



LAKE VICTORIA WATER AND SANITATION INITIATIVE FAST TRACK CAPACITY BUILDING PROGRAMME FOR UTILITIES

Water Systems Management for Change Agents and On Job Training for Staff from Water Utilities around Lake Victoria



Capacity Building Programme Plan

Utilities

Muleba Urban Water and Sewerage Authority

Bukoba Water and Sewerage Authority

Gusii Water and Sanitation Company – Kisii Water Supply Area

South Nyanza Water Services Ltd – Homa Bay Supply Area



PREPARED BY: NWSC EXTERNAL SERVICES UNIT

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

Tel: +256 41 315 100, Fax: +256 41 265 929

Email: External.Services@npsc.co.ug, website: www.npsc.co.ug



August 2007

Preface

National Water and Sewerage Corporation has since 1998 undergone a series of performance improvement programmes that have driven performance of the utility to greater heights. This deliberate move to adopt various change management techniques has resulted in a wealth of knowledge and experiences that have not only been shared within NWSC but also with other water utilities within the region.

UN HABITAT identified, the National Water and Sewerage Corporation (NWSC) through its External Services Unit as a suitable partner with potential, experience within the region and competence to carry out the fast track capacity building programme. As such, UN HABITAT under a cooperation agreement contracted NWSC ES to take on the consultancy services in this regard. The NWSC was tasked with developing training modules and a comprehensive training programme that would result in: improved sustainability of the investments in each of the utilities, predicated on adequate cost recovery systems; an expansion of the revenue base; improved customer relations as well as more effective operational systems geared at reduction of unaccounted for water.

As a beginning, five towns around Lake Victoria region i.e. Kisii and Homa Bay in Kenya, Muleba and Bukoba in Tanzania, and Kyotera in Uganda were selected as the ideal towns. However at the inception of implementation, Kyotera in Uganda was not included as the issue of its management is yet to be sorted out by the Directorate of Water Development (DWD), Uganda.

NWSC ES sent an expert team (ET) during the period 11th – 29th June 2007 to carry out a situational analysis and training needs assessment. The team visited the towns of Muleba and Bukoba between 11th – 15th June 2007 and Homa Bay and Kisii between 25th and 29th June 2007. The findings form the basis for the formulation of the training programme and are herein highlighted in this report.

Chapter 1 covers the introduction whilst Chapter 2 describes the approach to the assignment. Chapter 3 details the training programme for the Change Agents whilst Chapter 4 details the programme for the Performance Improvement Programme workshops and the on job training, the mechanism for monitoring and evaluation as well as the products to be developed that are the outputs. Chapter 5 provides the Training implementation schedule.

Table of Contents

PREFACE	3
1.0 INTRODUCTION.....	5
2.0 APPROACH TO THE ASSIGNMENT	6
2.1 GENERAL APPROACH.....	6
2.2 IMPROVEMENT OF BILLING AND ACCOUNTING SYSTEMS	6
3.0 CHANGE AGENTS TRAINING PROGRAMME.....	8
3.1 SELECTION CRITERIA FOR CHANGE AGENTS	8
3.2 PROPOSED CHANGE AGENTS	8
3.3 OBJECTIVES OF THE CHANGE AGENTS TRAINING/BENCHMARKING VISIT	9
3.4 TARGET AREAS	9
3.5 SPECIFIC OBJECTIVES UNDER EACH TOPIC	9
3.6 TRAINING METHODS AND RESOURCES.....	10
3.7 PROGRAMME FOR COURSE ON WATER SYSTEMS MANAGEMENT FOR CHANGE AGENTS.....	11
4.0 DEVELOPMENT OF PERFORMANCE IMPROVEMENT PROGRAMMES AND ON JOB TRAINING	16
4.1 PERFORMANCE IMPROVEMENT PROGRAMMES (INCLUDING CROSS CUTTING INSTITUTIONAL DEVELOPMENT ISSUES)	16
4.2 TRAINING MODULES FOR HANDS ON ASSISTANCE/ON JOB TRAINING	17
4.2.1 Block mapping	17
4.2.2 Billing and Accounting	18
4.2.3 Leak detection and control.....	20
4.3 MONITORING AND EVALUATION	21
4.4 PRODUCT DEVELOPMENT.....	21
5.0 TRAINING IMPLEMENTATION SCHEDULE	23

1.0 INTRODUCTION

As part of the fast track capacity building programme for Muleba Urban Water and Sewerage Authority (MULWASA), Bukoba Water and Sewerage Authority (BUWASA), Gusii Water and Sanitation Company (GWASCO) – Kisii and South Nyanza Water and Sanitation Ltd., the training programme that starts in September 2007 is geared at:

- Improving collection efficiencies and expanding the revenue base of the Utility Corporations by establishing effective billing, accounting and revenue collection systems
- Reducing unaccounted for water by providing training and assistance in water audits, non-revenue water issues and water demand management including the provision of hands-on assistance in operationalizing leak detection and repair systems
- Improving customer relations, and
- Formulating and implementing a comprehensive performance improvement programme with short-term and long-term components.

As such a situational analysis and training needs assessment were carried out in the towns of Muleba, Bukoba, Kisii and Homa bay from the 11th to 29th June 2007. The findings of this report form the basis for the planned capacity building programme to be launched in September 2007.

The focus areas shall include:

- i. Cross cutting Institutional Development issues
- ii. Block mapping
- iii. Billing and Accounting
- iv. Leak Detection and control

2.0 APPROACH TO THE ASSIGNMENT

2.1 General Approach

Following the visit by the National Water and Sewerage Corporation External Services Expert team to each of the towns a Best practice Change Agents Training/Benchmarking visit shall be held from the 24th – 29th September 2007. On job training in the areas of billing and accounting, customer care, leak detection and control, block mapping and cross cutting institutional development issues shall commence in October 2007. During the period October to December 2007, various teams of experts shall visit each of the utilities and spend time working. Training shall be administered in three ways:

- a) Development and implementation of Performance improvement plans aimed at strengthening the performance in targeted areas. These shall be developed in 3 day workshops to be held in each of the towns.
- b) Hands on assistance both in office and in the field
- c) Short teaching sessions using structured modules. The modular training will be delivered to utility staff (technical, financial and commercial) in a compressed form in each of the respective utilities.

For each of the areas a series of tools; operational manuals, procedures and or guidelines shall be developed.

2.2 Improvement of Billing and Accounting Systems

a) OPTION 1. Review and Enhance functionality of a preferred Existing Billing & Accounting Systems

Under this option, NWSC shall evaluate the existing billing & Accounting systems within the Utilities and recommend one technically preferred system to be reviewed and enhanced. This shall be done in collaboration with the supplier/vendor. The system shall be implemented under the supervision of NWSC. The scope of work shall broadly comprise the following phases:

Phase 1: Billing & Accounting Systems Review

- i) To carry out a comprehensive systems audit and review of the existing billing & accounting systems and identify shortcomings, deficiencies and/or limitations within the inputs, processes, outputs, systems' administration tasks, computer network infrastructure and other related incidental processes and activities affecting the efficient functionality of the billing system in meeting operational and management requirements.

- ii) Make recommendations (short and medium term) for resolving the deficiencies and / or limitations in (i) above aimed at improving the functionality of the billing & accounting systems in accordance to operational and management requirements.
- iii) Review the proficiency levels and suitability of the billing/IT/Accounting staff, determine and recommend the training requirements (if any) for the staff sufficient for their effective and efficient usage, management and administration of the billing & accounting systems
- v) Review the existing system and management reports and recommend appropriate formats for effective & efficient delivery of Management Information in billing, revenue management and customer service.

Phase 2) Improve Systems' Functionality & Implement the Systems

- i) Improve the functionality of the systems by ensuring implementation of customizations and improvements as defined in phase 1 (ii) above.
- ii) Support one pilot Utility in executing their billing using the enhanced billing system for at least two months.
- iii) Roll-out the enhanced systems to all other Utilities within the Project Area
- iv) Ensure on-job training for the billing and revenue / finance staff in the usage and administration of the systems in accordance to the recommendations in Phase 1 (iii)
- iv) Develop appropriate procedures and controls for the daily *modus operandi* of the systems
- v) Ensure on-job training of all other users and management in the usage of the Billing System

b) OPTION 2: Implement new Billing and Accounting Systems

This option is proposed in the event that none of the existing billing & accounting systems within the Utilities can be technically improved to realize effective, efficient and accurate billing & accounting in accordance to billing & accounting systems' best practices.

Under this option, NWSC shall propose to either install & implement CUSTIMA billing system or procure and implement a new medium size industry standard billing system and accounting system

If this option is considered, the financial implications for procurement and implementation of the systems shall be reviewed and agreed together with UN-Habitat and the Utility Companies.

3.0 CHANGE AGENTS TRAINING PROGRAMME

3.1 Selection Criteria for Change Agents

The change agents were selected in consultation with the Managing Directors of each of the utilities based on the following criteria:

- (i) Their function in relation to the utilities business
- (ii) Their role in aligning systems within the utility
- (iii) Their ability to drive change in their sections/departments

3.2 Proposed Change Agents

Table 3.1: List of Change Agents

No.	Position	Name
MULEBA URBAN WATER AND SEWERAGE AUTHORITY, TANZANIA		
1.	District Administrative Officer – Board Member	T. Rugarabamu
2.	District Water Engineer – Board member	Erast Vencent
2.	Board Chairman for MLUWASA	Hussein Rwehumbiza
3.	Managing Director	Faustine Kiiza
4.	Billing in Charge	Poncian Thomas
5.	Technical In Charge	Felix Ernest
BUKOKA WATER AND SEWERAGE AUTHORITY, TANZANIA		
1.	Managing Director	Eng. Chaggaka Kalimbia
2.	Technical Manager	Eng. Vedasto .K. Mutabasibwa
3.	Finance Manager	Jacob Laisse
4.	Business and Personnel Administration Officer	Bayona B.L. Ndibalema
5.	Public Relations Officer	Juliet Shangali
6.	Technical Mapping Issues	Dotto Matage
GUSII WATER AND SANITATION COMPANY – KISII WATER SUPPLY AREA		
1.	Representative of LVSWSB	
2.	Chairperson of the GWASCO Board	Ms Rosemary Obara
3.	Managing Director	Thomas Kondo
4.	Finance/Accountant Manager	Josephat Nyachoti
5.	Scheme Manager Kisii	Thomas Ongoro
6.	Technical Manager	Mark Ongonge
SOUTH NYANZA WATER SERVICES LTD. – HOMA BAY SUPPLY AREA		
1.	Representative of LVSWSB	
2.	Chairperson of SNWSL Board	Mr. Gilbert Oluoch
3.	Managing Director	Mr. Martin Lai
4.	Scheme Manager	Mr. Ademba
5.	Accountant	Ms. Christine
6.	Technical Manager	Mr. Isaac Owino Aura

3.3 Objectives of the Change Agents Training/Benchmarking visit

To enable the Change Agents be exposed to best practices from a Ugandan utility, and enable them to identify Performance Improvement Goals for their own utilities, in collaboration with the NWSC. The workshop is also aimed at knowledge exchange between the participants further enriched by the regional representation.

3.4 Target Areas

- Commercial and customer care services
- Revenue collection
- Water infrastructure and demand management
- Block mapping
- Cross-cutting institutional development issues (business planning, SWOT analysis, contracting, monitoring and evaluation, incentive mechanisms etc.)

3.5 Specific objectives under each topic

a) *Billing*

- Develop a clear understanding of the concepts and role of water utility billing
- Provide exposure to the structure and design of effective and efficient utility billing systems
- Enable the participants understand the techniques of attaining efficient and accurate metering and meter reading skills.
- Provide an overview to billing system software and their role in promoting utility efficiency in service delivery

b) *Customer Care*

- Develop a clear understanding of the meaning and role of the customer (internal and external) behaviour and motivations
- Develop skills and techniques on how to effectively provide quality service delivery to customers
- Understand techniques of enhancing customer satisfaction and delight
- Develop skills for effectively managing customer complaints
- Create awareness on the need to be customer driven and more flexible

c) *Revenue collection*

- Develop skills for effective and strategic revenue collection approaches
- Provide understanding for the different payment systems, strategies and methods
- Provide understanding for the different reporting requirements

d) *Water infrastructure and demand management*

- Equip the participants with knowledge and skills to enable them identify and remedy water losses and illegal use reduction

- Provide understanding of effective non revenue water management strategies applicable to their working environments
- Provide basic understanding of techniques used for leak detection
- Provide understanding of the approaches used in meter management
- Provide understanding on the interface between leakages and illegal use on non revenue water

e) *Block mapping*

- Develop a clear understanding of the objectives and benefits of block mapping
- Provide understanding of all the systems entailed in carrying out block mapping

f) *Cross cutting institutional development issues*

- Provide understanding of the concepts of performance improvement approaches
- Provide knowledge and skill in development of SWOT and PEST analyses
- Provide understanding of business plan preparation
- Equip the participants with the knowledge and skill in performance improvement plan preparation.
- Create awareness on the diverse aspects in surviving in a competitive and aggressive market
- Promote learning opportunities
- Provide transferable skills related to water utility management and performance improvement.
- Create awareness and impart knowledge with regard to business planning and performance improvement programmes

3.6 Training Methods and resources

a) *Training methods and duration*

The training will take six days, which will cover lecture sessions, focus group discussions, question and answer sessions, computer demonstrations and role play where appropriate. The participants shall be encouraged to make presentations in plenary sessions which allow the audience (facilitators and other participants) to critique each other. Further hands on experience shall be gained through the 1 ½ day attachments. During this period, the participants shall be attached to the different sections as per their field of expertise. This will provide learning opportunities, create awareness and provide more practical information on best practices. The training sessions shall be conducted in the English language but in cases where Swahili translation is required it shall be provided.

b) *Session times and breaks*

Apart from the first day which will start at 8.30 a.m., the rest of the days session shall start at 8.45 a.m. and end at 7.30 p.m for the first four days. For day 5 the field work shall end at 6.00 pm. During the sessions there will be at most three 30 minute breaks. For the sessions that are longer than one hour the session facilitator at his discretion can allow a short break.

b) Resource persons

A multi-disciplinary team of specialists with acclaimed competence and experience in various fields such as Institutional Development, Change Management, Engineering, Finance and Accounting, Commercial and Customer care, Water Quality etc. shall be pooled from the NWSC workforce to carry out the capacity building.

c) Materials

Materials to be used shall include marker pens, flip charts, flip chart stands, computers for power point presentations and group work and an LCD projector all to be provided by NWSC. The participants shall receive a bag that shall contain a writing pad, two pens, a box file and hand out notes.

d) Facilities

The training shall be conducted at the National Water and Sewerage Corporation Training Center in Bugolobi which is five minutes drive from the City Center. This complex comprises of lecture halls with a sitting capacity of at least seventy (70). It has a computer laboratory and also houses the NWSC library. Catering services shall be outsourced from a competent service provider.

3.7 Programme for Course on Water Systems Management for Change Agents

24th September 2007, Monday – Day 1

Innovative Revenue Generation and Customer Care Management

Time	Session content (Facilitator)
8.30 – 9.00 a.m.	Registration
9.30 – 10.30 a.m.	Official Opening
10.30-11.00 a.m.	TEA BREAK
11.00-1.00 p.m.	<p>Billing (procedures and data input) and key commercial aspects (Mr. George Okol)</p> <p>This session introduces the following: concepts of utility billing. Structure and design of effective and efficient billing systems, metering and meter reading, billing runs and billing software systems.</p>
1.00 – 2.00 p.m.	LUNCH BREAK
2.00 – 4.00 p.m.	<p>Innovative Revenue Generation Management and marketing (Mrs. Sylvia Tumuhairwe)</p> <p>This session outlines the generic and strategic approaches to maximizing revenue collection. Different payment systems, strategies and methods of revenue collection without disconnection, organization and management of revenue collection squads/zones, illegal use reduction methods, partnering approaches with the public/stakeholders, recipes for outsourcing revenue collection management. Critical Revenue Management Reports for turning around revenue streams for your organization. This session will outline key approaches to debt management; debt payment agreements and debt write-off policies. When is a bad Debt bad and How to avoid Bad Debts. During this session examples from best practices shall be shared. Participants shall be encouraged to share their experiences</p>
4.00-4.30 p.m.	EVENING BREAK
4.30-6.30 p.m.	<p>Customer Care (Mr. George Okol)</p> <p>This session covers the meaning and role of the customer. It gives an overview of utility business – the product and service concept and provides understanding the meaning or role of customers and facts about customers, the Internal and External Customer and Customer service as a determinant for acquiring and retaining customers. The session also outlines aspects of Quality Service Delivery – who are the players and who determines quality service, outlining the Service delivery gaps in water utilities, the factors that determine quality of service in water utilities, how to satisfy and delight customers as well as aspects of Service delivery – the role of internal customer. The concepts of customer care are highlighted and include: the Customer Encounter - the real moment of truth in customer care, effective management of customer complaints, how to handle disagreements within customers, winning over of difficult customers, tips for handling customers – the do^{’s} and don’ts, the Challenges of handling customers. Issues pertaining to Slogans, the Customer Charter, the Customer policy, the internal Outlook, Customer Management systems, Customer care Units, Customer Service standards and Codes of practice are also discussed.</p>
6.30-7.00 p.m.	BREAK
7.00-7.30 p.m.	Sharing Experiences / Case Study/Role play/ Video

25th September, Tuesday – Day 2

Water Infrastructure and Demand Management

Time	Session content (Facilitator)
8.45-9.00 a.m.	Introduction to the Day's sessions: outline, objectives and expected outputs.
9.00 -10.30 a.m.	<p>Non Revenue Principles and Water Balance (Mr. Jude Mwoga)</p> <p>This session provides a clear understanding of the components and analysis of Non Revenue Water (NRW) through an interactive construction of the water balance and the underlying assumptions in estimating components of the water balance. The session also outlines the benefits of reducing NRW, the importance of NRW in assessing utility efficiency & performance and the trade-offs for NRW etc.</p>
11.00-1.00 p.m.	<p>Network Operations (Eng. Amayo Johnson)</p> <p>This session outlines the systematic approaches for effective management of Un-accounted for Water; It provides an understanding of preventive and corrective maintenance practices in network systems and network balancing, to deal with cost-benefits of mains extensions, network intensification and new connections.</p>
1.00-2.00 p.m.	LUNCH BREAK
2.00-3.30 p.m.	<p>Survey and block mapping (Eng. Lawrence Muhairwe)</p> <p>This session is an introduction to block mapping. It outlines the objectives and benefits of block-mapping, highlights the concepts of map referencing, provides understanding of field survey processes, consumer data collection and processing as well as the procedures for map updates. It further helps the participant understand development and updating of block-maps and digitization processes. This session shall comprise mainly of computer demonstrations. The participants shall be shown why it is important to block map and how it can be done.</p>
3.30-4.00 p.m.	EVENING BREAK
4.00-5.00 p.m.	<p>Meter Management (Mr. Jude Mwoga)</p> <p>This session outlines procedures and benefits of a sound meter management system. The session discusses systems for tracking meters and meter databases, meter technologies and appropriateness, metering accuracy, meter life-cycles, consumption profiles, test-benches, replacements and renewals, trade-offs, metering, management approaches for small meters vs large meters etc.</p>
5.00-6.00 p.m.	<p>Leak detection and illegal use reduction (Timothy Mubaala)</p> <p>This session outlines the procedures and principles for undertaking an effective leak control and illegal use reduction programme. The session includes discussions on network sectorisation, setting up district meters, flow measurement, night flow measurements, setting up leak detection programmes, techniques for leak location (sounding sticks, noise correlators etc), leak repair management etc. The session also covers techniques for proactive information gathering and successful investigations of suspected illegal consumption cases as well as the management of confirmed illegal consumption cases.</p>
6.30-7.30 p.m.	Sharing of Experiences/Case Study

26th September, Wednesday – Day 3

Change Management Principles and Approaches

Time	Session content (Facilitator)
8.45-9.00 a.m.	Introduction to the Day's sessions: outline, objectives and expected outputs.
9.00-10.30 a.m.	<p>Performance Management: Basics (Dr. Eng. Silver Mugisha)</p> <p>This session introduces participants to basics of performance indicators (qualitative and objective performance indicators), targets/benchmarks, driving forces for performance improvement plans, SMART criteria. The programme approach is emphasized as key to organizational behaviour change.</p>
10.30-11.00 a.m.	TEA BREAK
11.00-12.00 a.m.	This session introduces participants to FOUR questions of strategic management. Detailed discussions of SWOT and PEST analysis . The session will distinguish between quantitative and subjective situation analysis. Examples of successful cases are used to illustrate the efficacy of programme approach to performance improvement.
12.00-1.00 a.m.	<p>Performance Monitoring and Evaluation (Dr. Eng. Silver Mugisha)</p> <p>Preventive-based performance monitoring. Output versus process-oriented monitoring: merits and demerits. Benchmarking and comparative competition through use of emotional incentives, preparation of checkers/inspection schedules, evaluation criteria setting, preparation of evaluation reports and stakeholder buy-in approaches. Customer protection monitoring and benchmarking through periodic customer surveys. Extensive use of successful practical examples.</p>
1.00-2.00 p.m.	LUNCH BREAK
2.00-4.00 p.m.	<p>Business Plan Preparation: Key ingredients (Eng. Harrison Mutikanga)</p> <p>The role of business planning in WSS management. Key considerations in business planning (priority/focus areas, comprehensive SWOT and Strategy formulation). Using participatory approach to prepare performance improvement programmes; programme ownership and staff involvement. The <i>Stretch-Concept</i> is introduced as a key tool for participatory work-outs. Concepts of cash-flow preparation and mainstreaming with company financial budgets, priority financing, recurrent and one-off expenditure preparation, delegating capital investments and role definition.</p>
4.00-4.30 p.m.	EVENING BREAK
4.30-7.30 p.m.	<p>Performance Improvement Plan (PIP) Preparation: Case Introduction (Jude and Edmond)</p> <p>This session shall focus on a simple case study where participants shall prepare performance improvement plans (PIP) in groups. This session shall introduce the topic and divide the participants into groups.</p>

27th September, Thursday - Day 4

Performance Improvement Plan Preparation and benchmarking tour

Time	Session content (Facilitator)
8.45-9.00 a.m.	Introduction to the Day's sessions: outline, objectives and expected outputs.
9.00-10.30 a.m.	Preparation of Performance Improvement Plans (PIP) by participants The participants shall be divided into groups and develop sample performance improvement plans, based on a hypothetical case study.
10.30-11.00 a.m.	TEA BREAK
11.00-1.00 p.m.	Group work continues
1.00-2.00 p.m.	LUNCH BREAK
2.00-4.30 p.m.	Presentation of PIPs by Groups
4.30-7.30 p.m.	Visit to Gaba Water Treatment works/Laboratory/Booster station

28th September, Friday - Day 5

Field Work/Attachments

Time	Session content (Facilitator)
8.45 - 9.00 a.m.	Introduction to the Day's sessions: outline, objectives and expected outputs and Grouping participants for Attachments
9.00 - 9.30 a.m.	Participants divided into groups
9.00 - 1.00 p.m.	Field Work in designated places
1.00-2.00 p.m.	LUNCH BREAK
2.00-6.00 p.m.	Field Work in designated places

Saturday - Day 6

Field Work/Attachments/Closing Ceremony

8.00-8.30 a.m.	Introduction to the Day's sessions: outline, objectives and expected outputs
8.30-9.00 a.m.	TEA-BREAK
9.00-1.00 p.m.	Field work in designated places
1.00-2.00 p.m.	LUNCH BREAK
2.00-4.00 p.m.	Site seeing in Kampala
4.30 p.m	Closing ceremony and Cocktail

4.0 DEVELOPMENT OF PERFORMANCE IMPROVEMENT PROGRAMMES AND ON JOB TRAINING

4.1 Performance Improvement Programmes (including cross cutting institutional development issues)

The NWSC ES shall conduct 3 day Performance Improvement Planning workshops which shall lay emphasis on Performance Planning, Department Target setting and Individual Target Setting, Incentives and Penalties. These workshops shall contain a blend of S-T-R-E-T-C-H work-outs to resolve staff software issues which may affect decision making and performance such as bureaucracy, management practices, staff attitudes, etc. The workshops shall be facilitated by experts from utilities who have successfully made Improvement Plans that work. The performance improvement plans shall be consolidated to provide a comprehensive performance improvement programme for each utility and this programme shall provide the basis for a set of priority improvements under the fast track programme and, the design of long term improvements.

For each utility the following programme shall be adopted:-

DAY 1: OPENING CEREMONY

Item	Particular	Time
1.	Welcome remarks by the Representative of UN HABITAT	9.00 - 9.10 a.m.
2.	Remarks and Presentation of workshop methodology – Organization & Expected Outputs by the Team Leader NWSC External Services	9.10 - 10.00 a.m.
3.	Remarks by the Managing Director	10.00 - 10.10 a.m.
4.	Speech by the Chairman of Board of Directors	10.00 - 10.30 a.m.
5.	TEA BREAK	10.30 - 11.00 a.m.
Working groups and Plenary, Vision, mission, strategic objectives and targets & SWOT Analysis		
6.	Review of Vision, Mission, Strategic Objectives and Previous performance against targets-	11.00 - 12.30 a.m.
7.	Presentation of the revised Corporate Vision, Mission, Strategic Objectives.	12.30 - 1.00 p.m.
8.	LUNCH	1.00 - 2.00 p.m.
9.	Analyses of Strength, Weakness, Opportunities and Threats (SWOT) by each working Group in respect to: (<i>Water Production, Water Distribution, Revenue Generation, Customer Care and Cost Optimization</i>)	2.00 - 4.00 p.m.
10.	TEA BREAK	4.00 - 4.30 p.m.
11.	Analyses of Strength, Weakness, Opportunities and Threats (SWOT) by each working Group in respect to: (<i>Water Production, Water Distribution, Revenue Generation, Customer Care and Cost Optimization</i>)	4.30 - 8.00 p.m.
12.	DINNER	8.00 - 8.30 p.m.
13.	Analyses of Strength, Weakness, Opportunities and Threats (SWOT) by each working Group in respect to: (<i>Water Production, Water Distribution, Revenue Generation, Customer Care and Cost Optimization</i>)	8.30 - 10.00 p.m.

DAY 2: GROUP DISCUSSIONS AND PLENARY

Item	Particular	Time
1.	Strategy formulation Formulation of Strategies to address issues arising from the SWOT Analysis indicating costs were appropriate	9.00 - 10.30 a.m.
2.	TEA BREAK	10.30 - 11.00 a.m.
3.	Strategy formulation Formulation of Strategies to address issues arising from the SWOT Analysis indicating costs were appropriate	11.00 - 1.00 p.m.
4.	LUNCH	1.00 - 2.00 p.m.
5.	Strategy formulation Formulation of Strategies to address issues arising from the SWOT Analysis indicating costs were appropriate	2.00 - 4.00 p.m.
6.	TEA BREAK	4.00 - 4.30 p.m.
7.	Plenary Presentation of Strategies by groups and harmonization of the strategies and new targets.	4.30 - 8.00 p.m.
8.	DINNER	8.00 - 8.30 a.m.
9.	Plenary Presentation of Strategies by groups and harmonization of the strategies	8.30 - 10.00 a.m.

DAY 3: FINANCING PLAN, FINAL DOCUMENTATION AND CLOSING

Item	Particular	Time
1.	Financing plan Management Teams prepare a three month income and cash outflow plans (Corporate and Area Specific)	9.00 - 10.30 p.m.
2,	TEA BREAK	10.30 - 11.00 a.m.
3,	Financing plan Management Teams prepare a three month income and cash outflow plans (Corporate and Area Specific)	11.00 - 1.00 p.m.
4.	LUNCH	1.00 - 2.00 p.m.
5.	Document Preparation with assistance from NWSC External Services	2.00 - 5.00 p.m.
6.	Closing Ceremony	5.00 p.m.
7.	Cocktail	7.00 p.m.

4.2 Training Modules for hands on assistance/on job training

4.2.1 Block mapping

The first phase of training for block mapping shall be carried out for Change Agents as described under the modules for the Change Agent training/benchmarking visit. The second phase for hands on assistance/on job training shall be carried out through both short classroom sessions and field work. For each town the block mapping exercise shall cover at most three weeks. Topics to be covered shall include but not be limited to:

- i) *Preparation of block maps from existing base maps, aerial photographs or satellite (quick bird) images¹*

This shall be done at NWSC, Kampala office

- ii) *Preliminary Survey and Referencing of maps*

The NWSC team shall move with the local technical staff on site and carry out the physical surveying. Instruments to be used shall be provided by the NWSC ES team. Referencing of maps shall be town specific. Grid references shall be given which shall later be used as property reference numbers of consumers. The NWSC team shall with the help of the local staff go around the whole area to be mapped, looking at the extent of the distribution systems and look at future extensions thus giving references for these places as well. This shall form a basis for future updating of maps. During the surveys, all underground facilities i.e. pipes shall be traced and mapped as well.

- iii) *Development of field data collection questionnaires*

Questionnaires shall be developed and translated into Swahili with the help of the local teams for use in collection of field data to be included in the customer data base.

- iv) *Consumer field data collection and processing*

The NWSC ES team shall move around with the local staff to administer the questionnaire. The NWSC ES team shall process the data together with the local staff both technical and commercial staff.

- v) *Updating of maps*

The NWSC ES team shall show and teach the local staff on how to update the maps including new connections and new mains extensions.

Staffing Requirements

3 Technical staff who know the Area who can be seconded to the NWSC ES team.

4.2.2 Billing and Accounting

The on job training on billing and accounting shall be geared at enabling the staff gain understanding of the:-

- structure and elements of a billing system
- hierarchy of customer accounts and their categorization
- allocation and assignment of property references and service units
- techniques of attaining efficient & accurate metering and meter reading
- generation and summarizing of transactions and journals as well as;

¹ For Muleba the whole service area shall be block mapped, while for the other towns namely Bukoba, Homa Bay and Kisii one zone shall be mapped.

- provide an overview to billing system software and their role in promoting utility efficiency in service delivery

The staff shall receive training on processes and procedures in the areas outlined in Table 4.1.

Table 4.1: Training modules for Billing and Accounting (on job training)

Topic	Scope / Content
Module 1: Over-View of a Billing System	<ul style="list-style-type: none"> ▪ Basic elements of any utility billing system ▪ Relationship between billing and other utility departments / sections ▪ Administration & Management of Billing in Utilities ▪ Responsibilities & Roles within Billing ▪ Other players
Module 2: Customers and Accounts Maintenance	<ul style="list-style-type: none"> ▪ Customer Accounts Referencing ▪ Customer Types ▪ Customer Classifications ▪ Billing & Mailing Addressing
Module 3: Properties and Service Units	<ul style="list-style-type: none"> ▪ Property Identification ▪ Service Area Grid Referencing ▪ Sequencing Property Referencing ▪ Mapping Property references to Block-map references ▪ Property Classification ▪ Service Units within Properties ▪ GROUP WORK, PRACTICLES & GROUP PRESENTATION
Module 4: Services & Tariff Structure	<ul style="list-style-type: none"> ▪ Service Categories ▪ Service Types ▪ Service Supply categories ▪ Service Supply Modes ▪ Service Supply Status ▪ Tariff Regime ▪ Referencing tariffs ▪ Applying a tariff structure within a billing system ▪ Revising tariff Structures ▪ Changes to Services (opening, changing, closing, suppressing, re-opening services) ▪ GROUP PRACTICLES & GROUP PRESENTATIONS
Module 5: Metering, Book/Walk/Sequences, Meter Reading	<ul style="list-style-type: none"> ▪ Developing meter inventories ▪ Aligning Meters to Properties ▪ Meter maintenance (Installation, Exchanges, Removals) ▪ Meter Reading Cycles ▪ Book / Walk / Sequencing in Practice ▪ Meter Reading Tools ▪ Validating Meter Readings ▪ GROUP WORK, PRACTICLES & GROUP PRESENTATIONS
Module 6: Transactions & Journals	<ul style="list-style-type: none"> ▪ Transaction Types ▪ Transaction Coding ▪ Allocation of Transactions to Charges (LIFO, FIFO, CUSTOM) ▪ Reconciliation's & Balancing ▪ Controls & Audit Trails ▪ GROUP WORK, PRACTICLES & GROUP PRESENTATIONS
Module 7 Billing & Re-Billing	<ul style="list-style-type: none"> ▪ Pre-Billing Validations ▪ Billing Authorization ▪ Billing Execution ▪ Post-Billing Procedures

Topic	Scope / Content
	<ul style="list-style-type: none"> ▪ Re-Billing requirements ▪ GROUP WORK, PRACTICLES & GROUP PRESENTATIONS
Module 8 Billing System Software	<ul style="list-style-type: none"> ▪ Over-View of the Billing Application (Operating System, Billing Application, Hardware, etc) ▪ Managing Customer Enquiries ▪ Input and Update of data ▪ Transaction Coding ▪ Data Integrity ▪ Key Product Functional Features ▪ Populating & Maintaining the Billing Database (Customers, Properties, Metering, Services, Structure, transactions & Journals) ▪ Billing Execution ▪ Management Information and Reports ▪ Bills and Bill Interpretation ▪ GROUP WORK, PRACTICLES & GROUP PRESENTATIONS

4.2.3 Leak detection and control

The on-job training module on leak detection and control shall involve the following:

- i) *Identification of staff to be trained:*
Through consultations with the management teams of the utilities the technical and field staff to be trained will be selected.
- ii) *Basis Introductory Course (workshop/seminar)*
The selected staff will under a half day training seminar covering aspects of leak detection and control such as: procedures and principles for undertaking an effective leak control and illegal use reduction programme; network sectorisation, setting up district meters, flow measurement, night flow measurements, setting up leak detection programmes, techniques for leak location (sounding sticks, noise correlators etc), leak repair management etc.
- iii) *Preparation of maps and leak detection programme*
Schematic maps for the pipe network showing the different segments, nodes, junctions and fixtures will be prepared and suitable/critical sections for carrying the first leak detection activities will be selected through consultations with the technical staff. On the basis of the selected sections, a three day leak detection programme will be prepared including night flow measurements where feasible and applicable. Preparation of the maps and leak detection programme is expected to take up the later part of the day as it may include the trainers making field excursions for acquaintance and fine tuning.
- iv) *Field Leak Detection Activities*
The selected staff will be taken to the field and the first step will be rigorous drills on giving the staff acquaintance with the instrumentation. Actual guided leak detection will then start on a do-it-yourself basis with guidance from the trainers. This is viewed as

the fastest approach in transferring skills to the selected staff. The leak detection will be using the techniques of listening sticks, leak noise correlators and leaks by sounding. The field activities will also, for purposes of completeness include drill on pipe location techniques. Where possible night flow measurements will also be carried out at least for one of the nights. A few of the detected leaks will be repaired for illustration purposes. The field activities will also include taking the staff through standards templates for data capture and concise field reporting. The field leak detection activities are expected to take three days.

v) *Formulating the way forward*

This will involve debriefing from the field staff, drawing up a plan of carrying out leak detection for the entire water network and for following timely and effective repair of identified leaks.

4.3 Monitoring and Evaluation

The progress of performance improvement plan implementation will be tracked by the NWSC ES team for a period of 3 months following the training. Reporting formats and Evaluation templates shall be developed at the onset of the PIP workshops. These shall cater for monitoring of all key performance indicators. Monthly evaluations shall be conducted at the NWSC offices in Kampala based on monthly reports submitted by the respective utilities. At the end of three months, a quarterly evaluation workshop shall be held at each of the utilities. Six months after implementation has begun, the NWSC will conduct an in-depth evaluation of progress within each utility, and advise on a way forward to be included in the final report to UN HABITAT.

4.4 Product Development

Tools to sustain changes within the utilities shall be developed as follows:-

(i) Improved billing software for each utility.
NWSC will review the existing software for Billing and Accounting Systems in Homa Bay, Kisii and Bukoba, identify gaps and suggest recommendations to the vendors for improvement. For Muleba a billing and accounting system shall be recommended. In the event that it is decided to implement a new Billing and Accounting system in the towns, the best option shall be recommended. The functional performance requirements and System Management, Administration, and Security Requirements shall be taken into consideration in all cases. Procedure manuals shall be developed to support the Billing and revenue collection functions.

(ii) Block Maps
Using data produced during the training and electronic maps available from UN-HABITAT, NSWC will digitize block maps for each utility and produce a report advising each utility on the way forward.

(iii) Training Materials and Documentation
Training materials, guidelines and procedures developed in the course of training will be well documented and made available for future use. They will include:

- Training materials used in the areas of Billing and Revenue Collection, Reduction of UFW, and Customer Care
- Operation manuals on 1) billing and accounting procedures; 2) block mapping procedures 3) Conducting water audits; 4) leak detection and repair; 5) improving customer care; and 6) Reducing illegal connections.

5.0 TRAINING IMPLEMENTATION SCHEDULE

(a) Change Agents and Performance Improvement Programme Workshops, Monitoring and Evaluation

MONTH	Apr-07				May-07				Jun-07				Jul-07				Aug-07				Sep-07				Oct-07				Nov-07				Dec-07				Jan-08				Feb-08				Mar-08							
WEEK NO.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
STARTING DATE	2nd				30th				4th				2nd				30/5				3rd				1st				5th				3rd				1st				1st				1st							
TASK																																																				
CHANGE AGENTS																																																				
Hold Training for Change Agents																																																				
Submit Final Report for CA Training																																																				
PIP WORKSHOPS																																																				
Hold 3-day Workshops in each town																																																				
Muleba																																																				
Bukoba																																																				
Kisii																																																				
Homa Bay																																																				
Submit PIP M&E Reports to UN HABITAT																																																				
MONITORING & EVAL. OF PIPs (ALL UTILITIES)																																																				

b) On job Training

MONTH	Apr-07				May-07				Jun-07				Jul-07				Aug-07				Sep-07				Oct-07				Nov-07				Dec-07				Jan-08				Feb-08				Mar-08							
WEEK NO.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
STARTING DATE	2nd				30th				4th				2nd				30/5				3rd				1st				5th				3rd				1st				1st				1st				1st			
TASK																																																				
ON JOB TRAINING/TRAINING MATERIALS																																																				
Billing/Revenue Collection																																																				
Muleba																																																				
Bukoba																																																				
Kisii																																																				
Homa Bay																																																				
Leak Dectection & Control																																																				
Muleba																																																				
Bukoba																																																				
Kisii																																																				
Homa Bay																																																				
Customer Care																																																				
Muleba																																																				
Bukoba																																																				
Kisii																																																				
Homa Bay																																																				
Submit Report on On Job Training																																																				

c) Product Development and Block Mapping

MONTH	Apr-07				May-07				Jun-07				Jul-07				Aug-07				Sep-07				Oct-07				Nov-07				Dec-07				Jan-08				Feb-08				Mar-08			
WEEK NO.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
STARTING DATE	2nd				30th				4th				2nd				30/5				3rd				1st				5th				3rd				1st				1st				1st			
TASK																																																
PRODUCT DEVELOPMENT																																																
Billing and accounting procedures																																																
Block mapping procedures																																																
Water audits procedures																																																
Leak detection & repair procedures																																																
Customer care manual Procedures for reducing illegal connections																																																
BLOCK MAPPING EXERCISE																																																
Carry out block mapping																																																
<i>Muleba</i>																																																
<i>Bukoba</i>																																																
<i>Kisii</i>																																																
<i>Homa Bay</i>																																																
Finalize digitization of each town																																																
FINAL REPORT																																																