA) in collaboration with the Ministry of Water and Environment of Uganda (MoWE)/National Water and Sewerage Corporation (NWSC), and the participation of the International Water Association (IWA); among others, is organizing a high impact International African Water Congress and Exhibition, 15th – 18th March 2010 in Kampala, Uganda. The congress theme relates to energy and climatic change challenges facing water and sanitation service delivery.

As clearly depicted during the numerous deliberations at the UN Climate Change Conference in Copenhagen (Denmark) in December 2009, climatic challenges are increasingly becoming threats to our planet – especially to service delivery enhancement and expansion efforts, for water managers and policy makers. Delegates will therefore discuss and reflect on these challenges, with a view of formulating a way-forward on actions and policies for Africa. Also, the Congress comes at a critical juncture in the movement towards achieving the Millennium Development Goals (MDGs).

We expect a number of high profile keynote speakers to participate in this important Congress. These include; **H. E. Yoweri K. Museveni** (President of Republic of Uganda), **Hon. Maria Mutagambwa** (Minister of Water and Environment of Uganda), **Prince Charles** (United Kingdom), **Prof. Wangari Maathai**

(2004 Nobel Laureate and Environmental activist), **Dr. Mo Ibrahim** (Mo – Ibrahim Foundation), **Dr. Paul Reiter** (Executive Director – International Water Association), **Dr. Jamal Saghir** (Director – Energy, Transport and Water, World Bank), **Mr. Achim Steiner** (Executive Director – UN Environmental Programme), **Dr. Anna Tibaijuka** (Executive Director – UN Habitat), among others.

So far, over twenty (20) international organizations (IWA, GTZ, Bill Gates Foundation, UN-Water, UN-Habitat, DAAD, AFD, USAID, Water Aid, World Bank, WSP, UNEP, etc), have confirmed to organize seminars and/ or side events which will give participants a menu of interesting topical issues and sessions.

A big thumbs up to those who have so far responded to our call to register for the Congress. In case you have not yet registered for this historical event, please register online by using the following links:

www.aae-event.com/ or www.nWSC.co.ug/.

Since Uganda is an exciting tourist destination in Africa, some Congress delegates have decided to combine the event with a holiday package, to visit some of the famous spots like the source of River Nile, traditional sites, game viewing, gorilla tracking, etc. As a delegate you can also use this grand opportunity to attend the Congress and thereafter, take some time off to relax in Uganda's tourist hot spots.

If you have any questions or clarifications about the Congress, please contact us on: afwacongress2010@nWSC.co.ug

We look forward to your participation in this historic event, and wishing you a happy and prosperous new year.

The NWSC Turn Around Story: A Benchmark for WATSAN Utilities

by David Isingoma

1.0 Introduction

During the 1990's and beginning of 2000, the dominant paradigm was that state-owned enterprises (SOEs) could not deliver. Most public companies, especially in low income countries, were plagued by operational, financial, managerial and investment inefficiencies, which resulted into the SOE's relying on handouts from their state Governments. Indeed, the above issues have, at one time or the other, characterized many public companies in the World and especially in developing countries, forcing them into near state of bankruptcy. The National Water and Sewerage Corporation (NWSC) has not been an exception to this trend.

This article is a manifestation that state owned enterprises (SOEs), if subjected to the right reform strategies and incentives; can offer good services and, therefore, restore customer and public confidence. This article covers: the historical background of NWSC, the reform drivers, what was actually done to turn around performance at strategic and tactical levels; the main performance drivers; the key achievements (1998 – 2009); the key lessons learned and the conclusions/future perspectives.

1.1 NWSC in a Historic Perspective

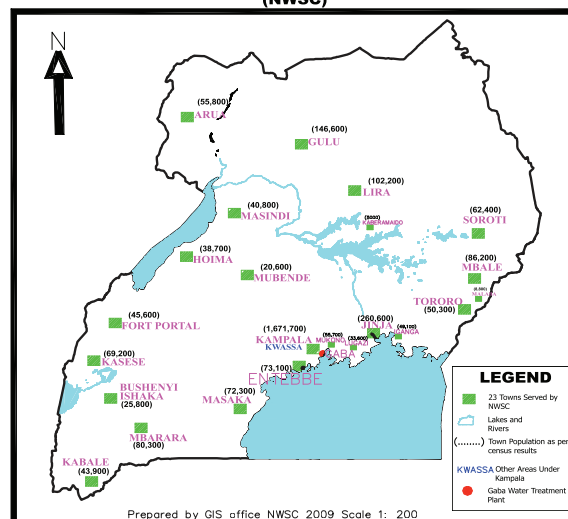
NWSC is a government owned parastatal which was established by Decree No. 34 of 1972, following an earlier study on the need for improvement of water and sanitation in the major urban centres of Uganda.

The Corporation was initially, responsible for the three key towns of Kampala, Entebbe and Jinja. During the 1970's and early 1980's NWSC, like most other institutions in the country at that time, suffered substantial decline. Most of the assets were run down and service delivery reduced considerably. From the mid 1980's, following the take over of Government by the National Resistance Movement (NRM) the water sector was increasingly revitalized. Through the inter-

vention of the International Development Association (IDA) and other donor agencies, the Corporation embarked on major rehabilitation and expansion of its water supply and sewerage systems.

The Corporation's legal position was strengthened by NWSC Statute No. 7 of 1995, which was later enacted into NWSC Act of 2000. Under the new legal framework, the powers and structure of NWSC were revised to enable the Corporation operate on a commercial and financially viable basis. Accordingly, the Corporation is currently mandated to manage water and sewerage services in 23 Urban Areas namely: Kampala, Jinja/Njeru, Entebbe, Tororo, Mbale, Masaka, Mbarara, Gulu, Lira, Fort Portal, Kasese, Kabale, Arua, Bushenyi/Isahaka, Soroti, Mukono, Lugazi, Iganga, Malaba, Hoima, Masindi, Mubende, and Kaberamaido. The NWSC towns have a population of 2.96 Million people which account for 75 % of the population in the large urban centers¹.

TOWNS SERVED BY NATIONAL WATER AND SEWERAGE CORPORATION (NWSC)



¹ Large Urban areas have populations greater than 15,000 people.

1.2 Vision and Mission

The newly adopted Vision of NWSC is “To be One of the Leading Water Utilities in the World”. The Corporate Mission is “To provide efficient and cost effective Water and Sewerage Services applying innovative managerial solutions to the delight of our Customers”

2.0 Specific driving forces for reform in NWSC (as at 1998)

The main reform era in NWSC started in 1998. The key driving force was pressure to improve performance. It must be noted that this was after a long spell (1986 – 1998) of heavy infrastructure investment, but inadequate commercial and marketing management. However, judging from the state of the infrastructure as at 1986, this was understandable – to make water available first. Nonetheless, the poor performance indicators pointed towards the need to revamp the performance of the company, namely;

- Low operational efficiency with high NRW of 50–60 %
- Low collection efficiency of about 60 %
- High arrears (accounts receivables) standing at about US\$ 30 Billion equivalent to 14 months of debt age.
- Overstaffing levels of about 36 staff/1000c with alarming corruption tendencies
- Irrational and costly welfare scheme (for example a flawed and uncontrolled medical scheme)
- High number of unviable towns (only 3 out of 12 were financially sound)
- A running monthly deficit of about US\$ 348M (~USD \$ 300,000) despite a high average tariff of US\$ 1100/m³ (USD \$ 1.00/m³)
- Poor customer care
- Poor organizational culture with most staff actions at variance with the organizational goals and objectives, e.g. late coming and illicit activities.

3.0 Steps (initiatives) taken to improve performance

In order to improve performance, NWSC adopted a two-tier process. First, a set of long-term strategies was formulated through a Corporate Plan and later, the Performance Contract with Government, establishing a platform for subsequent tailor-made activities at a tactical level. Within the overall framework of the Corporate Plan and the Performance Contract with Government, a series of activities were implemented at operational level. Secondly, NWSC adopted several high impact short term performance improvement programmes based on home grown solutions/approaches meant to operationalize the long term plans.

3.1 Long Term Strategies

The long-term strategies formulated by NWSC to address the situation can be summarised as follows:

- Use of performance improvement programme approach as the key vehicle of efficiency enhancement
- Re-aligning staff organisational behaviour to operate with a strong commercial and customer care orientation
- Keeping close contact and strategic alliance with the public and customers to ensure confidence and legitimacy of NWSC initiatives
- Adopting a “do-it-yourself” strategy and outsourcing for supplementation not substitution
- Adopting an incrementalist approach to tariff adjustment through an equitable indexation policy
- Establishing “smart” networks with academic institutions and other regional companies operating similar business
- Adopting “change is a constant factor” nugget and applying it as a primer in all change management initiatives
- Computerisation of most management information systems in order to increase speed of work and efficacy

- Inculcating a strong element of “worker involvement” to enhance transparency and strategy ownership.
- Establishing transparent operating framework with the business owner (Government of Uganda) through performance contracting.



Kampala Water Billing Staff

3.2 Short Term Performance Enhancement programmes

At the secondary and more tactical level, the Corporation converted the long-term plans into a plethora of short term plans relating to sections of the long term plans. The short term plans progressively fulfilled the Corporate plan, and were meant to operationalise the long term plans. The highlights of the programmes are described below.

- The 100-days programme (Feb – May 1999)** was a high –impact programme aimed at reversing the operational & financial inefficiencies within NWSC. The programme activities addressed the five key performance areas of: Water production and sewerage services, water distribution services, customer-care services, revenue generation services and cost reduction initiatives. The programme was responsible for the initial improvements in the Corporation and greatly improved its public image.
- This was followed by the Service & Revenue Enhancement Programmes – SEREP I&II (Aug 1999 – Aug 2000)** which was aimed at restoring customer confidence in NWSC operations and hence service delivery. By end of the SEREP programmes, the Corporation had registered more achievements, most notable of which was the expansion of the customer base and the increase in the number of break-even towns to 6 from 3 in 100-Days programme.
- The Area Performance Contracts I (APC I) and Support Services Contracts I (SSC I) (Oct 2000 – Oct 2001)** were Contracts signed between the NWSC Headquarters and the Area Managers and Heads of Support Service departments like the Maintenance, Procurement and Stores departments. The main characteristics of the APCs and SSCs were among others, increased autonomy of Areas and Support Departments, enhanced commercial orientation, creation of result and output oriented management and increased accountability and clear separation of responsibilities.
- The Area Performance Contracts II (APC II) and Support Services Contracts II (SSC II) (from Dec 2001 – Nov 2002)** were generally a strengthened form of the APC I and SSC I. Under these programmes more key performance areas were introduced such as the reduction of suppressed accounts. In addition, the incentives structure was re-designed according to SMART criteria in order to enhance staff motivation to work harder.
- The S-T-R-E-T-C-H-OUT Programme** came as a result of continuously evaluating the progress of APC IIs in which it was realised that there was need to accelerate the achievement of APC II objectives. The STRETCH-Out programme was a tailor-made programme whose main concepts were benchmarked and adapted from best-practice World-class organisations (General Electric of Jack Welch). The main characteristics of S-T-R-E-T-C-H out were: Reduction of bureaucracy, Increase in speed of work, simplicity and self-confidence, Worker involvement, Organisational boundarylessness, Stretched targets(which are far above SMART targets) and Reward of progress towards achievement of Stretched targets.
- The One Minute Management Concept (Jul 2003 – 2004)** was introduced as an augmental measure for Stretch-Out Programmes by strengthening the Individual accountability within the group by requiring each staff, right from the Managing Director, to have individual Visions, Missions and One Minute Goals, catching people doing the right thing instead of the “policing” orientation, Regular group and individual performance appraisals to reward individual performance as well.
- The Internally Delegated Management Contracts (since Dec 2003)** were introduced under the auspices of the second Performance Contract with Government, and came as a result of NWSC’s response to the need to further consolidate operations at area

(Town) level. The contract differed from the Area Performance Contracts by assigning more autonomy and operating risk to the management teams in the various towns under NWSC. The management teams formed partnerships paid based on the achievement of key performance indicators.



General Manager, Kampala signing Performance Contracts with Branches.

- h) The Zonal Performance Contracts in Kampala were introduced as a result of** the increasing demand for services in Kampala. The NWSC management decentralized and devolved functions from the centre in Kampala to the Zones. With the introduction of this policy, all the 13 zones in Kampala assumed responsibility for their operational functions, which were formerly centralized under the administrative unit at our 6th Street premises. The decentralized functions have turned the **zonal offices** into one-stop centres for all services including new connections, mains extensions, leak control and billings. This has brought services nearer to the customers, a move highly acclaimed.
- i) The Checkers System was introduced (since 2005)** in line with the implementation and consolidation of the Internally Delegated Area Management Contracts (IDAMCs) as a means of monitoring the operations of the Areas by the NWSC Head Office. Key among the objectives of the checkers system were the need to ensure; efficiency and effectiveness in operations management, effective implementation of delegated works, sustainability and reliability of services, authenticity of quantitative performance data and information., etc.

3.3 Private Sector Participation (PSP) Initiatives

Complimentary to the internal programmes, NWSC also tested the waters with the private sector based on a need to explore their acclaimed benefits. First and foremost, the NWSC outsourced the non-core activi-

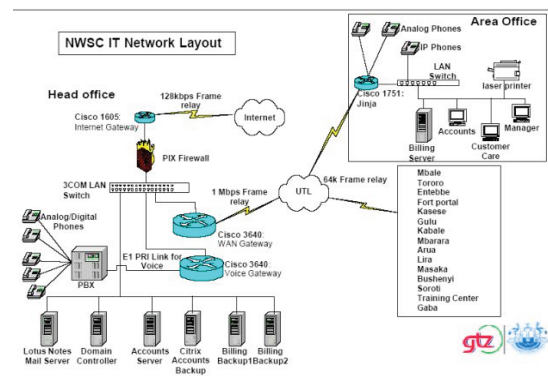
ties including building maintenance, vehicle repairs, guard services and premises maintenance and up-keep.

Secondly, management engaged the private sector in the management of the water and sewerage facilities in the Kampala area, the largest area within the NWSC accounting for about 70 % of the Corporation's activities. The first contract code-named "Kampala Revenue Improvement Project" (KRIP), run from Dec 1997 – Jun 2001, under Gauff Ingenieure, a German firm. The second Management Contract was signed in Feb 2002, with ONDEO Services Limited (OSUL) one of the best known water management utility companies in the world. Services provided by the operator were billing, revenue collections, and management of the distribution system.

3.4 Commercialisation Activities

Other commercialisation activities carried out by NWSC included;

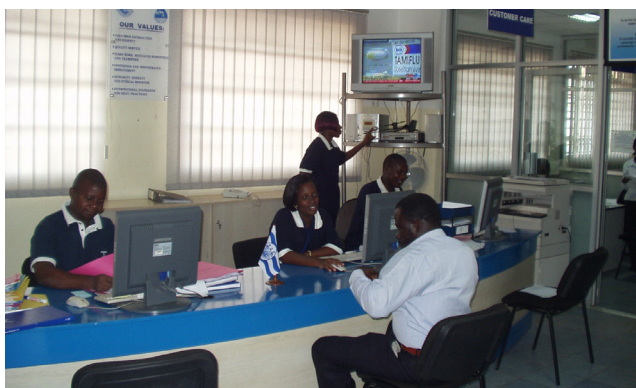
- a) Tariff Reviews**, which included the reduction of the connection/reconnection fees, and introduction of a new Water and Sewerage Connection Policy aimed at giving subsidised access for pipe lengths up to 50 metres and 60 metres for water and sewerage, respectively (with a nominal fee of about USD \$ 30). Furthermore, in order to protect the tariff from externalities such as inflation, and thus take into account changes in production costs, the NWSC tariff was indexed with effect from Mar 2002 with government approval. The indexation was carried out so as to protect the tariff from further erosion, and thus maintain its real value.
- b) Implementation of a Modern MIS**, which is a key ingredient to a robust commercialization process. In this respect, the following were achieved; A Wide Area Network (WAN) and Local Area Networks (LANs) in all Area offices, Establishment of a modern Computing server room at Head office, Efficient inter-office and external Corporate email communication system using Lotus Notes, Substantial increase in computer workstations and accessories for



Headquarters and Area office staff, Establishment of autonomous billing centres, and online cash receipting in all Area offices, Improvements in the financial and billing systems, including SCALA and CUSTIMA, Computerisation of the central procurement process and Implementation of modern integrated telephone exchange facilities.

NWSC IT Network Layout

- c) **Improvement in Customer care**, in which NWSC management ensured that the customers concerns and queries were adequately addressed through the establishment of Customer call Centres, the introduction of account–balance checking system with local telephone companies, and the introduction of the Direct Debit System with some Commercial Banks in order to simplify the payment of bills by customers through the Banking system. All these have simplified and eased the payment and verification of the account balances of customers.



Kampala-City Centre Customer Care Desk

As an additional Commercial programme, during the financial year 2009, the Corporation launched the Raving Fans Concept. Under this programme, the Corporation sought to meet, and exceed expectations of the customers and deliver plus 1 % extra effectiveness in water service delivery. The Corporation therefore continuously did its best to maintain and improve the services to customers. As a result of the implementation of the Raving Fans Concept, handling customer issues greatly improved. All Areas have key contact officers who have been trained in the use of the call centre database to manage complaints.

4.0 Performance drivers

The following are some of the key performance drivers which underlined the enhancement programmes carried out in NWSC:

- Empowerment of staff at all levels.
- Staff involvement in decision making.

- Receptivity to change. It is said that the only constant in NWSC is change.
- Carefully thought and conceived performance programmes with clear responsibilities defined.
- Devolution of power from the centre (headquarters) to regional operations, and further down to sub regions. NWSC is currently a union of quasi–private and autonomous business units.
- SMART Global targets underlined by stretched targets at the Area/Town level.
- An effective incentive mechanism
- Customer orientation and focus for interfacing staff has significantly improved
- Commercial orientation of operations
- Incorporation of “private management style” efficiency (less bureaucracy, performance–based pay, “customer– pays – for – a good service” principle, etc).
- Effective tailor made Monitoring and Evaluation system
- Competition among staff for key positions
- Government support
- Donor support

5.0 Key challenges to implementation of the change management programmes

The following were some of the impediments faced in the quest to improve services by changing the way things were done, which were overcome by a comprehensive system of sensitisation.

- Inability of staff to quickly appreciate the merits of change and thus preferring the existing status–quo.
- Excessive adherence to bureaucratic straight jacket policies which had been overtaken by events.
- Fear of staff to take management risks because of the stereotype way of operations in the past.
- Fear to accept the private sector work practices because of improper information about their benefits.

The above misgivings were overcome through a process of sensitisation in which the benefits were out-



MD-NWSC, Dr. William Muhairwe (right) and Senior Staff Celebrate the Prestigious Award for the most respected Public Utility in the East African Region. (L-R), Ms. Prossy Aketch, Mr. Harrison Mutikanga, Ms. Edith Katete, Dr. Eng. Silver Mugisha (Chief Manager, IDES), Eng. Johnson Amayo (Chief Manger, P&CD), Mr. Peter Werikhe.

lined to the staff, and the staff were thereafter involved in designing and implementing of the programmes. The sensitisation process was carried out in the presence of the Board of Directors, and managers were encouraged to be flexible with assurance given to them that they would not be reprimanded for rational independent actions.

Snapshot of Performance 1998 versus 2009

#	Performance Indicator	1998 performance	2009 Performance	Remarks
1	Water Production m ³ (Millions)	44	70.3 (Dec)	57 % growth
2	Water sales m ³ /day (Millions)	22	46.2 (Dec)	100 % growth
3	Non – Revenue Water (%)	51	34 (Dec)	15 % reduction
4	New water connections (No./year)	3,317	23,305	7 % growth in new connections
5	Total number of water connections (No.)	50,826	234,718 (Dec)	4-fold increase in the customer base
6	Service Coverage (%)	47	73	26 % increase in coverage
7	Staff per 1000 water connections	37	7	Improved staff Productivity
8	Income (US\$ Billion)	21.9	100.6	More than 4-fold increase in Turnover
9	Operating profit (US\$ Billion)	-2.0	15.1	From loss making to surplus

6.0 Outcome of the programmes

A snapshot or static view of the corporation's performance after a decade of transformation shows the impact of the various initiatives that were undertaken. In order to give a clear indication of our progress, a summary of the cumulative achievements based on the supply service chain, right from water production to the point of delivery to the users, is shown below.

In summary therefore, to date, contrary to the misgivings of public enterprises, NWSC stands out as a model utility in the African region because of its exemplary exploits and achievements. The Corporation is now an efficient water utility producing about 70 million cubic meters of water per annum, operating at an average Non-revenue Water rate of 34 %, a staff productivity ratio of 7 staff per 1,000 connections, a customer base of about 234,718 accounts (Dec 2009) which have grown from a paltry number of 50,826 in 1998. Underlying the performance improvements have been the rehabilitation and expansion of some of the water and sanitation infrastructure.

The above mentioned achievements have also contributed towards the achievement of the overarching Government policies namely, the Poverty Eradication Action Plan (PEAP) and the Millennium Development Goals (MDG) obligations which are aimed at eradicating poverty through systemic improvement in the standards of living of the populace.



High lift Pumps Gaba III

Indeed, all the Corporation efforts would have been thwarted if the performance enhancement initiatives were not translated into the improved financial performance of the Corporation. The Corporation evidenced strong revenue growth with a 10-year compound average growth of 21 %. The Corporation's turnover increased from US\$ 21 Billion in 1998, to US\$ 100 Billion in 2009. To further confirm the effectiveness of the performance enhancement programmes, the operating profit after depreciation commensurately improved from a loss of US\$ 2.1 Billion in 1998 to a profit of US\$ 15.1 Billion in 2009, signifying an increasing ability of the Corporation to meet some of the capital

obligations. The improved operating performance of the Corporation also enabled the maintenance of healthy cash flow, after netting out cash flow from investment and financing activities, of about US\$ 7 Billion per annum, throughout the decade

7.0 Lessons learned

The NWSC experience, as part of the lessons learned, clearly suggests that there is need for;

- Continuous self monitoring and evaluation of the programmes to ensure progress and focused vision.
- Firm decision making on key aspects of change.
- Staff involvement at all levels
- A comprehensive and effective customer care policy
- Committed, transparent and competent top leadership
- Continuous involvement of the Board of Directors
- Careful and purpose-based outsourcing of professional guidance, mostly local consultants who understand the local conditions better.
- Extensive use of comparative competition in operational Areas and rewarding good performers with cash prizes and trophies.
- Sound change management tactics, ensuring smooth evolution of performance improvement programmes; one after the other
- Extensive use of benchmarking (both process and metrics), using good performing Utilities as benchmarking partners.
- In addition, the involvement of the private sector in the provision of water services is necessary but must not be an end in itself but well targeted to achieve strategic goals of the organization. In particular, exposure to both local and international private operators enables the utility to gain valuable experiences in contract management, technology transfer and capacity building.

8.0 Future perspectives

In summary, through the relentless efforts, the haemorrhaging of the Corporation was arrested, and a culture of change, self belief and ownership of the busi-

ness among all the staff was inculcated and above all the Corporation built a customer focused organisation with less bureaucracy. Indeed, the experience of NWSC reflects a tripartite relationship among results achievement, capacity development and performance improvement.

The NWSC experience over the last ten years has shown that the problem with public enterprises is not the nature of ownership. Properly managed by strong, committed and inspiring leadership with a clear sense of purpose and vision, public enterprises can perform well.

Today NWSC has become a model public utility in the water industry that has begun to share its experiences with sister utilities in Africa through its External Services Unit. The Corporation has rendered consulting services to sister water utility companies in a number of countries including Zambia, Tanzania, Kenya, Ethiopia, Rwanda, and Nigeria. Furthermore, NWSC has also offered consulting services to the local private sector, such as the Alam Group of Companies as well as the Directorate of Water Development, Private Water Operators and to the Ministry of Lands.

However, it should be noted that there is no room for complacency in as far as performance improvement is concerned. There is need to constantly seek for innovative solutions to the ever changing circumstances of the utilities performance. Indeed, as Albert Einstein said,

“the significant problems we face today cannot be solved at the same level of thinking we were at when they were created; We therefore have to put on a new mind if we are to succeed in our search for solutions”.

Therefore, as utilities grapple for solutions they have to put into context their performance vis-à-vis the wider institutional/macro level challenges which affect their performance. These include the inability of the Tariffs in most developing countries to cover full costs of operation, the impacts climate change on the water resources, the need to balance supply between the different customer groupings with special reference to the poor, and finally the scarcity of financial resources to implement the investment programmes of the utilities. This therefore points to the fact that whilst internal reforms and performance efficiency provides the foundation for improved performance, reforms should take into account the wider sector policy issues mentioned above.

WHAT DO YOU THINK?

To comment on this article, please e-mail up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

How Can Mobile Technology Support Utility Management Processes in Developing Countries?



By Idris A Rai

Introduction

The impact of mobile technology on socio-economic development in developing countries is unparalleled to any other technology of our modern times. The low broadband penetration and mobile hardware cost have led to the ever increasing popularity of mobile phone subscriptions in developing countries. Mobile phones, like ordinary computers, are programmable devices. Moreover, mobile phones are increasingly becoming more user-pliable in terms of power, resolutions, advanced user interfaces, memory, storage, fast connectivity technologies, etc. Data transmission for mobile phones is increasingly becoming faster. This enables the devices to handle and process large volumes of data and to access remote services at high speed. Thus, it's possible to develop innovative mobile solutions to solve local challenges.

Mobile phones have demonstrated huge potential in enabling e-inclusion and bridging the digital divide in developing countries. This has been demonstrated by a multitude of existing mobile phone based services. Perhaps the most successful of such services is mobile banking (m-banking); a service that enables mobile phones to execute financial transactions. M-banking has enabled millions of people to access virtual bank accounts, send and receive money in remote areas where banks aren't envisaged to "arrive" in the near future.

Various innovative forms of mobile banking include Safaricom's MPESA in Kenya which has been extended from just receiving/sending money to paying for airline tickets, Zain's ZAP which offers 24/7 banking like services with pliable convenience than a modern credit card or ATM, and MTN Mobile money in Uganda. Without doubt, banks are also increasingly exploiting the use of mobile phones to improve their customer services.

Numerous SMS based services also exist and offer affordable platforms to access critical agricultural, business, health information for users in rural areas (i.e. Google SMS). Some services focus on supporting social activities, such as bulk-sms for events management. Other potential areas where mobile technology has not registered much breakthrough include; mobile learning, mobile health, mobile phone based sensing, and mobile application development. The popular mobile banking service will set the stage for the development of many new mobile phone based services.

The improved capabilities of mobile phones and their accessibility in developing countries provide a potentially affordable platform for utility companies to reach millions of their clients. WATSAN utilities could reap significant benefits from mobile technologies. In this article, we propose a low cost mobile based platform for utility revenue management. The platform requires a mobile device e.g., a mobile phone or PDA with software application that handles meter readings. Another requirement is wireless connectivity to send meter readings from the mobile device to the central database or directly to clients' mobile phones. The platform can be incorporated with mobile banking systems for convenient payment of bills.

Mobile Based Utility Meter Reading

Utility companies often serve millions of clients who are located across a large expanse. Each client has a meter that needs to be read on a regular basis. This is one of the most costly operations for the utility industry. As a result, in developed countries, users are often required to pay for an estimated cost of monthly consumption for water, gas or electricity. Utility companies in that case, can choose to take meter readings and balance clients' accounts in longer durations – say

quarterly or even yearly. This significantly reduces on the operational cost compared to cases when meter reading have to be captured monthly.

Automated Meter Reading/Advanced Metering Infrastructure (AMR/AMI) also exists in some developed countries. This permits utility companies to automatically capture meter readings remotely and to wirelessly transfer the data directly to the central office for processing.

In contrast, the low accessibility of banking system for most clients in developing countries makes setting-up payments in the form of standing orders unreasonable. The meter reading practice in most countries is manually done and involves drive-by solutions. This approach requires that meters are read from all clients at a given window of time per month. Different utility companies then differ on the way the bill is generated after capturing the meter reading. In traditional practices, after manually capturing the readings, the data is taken to a centralised office, where it is manually uploaded to a system for computing and printing.

In recent years, some utility companies such as National Water and Sewerage Corporation (NWSC) in Uganda have been using advanced Hand-held Meter Reading Devices (HMRDs) to record meter readings. In addition, the utility personnel in charge of capturing the reading also moves with a portable printer which he/she uses to print the bill instantly at the clients' premises. This approach is still costly for two reasons: (1) The need to capture the reading from each house on a monthly basis, and (2) HMRDs are often expensive. Other disadvantages include the need to have a hard copy of the bill, which must be delivered to the client in person due to the lack of addresses in most parts of developing countries. Finally, clients must physically pay the bills through banks or utility offices

It is possible to build a simple and cost effective utility management platform based on mobile devices such as phones and PDAs. And every user-friendly application can be developed for mobile devices to enable easy storing of meter readings and instant processing of clients' bills. The meter reading data in the mobile device can then either be sent directly to the customer through sms or email, or uploaded on a central database. In the later case, the central system can have back-end applications that automatically sends SMS/

email alerts to clients whenever a new outstanding bill is due for payment. The back-end application can also be enabled so that clients inquire about their outstanding bills in the system. Remember, most modern phones or other mobile devices such as PDAs are very "capable". They are equipped with high quality user interfaces such as touch screens, have large storage capacities, and high computing capabilities. These devices can store information for a large number clients and can process some information at reasonable speed. An application in the mobile device can be developed using platform independent compilers/translators such J2ME. A database of clients' information such property IDs, customer numbers and names for a particular zone will be pre-loaded in the mobile device. This information can then be used by the application in the mobile device as input data.

Upon arrival at each client's premises, the utility personnel adds the current reading corresponding to the property ID/customer number in the mobile device and saves it. The application will have a bill-computing engine for immediate computation. Once the reading has been captured and the electronic bill has been computed, there are numerous ways to send it to the customer. Examples of possible methods include:

Traditional Paper bills: In this approach, clients are presented with a paper bill. This approach requires that the bill is printed either at the customer premises or at the utility company's central office. This however doesn't have much added value compared to the existing system, neither does it lead to reduction in operational costs.

Paper-less mobile based bills: An alternative approach is to transmit the electronic utility bill directly to the client. This can be done either by using Bluetooth, SMS, or email. When SMS is used, a client is sent an extract of the bill instead of the complete bill as would appear in the paper bill. This is necessary to comply with characters' limitations of SMS system. Example of information that can be extracted from the bill could be Billing date, Client number, Client Name, Property ID, Current/Previous Reading, and Payment due date in short forms.

When sent by email or Bluetooth, on the other hand, the bill can be in its detailed format. It is worth noting that apart from Bluetooth, email and SMS delivery methods are not free of charge. However, they might

be cheaper compared to the aggregate cost of portable printers and papers SMS method in particular provides some incentives to telecom service providers to support the platform.

Mobile Phone Based Utility Payment

It is possible for utility companies to cooperate with existing mobile banking providers to enable customers to pay their bills directly using their mobile phones. Any of the existing m-banking systems can work, but utility companies can alternatively develop their independent m-banking systems for this purpose. In case of involving independent m-banking provider, all what is needed is an agreement between the m-banking service providers and utility company that stipulates, among other things, on how the utility company gets its money from the provider.

Mobile phone based utility payment system is highly likely to easily penetrate the market due to the convenience it provides. Customers will definitely appreciate the comfort of paying their bills without having to join queues in banks or utility offices. It may also lead to timely payment of bills. Other advantages to utility companies include reduced operational cost, improved customer service satisfaction, and reduced customer complaints.

Additional useful components for the proposed mobile utility management platform include a provision for confirmation of receipt of the bill, receiving of the receipt after payment, reporting system faults such as water leakages, submitting complaints, etc.

Summary

At Makerere University, we have been developing numerous similar mobile based solutions. Examples of the solutions include EpiHandy for medical data collection (vaccination trials), an SMS based system

to monitor the spread of malaria in Rwanda, an SMS based system to monitor temperature of exported flowers from Ugandan farmers in order to preserve the quality of the flowers during the transportation phase, a mobile phone based system to report traffic incidences by Uganda Police Forces, an SMS based system to allow NSSF clients to inquire about their savings, etc. These examples demonstrate the existence of local capacity to develop similar solutions such as the proposed mobile phone based utility management system.

The potential of mobile phones in developing countries is immense. There is a need for stakeholders in developing countries to join efforts to cooperate in order to explore different areas of local or regional relevance where mobile technology can make an impact. Perhaps more importantly is the readiness of utility companies to embrace the solutions that mobile telephony will offer to them.

The writer is a PhD holder and Associate Professor in Communication Networks, at Makerere University.

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.



Pictorial: AfWA Scientific and Technical Council (STC) Deliberations (23rd – 26th November 2009, Commonwealth Resort –Munyonyo)



MD-NWSC, Dr. William T. Muhairwe chats with delegates from other AfWA WATSAN institutions during a session break



The STC Executive board members during the STC deliberations, at Commonwealth Resort, Munyonyo



STC Deliberations in progress



MD-NWSC, Dr. William T. Muhairwe, addresses a press conference during STC deliberations



A delegate makes a presentation during the STC meeting



AfWA President, Mr. Mamadou Dia responds to questions from journalists during STC deliberations

Pictorial :Commissioning of Entebbe Water Supply System (WSS) by H. E. Yoweri K. Museveni, President of the Republic of Uganda



The President of Uganda, H.E. Yoweri K. Museveni officially inaugurates the Entebbe WSS.



MD-NWSC Dr. William T. Muhairwe, explains to H.E. The President of Uganda Yoweri K. Museveni how water intec works at Entebbe WSS works.



The President of Uganda, H.E. Yoweri K. Museveni listens to a presentation by MD NWSC, Dr. William T. Muhairwe in the NWSC Entebbe area Offices.



H.E. The President of Uganda Yoweri K. Museveni is welcomed at the NWSC Entebbe are office by the MD-NSWC Dr. William T. Muhairwe.

Pictorial : External Services Assignments



The NWSC,Business Relations Manager Mr. Joseph Ndegyeya, (in a blue t-shirt) gives a guided tour to the DAWASA Tanzanian team during an External Service (ES) benchmarking visit.



The NWSC delegation led by Eng. Johnson Amayo, discusses with Ogun state water Corporation staff (Nigeria) on WATSAN utility management best practices.



Staff of the Ogun state water authority discuss utility management best practices proposed by the NWSC-ES team.



The Ogun state water Corporation staff (Nigeria) discuss with the NWSC External Service (ES) team during their visit in Nigeria.

I read
The Water Herald
Learn from your peers.

The Water Herald.

Your Valuable Source of Utility Innovations.

To find out more on how to submit an article, email us at
watereditorial@nwsc.co.ug.

National Water & Sewerage Corporation
Plot 39, Jinja Road, Kampala. P.O. Box 7053 Kampala, Uganda
Tel: +256 414 315 138 Fax: +256 414 265 929
Email: watereditorial@nwsc.co.ug Website: www.nwsc.co.ug



The Water Herald
Learn from your peers.

Elgon Water Partnership, Mbale Wins Certificate for Best Customer Care Corporate Category

By Jackson Turyahurira

In order for any business to survive and compete favourably in this competitive global environment, it needs to position itself strategically to its customers because they are the source of its revenue that increases the cash operating margin. Therefore, a company needs to show its customers that it values them by treating them well through good customer care and service.

Moment of truth

As a partnership built on strong belief to give superior customer service and consequently creating raving fans, we have recognized moments of truth for our business hence the recognition and award in the Eastern region. A moment of truth in business is when an interaction occurs between the customer and the service provider that can leave a lasting positive or negative impression (for our case a positive one) on the customer. This occurs when a customer for example makes first contact with business, when the business has experienced a service failure (for our case when we fail to supply water especially due to power outages and we ensure our customers are informed to use water sparingly till we restore supply).

The customer reception/ nice welcome i.e. calling customer by name, thanking customer for: having chosen to consume the product, visiting the office, settling water bills are key in creating raving fans. We also ensure that office phones are received with courtesy. All the above and others have put a long lasting impression.

In addition, to the above we have looked back and tried to find out what other things we do differently from other service providers in the region that made us stand out. It is summarized as follows:

Good customer care – a pillar for creating raving fans!

In Mbale we try as much as possible to implement what the Corporation Motto says that “The Customer is the Reason We Exist”. We have a very welcoming front desk officer who welcomes the customers with a smile and listens attentively to them before coming up with appropriate responses to their queries. Quick response to customers’ complaints is key to maintaining good customer care, that’s why we ensure that in case a complaint is at a Customer’s premises, we endeavor to visit the premises immediately in order to resolve the complaint without wasting time.

Apart from visiting big customers as revenue collectors, we also visit them to check on the supply status and ascertain whether or not they have any other water problem.

Another area that we have ensured we attend to quickly is the leakages and bursts that happen on our network. Our technical team is always on standby and equipped with the relevant tools and materials to use in case of such occurrences. At times these repairs have had to be done at night but this is all because we want to minimize water losses and inconveniences to our dear Customers.

Ambience is another key element that portrays whether an Organization values its Customers both Internal and External. We have maintained a good ambience both the interior and the exterior of the office. The Front Desk and Cash Offices are well positioned with enough waiting space and comfortable seats for the Customers to sit and wait for their turn to be served. The seats are entirely for customers. There is some literature for reading. A television set to keep the Customers occupied at the Front Desk is also available. A Water dispenser has been installed to provide

some clean drinking water for the Customers. Ample parking has been provided for the Customers and the office exterior and interior has beautiful flowers. We boast of a well maintained lawn and the building is well painted with the Corporation colours.

The Area Manager's telephone contact is also well displayed at the Front Desk so that in case any Customer needs to contact him, he can easily be reached. We ensure that correct meter readings are taken to minimize inaccuracies in bills and bills are delivered in time to give ample time to customers to make payments.

Another key factor important for the good Customer Service is being able to offer flexible working hours which can enable the Customers access the offices for service. We have ensured that we adhere religiously to the Corporation working hours of 7.30 a.m. to 6.00 p.m. on weekdays and 8.00 a.m. to 1 p.m. on Saturdays so that Customers are able to pay their water bills conveniently and also access our Office for any other issue. There is also a standby team which is ready to attend to Leakages and bursts over the weekends especially on Sundays.

All our field staff are well aware of the importance of our Customers so we always use disconnection of water supply as a last resort for revenue collection after other ways of making the Customer to pay have been exhausted. Even when carrying out disconnections we disconnect with a smile and even allow the Customer to fetch some little water for use before we disconnect.

An efficient flow of information from a business to its Customers is also key for good Customer Care so that Customers are not left in the blackout/unknown.

Because of that, we endeavor to communicate to our Customers concerning different things taking place that may affect them. For example through Radio announcements, we let our Customers know when we are distributing water bills, remind them to pay them and in case of interruption in the water supply we also let them know. We go an extra mile to call our big Customers.

In conclusion therefore, however much corporation like ours is able to provide the best services to its customers but then fails to provide excellent Customer Care practices to them, it's bound to have a bad corporate image. We thank the Eastern Corporate Club for having recognized our efforts towards ensuring that we provide good Customer Care to our Customers and we shall ensure that we uphold this good practice.

"The Customer is the Reason We Exist"

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

Implementation of Water Safety Plans in NWSC – Past, Present and Future

By Christopher Kanyesigye

1. Introduction

Water Safety Plans (WSPs) was introduced in National Water and Sewerage Corporation (NWSC) in 2002 by a WEDC Researcher, sponsored by DFID UK. To obtain management endorsement, WEDC expats held a meeting with the Top Management of NWSC and made a detailed presentation of the WSPs approach and how this is used to ensure water safety. The presentation made links to other on-going programs geared toward improvement of performance and efficiency. It also provided an opportunity to review how WSP could improve aspects of asset management. At this juncture, NWSC Management committed the Corporation to getting involved. WSPs was first developed in Kampala and Jinja.

Basically, WSP is a Performance Improvement Programme (PIP) that looks at the entire water supply system, from the catchment, through the treatment plants, reservoirs, the distribution network up to the consumers tap. Challenges faced at each of the processes/stages are assessed in a risk management approach, highlighting their prevention, control and improvement interventions and strategies. In its 3rd edition of the Guidelines for Drinking Water Quality (2004), WHO promotes WSP as a means of ensuring safety of water supplies. WSPs place emphasis on risk assessment coupled with risk management, with simple indicators to monitor process control and periodic verification through audit and microbial indicators. This is an approach based on the Hazard Analysis of Critical Control Points (HACCP) that has been applied in the food industry, which has been proved more efficient than the traditional monitoring by end-product testing.

2. Steps for WSP development

The following is the chronology of steps taken for the development of WSP:

- i. Assembling of a team to manage the process
- ii. System description: what does the treatment and supply entail from catchment to consumer?
- iii. Identify all possible hazardous events and hazards that can affect safety of the product
- iv. Assess the risks presented by each hazardous event
- v. Consider if controls are in place for each significant risk
- vi. Identify where new/or improved controls are needed
- vii. Implement an improvement plan
- viii. Demonstrate by monitoring and verification, internal and external audit that the system is consistently safe
- ix. Prepare an Operational Manual and follow it
- x. Implement WSP support programs e.g. staff training, equipment maintenance and calibration, implementation of cleaning schedules, e.t.c

3. WSP Implementation in NWSC from 2002 to 2009

WSP Development in Kampala and Jinja took about two years and this was used as a case study for the review of the WHO Guidelines for Drinking Water Quality (3rd Edition, 2004). The program was gradually rolled out to other Areas, namely Tororo, Mbale, Entebbe, Masaka, Mbarara, Lira and Gulu. However only Tororo and Mbale were able to document their WSP manual, the rest only managing to go up to system description. A WSP internal audit of Kampala, Jinja, Tororo and Mbale was carried out which indicated that risk control and monitoring measures were

planned/budgeted for but not adequately instituted. Each of the Areas sited inadequate budget as the key constraint but a further analysis pointed to inadequate focus and management support/commitment. One major constraint noted also was the wrong notion/misunderstanding that WSP is a program for staff of the Quality Control Department

4. NWSC renewed approach to WSP implementation

In September 2009, three members of staff attended a one week refresher training on WSP in Johannesburg, sponsored and organized by UNHABITAT and Cap Net, and hosted by Rand Water. The inter-African utility training created an opportunity for NWSC to refocus WSP implementation in all Areas. The following activities have since taken place which clearly show that there is a fresh spirit for the revival of WSP in NWSC.

- a. At its meeting that was held in September 2009, Top Management recommitted itself to support revival of WSP development and implementation in all Areas. This was upon noting that WSP is not just a water quality improvement program but a holistic risk based approach for asset management and performance/service improvement
- b. At the meeting, a corporate WSP team was formed. Its inaugural ceremony was held at which each member was given a formal appointment letter, signed by the Managing Director, spelling out their roles and responsibilities.
- c. A WSP revival program was written, specifying training dates for all Areas. The training that was conducted by the Corporate WSP Team saw all Areas holding STRETCH - like workshops for WSP team formation, system description, risk assessment, identification of control measures and their corresponding budget requirements. The teams so formed were formally appointed by the Managing Director, each member receiving an appointment letter spelling out their responsibilities.
- d. All the Areas have since written and submitted their draft WSPs to the corporate WSP team. Any risk control measures whose funding requirement falls within the current business plan and budget are being implemented by the respective Areas, while those whose funding is beyond the current budget will be considered for budget reallocation or supplementary funding.

5. Future of WSPs in NWSC

All Areas were able to re-launch their WSP development and implementation by end of November 2009, by forming WSP teams, carrying out system description, risk assessment, determination of control/mitigation measures and the required funding. The Control/mitigation measures shall be incorporated into the business plans and budgets as a sure means of their implementation. Writing of procedures for the operation of the processes shall be carried out by the process and section heads with guidance from the WSP teams. There shall be two types of procedures, namely Standard Operating Procedures (SOPs) for normal operating conditions and Corrective Action procedures for incident/emergency situations. The fact that all Areas are already ISO 9001 Certified makes writing of the procedures easy because most of the procedures have already been written and operational. Monitoring of the performance of the control measures shall be carried out on a continuous basis according to a schedule/protocol that shall be established, the Quality Control Department taking the lead. Control Points (CP) or sampling points shall be established appropriately throughout the entire system. Based on the above information, each Area shall write a WSP manual that will be a guide for all WSP activities. Internal audit of the WSP shall be carried out, preferably on a quarterly basis. Inter-Area benchmarking shall be carried out as facilitated by the Corporate Team to enhance performance improvement. The Corporate Team shall also identify a competent firm that shall carry out external audit of all Area WSPs. The Corporate Team shall also ensure inter-linkage of WSP with ISO/QMS, and any other system improvement programs.

6. Benefits of WSP implementation

- i. Holistic approach in the management of water supply systems (catchment, treatment, distribution and consumer premises)
- ii. Risk based water system and supply management
- iii. A sure means of reducing NRW
- iv. A means of developing an Emergency Response Plan (ERP) in case of extreme incidences and calamities

Continued to Page 33

Exploring Uganda's Oil Resource: The Link to Water and Sanitation Service Delivery

By Peter R Twesigye

Countries with non renewable natural resource wealth face special opportunities and challenges. If well utilised, these resources can create greater prosperity for current and future generations. On the other hand, if poorly managed, they could cause economic instability, social conflict and irreversible environmental degradation.

I had an opportunity to attend the fourth National Competitiveness Forum on Repositioning Uganda for Global Competitiveness, and wish to share with you some of the requisites and challenges Uganda ought to do to realise the benefits of its oil resource potential, noted at the forum.

First and foremost, it was noted that whereas Uganda has worked to better its Macroeconomic environment at the national and global scene, its Microeconomic environment which is the supportive structure of the economy is still poor. Pragmatic efforts geared toward deepening diversification are envisaged to help resuscitate the failures within the micro economy. This economic situation is characterised by the risky business environment of Uganda which increases risk on capital and threatening aid (FDI), implying that we have to only rely on domestic resources to build our economy.

It is in this vein therefore that Uganda needs to devote more efforts to resources like oil than donations. Effective use and management of oil requires that decisions on management of oil should be with the Government's top policy level and not the mining companies. To achieve great economic transformation therefore, Uganda ought to follow the steps below.

Step 1: Discover all Natural assets including sub soil assets within the country.

It was noted that Africa is naturally endowed with about 20,000 US dollars worth in mineral wealth per Km. In Uganda, Tullow oil prospecting has shown that 26 out of 27 wells prospected, have oil in them.

To maximise this natural resource, there is need to engage enabling laws, regulations and contracts for resource production and exploration that mitigate associated risks of repatriation at the expense of domestic social welfare. Currently Uganda has one of the best oil exploration contracts with an allocation of 80% share revenue to Government and 20% to the mining company. However there is still need to explore other natural resource potentials like Gold, Uranium etc.

Step 2: Have a sensible and robust tax regime:

The tax structure for the resource (oil) should be in a way that proceeds are remitted to ease the tax burden from consumer goods born by citizens. Oil revenue should be a major source of government revenue. The challenge now shifts to how to re-allocate this revenue for public expenditure.

Step 3: Avoid the "Niger Delta".

The government must avoid an uncompensated local community environment, and put in action compensation and benefits structures to avoid social unrest. The example of an uncompensated local community in Nigeria that was evicted from their lands to enable the oil production has resulted in armed rebellions in the Niger delta, spurring insecurity and multiple deaths of hundreds of people. Secondly the disposal and discharge of unwanted crude oil must be done in accordance with the legal and environmental provisions to avoid human exposure to unhealthy chemicals. Similarly natural water bodies (eg Lake Albert-Uganda) should be protected from any discharges. The local community can be involved through either of these means.

- Build a discourse which makes local demand for money unpalatable. Discourage present consumption of oil revenues, and emphasise that the revenues are meant to build institutions for the young generation (children' future). This

tenet should be seen to be practical within the country's service & infrastructural development.

- Effect transparency in the use of the oil revenues to trickle down to the lowest citizen. This can partly be achieved through, awarding oil contracts through transparent means like auctioning as opposed to secret deals. Auctioning is a preferred means because auctions reveal the huge value of worth to government. This also calls for "the best bidder takes it".
- Publish the Revenues from the resource (oil) to the public in order to remove public suspicion and corruption tendencies thereby consolidating public accountability.

Step 4: What does the government do with the realised revenues?

To achieve global economic competitiveness, the government has a challenge to make a choice on how to utilise oil revenue thus; It can be business as usual where most oil money will go to public consumption. However oil revenues can't be used for this purpose because they will run down as the asset gets depleted. There is therefore need to have a high savings rate of the oil revenue. This requires that;

- Oil revenues be flagged in the national budget thereby attracting local and foreign investment.
- Need to have a separate decision making body on spending it.

Don't do "a Norway". Norway was able to develop by investing its oil revenues in acquisition of assets abroad. This method was successful because Norway has a high capital per worker than Uganda. The question that arises therefore is, how do you invest the generated revenues domestically? The following are the recommended answers.

- i. Invest in capital investments despite their low returns in the short-run, but these usually have high returns in the long term.
- ii. Build capacity of the system to invest, by choosing good investment projects.
- iii. Set up capacity in the civil service to select good investment projects and implement them. This can be achieved through Research & Development (R&D), backed by an enabling industrial policy.

- iv. Carry out private investment to stimulate development. However this must be accompanied by scaled down unit costs of production especially in the energy and infrastructure sectors.

To achieve all the above, there is need to think regional, i.e. in terms of the East African Community to exploit the opportunities that arise within, and positioning East Africa as a haven of competition. Secondly, think urban because Uganda is on a path of Urbanisation, and this calls for putting in place the necessary infrastructure to support the rising population and industrial opportunities.

As National Water and Sewerage Corporation (NWSC), we stand to benefit from the development of the oil sector, when the government can pay all its utility bills in time, bigger contributions through grants for key water investments like new treatment plants, network reticulation, construction of adequate reservoirs, overhaul and expansion of the sewage network in all urban centres, and above all a better infrastructure that can hasten NWSC operations (better roads, energy development etc)

Looking at the bigger picture, one of the objectives of NWSC is to facilitate the process of achieving Millennium Development Goals (MDGs) – through increasing the proportion of the population with access to improved water sources in urban areas. The achievement of this objective can be enhanced if oil revenues are allocated in a way that allows NWSC to increase water coverage in all Urban Centres. The onus therefore, is on the Government of Uganda to ensure that this is done for the benefit of Ugandans, through provision of the required resources.

WHAT DO YOU THINK?

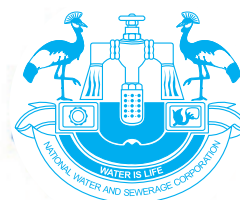
To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.



Coming soon...
The Water Herald Online.
Get ready to point, click and read!!!

Any ideas, views or comments? Email us at watereditorial@nwsc.co.ug.

National Water & Sewerage Corporation
Plot 39, Jinja Road, Kampala. P.O. Box 7053 Kampala, Uganda
Tel: +256 414 315 138 Fax: +256 414 265 929
Email: watereditorial@nwsc.co.ug Website: www.nwsc.co.ug



The Water Herald
Learn from your peers.

The Challenges of Information Integrity in NWSC

By Ronald Azairwe and Peter Mukuru

What is Information Integrity?

As we say goodbye to the data age and hello to the information age, where leading - edge organizations treat their data as a critical resource and harness its power to generate information that enables them, not just to stay ahead of the competition, but also to make important decision, it has become more important than ever to emphasize information integrity. In this era of on demand information, organizations generate, manipulate, manage and exchange more data than ever before.

The technology landscape is awash with buzzwords and terminology used without common understanding and proper definitions. Many times the terms data quality and information integrity are used interchangeably as though one meant the other.

While as the two words share a lot in common and definition, they are in fact different. The former refers to the accuracy of business information, the latter refers to more than just one quality of information.

The exact meaning of Data Quality can vary widely from person to person but is not the subject of this article.

Information Integrity is the trustworthiness and dependability of information. More specifically, it is the accuracy, consistency, usability, relevance and reliability of the information content, processes and systems.

Put simply in business terms, information integrity is the assurance that information is consistent, certified and can be reconciled.

Information in itself is a key enterprise asset for any entity that needs to be managed well if it is to deliver the benefits associated with it. It is the mismanage-

ment of information that leads to information integrity impairments.

If the underlying information isn't of a sufficient level of integrity, the success of business activities relying on the information will be limited. We therefore argue that Information Integrity should be a prerequisite for many other information management initiatives.

To illustrate the point, think of a situation where payroll information from the HR systems did not agree with payroll system information in Scala Computerised accounting system and figures in Scala did not agree with those from HiAffinity (Custima) Customer billing System! What use would this information be to NWSC?

Information Integrity Benefits

When Information Integrity failures occur, they can be enormously expensive. Implementing an enterprise-wide Information Integrity architecture that minimizes erroneous information would greatly benefit the enterprise by:

- Preventing, monitoring, detecting, verifying, and correcting information errors.
- Enhancing security, audit, and control.
- Making it easy to detect accidental failures – or deliberate fraud.
- Easing integration of systems
- Easing the conversion of existing systems should there be mergers, acquisitions, and consolidations.
- Modifying existing systems to accommodate changes such as new legislation or technology.
- Conforming to evolving industry - specific Information Integrity requirements.

- And more importantly, giving assurance that information used for decision making is dependable.

What are the Causes of poor Information Integrity?

There are numerous sources of poor information integrity. Some of the most prominent ones include:

- Human error: Wrong input from the data entrants (the old maxim – garbage in, garbage out)
- Disparate systems: Systems that don't "talk" to each other. Lack of integration
- Attacks from hackers: Malicious attacks either for profit or just as a destruction
- Virus attacks
- Complexity of information such as images and video
- Conversion: Moving from one system to another or changing databases, e.g. Custima to HiAffinity
- Distributed offices: Geographically distant offices using the same data e.g. Mbarara, Arua, Head Office.
- Large volumes of data: Processing large volumes of data can lead to data corruption
- System failures or programming design errors

What are the dangers of poor information integrity?

Because Organizations are increasingly relying on complex and interrelated information systems to support business operations, interface with customers, and make decisions, poor information integrity can lead to very costly errors in decision making, business operations and even impact directly on financial aspects.

For example, a 2001 study by PricewaterhouseCoopers in New York found that 75% of the 599 companies surveyed experienced financial pain from defective information. It is estimated that poor data management is costing global businesses more than \$1.4 billion per year in billing, accounting, and inventory inconsistencies

Accordingly, the information products and services

provided by these systems like custima, high affinity, scala should be of high quality and should be well governed.

Industry analysts, researchers and academicians agree that poor information integrity pervades all aspects and parts of the organisation.

What are the challenges faced in ensuring Information integrity?

Although it is now well understood that Information Integrity failures affect all organizations, until recently we have not recognized these failures as a pervasive issue, despite the fact that the lack of Information Integrity costs our economy billions of dollars. It has led to such things as ghost soldiers, ghost teachers, individuals being paid twice and some going without pay for months, delayed transcripts, etc.

Sister companies like Umeme have been greatly castigated for issuing wrong bills and this has in turn harmed their customer relations, where customers prefer to "steal" their electricity rather than pay wrong bills.

However, even with this realisation, it is still an uphill task to ensure that information has integrity in organisations. Information experts trying to clean up information in organisations face a number of challenges, not least among which is:

- Top management buy in: Sometimes top management underestimate the value and importance of information integrity and will slash budgets meant to improve this
- Legacy systems: old and antiquated systems
- Disparate systems: Systems that are not integrated and therefore take in same data facts from different sources
- Costs: The cost of a cleanup exercise
- Human error: Input error, e.g. poorly input data

Solutions to Poor Information Integrity

As more organizations realize that high quality information is necessary for competitive advantage as well as good decision making, information managers are under increasing pressure to add information quality

assurance to their list of job responsibilities. Some of the technology - based mitigations to lessen the challenges include:

- ERPs to replace the numerous disparate systems
- Automated data capture systems such as scanners, for meter reading, handheld meter readers.
- Automation of manual process, e.g. online payments as opposed to cheque writing
- Wide Area Networks (WAN) to overcome the challenge of distributed offices
- Adaptive security appliances that are capable of ensuring high integrity of data transmitted over networks and protecting it from viruses and hackers

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

Continued from Page 27

Implementation of Water Safety Plans in NWSC – Past, Present and Future

- | | |
|---|---|
| <p>v. WSP will contribute to a good public image through customer satisfaction</p> <p>vi. Staff skills development through the comprehensive system risk assessment and management</p> <p>vii. Boosting external services through provision of WSP consultancy</p> <p>viii. Cost effective water quality management</p> | <p>ix. WSP is a support programme to QMS/ISO certification and vice versa</p> <p>x. WSP will ease the process of accreditation of NWSC Laboratory services</p> <p>xi. WSP is a means of partnering with key stakeholders to ensure observation of regulatory requirements against catchment and source pollution.</p> |
|---|---|

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

The Battle against Illegal Water Consumption in Mbale is on and the Harvest is Bounty

By Jackson Turyahurira

Much as we aim at creating raving fans out of our Customers in Mbale Area, we are faced with several challenges and one of them is the illegal water consumption by some Customers. We have been very vigilant while carrying out our field work and have been able to get some of the customers who practice this illegal act.

Since 1st July 2009, we have managed to discover fourty five cases of illegal consumption of water and have been fined a total of over 35 million and so far over 15 million shillings has been bagged successfully. Thanks to area staff that have embraced the Territorial Management Concept. Illegal consumers that have not responded have been forwarded to the Debt Collectors for further action.

We have set up a network of informers in the area against illegal water use. We give them a token of appreciation after we have confirmed the report. Our staff have also helped much in discovering illegal consumption.

We as staff are determined to fight this vice of illegal water consumption .

Below are some of the ways through which water is consumed illegally by these unscrupulous customers:-

- Meter Tampering – cutting the gears of the meter so that it under registers the water consumed. This is very common in Mbale.
- Meter by pass – tapping water behind the meter thus not registered by the meter.
- Illegal connection – connecting themselves on our service lines without a formal application for water supply.
- Illegal reconnection – after an official

disconnection a Customer reconnects the water supply illegally usually by using a flexible pipe.

- Meter reversal – Customer removes the meter and connects it in the reverse direction.

Below are some of the ways we use to find out these illegal practices:

- Observation of the meter – we open a Customer's tap and as the water is flowing you observe the movements of the dials of the meter, if they skip as they move then the gears are cut. We open the meter and physically inspect.
- If the consumption of a particular account especially a big account drops by a big difference then we investigate the account especially for a meter by pass. In most cases for a meter by pass when you remove the meter the water will come out from the opposite direction in the pipe (back flow will stop after a short while but in case of a meter bypass, it will flow consistently and continuously).
- After an official disconnection, incase a Customer does not make payments within 2 days, we normally go back to check and you may find that he has reconnected himself.
- During meter reading, if you find that the readings in that month are lower than the previous reading of last month then most likely the customer is reversing the meter.

The Struggle Continues. "Aluta Continua"

WHAT DO YOU THINK?

To comment on this article, please email up to 500 words to the editor at watereditorial@nwsc.co.ug. A selection of significant comments received will be published in the next issue of the magazine. The Water Herald relies entirely on contributions sent in by NWSC staff, customers, guest writers and other stakeholders. Articles should be 1000 – 2500 words long, with adequate illustrations and references. Please contact the editor for further information.

Disturbing Global Trends:

A Biblical Perspective

By Martin Kalibbala and Pheona Wall



Numerous disturbing global events have taken place in the last couple of years. Unfortunately, some of them have received very limited media coverage. It is tenably prudent to analyze some of these events, through the lenses of biblical scripture.

Firstly, German based energy watch group released a horrifying report. They predicted that in approximately 42 years from now, all fossil fuel reserves will completely run dry and the entire global economy will shut down, since it entirely depends on them. In fact they allege that production peaked in 2006 and thereafter, production has dropped by 7 % and will continue to do so – for the subsequent years – till the reserves completely dwindle. This implies ever soaring fuel prices at the pump. Recently, crude oil prices soared to their highest, to over USD \$ 100 per barrel.

On the other hand, environmentalists like Al Gore – in his famed award winning documentary dubbed “The Inconvenient Truth” – allege that if we continue to use fossil fuels at the same rate to run our machinery, pollution will have irreversible effects on our planet in 50 years! Also, recently concluded deliberations at the United Nations Conference on Climate Change – in Copenhagen, Denmark – sounded similar alarms. Science is beginning to inevitably predict

doom. But where is our hope when all this is raging its fist against our planet?

In **Psalms 121:1-2**, David said, “...I lift up my eyes to the hills. Where does my help come from? My help comes from the Lord, the Maker of heaven and earth. He will not let your foot slip. He who watches over you will not slumber...” During King David’s times, some people hoped and looked up to high places (hills) where other gods and things they trusted were. But where is your trust? Is it in God alone?

Secondly, on 15th September 2007, the London Times featured an alarming story on alleged Iraq war intrigue, which perplexed Americans. Former Federal Reserve Chairman Alan Greenspan openly declared that the prime motive for the war in Iraq was not terrorism but oil – implying a war of economics. Simply stated, when the United States went off from the gold and silver standards, it had no backing for its dollar. Thus, the US Government made a deal with Organization of Petroleum Exporting Countries (OPEC) – the oil producing nations – to make the United States (US) dollar the absolute currency for oil trade.

You all remember the fake intelligence Central Investigation Agency (CIA) reports about Saddam Hussein, alleging that he possessed weapons of mass destruction (WMDs). The entire world believed US – only to be deceived. This reputable economist, Greenspan and others now know that Iraq was attacked because they had earlier on refused to accept dollars as payment for their oil and that Saddam was encouraging the use of Euros. Even China, with its USD \$ 1.33 trillion debt, has now been threatening to use its vast economic power to destroy the economy of USA. Red China is calling its vast economic power nuclear economics.

Remember, a great deal of American products come from China because of its huge consumer and cheap

labor base. Experts say that if China unleashes this economic nuclear war as they call it, by for instance just disposing off all the back-up dollars they have in their treasury – in exchange for Euros – there would be a “dollar tsunami”, leading to the crash of the already struggling dollar. China and their bosom friend Russia, are not good friends to USA. If you can, please pray for America’s economy. In the face of the prevailing economic meltdown, I don’t think we need any more calamities.

Another disturbing thing is that according to biblical end time prophecies, USA does not feature as a force to reckon with. This actually implies that according to God’s timetable, this super power will fade out with time. But the bible predicts China and Russia as one of the world’s future super powers. Just for the record, God gave 70 % of all the world’s gas deposits to Russians.

How can we understand these disturbing events of our time – without seeking God’s counsel? **Daniel 12:10** affirms, “...but the wicked will continue to be wicked. None of the wicked will understand, but those who are wise will understand...” How can we be wise then in order to understand? **Proverbs 9:10** says, “...The fear of the Lord is the beginning of wisdom, and the knowledge of Him is understanding...”

Thirdly, on 20th September 2008, BBC News reported that an object from space had streaked through the sky over Peru and slammed into the ground at Carancas. The unidentified object looked like a giant fireball. It left a crater ninety-eight feet wide and twenty feet deep. Some scientists said it must have been a meteor, other scientists disagreed but couldn’t tell what it was. Strange and unidentifiable vapors began to rise from the crater, and people in the area began to get sick. Many of the people in Carancas complained of headaches, nausea, and vomiting shortly after the object landed. The people of the city were greatly frightened, because their water supply was also contaminated. Later, the region’s president, Pablo H. Guzman declared the crater a national cultural and heritage site.

Revelation 8:10–11, declares: “...And the third angel sounded, and there fell a great star from heaven, burning as it were a lamp, and it fell upon the third part of the rivers, and upon the fountains of waters...and the third part of the waters...were made bitter...”

Jesus said that in the last days, there would be fearful events and great signs from heaven. **Luke 21:25–26** declares, “...There will be signs in the sun, moon and stars. On the earth, nations will be in anguish and perplexity at the roaring and tossing of the sea. Men will faint from terror, apprehensive of what is coming on the world, for the heavenly bodies will be shaken...”

Was this fireball that fell in Peru a sign of something much bigger that is soon to come? Or is it just a trial-run of God’s judgmental activity against insolent, sinful and unrepentant man on earth? The question turns to us then, are we really living right with God? If you have not yet accepted Jesus Christ as your Lord and Savior, please do so by repenting and yielding yourself to His Lordship.

Lastly, uncontrollable wild fires are raging in America and Australia. Recently, CNN and ABC news media featured video clips of these fire horrors. It was disturbing to note that as California state fires were raging, the helpless and overwhelmed US fire department crew – the world’s super power – looked on. With particular interest, it was moving to note one reporter who was covering the fires down peoples’ homes. He would interview them to ascertain how they felt about the loss.

While he was reporting the loss of others, he went to check on his 20-year old home, only to find it in flames with his family having fled for dear life. He was then forced to emotionally report about his own loss. He was almost in tears as he narrated his own ordeal.

While the fires were raging, people had to make quick decisions on what things they were to flee with from their burning homes. Some fled with souvenirs, family memoirs, photos, etc. Infact one man – while he was standing near his once beautiful family house that was burnt down – said, “...well surely one thing I lost and can’t do without, that is my bible, it got burnt. I got to go out and get another one...” What a moving statement to learn from this unknown man! Had this man set his mind on correct priorities? Heaven and earth will pass away, but God’s word will never pass away. May God help us to set our priorities right in life.

Assuming you were in his predicament, what would you have done or saved first? Would you have complained and shook your fist against God? Psychologists allege that extreme crises like these are great revealers of character.

In **Luke 6:47–49**, Jesus said, “...I will show you what he is like who comes to me, hears my words and puts them into practice. He is like a man who built a house on rock. When a flood came, the torrent struck that house stayed, because it was well built. But the one who hears my words and doesn’t put them into practice is like a man who built a house on sand. The moment torrent struck that house, it collapsed and its destruction was huge...”

Jesus added, “...Verily, verily, I say unto you, He that believeth on me hath everlasting life...” (**John 6:47**). Unlike us who bold a statement in print or emphasize it by the voice tone during speech, in the Hebrew vulgate, when one wants to emphasize a very

important point, they repeat it twice or more times. Here, Jesus wanted us to get this very crucial truth of God’s Kingdom by repeating the word “verily” twice. To the listener, this meant that they would stake their lives on what was said as absolute truth. Another translation of this phrase can mean “I vow, I vow.”

Why don’t we look up to Jesus, believe, and wholly trust Him in the midst of all this disturbing news around us. He is the only one who can give us unshakable peace (**John 14:27**).

May God Almighty bless and keep you!

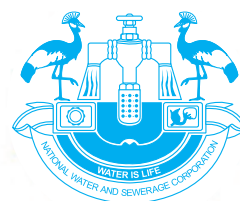




On the 100kout?
You'd better be!!!
Coming soon...

The Online Version - Water Herald

National Water & Sewerage Corporation
Plot 39, Jinja Road, Kampala. P.O. Box 7053 Kampala, Uganda
Tel: +256 414 315 138 Fax: +256 414 265 929
Email: watereditorial@nWSC.co.ug Website: www.nWSC.co.ug



The Water Herald
Learn from your peers.

Areas Performance Score Card, July – Sept 2009

By Beat Nabacwa

Area		July Performance				August Performance				September Performance			
		NRW	WR	COMI (‘000 UShs)	Incentive Earned (COM ‘000’ UShs)	NRW	WR	COMI (‘000’ UShs)	Incentive Earned (COM UShs)	NRW	WR	COMI (‘000’ UShs)	Incentive Earned (COM UShs)
Kampala	Actual	40	59.8	2,605,000	87,593	38.8	42.7	3,335,000	138,429	38.9	42.5	2,943,000	111,099
	Target	39	48	3,522,000	650,209	39	48	3,522,000	650,209	39	48	3,522,000	650,209
Jinja	Actual	16.2	51.2	359,262	0	21.60	44.1	433,680	19,222	26.2	66.2	349,715	13,081
	Target	19	40.2	495,269	121,989	19	40.2	495,269	121,989	19	40.2	495,269	121,989
Entebbe	Actual	25.8	44.2	647,013	13,443	18.50	38.60	571,731	24,320	15.30	57.80	301,979	13,325
	Target	14	42.5	331,674	113,949	14	42.5	331,674	113,949	14	42.5	331,674	113,949
Mbale	Actual	14.4	80.3	57,194	0	8.20	77.3	72,155	0	6.90	77.3	105,147	7,702
	Target	5	53.9	151,904	73,015	5	53.9	151,904	73,015	5	53.9	151,904	73,015
Mbarara	Actual	16.5	54.5	228,608	0	14.50	56.5	174,289	6,883	13.80	56.50	138,991	0
	Target	13	42.7	240,053	102,946	13	42.7	240,053	102,946	13	42.7	240,053	102,946
Masaka	Actual	27.30	75.9	36,291	0	17.70	64.70	34,547	0	26.70	97.0	55,565	2,372
	Target	15	61	96,358	74,007	15	61	96,358	74,007	15	61	96,358	74,007
Tororo	Actual	6.60	67.0	25,262	0	8.60	73.90	4,600	0	8.10	73.90	17,297	0
	Target	8	67.5	63,647	26,770	8	67.5	63,647	26,770	8	67.5	63,647	26,770
Soroti	Actual	11.20	75.3	53,527	6,703	14.80	84.2	30,798	3,840	12.50	84.20	28,882	4,296
	Target	16	66.9	42,602	32,320	16	66.9	42,602	32,320	16	66.9	42,602	32,320
Arua	Actual	18.30	92.3	23,284	0	9.70	71.90	22,644	0	10.30	107.9	16,919	0
	Target	6	60.4	52,199	28,863	6	60.4	52,199	28,863	6	60.4	52,199	28,863

[illegible]

July–Sept 2009 Performance

Non Revenue Water (NRW):	The July 2009 performance indicates that only four Areas succeeded in achieving their NRW targets. These were Jinja, Tororo, Soroti, and Bushenyi. All the other areas fell short of their targets.
Working Ratio (WR):	Seven Areas were able to achieve their Working ratio targets. These include: Tororo, kabala, Lira, Fort Portal, Kasese, Hoima and Mubende.
Cash Operating Margin (COM):	With regard to cash operating margin, six Areas managed to achieve their cash operating margin targets namely, Entebbe, Bushenyi, Kabale, Lira, Kasese and Hoima.
Incentives Earned:	Almost half the Areas were able to earn some incentives during the month of July 2009. These included: Kampala, Entebbe, Soroti, Bushenyi, Kabale, Lira, Kasese and Hoima.
August 2009 Performance	
Non Revenue Water (NRW):	During the month of August 2009, only Kampala and Gulu succeeded in attaining their NRW targets. Although a good number of the remaining Areas were close to their targets, but fell short.
Working Ratio (WR):	Kampala, Entebbe, Kabale, Lira, Fort Portal, Kasese and Mubende are the Areas that achieved their working ratio targets. The other Areas fell short of their targets.
Cash Operating Margin (COM):	With the exception of Entebbe, Lira and Kasese, all Areas were unable to achieve their cash operating margin targets for the month of August 2009.
Incentives Earned:	Most Areas managed to receive substantial incentives during the month of August 2009, with Entebbe earning the highest incentive of US\$ 24 million among other Areas.
September 2009 Performance	
Non Revenue Water (NRW):	The performance for September 2009 indicates that only three Areas managed to obtain their NRW targets. These included: Kampala, Soroti and Gulu.
Working Ratio (WR):	Only Kampala, Kabale, and Lira achieved their working ratio targets. The other Areas fell short of their targets.
Cash Operating Margin (COM):	All Areas with the exception of Kasese fell short of their cash operating margin target during this month.
Incentives Earned:	Twelve Areas were able to earn incentives in September 2009, with Entebbe and Jinja Area earning the highest amounting to US\$ 13 million.

Indeed Water is Life!

Lance Okwerede

I totally agree with this statement because of two reasons; First and foremost, most living things, including human beings, depend on water for life, though I am reliably informed that the morphology of most non-living things, e.g. rocks, may be drastically affected by the presence or absence of water. I would not like to risk going into the details, save for cowardice, but because it is wide and sophisticated science that tends to defy most laws of creation and pays more allegiance to the Darwinian theory of evolution that irritates most GOD-loving people, by virtue of the fact that it has no basis before the great bung, which it purports to be the beginning of life.

Secondly, it has to be treated, just like our lives, in order to make it fit for the intended uses. Without treatment, water does not perform as desired. For example, one has a headache, which is of course a symptom of a problem or sickness. You need the attention of a professional physician to carry out proper diagnosis to determine the cause of the headache, after which appropriate treatment is prescribed with specific doses of medicines and schedules of their administration. Without treatment, you can not perform any of your duties as expected whether in Engineering, Accounting, Customer care, Legal chambers and etc. Any improper application (under or over dose) of the medicines prescribed

by the physician may result in serious illness, high costs of treatment, loss of valuable time, not to mention the loss of life.

Did you know or ever thought that water behaves in a similar way to our bodies because it is 'Life'? This reason is what convinces me mostly that water is life. Take for example, water has colour. Of course wa-

“Water is Life’ because it has to be treated well, just like our lives,”

ter with colour is undesirable to both the water supplier and customer because it is an aesthetic property that indicates dirt if seen but ensures purity when not seen. To carry out diagnosis to determine the cause of colour in water, you need the assistance of a professional laboratory analyst after which appropriate treatment is prescribed with specific chemical doses and application to produce potable water. Without treatment, water can not be fit for various uses it is intended for.

Any over or under dose application of the recommended chemical doses may result in high costs of treatment and/or unsatisfactory quality of treated water that does not meet potable water standards, which may result in health problems and not to mention the loss of life. Indeed, ‘Water is Life’.



**Our ultimate objective-to keep
the water flowinggggg...**

The 21st Century Water Utility Company
Continually Innovating to lead.
Continually Improving to delight our customers.

Any ideas, views or comments? Email us at watereditorial@nwsc.co.ug.

National Water & Sewerage Corporation
Plot 39, Jinja Road, Kampala. P.O. Box 7053 Kampala, Uganda
Tel: +256 414 315 138 Fax: +256 414 265 929
Email: watereditorial@nwsc.co.ug Website: www.nwsc.co.ug



The Water Herald
Learn from your peers.

The Water Herald

Learn from your peers

Publication © NWSC 2010
Plot 39 Jinja Road, Kampala
P. O. Box 7053 Kampala–Uganda
Tel: +256 414 315 138
Fax: +256 414 265 929
E-mail: watereditorial@nwsc.co.ug
Website: www.nwsc.co.ug