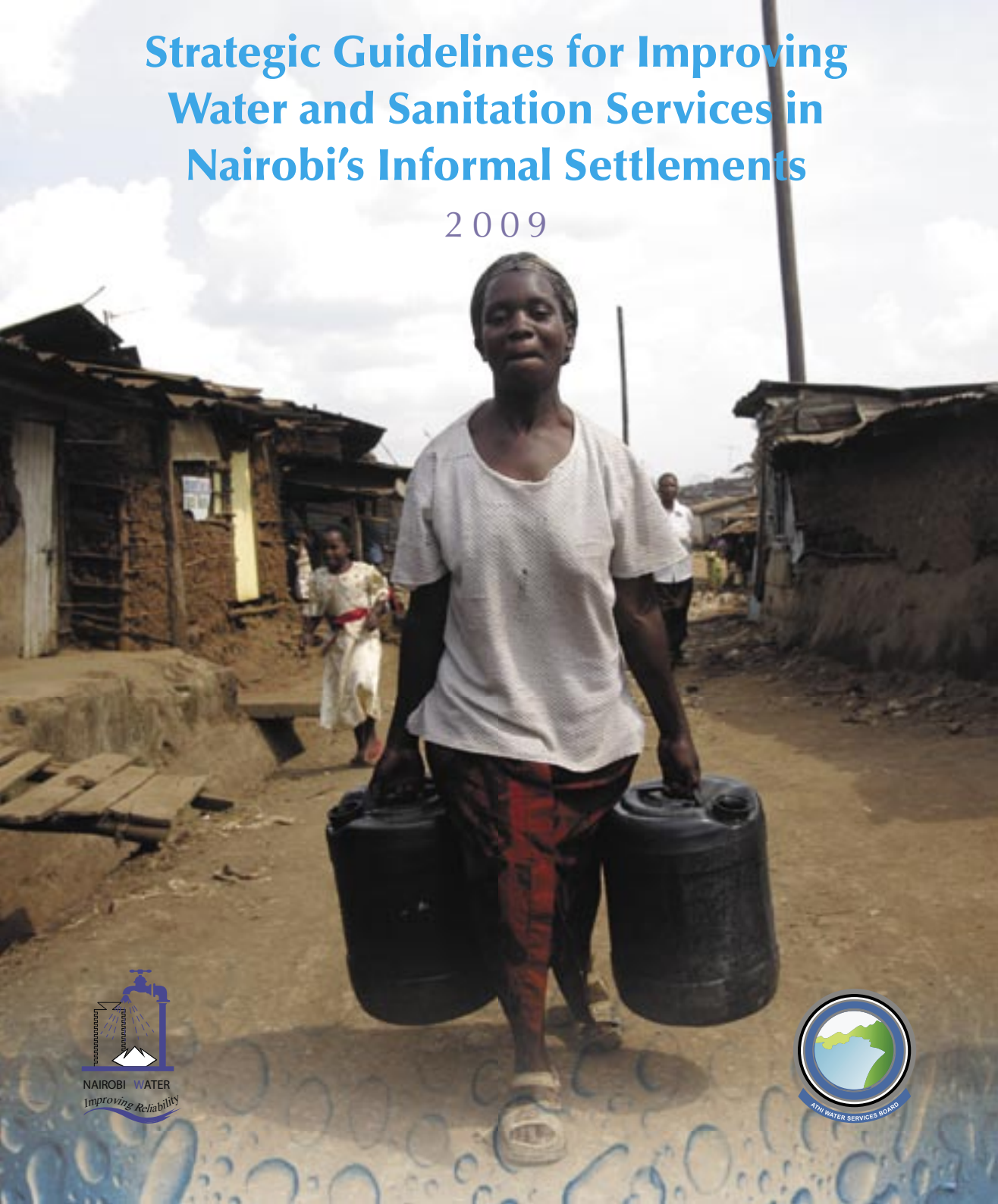


# Strategic Guidelines for Improving Water and Sanitation Services in Nairobi's Informal Settlements

2009





# Table of Contents

<b>Acknowledgements</b>	<b>3</b>
<b>Foreword</b>	<b>4</b>
<b>Acronyms</b>	<b>5</b>
<b>Introduction and Summary</b>	<b>6</b>
<b>PART 1: Introduction</b>	<b>7</b>
1.1 Context	7
1.2 Relevance	8
1.3 Overall objective	9
<b>PART 2: A Situational analysis</b>	<b>10</b>
2.1 Socio-economic dimensions of informal settlements	10
2.2 Existing WSS service levels in Nairobi's informal settlements	11
2.2.1 Water	11
2.2.2 Sanitation, sewerage, and hygiene	12
2.3 Institutional arrangements	13
2.4 Legal environment	14
2.5 Regulatory framework	14
2.6 Coordinating development efforts	16
<b>PART 3: Technical options</b>	<b>17</b>
3.1 Water supply	17
3.2 Sanitation	18
3.3 Drainage	19
3.4 Increasing technical capacity	19
3.5 Development and enforcement of appropriate standards	20
<b>PART 4: Financial options and asset ownership</b>	<b>21</b>
4.1 Financing options	21
4.2 Options for asset ownership and management	21
<b>PART 5: Guiding principles</b>	<b>25</b>
5.1 Social principles	25
5.2 Economic and financial principles	26
5.3 Institutional and management arrangements	27
5.4 Giving priority to the informal settlements in NCWSC corporate strategy	28

5.5 Including sanitation in the operational mandate of NCWSC	29
5.6 Working in partnership with stakeholders	29
5.7 Improving infrastructure	31
5.8 Involving consumers through effective communication	32
<b>PART 6: Moving to action</b>	<b>33</b>

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# Foreword

The Nairobi City Water and Sewerage Company (NCWSC) was established in 2003 as a result of the Water Act (2002) and started its operations in 2004. Although significant improvements have been made in this short time, NCWSC still faces major challenges in its service area, particularly in Nairobi's ever growing informal settlements. Due to the variety of infrastructure requirements, water supply and sanitation (WSS) as a public service poses an especially difficult hurdle in these densely populated areas. The lack of clear rules of ownership and tenure on state-owned land and privately owned housing structures have led to high tenancy ratios, little faith in the future and haphazard solutions for provision of basic WSS services. Indeed, the vast majority of the 'informal' residents purchase their water from semi-legal individual vendors, often paying up to 12.5 times more than a Nairobi consumer connected directly to the network.

NCWSC and the asset-holding entity, Athi Water Services Board (AWSB), recognize the plight of these underserved residents, but we have not had the capacity to address services to informal settlements. Serious steps are being taken to strengthen our capacity, to expand our networks, and manage services in these marginalized areas. We have already employed a team of sociologists to work on the social components of services to informal settlements, acknowledging the inadequacy of a purely engineering approach.

A major positive development has been the drafting of guidelines for interventions in informal settlements. These guidelines lay out the guiding principles for affordable and reliable WSS services, focusing on community participation, partnerships with key actors, and adopting suitable technical, management and financial solutions. Our commitment was made public by explicitly mentioning the informal settlements in the 2008 NCWSC customer charter.

Increased impetus comes from successful efforts to attract project funding for service improvements in the informal settlements, coinciding also with the availability of project funds for urban WSS improvements in another sector institution stemming from the reforms – the Water Services Trust Fund (WSTF). Pilot projects and engagement with poor communities are currently taking place in some of the city's slums, notably in Mathare and Mukuru.

We wish to adopt these guiding principles to systemize our efforts and increase our projects' predictability and transparency. We shall also share them with all our partners, who actively work to improve the lives of slum-dwellers, so that we can effectively streamline all the efforts under the guidance of NCWSC.



*Lawrence W. Mwangi, CEO  
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# Acronyms

AWSB	Athi Water Services Board
CBOs	Community-Based Organizations
CPC	Community Project Cycle
CSOs	Civil Society Organizations
DMA	District Management Areas
GoK	Government of Kenya
KENSUP	Kenya Slum Upgrading Program
MDG	Millennium Development Goals
MWI	Ministry of Water and Irrigation
NCWSC	Nairobi City Water and Sewerage Company
NCC	Nairobi City Council
NGOs	Non-Governmental Organizations
NRW	Non-Revenue Water
SPA	Service Provision Agreement
ToR	Terms of Reference
WASREB	Water Service Regulatory Board
WOP	Water Operators Partnerships
WSB	Water Services Board
WSP	Water Services Provider
WSP-AF	Water and Sanitation Program-Africa
WSS	Water Supply and Sanitation
WSTF	Water Services Trust Fund

# Introduction and Summary

These Guidelines attempt to systemize the planning and execution of water, sanitation and hygiene interventions in Nairobi's informal settlements. It is the result of an effort between the Athi Water Services Board (AWSB) and Nairobi City Water and Sewerage Company (NCWSC) to provide a clear framework and guidelines for services in informal settlements.

Nairobi and other cities in Kenya have been unable to keep up the pace of planning and developing its infrastructure to meet the demands of a growing population with the population (4 to 5 percent average growth per year since the 1990s). Rural migration and the natural growth of the urban population have been largely absorbed in the fast growing urban informal and unplanned settlements.

The asset holder, AWSB, and the operator (NCWSC), which is formally responsible for water services in Nairobi, currently have limited capacity to extend or improve services to informal settlements. Residents rely largely on kiosks and vendors providing services of lesser quality at higher costs. NCWSC and AWSB have recently increased their efforts to improve services in the informal settlements and both the Board and the Company recognize the importance of partnerships with other players in the informal settlements.

Interventions in informal settlements need a more coherent and strategic focus in order to move beyond piecemeal efforts, maximize long-term impact, and ensure efficient use of resources. Hence this initiative to develop guidelines to steer AWSB, NCWSC and other stakeholders in planning and carrying out a more systematic and expanded drive to improve water and sanitation in informal settlements.

The overall objective of these Guidelines is to increase coverage, affordability and sustainable access to safe water services and basic sanitation facilities in the informal settlements of Nairobi by providing guidance for NCWSC actions, promoting partnerships with key stakeholders, and increasing the predictability and transparency of WSS interventions for recipients and partners. The Guidelines provide direction to plan settlement-specific strategies and programs, including specific timelines, goals and costs.

The guidelines include a brief overview of the sector (institutional, legal, and regulatory issues) as well as an overview of the situation in Nairobi's informal settlements. The guidelines provide some preferences for technical solutions, but more importantly, a series of principles are laid out to construct a framework for interventions. Lastly, these principles are translated into an action model for operational engagements in the informal settlements.

Although the operational framework is designed for NCWSC, it is general enough in its underlying principles and actions that, with modifications to meet local conditions, it can provide a good reference point for Water Services Providers in other urban areas.



# PART 1: Introduction

The provision of basic water and sanitation services to all remains a necessary and urgent task in Kenya. The Government of Kenya (GoK) is committed to reducing the backlog in services by 2015, in line with the targets set by the Millennium Development Goals<sup>1</sup> (MDGs). This specific goal has proved elusive particularly in the informal settlements (home to more than half of the city's population), which are characterized by poverty, harsh living conditions, high population densities, sub-standard housing, and low levels of services.

These guidelines articulate the priorities and overarching principles adopted by the Athi Water Services Board (AWSB) and the Nairobi City Water and Sewerage Company (NCWSC) to improve water and sanitation services (WSS) delivery in Nairobi's informal settlements. These principles have been used to develop a framework that provides NCWSC with the practical tools to apply on a settlement-by-settlement basis. The underlying principles and actions of the model, though specifically designed for NCWSC, may be useful, after relevant modifications, to Water Service Providers (WSPs) in other urban areas.

## **These informal settlements guidelines consist of six main parts:**

- 1) context, relevance, and objectives;
- 2) socio-economic, institutional, and legal issues;
- 3) general technical guidelines;
- 4) finance and ownership issues;
- 5) the overarching principles for service provision in informal settlements; and
- 6) an action model guiding NCWSC's work in informal settlements.

## 1.1 Context

Within the framework of its 2007 National Water Services Strategy (NWSS), and in line with the MDGs, the Ministry of Water and Irrigation (MWI) is committed to specific goals for water, sewerage, and basic sanitation in urban areas<sup>2</sup>. The NWSS advocates implementation of pro-poor strategies targeting households living in informal settlements. The NWSS also allocates the primary responsibility of providing sustainable, affordable access to safe water in informal settlements to the Water Service Boards (WSBs) and the Water Services Providers (WSPs).

Accordingly, AWSB and NCWSC have incorporated the challenge of service provision in informal settlements into their mission and corporate plans and have already undertaken some improvements in Nairobi's informal settlements<sup>3</sup>. These guidelines are meant to

1 National Water Services Strategy 2007-2015, Ministry of Water and Irrigation (2007).

2 Ibid. Water: Achieving 80% access to safe water by Kenyan standards of urban populations (<30mins to fetch, good quality), reducing UFW to 30%; achieving O&M cost recovery of all WSS systems by 2010; increase access to waterborne sewage collection, treatment and disposal from 30% to 40%; Increasing collaboration with other line ministries, particularly for sanitation. Sanitation: Access to basic sanitation from 55% to 77.5% in the urban setting.

3 Meter chambers in Mukuru, Water kiosks in Mathare, proactive collaboration with Kibera kiosk operators, to name a few.

The Ministry has established the following institutions as part of the sector reforms:

- **Water Reform Programme**, whose role is to manage the implementation of the reform programmes in the Ministry. A reform secretariat is in place to manage the reform process. This programme will come to an end when the planned reforms in the sector are fully implemented.
- **The Water Resources Management Authority**, which is responsible for the management of water resources as provided in Section 8 (i) of the Water Act (2002).
- **The Catchment Area Advisory Committee**, which is responsible for the management of water resources, conservation, use and apportionment of water resources in a defined catchment area as presented in Section 16 (i) of the Water Act (2002).
- **The Water Services Regulatory Board**, whose role is to license and manage the supply of water and sewerage services in accordance with Section 47 of the Water Act (2002).
- **Water Services Boards and Water Services Providers**, whose service delivery roles are provided in Section 5 of the Water Act (2002).
- **Water Services Trust Fund**, which has the mandate to mobilize financial resources for development and rehabilitation of water and sewerage services infrastructure, especially to unserved areas.
- **Water Appeals Board**, whose mandate is conflict resolution within the sector management.

Source: Republic of Kenya, Ministry of Water and Irrigation. 2005. *Strategic Plan of the Ministry (2005-2009)*. Nairobi, Kenya

support these two institutions in scaling up their efforts in partnership with others. It recognizes the specific challenges of WSS services in informal settlements and the need to work closely with communities and municipalities.

## 1.2 Relevance

Developing these guidelines is timely. The institutional and regulatory frameworks following the Water Act (2002), combined with the newly published NWSS, and the newly created Ministry for Public Health and Sanitation, provide a

platform to improve WSS delivery in informal settlements. An explicit approach such as this, with operational models, is necessary to bring local actors together and mobilize the relevant municipal agencies.

In terms of available funding for implementation, the timing is excellent, as AWSB has received approval for approximately \$8 million<sup>4</sup> over the next five years to improve and extend services

<sup>4</sup> European Union (\$4,2 million) World Bank (\$3,8 million), most of which target Nairobi's informal settlements.

in the informal settlements. These guidelines are meant to provide a commonly accepted framework for planning interventions and for improving the impact of such WSS investments.

The Guidelines will also give renewed impetus for action by the management of NCWSC and AWSB by putting the spotlight on services to the informal settlements and outlining practical ways to move forward.

In addition, one should note that partnership-based WSS improvements provide an entry point for broader initiatives to improve living conditions in informal settlements. The inclusive and participatory approaches put forward by the Guidelines have the potential to empower communities and build local capacity. They will also strengthen the official standing of community organizations and hopefully enable them to take on other development activities. Overall, community participation and ownership of the projects are important to the sustainability of interventions.

### 1.3 Overall objectives

The overall objectives of these Guidelines is to increase access, affordability, and sustainability of safe water services and basic sanitation facilities in the informal settlements of Nairobi.

The specific objectives are:

- a) to provide guidance and a framework for NCWSC operations in informal settlements;
- b) to promote and facilitate partnerships with key stakeholders; and
- c) to systematize and increase the transparency of WSS interventions for recipients and partners in informal settlements.

To this end, AWSB and NCWSC commit to a set of core principles and measures for action, which together form the basis of these Guidelines.



## PART 2: A Situational Analysis

### 2.1 Socio-Economic Dimensions of Informal Settlements

Recent demographic trends reveal a pattern of urban demographic growth which most urban authorities are ill equipped to cope with. The migrants and long-standing residents aspire for improved livelihood but instead are often trapped in congested informal settlements, where housing costs may be lower but living conditions are precarious. Additionally, rising costs in Nairobi's formal areas result in some residents shifting to informal settlements to make ends meet.

Already, an estimated 60 percent of Nairobi's inhabitants live in these informal settlements, which constitute only five percent of the city's residential land. High population densities and sub-standard living conditions in these congested areas make accommodating the needs of the growing settlements a daunting task.

The informal settlements are varied in size, population, ethnic, social and cultural character, but share one common denominator – poverty. Average monthly income in Nairobi informal settlements is estimated to be KSH 3,000,

leaving little room for savings or investments<sup>5</sup>. Ninety-two percent of the residents in Nairobi's slums are rent-paying tenants<sup>6</sup>. The rate of homeowners is 10 percent lower than that of the city as a whole, and about 63 percent lower than the national average<sup>7</sup>. Slum dwellers typically live in the same area for between five and nine years<sup>8</sup>. Precarious living conditions, scarcity of available options, and uncertain land tenure limit the incentives for investment to improve the surroundings or develop anything but sub-standard structures.

According to some estimates, the proportion of people living in poverty in urban areas has increased rapidly, from 29 percent in 1992<sup>9</sup> to 44 percent in 2003. According to these 2003<sup>10</sup> estimates from the Central Bureau of Statistics' poverty mapping exercise, the poverty levels range from below 20 percent to over 70 percent in the poorest districts. These rates derive from calculations using proxy indicators (such as access to water and quality of housing) rather than actual income or expenditure data<sup>11</sup>. This means that residents of slum settlements are classified as poor due to sub-standard housing, lack of infrastructure, and poor access to water.

5 Inside informality: Poverty, Jobs, Housing, and Services in Nairobi's Informal Settlements. May 2006. S. Gulyani, Debrata Talukdar, Cuz Potter, The World Bank

6 Ibid.

7 Ibid.

8 Ibid.

9 Central Bureau of Statistics, 2000

10 Central Bureau of Statistics, 2003,

11 Inside informality: Poverty, Jobs, Housing, and Services in Nairobi's Informal Settlements. May 2006. S. Gulyani, Debrata Talukdar, Cuz Potter, The World Bank

## 2.2 Existing WSS Service Levels In Nairobi's Informal Settlements

Nairobi's informal settlements are mostly unplanned, resulting in inadequate infrastructure (roads, water, sanitation, sewerage, drainage, and electricity), temporary and haphazard building solutions, poor housing, high occupation density, and very low levels of public services. Clean water, adequate sanitation, and hygiene are visibly substandard. This was confirmed in a recent consumer survey which illustrated informal settlement residents' general discontent with services<sup>12</sup>. The continuing expansion and densification of settlements render upgrading and service improvements altogether urgent, as well as more complicated and expensive.

### 2.2.1 Water

Most informal settlements residents consume piped water, but service delivery varies. Approximately 22 percent of residents have a household connection, while an estimated 75 percent purchase their water from resellers at water kiosks operated by community groups or individual entrepreneurs, and in some cases from pushcart vendors<sup>13</sup>. Water kiosks are the main water source. Kiosk vendors sell water in 20 liter jerry cans at 2 to 5 KSh each (about Ksh 100 to 250 per m<sup>3</sup>). This price is well above NCWSC's average price of KSH 45/m<sup>3</sup>, which includes the lower block tariff of 12 Kshs/m<sup>3</sup> applicable

to households consuming under 10 m<sup>3</sup> per month<sup>14</sup>. NCWSC's official price for water in informal settlements is a subsidized KSh10/15m<sup>3</sup> although resellers add their own margins and this rate is not always accurately billed. Consequently, informal settlement residents are the highest-paying consumers in the city per cubic meter. On average, poor non-connected households spend a higher share of their monthly income on water<sup>16</sup>. In Nairobi, as in most African cities, lack of access to modern water services is a contributing factor to poverty since households spend limited income on expensive water.

Some kiosks have legal connections with accounts and meters but many are illegally connected. Water theft and low revenue collection have a significant negative impact on NCWSC and AWSB's finances and ability to expand coverage. These unauthorized, low-quality connections also lead to losses in water pressure and contribute to leaks.

The quantity of water supplied to informal settlements is not well known due to the lack of effective bulk metering and clear maps. However, a recent study points to an average daily per capita water consumption of 23 liters in the informal settlements<sup>17</sup>. Given a population of approximately 1.5 million in informal settlements, this would amount to a daily consumption of approximately 34,500m<sup>3</sup> or some 8 percent of NCWSC's total daily production of 420,000m<sup>3</sup><sup>18</sup>. If one assumes that

12 Citizens' Report Card of urban water, sanitation and solid waste services in Kenya, MWI, 2007

13 UN Habitat and the Kenya Slum Upgrading Programme, UN Habitat (2007)

14 Citizens' Report Card of urban water, sanitation and solid waste services in Kenya, MWI, 2007

15 The NCWSC's tariffs were under review at the time of printing

16 (Median values) Inside Informality: Poverty, Jobs, Housing, and Services in Nairobi's Informal Settlements. May 2006. S. Gulyani, Debrata Talukdar, Cuz Potter, The World Bank

17 Ibid.

18 Technical Department, NCWSC, 2007

double the estimated consumption is distributed into informal settlements and only half reaches customers (with 50% NRW) then actually 15% of NCWSC's total production goes into informal settlements. The potential additional revenues and reduced losses from improved and regularized water services in informal settlements are significant. Although the significance of these interventions is primarily of social nature, NCWSC aims to eventually break even in the informal settlements.

Improving the conditions of the tertiary distribution networks and post-meter network is a necessary first step for improving and expanding services in informal settlements. Due to substandard materials and connections, leaks are common in most informal areas and contribute to losses and water contamination. By regularizing and improving the water

supply, NCWSC should benefit from increased revenue and reduced losses and ensure that revenues accruing from expanded delivery of water to informal settlements are in line with the incremental expenses of providing these services. NCWSC should be able to meet its mandate to serve all Nairobi residents while also achieving financial viability and increasing its capacity to fund related investments. In terms of performance efficiency and growth, the informal settlements and the company can both benefit from a stronger standing of pro-poor approaches in NCWSC's corporate priorities in both their financial and social mandates.

### 2.2.2 Sanitation, sewerage, and hygiene

Without planning, bare-minimum investments and only ad-hoc coordination, sanitary conditions in Nairobi's informal settlements are



a permanent health hazard and an affront to human dignity. Sanitation in informal settlements is altogether much worse and more complex than water supply. While NCWSC and those retailing its water are the primary actors in the delivery chain for water supply services, this is not the case for sanitation, which is primarily the purview of individual households. Water-borne sewerage is the only component of broadly defined sanitation that is under the direct responsibility of NCWSC. The nominal responsibilities for other components (drainage and solid waste) are shared between households, community groups and municipal agencies.

In Nairobi's informal settlements, an estimated 24 percent of residents have access to household toilet facilities- a ventilated improved pit (VIP) latrine, an ordinary pit latrine, or a flush toilet. Sixty-eight percent rely on shared facilities, while 6 percent have no access to toilets<sup>19</sup>. Lack of public action and easements as well as congested land use has led to a situation where most residents rely on over-crowded and sub-standard pit latrines—and even open spaces and flying toilets<sup>20</sup>.

Sewerage infrastructure in informal settlements is either broken down, lacking or grossly inadequate. The oldest settlements are crossed by aging sewerage pipes with frequent burst and overflows. Latrine emptying and sludge removal are handled by small scale operators working under unsanitary conditions. Sludge is disposed haphazardly either in the rare sewer inlets or in rivers and drainage ditches. Like sludge, solid

waste is also lacking a structured collection, transport and disposal chain.

Drainage is also insufficient. Natural drainage ditches and storm water gullies carry liquid and solid waste but not in an environmentally friendly or hygienic path. Rain water sometimes flows into latrine structures, forming pools and flowing into footpaths and nearby rivers. These appalling conditions and lack of environmental sanitation lead to acute water and vector-borne infectious diseases such as diarrhea and malaria, with epidemics such as cholera and typhoid occurring with greater frequency and impact. Indeed, informal residents often prioritize improved access to sanitation facilities over water.

### 2.3 Institutional Arrangements

On a national level, water services provision is the responsibility of the Ministry of Water and Irrigation (MWI), whereas sanitation falls under the Ministry of Public Health and Sanitation, created in 2008.

Following the enactment of the 2002 Water Act, newly created institutions undertake the provision of water and sewerage services in urban areas. This task, previously managed by the City Council primarily through their water and sanitation department, is now the responsibility of seven Water Services Boards (WSBs) which then delegate operational responsibilities for service delivery to local Water Services Providers (WSPs). In the case of Nairobi, AWSB, the asset holding and management entity, has delegated the operational mandate to NCWSC. WSS provision in the informal settlements will be guided by the Athi Water Services Board (AWSB) Pro-Poor Policy of 2007 and the present Guidelines.

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19 Inside Informality: Poverty, Jobs, Housing, and Services in Nairobi's Informal Settlements. May 2006. S. Gulyani, Debrata Talukdar, Cuz Potter,

20 Human waste thrown onto the streets in plastic bags

NCWSC is divided into five service areas, each operating as an independent business unit and serving both formal and informal areas within their boundaries. Formally, two of these service areas had teams dedicated to the informal areas, including a sociologist, a technical specialist, technicians and meter readers. As of July 2008, NCWSC has an informal settlements department based out of the headquarters office and provides support to the five service areas. The department is comprised of the Head (a Chief Engineer) and two sociologists. Billing is done normally by the commercial department which has staff embedded in each business unit.

The Government of Kenya's Slum Upgrading Program (KENSUP) has the institutional mandate for slum upgrading. KENSUP partners include line ministries, City Councils, and UN Habitat. Water and sanitation services are components of the program, but progress in these upgrading efforts is slow. These Guidelines are meant to guide AWSB and NCWSC contributions to the Kenya Slum Upgrading Program (KENSUP), in which they are expected to take a leading role.

## 2.4 Legal Environment

Informal settlements fall outside the formal planning framework of the State authorities, and therefore lack legal standing. The City Council and all other utilities rarely plan the provision of services to these areas. The inhabited land is mainly owned by the State. Residents live in congested, sub-standard shacks with little incentive to invest in a more permanent solution.

According to estimates, half of slum residents believe their tenancy is secure despite only a fraction having written tenancy contracts<sup>21</sup>. Most

contracts are verbal and provide few guarantees for the future.

Identifying the opportunities and constraints concerning rights to ownership, investment incentives, and the protection of property is important and useful for policy makers. Provision of basic services and improved quality of living will have a more positive impact on the poor if it involves a holistic approach that improves their legal situation. The specific interventions in each settlement will depend on the prevailing conditions<sup>22</sup>. The stand taken in the present Guidelines is to point out the areas which are in need of reform and adaptation but outside the mandate of AWSB and NCWSC; and at the same time to propose principles and operational approaches that are possible in the current context.

## 2.5 Regulatory framework

WASREB is responsible for the regulation of WSS provision including issuing licenses, setting service standards, defining guidelines for tariffs and prices, and providing complaints handling mechanisms, among others. Through regulation, WASREB intends to help WSBs and WSPs to achieve the proper balance between financial viability and their social mandate as public institutions to serve all citizens including the poor who account for the majority of the unserved in their service areas. The responsibility for achieving financial viability while extending services to the poor lies with the seven regional WSBs which are licensed by WASREB. The

<sup>21</sup> Inside Informality: Poverty, Jobs, and Services in Nairobi's Informal Settlements. May 2006. S. Gulyani, Debrata Talukdar, Cuz Potter, The World Bank.

<sup>22</sup> References for further details concerning the legal framework include: National Water Service Strategy (2007), Draft Model Water Services Rules (2008), WASREB website <http://www.wsrb.or.ke/>



WSBs are responsible for asset financing and management and in turn delegate operational responsibilities to WSPs under Service Provision Agreements (SPA) that stipulate the specific objectives and tasks related in particular to (a) tariffs, (b) services standards, and (c) coverage<sup>23</sup>.

The WASREB 2008 Model Water Services Rules<sup>24</sup> further elaborates the rules governing the relationship between the WSBs, WSPs, and consumers and constitute the common template for the provision of water services in Kenya

adopted and/or adapted by individual WSBs and WSPs.

However, as the Rules stand, they do not specifically cover services improvements into the informal settlements. This is being addressed through a current process of revisions. AWSB and NCWSC will move ahead and ensure improvements in service coverage, service standards and water quality, through regular monitoring and reporting at the level of each business unit as well as for NCWSC as a whole.



23 Socially Responsible Commercialization, WASREB, 2007. For more information, see also <http://www.wsrb.or.ke/index.htm>

24 Draft Model Water Services Rules (2008).

This drive will be also be pursued through regular meetings with consumer associations and other community partners.

## 2.6 Coordinating Development Efforts

There are many development projects in informal settlements that have been implemented by many different institutions, including international organizations, development agencies, NGOs, CBOs, civil society organizations (CSOs) and others. The influx of financial and human resources is welcome, but the lack of coordination and sometimes conflicting objectives or methods results in inefficiencies and duplications.

Increased awareness on the need for water and sanitation services improvements in the informal settlements has led to positive developments, including the development of community-run water kiosks, ablution blocks and solid waste management as well as ecological sanitation approaches. Self-help groups, including youth groups, have emerged to organize solid waste collection and recycling efforts and to initiate environmental sanitation campaigns. Many of these initiatives have been supported by NGOs with funding from development partners. Although these initiatives provide valuable models and practices and have led to local improvements, their overall impact has remained limited. They have not been scaled up and sustainability remains a challenge.

The main limiting factors are (a) public neglect,

(b) fragmentation among a large number of small projects, and (c) a lack of coordination between local and trunk infrastructure.

In response to their public mandates<sup>25</sup> for poverty reduction and environmental health, NCWSC and AWSB have recently taken up the challenge of supporting such community efforts, including the promotion of improved on-site sanitation and improved hygiene<sup>26</sup>. As public agencies with a large degree of autonomy, they are particularly well placed to enhance the efficiency and scalability of ongoing efforts by fostering a coherent operational framework and guiding principles for consultations, planning, coordination and funding. The Guidelines are meant to guide NCWSC and AWSB to do what is in their power to end the era of public neglect of informal settlements and partake in broader efforts towards slum upgrading, which involves a broader array of public agencies.

The Guidelines recognize the need to coordinate water and sanitation improvements with KENSUP broader slum upgrading efforts. The partners for slum upgrading are the Ministry of Water and Irrigation (MWI), Nairobi City Council (NCC), Water Services Regulatory Board (WASREB), UN Habitat, and other relevant line ministries (Ministry of Housing, Ministry of Local Government, and Ministry of Health). An active pursuit of water, sanitation, and hygiene improvements within KENSUP could be an entry point, and catalyst for accelerated progress on the broader objectives pursued by KENSUP.

<sup>25</sup> Model Water Services Rules (Draft), 2008.

<sup>26</sup> Examples include Gatwikera Bio-latrines and other ablution blocks in Kibera, where NCWSC has been supported the community efforts with free connections and storage tanks.

# PART 3: Technical Options

This part introduces some technical principles to guide the design, construction, and implementation of physical water and sanitation services (WSS) interventions in the informal settlements of Nairobi.

## 3.1 Water supply

The improvements and extension of water supply services in the informal settlements need to be combined with measures to reduce Non-Revenue Water (NRW). These include steps to eliminate illegal/unauthorized connections and to reduce leakages which contribute to pressure losses and affect water quality through contamination. To tackle NRW, AWSB and NCWSC intend to develop settlement specific programs including a range of components identified in the Athi Water Services Board (AWSB) Pro-Poor Policy of 2007. These include:

- a) **Network intensification:** AWSB and NCWSC, together with community partners will ensure the intensification of formal networks in both water and sewerage, as they remove informal “spaghetti” networks. This will reduce leaks and opportunities for unauthorized connections and reduce the length of after-meter piping. The involvement of communities will facilitate the right-of-way and prevent vandalism and illegal abstraction.
- b) **Water supply in bulk and introduction of bulk meters:** This will enable NCWSC to quantify the amount of water supplied

and lost - in informal settlements and provide essential information to guide planning, budgeting, and costing of future investments. Strategically located bulk meters will measure the flow in operationally manageable District Management Areas (DMAs).

- c) **Introduction of meter chambers:** In cooperation with community partners and relevant stakeholders, NCWSC will introduce protected and locked meter chambers with accounts and meters for individual connections and/or kiosks. NCWSC and carefully selected accountable community partners will supervise the process. The chambers will be located strategically so as to reduce the length of connection pipes and enhance security through community vigilance.
- d) **Upgrading of pipes:** NCWSC will encourage the systematic use of robust galvanized pipes for after-meter connections to reduce leakages and bursts and prevent water contamination.
- e) **Facilitation of improved water kiosks:** NCWSC will construct or support community construction of improved kiosk structures that provide safety of the meters and facilitate a higher-quality service by individual or community operators.
- f) **Social connections:** NCWSC will review current procedures and charges for house or plot connections with a view to simplify them and to launch a social connection



program to facilitate more affordable access to piped water by poor households.

### 3.2 Sanitation

Sanitation, an increasingly difficult problem, needs tackling in a socially, financially, and environmentally sustainable way. AWSB and NCWSC commit to this by promoting, facilitating, and supporting the increase of basic sanitation facilities to informal settlements. This commitment includes developing and promoting innovative solutions, including improved individual or communal on-site sanitation, which will remain the prevalent mode for sometime. It will also include pilot efforts to introduce condominial (low-cost) sewerage systems. To achieve this, NCWSC prioritizes certain solutions:

- a) **Promotion of community managed pay ablation blocks including bio-latrines<sup>27</sup>.** NCWSC will seek ways to develop such latrines in partnership with CBO and/or private operators. Pilot bio-ablation blocks

of different designs have been built and operated by CBOs in Kibera since 2004 and, although in need of improvements, will provide useful models. NCWSC will play a facilitating role focusing on land allocation/acquisition, mobilization of funds, providing a water connection and ensuring a sewer connection to dispose of wastewater.

- b) **Construction of simple systems for waste discharge.** Pit latrines are the most common type of sanitation facility in Nairobi's informal settlements, but are not useful for all types of wastewater. NCWSC aims to provide suitable facilities, such as discharge channels with easy access points to improve connectivity to the sewer mains. NCWSC will work with communities and adjoining structure owners to plan the facility, clear the right of way, mobilize funding and build the connection to the sewer network.
- c) **Supporting improved pit latrine emptying services.** AWSB and NCWSC will work with latrine emptying and sludge removal operators to introduce basic health standards, improve their equipment, and control choice of site disposal. AWSB and NCWSC will also provide designated disposal points along the sewer network. NCWSC will seek to be flexible and innovative with the objective to lead city-wide practices and standards.
- d) **Facilitation of community connections to sewerage networks:** The approaches mentioned above, including condominial sewer systems and ablation blocks,

<sup>27</sup> Such latrines are regular ablation blocks equipped with an underground dome, where excreta accumulate from the toilets above. The methane released by the excrement is captured and reused for power. Eventually, the remaining waste is used for fertilizer.

eventually require sewer connections for the final disposal of used water and sludge. Their planning will need to be closely coordinated with the rehabilitation and expansion of the sewer system for which NCSWC retains the primary role. NCSWC sewer improvement and expansion program in the high density informal settlements will be prioritized and will be coordinated with the interventions mentioned above. Active community participation will be encouraged in order to ensure local demand and community ownership.

### 3.3 Drainage

While drainage and solid waste management are not included in the AWSB and NCWSC mandates, both institutions acknowledge that inadequate drainage in informal settlements is a public health challenge, and that water interventions must include drainage systems. They therefore support and facilitate community and NGO efforts to this end and engage with other relevant authorities like Nairobi County Council (NCC) and the Ministry of Local Government (MoLG) in the construction of open drains. Improvements in solid waste management shall be advocated, as the provision of central collection points and disposal services ensures that drains are not blocked.

AWSB and NCWSC will actively seek to involve councilors in order to get their commitment to develop drainage infrastructure that complements other improvements.

### 3.4 Increasing technical capacity

To ensure wide-scale impact of informal settlements interventions, NCWSC and AWSB

must identify their own human resource gaps. This process will include assessing NCWSC's technical capacity to tackle the challenges of informal settlements, identify specific skill gaps and address them with capacity-building interventions. This is to ensure high quality workmanship and to avoid contamination, high levels of NRW, poor pressure and leaks.

The poorest quality pipes are generally located after the meter and are the responsibility of the vendor or household. Due to financial constraints, and insufficient knowledge, vendors and households often use low quality pipes and install them at insufficient depths, resulting in breakages, even from light loads.

Improved technical skills of NCWSC staff and individual/community water services providers, as well as appropriate and enforceable standards require urgent attention and support.

Some technical focal areas are below:

#### 3.4.1 Technical skills and technology

- a) Offer short skills training courses to selected persons within the slums to supplement staff capacity in the company, and issue grade test certificates that authorize successful artisans to carry out the repairs within the slums.
- b) Include areas of training such as (a) materials and their characteristics, (b) repair methods, (c) available tools and their appropriate use, (d) depth of installations.
- c) Benchmarking with other utilities and implementing technologically successful case studies (bearing in mind the local context).

- d) Participating in Water Operators Partnerships (WOP) to learn from other utility experiences and successes.

### 3.5 Development and Enforcement of Appropriate Standards

- a) Developing appropriate and affordable standards of pipes for vendors
- b) Documenting successfully implemented and technologically accepted structures for replication (e.g. Bio-Latrines)

- c) Including appropriate drains/sewer systems with manholes that are designed to avoid blockages (examples are the semi-open channels in Indian cities)
- d) Developing appropriate WATSAN service models with other stakeholders
- e) Developing mechanisms to curb vandalism of infrastructure (e.g. community policing)
- f) Monitoring, supervising, and documenting the activities of trained artisans



# PART 4: Financial Options and Asset Ownership

## 4.1 Financing options

In principle, AWSB and NCWSC will use available funds from (a) internal revenues, (b) donor-funded investment programs, or (c) a combination of the two. However, the funding arrangements for informal settlements interventions will be made on a case-by-case basis and depend on the particularities of that community and the project objectives. Community-financing will also be encouraged. As the responsible entities for WSS services provision in their services areas, AWSB/NCWSC will:

- a) leverage funding for all new infrastructure projects; when internal funds are unavailable, the recently developed urban funding window of the Water Services Trust Fund (WSTF) will provide an important funding option.
- b) influence donor investment programs in the preparation phases to ensure that (i) funds are allocated to informal settlements, (ii) the design reflects the realities and needs of the settlements, and (iii) investments feed into, reflect, and ensure efficient use of master plans for citywide improvement.
- c) co-finance investments with communities and other partners (including financial institutions)
- d) facilitate community access to local financing options, including, but not limited

to the (i) Constituency Development Fund (CDF) and (ii) Local Authorities Transfer Fund (LATF).

These are state institutions, whose processes require official applications for funding, with detailed project descriptions, coverage targets, implementing agencies or groups, and the related costs. NCWSC will assist partner communities to prepare such documentation and draft the funding applications.

- e) facilitate community partners' access to micro-finance by informing them of existing financial services; participating in the design of feasible financing mechanisms; providing them with sustainable technical and management solutions, and assisting them with preparing feasible proposals and business plans.

## 4.2 Options for asset ownership and management

Currently, the majority of WSS services in the informal settlements are provided by unregulated, small-scale operators (mostly individuals). These operators do not have contracts with the NCWSC. The majority of the infrastructure has been funded and constructed locally. Illegal connections, non-payment of bills, substandard quality of water and services, and excessive resale tariffs are difficult to enforce. In addition, if NCWSC disconnects a consumer



this usually leads to an illegal reconnection. In providing increased incentives for effective management and maintenance and operations, asset ownership options are important for establishing sustainable management solutions under clear rules, which are stated in contracts.

As stipulated in the Water Act (2002), AWSB is the sole owner of assets and facilities used for water supply within the NCWSC service area and it reserves the right to ownership of assets and facilities contained in the WSP's Services Provision Agreement (SPA) inventory. Similarly, AWSB is principally responsible for the development, rehabilitation, renewal, and extension of the facilities, but may delegate its responsibility to develop new fixed assets in informal settlements to the NCWSC, according to specified standards.

Responsibility of implementation lies with NCWSC even when a customer might fund extensions to AWSB's assets.

Similar to the rest of the city, the preferred ownership for new infrastructure in informal settlements lies with AWSB, under the principle that in an urban area, the residents should be entitled to WSS services provided by the designated authorities. The rules governing the assets owned by AWSB are clear, predictable and transparent.

However, AWSB and NCWSC acknowledge the fact that most of the WSS infrastructure on the ground has been built and paid for by individuals or communities, and thus also welcome community or individually-owned WSS infrastructure into its



formal service network jurisdiction. Similarly, if a local NGO or CBO attract project funding for their area, they will be equally supported.

Concerning the transfer of management and operation of water services from the GoK to the WSBs, the Water Act (2002) provides a legal and institutional framework for transferring the management and development of Kenya's water resources, as well as the provision of water services. The Transfer Plan:

- a) provides details of institutional, contractual, and financial arrangements; capacity building, organizational restructuring; transitional and other measures necessary to ensure efficient, cost effective, and orderly transfer of the management and operation of water services;
- b) prescribes appropriate arrangements for transferring to WSBs the ownership of plant, equipment, and/or other assets used by the government in connection with water services, with or without any associated liabilities;
- c) prescribes appropriate arrangements for WSBs to obtain the use of plant, equipment or other assets used by local authority or other person in connection with water services; and
- d) specifies measures to effect the plan within a specified time.

In addition, the Transfer Plan provides a framework that allows AWSB to influence the use of facilities owned or used by NGOs, Community Based Organizations (CBOs), self-help groups, and small-scale service providers. It is flexible and provides options for asset ownership while including the following considerations:

- a) Recognizing the role played by community, self-help groups, CBOs and NGOs in the

provision of WSS services in informal settlements;

- b) Engaging NGO initiatives in developing AWSB plans;
- c) Continuing ownership and management of such facilities by their owners;
- d) Encouraging the separation of asset ownership and provision of services in the informal settlements, so that community organizations employ professional operators and maintenance managers;
- e) Maintaining proper accounts and records related to provision of water services;
- f) Encouraging such organizations and groups to continue investing in the development of facilities through AWSB's approved development plans and available funding sources;
- g) Providing terms and conditions for adoption of management improvement programmes in service provision and in the maintenance facilities, including management of demand and provision of resources for system renewal; and
- h) Providing terms and conditions of undertaking additional infrastructural investment.

Thus, while preferring public ownership, AWSB welcomes different ownership arrangements. The ownership options can be categorized as follows:

- a. In cases where assets are installed and financed by AWSB or agents supporting it, the ownership lies with AWSB. In this case, the maintenance of assets is delegated to NCWSC. NCWSC is to ensure the assets' serviceable condition according to good practice at its own cost.

- b. Similarly, when installation and financing has been done by the community partner or supporting agents, the assets and their maintenance is the responsibility of those parties (guided by NCWSC) with conditions stipulated in separate management contracts. Where there is community-ownership, the community partner owns the asset from the main meter onwards and manages its distribution. Where a distribution network is without a main meter at the point of entry to the system, AWSB automatically owns the assets for the first year following construction.
- c. In specified cases, AWSB will consider co-funding arrangements and asset transfer schemes with community partners, based on specific needs and conditions. This could mean AWSB ownership up to the point of a master meter, beyond which a sub-reticulation network belongs to the community partner. Such temporary, mixed-ownership arrangements help to leverage resources from different parties.

In principle, it could be stated that when a WSS improvement is financed with public funds (government, sector, or donor funding), the infrastructure automatically belongs to AWSB. Privately funded interventions (individual, CBO, NGO, community, private sector) are owned by the community partner, unless agreed otherwise.

However, independently of ownership, in order to ensure regulated and coordinated service quality and price, the NCWSC shall develop and enter into management contracts<sup>28</sup> with viable community parties to act as its agents in water services provision in areas not currently served. These contracts, by governing the rights and obligations of the NCWSC and the agent, shall define minimum service levels, maintenance concerns, rates charged to/by the agent and so forth. They shall be in accordance with the Regulatory Board's guidelines and/or model contracts approved by the Regulatory Board.

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<sup>28</sup> Similar agreements are already in use in Kisumu and will be taken into account.

# PART 5: Guiding Principles

These Guidelines provide Nairobi City Water and Sewerage Company (NCWSC) a standard sequence to follow in its interventions in Nairobi's informal settlements, following the framework laid out in the Athi Water Services Board (AWSB) Pro-Poor Policy of 2007. The actions are based on a set of guiding principles and are meant to be specific, practical, and general enough to allow for adjustments according to the particulars of each settlement.

## 5.1 Social Principles

### **I. Everybody Has a Right to Basic Water Supply and Sanitation**

Everyone, including those in informal settlements has a right to (a) sufficient and safe water, (b) an environment that is not harmful to health or well-being, and (c) a protected environment beneficial to present and future generations. The State must therefore take reasonable legislative and other measures within its available resources to achieve progressive realization of these rights.

### **II. A Strong and Active Civil Society has an Important Role to Play**

AWSB and NCWSC commit to collaborating with civil society and communities to identify local priorities, plan, and support service delivery and implementation within informal settlements. The scope of partnership between AWSB, NCWSC, and Community Based Organizations (CBOs) will range from loose to specific and informal

to formal contractual arrangements. Through innovation, flexibility, and mutual respect, the energy of Civil Society Organizations (CSOs), especially youth groups, can support the water services improvement objectives.

### **III. Youth Groups**

The energy and resourcefulness of Nairobi's youth should be put to good use by including them in the planning, construction and management of WSS schemes. As the generations of the future, the youth should participate in the way basic services are provided to them. Currently, high unemployment rates keep this valuable human resource underexploited and frustrated.

### **IV. Women Should Play a Central Role in the Planning, Provision, and Management of Water Services**

Women often bear the brunt of poor and absent water services and hence are key stakeholders in the sector. NCWSC will target efforts enabling women to play a meaningful role at all levels in consultations, planning, decision-making, as well as operation and management of water services. Women's rights groups will play a key role.

### **V. Hygiene Promotion**

Education and knowledge about hygienic practices and the linkages with unsafe water, inadequate sanitation and disease, are vital components of water services and achieving

sustained health and quality of life. All water services initiatives will integrate the promotion of safe hygiene. NCWSC will do this in collaboration with the Ministry of Public Health and Sanitation.

## 5.2 Economic and Financial Principles

### I. Ownership of Water Services Infrastructure

AWSB owns the infrastructure for delivery of water, as stipulated in the Water Act (2002). According to the principles of the Act, it has delegated direct services provision, as well as operations and maintenance of these assets to NCWSC. However, it welcomes different ownership and management options for the informal settlements, within the limits of the sector regulations, as also described in section 4.2.

### II. Water Services Must be Provided in Accordance with Commercial Principles

Water is both a social and an economic good. Water services provision must be in accordance with reliable commercial practices within a sound agreement framework, failure of which substantially increases the risk of unsustainable service. These principles include (a) proper accounting with adequate provision for depreciation, (b) adequate spending on maintenance and replacement of assets, (c) effective and efficient use of resources, and (d) appropriate tariff regimes and income (including subsidies) that cover expenses.

### III. Reasonable Water Tariffs

Reasonable water tariffs are important components of any strategy to support

sustainability in the provision of services in the informal settlement. Charging for water is essential to generate funds for operating, maintaining, and investing in water systems. Given the informal settlements residents' limited ability to pay, NCWSC currently charges its connected customers a social tariff of KSh 10/m<sup>3</sup>. However, intermediaries raise these prices to cover their costs and make significant profits. Therefore, NCWSC will require and enforce maximum resale prices through partnerships with the community so that neither commercial incentives nor poor consumers' interests are undermined.



#### **IV. Water Conservation and Demand Management**

Water conservation and demand management will receive as much attention as supply expansion in the planning of water services and water resources. Currently, per capita water consumption in Kenya lies between 647 and 700 cubic meters per annum due largely to the unavailability of water lost to leaks and other wasteful practices. The situation is worse in the informal settlements where availability is below the global benchmark of 1,000 cubic meters per capita per annum. Water conservation and demand management are therefore critical and prominent components of AWSB's and NCWSC's planning and managing of water services.

### **5.3 Institutional and Management Arrangements**

**Clear definition of roles and responsibilities:** The Service Provision Agreement (SPA) defines the respective roles and responsibilities of AWSB and NCWSC to avoid overlapping mandates.

#### **I. Separation of Regulatory and Operational Responsibilities**

Clearly separating the roles of regulation and operation helps to reduce potential conflicts of interest inherent in self-regulation and clarify the objectives and responsibilities of parties. Regulation seeks to protect and balance the interests of consumers and those of the responsible institutions.

#### **II. User and Community Participation**

Public (users and community) participation in planning and provision of services is important

at every phase of the intervention to increase sustainability of the projects.

#### **III. Capacity Building**

Community capacity building is necessary and should be prioritized. Capacity building will relate not only to 'hard' technical skills but also equally to 'soft' skills such as (a) health education, (b) communication, (c) negotiation, (d) social mediation, (e) leadership, and (f) management. There is need to seek and nurture good managers.

#### **IV. Information to Support Monitoring and Evaluation**

Well-designed information systems will enable better management and the effective monitoring and regulation of service provision by AWSB and NCWSC. Systems will be simple, practical, user-friendly, and designed for informal settlement settings.

#### **V. Knowledge Management and Structured Learning**

Structured learning and knowledge management will facilitate improved decision-making and utilization of lessons learned from experience and best practices and adapt new information as and when available. A specific unit at NCWSC for the informal settlements will be responsible for documenting, analyzing and distributing experiences and information of pro-poor interventions.

#### **VI. The Private Sector has an Important Role to Play**

The private sector will play an important role in assisting local AWSB and NCWSC in the water

services sector including engineering and design services, construction, consulting services, capacity building and some management (e.g. kiosks and public toilets).

## 5.4 Giving Priority to the Informal Settlements in NCWSC Corporate Strategy

In light of the above commitments, informal settlements are corporate priority areas for AWSB and NCWSC. AWSB and NCWSC provide clear objectives and timelines for informal settlements improvements, which are also in their respective performance agreements and a main component of their strategic plans.

- i. Sustained and adequate human and financial resources are necessary to ensure impact and continuous improvements in the informal settlements. NCWSC has established a specific department for the informal settlements with staff and budgets. This informal settlements department has high institutional standing within NCWSC, including specifically developed performance contracts.
- ii. This informal settlements department has staffing at headquarters.
  - a. **Central:** The informal settlements department is based at the NCWSC headquarters. In principle, technical and investment planning and decisions are made in the central office, based on the recommendations of the regions. The department is responsible for implementation of new investment projects and ongoing monitoring. The department will hand over projects to the regions for operations, support, and maintenance.
  - b. **Regions:** Regional teams will be in charge of operations, support, and maintenance of informal settlements water and sanitation supply.
- iii. The staff dedicated to the informal settlements department shall have sufficient technical and social skills to effectively address the challenges of informal settlements<sup>29</sup>. The dedicated department will have operational clout in NCWSC's headquarters, including an operational budget.
- iv. NCWSC will divide the informal settlements into manageable areas, or District Management Areas (DMAs), installing bulk meters to quantify the amount of water consumed and also to facilitate operational and investment planning.
- v. NCWSC's customer charter will specifically mention informal settlements residents as a sign of official and public commitment to improve services to these areas.
- vi. Similarly, AWSB commits to dedicating staff to the informal settlements work. These staff will participate in the mobilizing of funds, planning, and execution of WSS improvements and work closely with NCWSC.

<sup>29</sup> i.e. billing frequency and modalities, operations and maintenance, cooperating with designated partners, socio-economic realities, security, population densities.

## 5.5 Including Sanitation in the Operational Mandate of NCWSC

NCWSC will consistently undertake and support efforts targeted to improving sanitation in informal settlements. Off-site sanitation facilities are preferred and prioritized, but where not possible due to geographical or other reasons, NCWSC will promote on-site solutions. The focus will be on sustainable approaches with an emphasis on different ecological sanitation approaches and emptying services. NCWSC will assist its

community partners by providing them with water connections and storage tanks and, where possible, connecting them to sewerage networks. NCWSC will also promote awareness-creation and education to promote hygienic and healthy habits.

## 5.6 Working in Partnership with Stakeholders

AWSB and NCWSC will strive for cohesion with its partners in all slum-upgrading approaches and will form partnerships on various levels, including:



**a) Government and Municipal Level**

- I. NCWSC and AWSB will work with GoK in line with relevant national strategies and policies. AWSB and NCWSC with their partners will promote WSS services improvements as a valid entry point for larger slum upgrading efforts.
- II. NCWSC and AWSB will actively involve the Nairobi City Council (NCC) in planning and implementation through advisory consultations. NCC participation is specifically required to address broader slum upgrading, land issues, site identification, and drainage. NCC will also be encouraged to intensify upgrading efforts in the slums.
- III. In cooperation with the GoK and NCC, NCWSC and AWSB will link their operations to other slum upgrading efforts like roads and greenfield<sup>30</sup> projects to ensure comprehensive and sustainable community impact.
- IV. Local authorities (provincial administrations and chiefs) and politicians (members of parliament and councilors) shall be included in the processes. Their inclusion will increase the possibilities for (a) leveraging broader actions by other government and other partners, (b) fund-raising, (c) political attention and, (d) commitment.

**b) Development Agency/NGO Level**

- I. NCWSC will take a central role in participating, supporting, and

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<sup>30</sup> The term greenfield refers to construction projects on land that has never been used and where there is no need to demolish or rebuild any existing structures.

coordinating operations of sector actors in informal settlements to maximize efficiency of allocation of existing resources and to meet the most urgent needs and areas.

- II. NCWSC will organize open and regular NGO/stakeholder forums for informal settlements including experience sharing and coordination to enable stakeholders to partake in NCWSC's activities and plans.
- III. AWSB and NCWSC will actively cooperate with specialized NGOs to put their expertise into use. This will always be done in adherence to existing procurement rules.

**c) Community Level**

Community participation in planning, installing, and operating services is central to the company's activities since they should be informed by ground-level knowledge and have community ownership. Therefore, targeted communities are included and consulted in all phases of intervention and operation. Feasible community initiatives should be supported within the range of possibilities.

To this end, and to ensure wide-scale impact, all projects use the principles of vertical and horizontal integration, as explained here below.

- I. *Vertical integration* means coordinating community initiatives in specific sub-sectors with complementary improvements in related trunk infrastructure and services. Examples of vertical integration would be a CBO/NGO water improvement effort supported by NCWSC installation of mains



and meters. Similarly, NCWSC can extend the sewer line to reach and connect a community ablation block.

- II. *Horizontal integration* means complementing trunk initiatives with a relevant but different type of service. Examples of such activities would include a community drainage system that complements an increased supply of water.

To promote transparency and community ownership in all settlement-specific interventions, a three level-structure is envisaged for informal settlements (where applicable), including (i) a settlement-wide WSS Forum, (ii) initiative-specific local steering committees; and (iii) community-based operators. The three levels are illustrated below:

- a) *Settlement-wide water and sanitation forums* will enable local residents to participate, plan, and agree on settlement-wide issues. The functioning of the forum will be facilitated by NCWSC. Meetings could be held at NCWSC's nearest offices and other locations. The forum will include all relevant stakeholders, including individuals, community groups, water vendors, district officers, NCWSC, NCC and others to allow for as wide of representation as possible.

In addition, the forums serve as resource and communication centers where NCWSC can disseminate information and documentation. This forum will bring overall supervision and relevance to the water and sanitation activities in the settlement.

- b) *Local steering committees* will be formed at the local community or village level. These committees will participate and contribute

to the planning and implementation of specific projects and initiatives. Once the schemes are operational, they will serve as local oversight committees for accountability to ensure good conduct in management and operations. These committees will include representation from local groups, NGOs, individuals, and a representative from NCWSC. Committees shall communicate regularly with NCWSC on operator compliance and are the main channel for consumer-utility relations.

- c) *A community-level operator (agent)* is jointly selected and/or hired by contract according to their capacity to operate services in partnership with NCWSC. A community partner can be a CBO, NGO, an individual, an enterprise, a professional association or other type of institution, and operates and manages installed infrastructure under a NCWSC contract, according to the ownership and management principles as laid out in section 4.2. The operator does this under supervision of an oversight committee. Where assets are owned by the community partner, rules concerning appointing and changing operators will be negotiated separately.

NCWSC or AWSB will design model contracts, memoranda of understanding (MoU), and other agreements for the several levels of partnerships. Although uniform in nature, some flexibility will be allowed due to differences in local conditions.

## 5.7 Improving Infrastructure

In the technical design and execution of its operations, NCWSC will principally target installation, improvement, and rehabilitation of

necessary trunk infrastructure. Where possible, NCWSC will seek to push for other trunk inputs from NCC (i.e. road, drainage) to increase impact of WSS interventions. Similarly, water and sanitation projects by NCWSC should complement any infrastructure project planned by the NCC. This helps account for existing and planned infrastructure. Multi-level partnerships are needed to plan and install trunk infrastructure.

## 5.8 Involving Consumers through Effective Communication

NCWSC will communicate the reasons and objectives of any intervention to the beneficiaries. Establishing and maintaining communication channels for end consumers in informal settlements is crucial to the success of interventions.

The communication runs two-ways to ensure the consumers' voice is heard. To ensure two-

way communication, the NCWSC will update its customer charter to include consumers in informal settlements and put in place mechanisms for complaints and feedback. It will also open resource centers in five administrative regions of the city. It will open its library in the main office on Kampala Road to interested parties. Similarly, documentation, information and resources will be available online through both AWSB's and NCWSC's websites.

NCWSC and AWSB commit to these guiding principles and have translated them into a sequence of action steps as outlined here below. The Guidelines comprise of two parts: (i) an explanation of the national context and challenges presented by Nairobi's informal settlements'; and (ii) an action-focused guide to steer interventions in these areas. The action guide is broken down into 10 steps with the lead implementing organization for each step.

# PART 6: Moving to Action

**Note 1:** The steps are listed below in a deliberate sequence. However, depending on the context they may also be implemented in a different order or in parallel to each other.

**Note 2:** The steps also build on the assumption that the type of intervention is not predetermined in detail, making it possible to respond to consumer demands.

**Note 3:** The assumption is that funding is available (see section 3.6). Therefore, funding arrangements have not been included as a separate step.

**Note 4:** NCWSC will document each step.

Action	Detailed Actions	Implementing Organizations
<p><b>Step 1:</b></p> <ul style="list-style-type: none"> <li>• Preliminary identification of area and target community</li> <li>• Beginning of action planning</li> </ul>	<p><b>i) Choosing the intervention area(s)</b>  <b>Elements contributing to the selection:</b></p> <ul style="list-style-type: none"> <li>a) Current WSS service levels and community demonstrated need</li> <li>b) Level of community activity               <ul style="list-style-type: none"> <li>I. Development initiatives being implemented or planned in the area</li> <li>II. Recommendations and findings resulting from continued meetings and work of the regularly meeting coordination group for informal settlements (<i>i.e. areas with little or no current interventions by partners might be given preference</i>)</li> </ul> </li> <li>c) Feasibility: Implementing agencies must consider the extent of resources (financial and human) and the target population and area size to ensure meaningful impact is possible; general security is also considered.</li> <li>d) Possible earmarking of available funds</li> </ul> <p><b>ii) Formation of a water and sanitation community forum at the settlement level to (a) agree on the principles of intervention, (b) identify specific areas/villages, and (c) be involved in all phases of the work. The forum may include:</b></p> <ul style="list-style-type: none"> <li>a) NCC and Provincial Administration</li> <li>b) Community members and leaders</li> <li>c) NCWSC staff</li> <li>d) Development partners</li> <li>e) Consumers</li> </ul>	<p><b>NCWSC, AWSB</b>  <i>(in consultation with partners and other stakeholders)</i></p>

Action	Detailed Actions	Implementing Organizations
<b>Step 1 cont:</b>	f) Other relevant stakeholder organizations <b>iii) Terms of reference (TOR) are drafted for a situational assessment of the area</b> <b>Output:</b> TOR for situational assessment; procurement of consultants (if necessary)	
<b>Step 2:</b> A thorough situational assessment and data collection of the targeted area	General characteristics of the area to be assessed <b>i) Collecting community data related to water and sanitation interventions</b> <ol style="list-style-type: none"> <li>a) Mapping of existing infrastructure and services provision in water, sewerage, and sanitation (GIS mapping and enumeration methods preferred)</li> <li>b) Mapping the distances from the nearest main water and sewerage networks if there is no network within the settlement (identify and cost any trunk extension needs)</li> <li>c) Mapping current and planned slum upgrading and WSS development activities in the area</li> <li>d) Identifying potential partnerships for planning and implementation with (a) development partner/NGO and (b) communities</li> <li>e) Assessing the needs of local partners and consumers in targeted community with cooperation arrangements in mind</li> </ol> <b>Output:</b> Action plan based on the assessment and including financial considerations	<b>NCWSC, AWSB, NGOs, communities, consultants</b>
<b>Step 3:</b> Presentation of findings	A workshop is organized for relevant stakeholders to discuss the results and recommendations of the assessment and to agree on an action plan, including: <ol style="list-style-type: none"> <li>a) roles and responsibilities of stakeholders (including ownership, management and supervision arrangements)</li> <li>b) communication, training, and capacity building needs and plan</li> <li>c) support for community funding/financing and social support</li> <li>d) trunk installations/extensions</li> </ol> <b>Output:</b> Detailed project work-plan drafted by appointed steering committees and approved by the forum.	<b>Lead: NCWSC, AWSB</b>  <b>Other: NGOs, community partners</b>
<b>Step 4:</b> Design  <b>Step 4.1:</b> Technical design of the project	The design shall: <ol style="list-style-type: none"> <li>a) consider existing knowledge and the detailed findings of the baseline survey</li> </ol>	<b>NCWSC, AWSB</b>

Action	Detailed Actions	Implementing Organizations
	<ul style="list-style-type: none"> <li>b) take into account the larger urban context when designing physical WSS structures and their installation;</li> <li>c) include a timeline and budget; and</li> <li>d) be based on consultations and be made available to all relevant stakeholders (beneficiaries, NGOs, steering committee, and other partners).</li> </ul> <p><b>Output:</b> A blueprint of planned infrastructure/hardware interventions and detailed cost estimates.</p>	
<p><b>Step 4.2:</b> Management and transaction design</p>	<p>Based on the existing information, the design arrangements for ownership, construction, operations, management, and financial flows should be carefully designed, including:</p> <ul style="list-style-type: none"> <li>a) application procedures and selection criteria for community partners (individuals or groups)</li> <li>b) working modalities between NCWSC and community partners (individuals or groups)</li> <li>c) contract templates and agreements necessary for the project (in consultation with the community committee/forum)</li> <li>d) training modules to prepare partners for collaboration</li> </ul> <p><b>Outputs:</b></p> <ul style="list-style-type: none"> <li>(1) Management and institutional framework</li> <li>(2) Selection criteria</li> <li>(3) Contracts and agreements drafted and approved by relevant parties</li> <li>(4) Training modules designed and costs calculated</li> </ul>	<p><b>NCWSC, AWSB</b> <i>(in consultation with steering committee, coordinating group)</i></p>
<p><b>Step 4.3:</b> Communicating the activities</p>	<p>Identifying and applying the best communications channels and efficiently combining channels (e.g. press, radio, leaflets, barazas) to ensure impact. The targeted communities shall be informed of project plans and objectives through a <b>call for applications</b> to collaborate with NCWSC (unless the intervention is small, the area is limited, and the partner is obvious).</p> <p>AWSB calls for applications on behalf of NCWSC. The application procedures and selection criteria shall be clearly communicated.</p> <p><b>Output:</b> Detailed communication strategy to support the project.</p>	<p><b>NCWSC, AWSB</b></p>
<p><b>Step 5:</b> Selection of community partners</p>	<p>NCWSC and AWSB select the potential partners based on their qualifications and in agreement with the steering committee.</p>	<p><b>NCWSC, AWSB</b></p>

Action	Detailed Actions	Implementing Organizations
<p><b>Step 5 cont:</b> and beginning to collaborate <i>(if applicable)</i></p>	<p>After the partner has been selected and the contracts have been agreed upon and signed, NCWSC and AWSB then provide training to the selected partner to ensure readiness for new tasks and duties.</p> <p><b>Output:</b> Community operators selected and relevant training started.</p>	
<p><b>Step 6:</b> Project implementation</p>	<p>Step 6 has three components:</p> <ol style="list-style-type: none"> <li>procuring contractors and/or consultants</li> <li>constructing and installing infrastructure</li> <li>training partners to prepare for operations and maintenance</li> </ol> <p><b>Outputs:</b> Infrastructure constructed and training completed</p>	<p><b>Lead:</b> NCWSC</p> <p><b>Other:</b> The selected community group, partner NGO <i>(if applicable)</i>, WSTF <i>(if applicable)</i></p>
<p><b>Step 7:</b> Operations and maintenance</p>	<p>Step 7 has four components:</p> <ol style="list-style-type: none"> <li>selected community partner manages the installed delivery system under NCWSC's and the community's supervision</li> <li>NCWSC provides technical support</li> <li>NCWSC undertakes any disciplinary measures as stipulated in the contract</li> <li>NGO partner provides capacity building support</li> </ol> <p><b>Output:</b> The scheme is operating successfully and sustainably.</p>	<p><b>NCWSC, the selected community group and partner NGO</b> <i>(if applicable)</i></p>
<p><b>Step 8:</b> Monitoring, evaluation and reporting</p>	<p>After six months of the completion of construction and the initiation of operations, NCWSC will:</p> <ol style="list-style-type: none"> <li>assess the successes and shortcomings of the project</li> <li>assess the potential for replication in another area, or scaling up in the same area</li> <li>ensure all phases of the project are documented</li> <li>make information available for the public in the NCWSC library, website, and resource centers</li> </ol> <p>NCWSC must provide ongoing operational support to the community partners instead of one-off support.</p> <p><b>Outputs:</b></p> <ul style="list-style-type: none"> <li>Results measured, assessed, documented, and disseminated</li> </ul> <p><b>Outcome:</b></p> <ul style="list-style-type: none"> <li>Increased capacity and preparedness of NCWSC and communities to replicate and scale-up interventions</li> </ul>	<p><b>Lead:</b> NCWSC</p> <p><b>Other:</b> consultant <i>(if necessary)</i></p>





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