IMPACT

A performance Report of Kenya's
Water Services Sub-Sector

Issue No 3

Water Services Regulatory Board

Ensuring Access to Quality Water Services for All

IMPACT

A performance Report of Kenya's
Water Services Sub-Sector

Issue No 3

© WASREB 2010
Water Services Regulatory Board

P.O. Box 41621, 00100 - GPO, Nairobi, Kenya
Tel: +254 (0) 20 273 3559/61
Fax: +254 (0) 20 273 3558
Email: info@wasreb.go.ke
Website: www.wasreb.go.ke

All rights reserved.

Supported by

gtz Partner for the Future. Worldwide.

Design & Production: RealONE Concepts Ltd
Email: info@realoneconcepts.co.ke

Table of Contents

List of Tables

List of Figures

Abbreviations

AfDB	African Development Bank
AFD	French Development Agency
BOD	Board of Directors
DWO	District Water Officer
ESAWUR	Eastern and Southern African Water Utility Regulators
ETA	Extra-ordinary Tariff Adjustment
ISO	International Standards Organization
KeBS	Kenya Bureau of Standards
KPIs	Key Performance Indicators
KPLC	Kenya Power and Lighting Company
Kshs	Kenya Shillings
KfW	German Financial Cooperation
L/c/d	Litres per capita per day
LVN	Lake Victoria North
LVS	Lake Victoria South
MDGs	Millennium Development Goals
MoU	Memorandum of Understanding
MSLs	Minimum Service Levels
MWI	Ministry of Water and Irrigation
NGOs	Non Governmental Organizations
NRW	Non Revenue Water
NWSS	National Water Services Strategy
NWSB	Northern Water Services Board
O&M	Operation and Maintenance
QMS	Quality Management System
RTA	Regular Tariff Adjustment
RV	Rift Valley
SPA	Service Provision Agreement
UfW	Unaccounted-for Water
UPC	Urban Projects Concept
WAGs	Water Action Groups
WARIS	Water Regulation Information System
WaSBIT	Water Services Board Investment Planning and Monitoring Tool
Wasreb	Water Service Regulatory Board
WSB	Water Services Board
WSP	Water Service Provider
WSS	Water Supply and Sanitation
WSTF	Water Services Trust Fund

Foreword

Information Key to Good Governance

"If the misery of our poor be caused not by the laws of nature,but by our institutions, great is our sin"

The third issue of *Impact* brings us up to date in terms of monitoring and reporting on the water services sub-sector performance. The production of this issue comes at a very challenging time for the water sector. From a general perspective, the recent past has witnessed extremes of water scarcity and water availability, bringing to the fore, once again, the issue of water security. For Water Service Providers (WSPs), it is an uphill task keeping up with the demands of consumers. On the other hand, Water Services Boards (WSBs) have to keep re-assuring WSPs and their customers that they have the capacity to deal with the backlog in infrastructure development.

In the midst of this scenario comes a compounding issue: Governance! The Water Services Regulatory Board, Wasreb, continues to prescribe standards for the sub-sector to guard against *ad hoc* management. Of these, the Corporate Governance Guideline, circulated early 2009, has generated the most heat. This is as it should be, because there is a limit to how much regulation can do. What we require is a philosophy of ethical behaviour which comes from living the value of professionalism. The best rules are intrinsic. The Corporate Governance Guideline is about holding players in the water services sector to account. The passion and anxiety it has generated has to do with the confusion between value statements and cultural change. It is in line with the dictum that "our actions are the best interpreters of our thoughts" – so much for the values that we hang on the walls of every office! Suffice to say that we are at a very critical stage of the water sector reforms. What we are doing now is deepening the reform of WSPs to unlock the benefits consumers have been longing for. We have been stuck at broad sector reform for a little too long. There is need for leadership at policy level to breathe more air into the institutions that have been put in place.

Good governance is about accountability and participation. It should focus on results and transparency in the management of water services. There is no transparency without information, which means that information is key to good governance. Information helps WSPs and customers improve access to water services. This is one of the primary reasons behind the publication of *Impact*. We want consumers to have an opportunity to interrogate their WSPs in terms of comparative performance, including asking why their WSP is not in *Impact!* These interactions will help create water service institutions that are responsive and accountable to their customers. As our mission says, we regulate for universal access. It is our strong submission that universal and sustainable access will only be possible within a solid governance framework. Wasreb is focusing on 33 WSPs across the country to provide a model of well governed WSPs in their regions. From our interaction with most of them, they know and support what needs to be done and all that needs to be done is work on mental models, especially for those professionals involved. The road from reality to vision has been travelled by others and we can travel it! All we are saying is that players in the water sector must abide by the Water Act, and the rules, guidelines and standards set by Wasreb, period.

Impact 3 shows general improvements in sector performance from the previous two issues. However, there are numerous challenges that still remain – sustainability being the key one. The apparent communication disconnect between WSBs and WSPs compounds these challenges. This is especially so during tariff review processes where some WSBs remain lukewarm as if they do not realize that their running costs are funded by WSPs. In future, Wasreb intends to organise forums with WSBs and WSPs to strengthen their relationships.

Impact 3 reports on seven (7) WSBs and 72 WSPs for the year 2007/8; and eight (8) WSBs and 77 WSPs for the year 2008/9. This is a tremendous improvement from *Impact 2* which reported on seven (7) WSBs and 55 WSPs. However, data quality and inconsistency remain a drawback to performance assessment. Transfer Plan issues, especially staff and assets transfer, remain the single biggest unresolved matter to unlock sub-sector development. These issues were raised in *Impact 2* as well but they remain pending.

Kenyans will remember 2009 as a year of severe water shortages due to prolonged drought. This situation forced WSPs, particularly in Nairobi and Mombasa, to implement water rationing programmes. This impacted negatively on the hours of supply, with a substantial reduction of WSP revenues. Water tankers were introduced by some WSPs as a stop gap measure to get water to the urban population. Without adequate water, however, most Kenyans in urban areas were left with no option but to rely on services provided by cartels and informal structures with the associated risk of source and quality problems.

To mitigate the impact of this water scarcity, the government implemented a borehole drilling programme, targeting a total of 250 boreholes across the country. Another initiative was the development of a water storage plan meant to raise the storage per capita through the construction of 30 large dams across the country as a long term measure to aid water harvesting and storage. These efforts were directed at addressing natural causes for the perennial water shortages. However, it is not lost that there are areas where purposeful intervention from water sector institutions can make a difference. This includes instituting measures to curb massive water losses resulting from inefficiencies in management and operations.

The aspect of improving efficiency is therefore the central role of this publication. We hope the institutions assessed will reflect on their annual performance and strive to do better in the next *Impact* phase.

Eng Robert Gakubia
CEO, Wasreb

Chapter 1

Sector Performance Overview

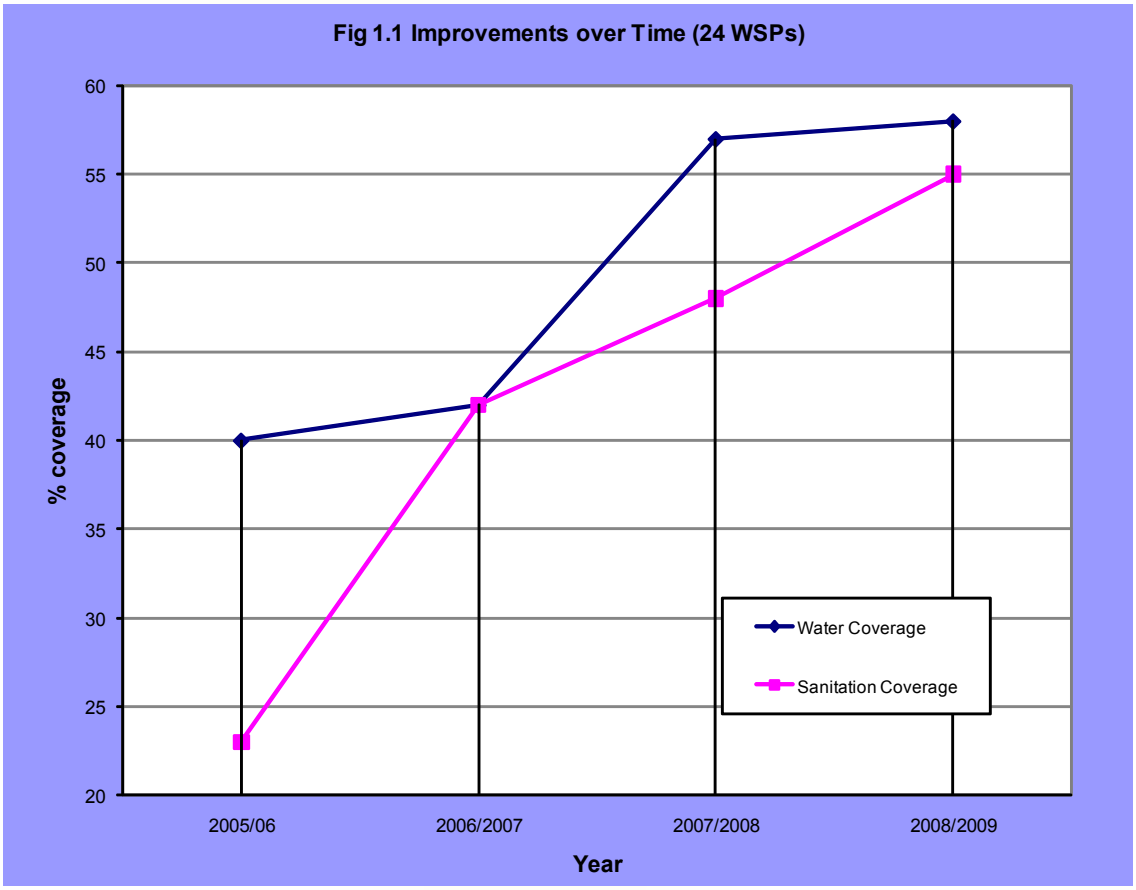
Progress Realised in Coverage

1.1 Trends and Performance Summary

The water services sub-sector, in recent years, has seen progress made with water coverage rising mainly in urban areas from 37% in 2007 to 45% in 2009. Data quality and availability for urban areas has improved steadily and will be up to date once *MajiData,* a database on low income urban areas in Kenya, is available by the end of 2010. Unfortunately, the picture on rural areas is not yet as precise. Wasreb is therefore not in a position to provide detailed information on rural areas in regard to rural water and sanitation coverage.

There has been a steady improvement in the responsiveness of WSPs to customer needs while substantial effort has gone into reducing Non Revenue Water (NRW) in realization that the little water that is available must be managed well.

Fig. 1.1 shows the trend in water and sanitation coverage (access) for the 24 WSPs that have submitted data consistently since 2005/6. Their sum annual water production is 346,654,449 m^3, representing 74% of all those that reported. Given that the 24 WSPs constitute three quarters of the sector's water production, the trend provides a good indication of improvement in urban water supply and sanitation. The trend clearly confirms that after a decade of decline and stagnation of service provision in towns, sector reforms have led to significant improvement. Thus, more people have access to safe drinking water and sanitation than ever before. The levels of access (particularly sanitation), however, remain far behind the MDG targets.



The average national consumption per capita (including NRW) is 116 l/c/d. If NRW is excluded, this figure comes down to 59 l/c/d, which is insufficient compared to industrialised countries where consumption levels are over 100 l/c/d. The amount of water lost (57 l/c/d) is almost equivalent to the billed volume per capita (excluding NRW).

The number of WSPs analysed have continued to increase from 25 in 2005/6 to 77 in 2008/9. The proportion of WSPs complying with data submission requirements has continued to rise from 28% in 2005/6, 47% in 2006/7, 59% in 2007/8 and 63% in 2008/9 (Table 1.1). Unfortunately, there are still WSPs, mainly small providers, that are registered but do not comply with reporting requirements. Wasreb puts these non compliant WSPs on notice.

Table 1.1 Trend in Data Submission by WSPs

	Impact 1		**Impact 2**		**Impact 3**			
Status of data submission	2005/6		2006/7		2007/8		2008/9	
	Nr of WSPs	% submitting	Nr of WSPs	% submitting	Nr of WSPs	% submitting	Nr of WSPs	% submitting
Complete	25	28	55	47	72	59	77	63
Incomplete	33	36	13	11	12	10	13	11
Nil	33	36	50	42	38	31	32	26
Total	91		118		122		122	

1.2 Performance Overview

1.2 .1 Performance of WSPs

This report rates performance of the WSPs based on nine indicators. Table 1.2 (a) shows the ten best performing and ten worst performing WSPs in the country. Wasreb congratulates the best performing WSPs for their efforts, which is a crucial contribution to the country's development. The worst performers, as well as the WSPs which have not submitted data, are warned that Wasreb will continue to expose their underperformance and their resistance to transparency and accountability to stakeholders and the public. Wasreb may consider revoking Service Provision Agreements (SPAs) of WSPs who either fail to provide information or do not make effort to improve their performance.

Table 1.2 (a) Best and Worst Performing WSPs in 2008/9

Top Ten Best Performers			Ten Worst Performers	
WSP	**Rank**		**WSP**	**Rank**
Nyeri	1		Gusii	68
Meru	2		Uasin Gishu	69
Embu	3		Ndaragwa	70
Malindi	4		Kitui	71
Muranga	5		Kapsabet Nandi	72
Nairobi	6		Vihiga	73
Nanyuki	7		Embe	74
Nakuru	8		Rumuruti	75
Isiolo	9		Kwale	76
Kericho	10		Upper Chania	77

Table 1.2 (b) Most Improved and Declined WSPs in 2008/09

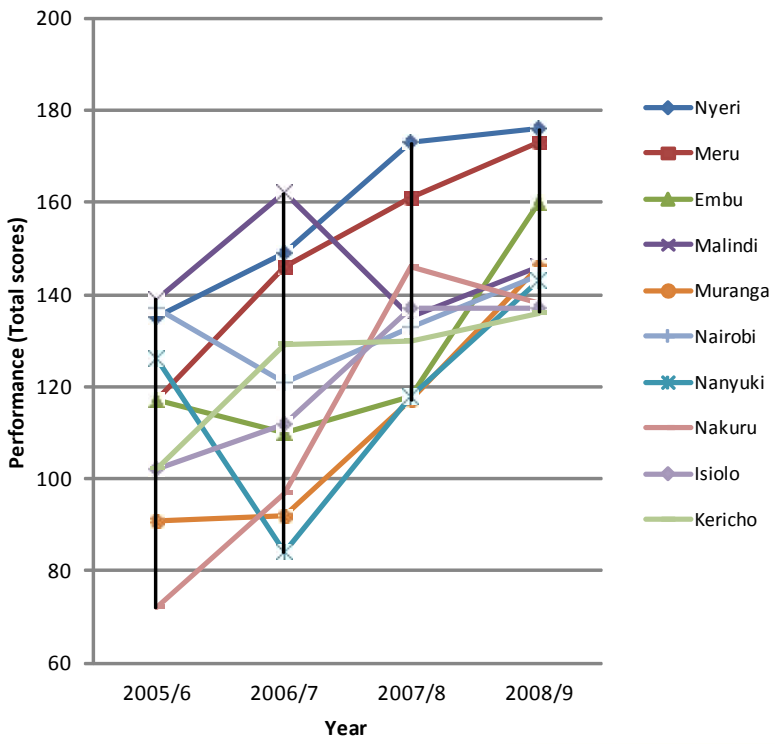
Most improved by more than Ten Ranks			Declined by more than Ten Ranks	
WSP	Change		WSP	Change
Iten Tambach	28		Ndaragwa	40
Othaya Mukurweini	22		Olkalou	38
Kiambu	21		Chemosit	29
Gatamathi	18		Kwale	26
Lodwar	16		Embe	23
Tachasis	14		Gusii	19
Mavoko	13		Imetha	15
Muranga	12		Kathiita Kiirua	14
Embu	12		Ruiru Juja	13
Kibwezi Mtito	12		Tarda Kiambere	12
			Makindu	11

Besides the annual reporting on performance, Wasreb also assesses WSPs performance over time. Table 1.2 (b) indicates WSPs that have shown improvement but also exposes WSPs that have declined by ten or more ranks between the period 2007/8 and 2008/9. Wasreb commends the 10 WSPs that have managed much better now than the year before and encourages them to continue their efforts for the benefit of their customers.

On the other hand, the 11 WSPs which have lost so much ground are warned that Wasreb will keep a special watch on them in the coming year. All under-performing WSPs are warned that their SPAs risk being terminated and they should, as a matter of urgency, put in place strategies to reverse the negative trend. The ultimate responsibility for improvements lies with Directors of Boards of the underperforming WSPs, who need to demonstrate better corporate governance and professionalism.

Fig 1.2 shows that the performance of the top ten ranked WSPs over time. That the top WSPs have recorded a positive trend over time is indicative that overall, the water services sector has continued to improve.

Fig 1.2: WSP Performance over time



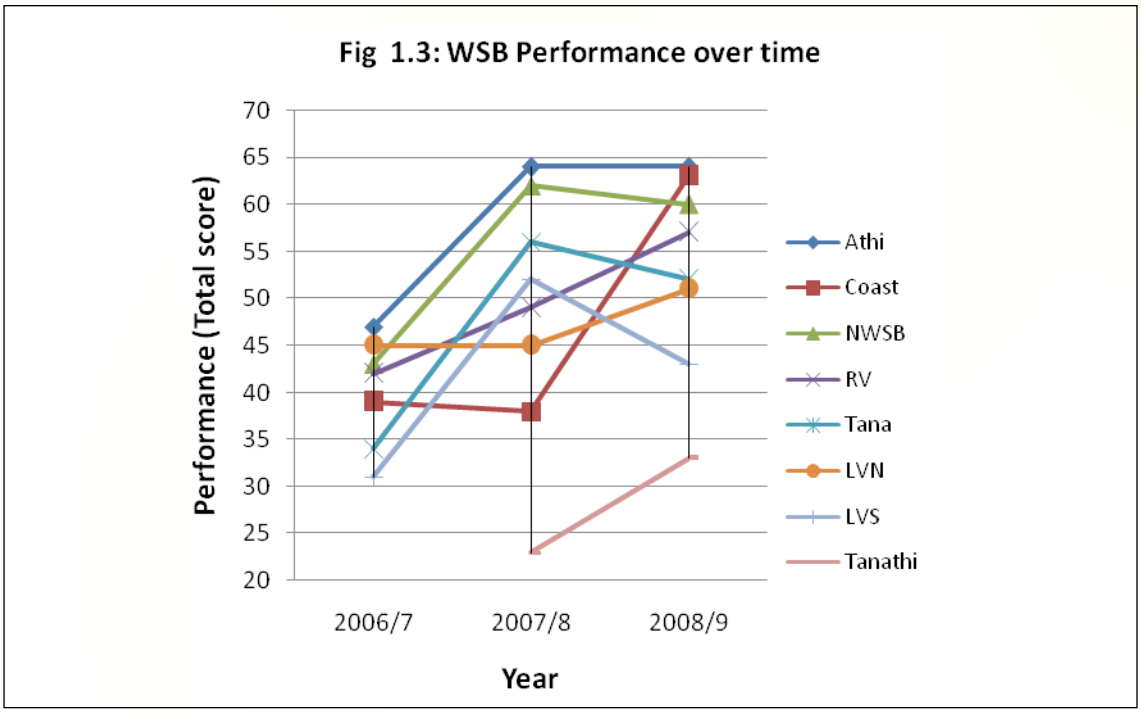
1.2.2 Performance of WSBs

The performance of WSBs in general is disappointing. The WSBs have submitted little information on rural water supply and sanitation, investments undertaken, and subsidies received in the sector. Caution must therefore be exercised when drawing conclusions from Table 1.3 and Fig 1.3 below, since it may not reflect the actual position on the ground.

Table 1.3: Comparative Ranking of WSBs Over Time

WSBs	2008/2009 Ranking	2007/2008 Ranking	Change in ranking
Athi	1	1	-
Coast	2	7	+5
Northern	3	2	-1
Rift Valley	4	5	+1
Tana	5	3	-2
Lake Victoria North	6	6	-
Lake Victoria South	7	4	-3
Tanathi	8	-	-

Wasreb commends Athi, Coast, Northern and RV WSBs for leading the 8 WSBs but calls on all WSBs to further improve their efforts. Wasreb challenges WSBs that have performed poorly, namely LVN, LVS, Tana, and Tanathi to improve performance otherwise they risk being penalized in line with the Enforcement and Compliance Strategy.



The following is the ranking of WSBs in the basis of information submission:

Performing level	WSBs
Good (5/5)	-
Medium (4/5)	Rift Valley, Northern, Tana
Mediocre (3/5)	Coast
Worst (2 or less/5)	Tanathi, LVS, LVN, Athi

It is urgent that the WSBs improve on enforcement of regulation (e.g. make the WSPs report according to guidelines), move to professional investment planning and project monitoring (e.g. by using the appropriate tools such as WaSBIT), improve data collection and analysis for the rural setting and devolve the operation of infrastructure to WSPs or local communities in line with the Water Act 2002.

The MWI may not be able to establish a sector program and sector investment plan if WSBs continue to underperform in their key functions.

Chapter 2

The Regulatory Environment

Building Blocks and Moving to Enforcement

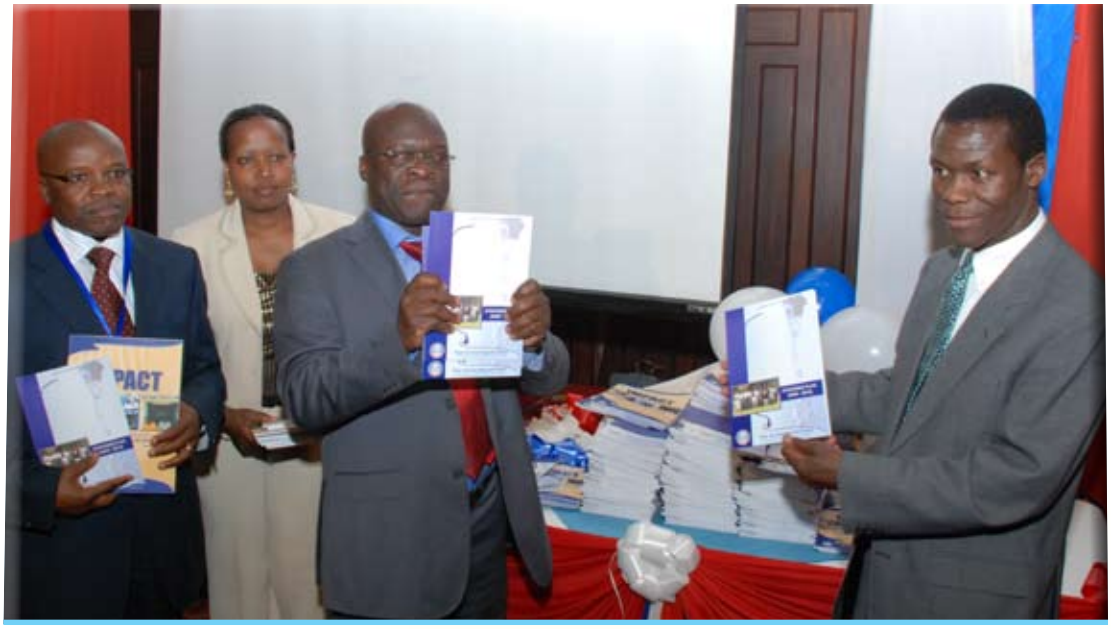
The Water Services Regulatory Board, Wasreb, has established the key elements of a regulatory regime to move the water and sanitation sector to a higher level of performance and ensure that commercial utilities are socially responsive. In other words, Wasreb has put in place relevant strategies and tools to achieve the policy objectives of the Ministry of Water and Irrigation (MWI).

2.1 Strategy and Objectives

The current Wasreb Strategic Plan identifies six strategic areas for the thrust of the Regulator's work:

- Refining, strengthening and enforcing the legal and regulatory framework governing the provision of water services by WSBs and WSPs
- Promoting the commercial sustainability of WSBs and WSPs
- Improving the institutional capacity of Wasreb to regulate water services
- Facilitating the development of an enabling policy environment for the provision of water services
- Facilitating effective information and communication on water services
- Enhancing collaboration between Wasreb and other relevant institutions

The strategic objectives are aligned to national aspirations for the water services sub-sector as articulated in the *National Water Services Strategy* (NWSS), *Vision 2030* and the *Medium Term Plan 2008* – 2012. Wasreb aims to take the water and sanitation sector gradually to a higher performance level to protect consumers from abuses of the natural monopoly in water and sanitation service provision. Over the performance period, Wasreb has been striving to ensure that the operation of water and sanitation systems, through



The Permanent Secretary, MWI, Eng David Stower (Middle) joins Wasreb Chairman, Prof Albert Mumma (right), and CEO, Eng Robert Gakubia, at the launch of the Wasreb Strategic Plan.

WSPs, and the development of infrastructure, through WSBs, contribute to the sustainable social and economic development of Kenya. The goal has been to ensure that the water and sanitation sector moves to a performance level that will enable Kenyans have access to services which respond to the criteria of the human right to water and sanitation. The human right to water implies:

- Access in terms of secure infrastructure/outlets for water, affordability for the different consumer groups, quantity and time
- Continuity of services e.g. minimum service hours and opening time for outlets
- Quality of services which includes e.g. continuous quality control of water and effluent
- Cultural acceptability e.g. sanitation facilities for households, institutions and the public
- Environmental protection e.g. disposal of effluent without risks to the public

The right to water also includes:

- Non-discrimination and equality e.g. above mentioned minimum standards for everyone
- Participation and empowerment e.g. through Water Action Groups (WAGs)
- Accountability and transparency e.g. in the use of funds for development and management

In order to fulfill the criteria for the human right to water and sanitation, the sector needs to enforce the provisions of the Water Act 2002 that oblige all water service provision to be formalized / regulated.

2.2 Tools for Regulation

In order to fulfill its responsibilities and attain its objectives, Wasreb has put in place a number of tools such as the Water Regulation Information System (WARIS), comparative performance reporting – *Impact*, tariff adjustment negotiations, guidelines and a citizen engagement mechanism through WAGs.

2.2.1 Information and Monitoring (WARIS)

WARIS is a reporting and monitoring software, introduced in 2006 and refined in 2008. WSBs and WSPs utilize the software to submit data annually (and in some cases quarterly) to Wasreb for analysis. This enables Wasreb to issue the annual *Impact* report, which analyses on the performance of WSPs in the operation of water supply and sanitation systems and of the WSBs in the development of infrastructure. The performance assessment is based on well defined and agreed-upon indicators. The present *Impact* report has closed the backlog of information by including the ranking for 2007/8 and 2008/9. In addition, data for 2006/7 has been included in the analysis of indicators for comparison with 2008/9.

2.2.2 Performance Reporting

Impact report is a tool for comparative competition. It analyses and exposes WSPs and WSBs according to their performance levels. Best performers are recognized and rewarded while the worst performers are shamed to give incentive for improvement. The report offers a country-wide performance overview of the water and sanitation sector. It is therefore an accountability tool to the public, shareholders and Directors of the WSPs and WSBs, as well as other decision makers in the sector.

2.2.3 Tariff Negotiations

Tarriff review is normally a rigorous process.

As an information tool, WARIS is also used to collect and analyse data on costs for WSPs and WSBs. This helps to verify if spending is justified or whether the institutions waste funds meant for operation and asset development. This information is then used to assess the financial viability of WSPs and the financial performance of WSBs and to determine if a tariff adjustment is justified. In addition, tariff adjustments are linked to perfomance improvement and can thus be used as an incentives. The adjustment of the average tariff aims at cost recovery for the financial sustainability of WSPs and WSBs. Through progressive block tarriffs, Wasreb ensures that the fixing of average tariffs takes into account the ability to pay for different consumer groups. Consequently, tariff adjustments do not mean that automatically the poor have to pay more than in the past.

The sector had not seen a tariff adjustment for almost 10 years prior to 2009. Many WSPs were below O&M cost recovery thus threatening service provision. Because most WSPs were unsustainable, the government was forced to subsidize water and sanitation services with taxpayer money. In addition, many costs increased over the years, including a high rise in electricity charges in 2009. The latter made WSPs default payments to the Kenya Power and Lighting Company (KPLC) subsequently leading to power disconnections. As a rejoinder to the fragile situation, Wasreb initiated an Extraordinary Tariff Adjustment (ETA) across the country. The measure was meant to temporarily cushion the WSPs as they liaise with WSBs to prepare comprehensive tariff applications based on justified costs and in accordance with the Tariff Guideline. Following the expiry of the ETA, WSBs and WSPs continued submitting applications for the Regular Tariff Adjustment (RTA). So far, Wasreb has approved 25 tariff applications. New tariffs have been effected for the majority of medium and large WSPs, including Nairobi, Mombasa, Nakuru, Kisumu, Nyeri, and Eldoret.

2.2.4 Guidelines

Various guidelines have been issued to support standardization and to protect consumers. Wasreb is now steadily moving to activities of implementing regulatory tools established in earlier years. During the reporting period, Wasreb developed two guidelines: Model Water Regulations to be adopted by WSBs and the Corporate Governance Guideline for use by the water services sub-sector. The water regulations

govern the relationship between WSBs, WSPs and consumers of water services. Wasreb expects that the adoption of these regulations will assist in enforcing acceptable behaviour and standards in the provision of water services. The Corporate Governance Guideline provides standards for WSPs to take decisions in the interest of the company and the people they serve. It broadens the representation of Boards of Directors and makes their composition more professional. It implements one of the key sector principles of separation of policy-making and service provision. It curbs undue political interference and promotes transparency and accountability. The guideline is currently being implemented by WSBs and WSPs.

2.2.5 Empowerment of Right Holders (Consumers and Under-served)

Wasreb is determined to support the Ministry of Water and Irrigation (MWI) to gradually realize the human right to water and sanitation for everyone in the country. Both the Licence and SPA have provisions for consumer engagement as integral aspects to improving transparency and accountability in the sector.

Against this background, Wasreb is the driving force for the establishment of WAGs to empower consumers and the underserved and give them a voice. A pilot programme on WAGs commenced in four towns: Nairobi, Kisumu, Kakamega and Mombasa. The WAGs, comprising a team of volunteers, have diligently begun the process of bringing consumer concerns to duty bearers. This is being done by encouraging consumers to demand improvement of services and by creating platforms where consumer issues are jointly discussed with the WSPs, WSBs and Wasreb. Further, expected benefits of this mechanism include greater awareness of water sector reforms by citizens as well as increased prominence and appreciation of the roles of the regulator. Through participation in forums, the regulator will be well informed on both the realities of WSPs and consumers, and will be better advised in order to make informed decisions, especially on tariffs. WAGs will also help strengthen consumer confidence in WSPs. Consumers will thus be able to utilize issue-handling channels in the WSPs to have their concerns resolved.

Mr. Evans Moseti (left) of the Nairobi WAG and officials of Nairobi Water Company sort out a customer problem in one of the estates.

2.2.6 Criteria for Appointment of WSPs

One of Wasreb's strategic objectives is to promote financial sustainability of WSBs and WSPs. In order to do this, Wasreb has developed criteria for the appointment of WSPs based on specific technical and financial parameters. This is to ensure that the WSPs are capable of meeting routine operation and maintenance costs and have in place proper management for the provision of water services. Depending on the impact on the quality of service, the criteria fall into two categories, namely:

1. Mandatory conditions – These must be met before approval of the SPA.
2. Conditional Approval (Conditions Attached) – This can be negotiated and time frames for compliance agreed upon between Wasreb and the licensee.

2.3 Other Developments

2.3.1 ISO Certification

In a major step towards becoming a model regulator, Wasreb acquired the ISO 9001:2008 certificate from the Kenya Bureau of Standards (KeBS). The award of the certification implies that the services of Wasreb can now be benchmarked with those of other leading regulators. For the water services sector, this means they can benefit from regulatory services that recognize efficiency and customer focus as essential ingredients in successful business. All activities of Wasreb now revolve around the requirements of Quality Management Systems (QMS) whose spirit is continuous improvement and adherence to Total Quality Management. The eight (8) Quality Management Principles are customer focus, leadership, involvement of people, process approach, systems approach to management, continual improvement, factual approach to decision making, and mutually beneficial stakeholder relationships.

To institutionalize commitment to best practice, Wasreb has embedded the commitments in the QMS in its service charter.

Officials of KEBS prepare to hand the ISO certificate to Wasreb CEO, Eng. Robert Gakubia (left).

Ms. Rose Nyagah (left) of AWSB soon after receiving a licence for her Board. Compliance to licence conditions by WSBs is still low.

2.3.2 Enforcement and Compliance

An Enforcement and Compliance Strategy has been developed by Wasreb for implementation in the sector. The Strategy is based on the following principles:

- **Education** – to foster learning, inducement and self regulation.
- **Prevention** – through selective and targeted surveillance and a graduated warning approach.
- **Enforcement** – as a last resort using the traditional methods of coercion and deterrence.

Enforcing regulation as a vehicle for implementing government policy in the water and sanitation sector can only be done if Wasreb elaborates and uses the right tools and WSBs enforce regulation as demanded by the Water Act 2002. The key tools of regulation are now in place. Their application is still a weakness at WSB level. The WSBs have failed to fully apply the tools and enforce them within WSPs. For instance, WSPs are often sending poor quality data or not reporting at all, which should not be permitted by WSBs. In addition, WSBs do not send comprehensive and quality data to Wasreb. It is obvious that with insufficient data, WSBs may not be able to carry out their functions in an acceptable manner.

WSBs are weak in compliance to licence conditions as very few:

- Have asset registers for their service area
- Can authoritatively vouch for the quality of water supplied and standards of effluent discharged in their area of service
- Can comment on the revenue inflows and outflows for their area
- Have well functioning complaints systems that capture and resolve customer complaints
- Have full control of their WSPs as provided for in the SPA
- Have established water source protection zones to safeguard their water supplies

These problems are a result of lack of capacity in critical key skills, weak governance systems (Boards of Directors) and management tools.

There is also a grey zone between the role of regulation and activities carried out by the MWI such as data collection on performance of WSPs. Therefore, reporting requirements for WSPs and proof of accountability still overlap.

2.3.3 Regional and Global Networking

For purposes of promoting best practice, Wasreb continued networking with other regulators regionally and globally. One of the forums found instrumental for this purpose is the Eastern and Southern African Water Utility Regulators (ESAWUR) Forum.

In May 2009, Wasreb joined other regulators in the commitment to improve regulation through monitoring and benchmarking. During the 3rd Eastern and Southern African Water Utilities Regulators meeting, held in Maputo, Mozambique, the regulators signed a Memorandum of Understanding (MoU) committing themselves to co-operate for purposes of improving their work. The forum brought together more than 25 participants drawn from water utility regulators in Kenya, Zambia, Tanzania and Mozambique. The theme of the meeting was "Better Service through Monitoring and Benchmarking". In the MoU, they committed themselves to collaborating on issues of training and information exchange.

Kenya was appointed to host the 2010 forum. The latter took place in August and was guided by the theme "Responding to the Changing Environment". The most important outcome of the meeting was the signing of the ESAWUR constitution by all members, as it will further formalize collaboration between the regulators.

Chapter 3

Performance of Water Service Providers

Positive Trend in Performance but Key Challenges Remain

The performance analysis of WSPs, which forms the centrepiece of this report, is based on nine key performance indicators (KPIs) namely: water coverage, sanitation coverage, Non-Revenue Water (NRW), water quality, hours of supply, metering ratio, (revenue) collection efficiency, operation and maintenance (O&M) cost coverage, and staffing (per 1000 connections). Together, these indicators give a very clear picture of the performance of a WSP and, in aggregate, of the whole sector. The KPIs form part of the binding Minimum Service Levels (MSLs). WSPs, in committing themselves to progressively improve on service delivery, agree to meet MSLs and other sector benchmarks over the SPA validity period.

By assessing the performance of WSPs on basis of the KPIs and by making this information available, Wasreb has created a regulatory tool (*Impact* Report) that seeks to support all key stakeholders in the sub sector to do a better job:

a) First and foremost, through benchmarking, every WSP is given the incentive to improve its performance vis-à-vis the other WSPs as well as to improve on its own previous performance. WSP managers and employees can identify areas for improvement and adopt realistic targets.

b) As a 'policy tool', it helps the MWI to monitor and review sector policies and programmes.

c) Development Partners and NGOs are provided a reference tool for making policy and for streamlining and improving investment interventions.

d) On the basis of comparative information, customers and the public get a feel of the quality of service they are getting from their WSP and can exercise their voice to demand for better service provision from an informed point of view.

3.1 General Information

Table 3.1 General Data on WSPs (2008/9)

	WSP	Total Population in Service area	Population served	No. of connections	No. of towns	Turnorver/ billing (Ksh in mio)	Production in M3 (000)	NRW	ø Consumption/c/d(incl. NRW)	ø Consumption/c/d without NRW)	No. of staff
Very Large WSPs (>35,000 connections)											
1	Nairobi	3,203,201	2,157,826	401,669	6	3,176	154000	40	196	118	1918
2	Mombasa	975,520	618,594	71,798	6	730	16240	35	72	47	483
3	Eldoret	401,456	260,512	42,593	1	292	15513	52	163	79	186
4	Nakuru	674,789	472,352	40,910	1	389	10302	47	60	32	212
Large WSPs (10,000-35,000 connections)											
5	Nakuru Rural	441,174	202,378	28,921	5	111	6405	36	87	56	118
6	Nzoia	377,036	174,215	28,292	4	109	5109	57	80	35	155
7	Nyeri	122,203	83,408	19,863	1	219	5219	39	171	105	111
8	Mathira	180,000	54,000	19,414	2	45	3967	61	201	78	62
9	Othaya Mukurw.	205,759	126,156	18,566	2	46	6753	65	147	51	85
10	Kirinyaga	348,000	110,106	18,531	5	55	1505	86	37	5	192
11	Western	448,400	131,617	16,364	6	75	2170	41	45	27	100
12	Kilifi Mariakani	764,090	428,161	16,136	11	137	4424	39	28	17	164
13	Murang'a South	299,297	91,038	14,932	4	15	3368	57	101	44	62
14	Chemosit	105,535	48,523	14,716	14	27	2628	67	148	49	109
15	Kisumu	525,313	153,083	14,084	1	230	6200	62	111	42	135
16	Kahuti	179,983	34,212	13,156	1	24	3240	72	259	73	59
17	Kericho	118,720	60,543	13,010	1	85	3007	52	136	65	120
18	Malindi	259,756	207,805	12,486	4	159	4301	7	57	53	75
19	Tetu Aberdare	103,202	69,769	11,819	3	33	2473	63	97	36	56
20	Gatamathi	194,111	44,954	11,478	2	16	3069	79	187	40	26
21	Nanyuki	83,360	50,360	11,364	1	127	3832	46	208	113	83
22	Nyahururu	95,000	35,564	10,156	9	54	2291	57	177	75	98
23	Kikuyu	112,830	38,136	10,047	3	31	1859	46	134	73	37
Medium WSPs (5,000-9,999 connections)											
24	Gatundu	255,394	31,766	9,717	3	31	3212	69	277	85	51
25	Garissa	186,522	121,239	9,587	2	73	3960	64	89	32	89
26	Embu	140,000	67,549	9,545	1	89	3726	57	151	65	55
27	Naivasha	70,000	19,200	9,240	1	17	585	47	83	44	23
28	Tavevo	259,772	126,114	8,914	3	71	3072	No data	67	No data	91
29	Machakos	161,000	10,494	8,485	1	16	545	41	142	84	52
30	Imetha	120,872	14,160	8,435	7	20	3447	81	667	124	70
31	Murang'a	47,000	24,816	8,200	3	42	816	50	90	45	67
32	Meru	105,985	53,146	7,537	1	77	1926	28	99	71	70
33	South Nyanza	680,000	573,020	7,417	5	11	2236	39	11	6	100
34	Ngagaka	64,000	26,652	6,698	1	11	3500	87	360	47	39
35	Gatanga	121,000	31,644	6,528	1	19	1945	42	168	98	31
36	Isiolo	70,000	28,310	6,496	1	36	1234	38	119	74	55
37	Ruiru Juja	115,376	50,765	6,302	2	23	816	26	44	32	40
38	Kwale	174,339	67,944	5,979	5	73	3189	59	129	53	71
39	Karimenu	106,865	42,746	5,956	1	8	2190	93	140	9	22
40	Ngandori Nginda	73,000	28,170	5,936	4	15	5110	77	497	112	30
41	Gusii	1,600,000	300,000	5,743	7	31	1210	45	11	6	147
42	Tuuru	335,912	162,442	5,682	1	20	1103	62	19	7	83
43	Ngariama Njukiini	50,000	15,984	5,407	1	4	4680	96	802	32	22
44	Oloolaiser	420,000	32,528	5,203	3	40	1623	40	137	82	52
Small WSPS (<5,000 connections)											
45	Kyeni	68,200	11,352	4,591	2	3	107	40	26	16	15
46	Kiambu	89,921	15,162	4,329	8	43	1041	38	188	117	36
47	Kitui	542,000	135,674	4,071	2	38	2728	68	55	17	53
48	Nol Turesh	66,667	50,000	4,001	2	37	3857	64	211	77	60
49	Eldama Ravine	61,986	30,211	3,969	1	12	1601	80	145	30	37
50	Mavoko	170,000	35,595	3,849	1	16	688	35	53	35	47
51	Embe	60,000	8,442	3,257	3	6	710	80	230	45	43
52	Lodwar	85,000	25,321	2,860	7	11	849	29	92	65	32
53	Nithi	69,811	15,996	2,811	3	20	1385	74	237	62	40
54	Githunguri	130,067	6,072	2,780	2	12	92	No data	41	No data	13
55	Kapenguria	92,700	7,524	2,595	7	4	622	42	226	131	36
56	Lamu	23,500	14,776	2,577	2	14	540	33	100	67	26
57	Olkalou	71,000	16,230	2,198	1	4	129	No data	22	No data	10
58	Nyandarua North	40,000	5,394	2,189	4	4	143	No data	73	No data	27
59	Narok	60,000	25,814	1,994	1	16	792	58	84	35	18
60	Tarda Kiambere	115,000	40,000	1,887	1	17	320	31	22	15	24
61	Kibwezi Mtito	186,000	29,120	1,801	1	10	465	24	44	33	29
62	Engineer Town	25,000	5,454	1,634	1	1	214	No data	108	No data	5
63	Makindu	63,178	18,996	1,401	1	12	726	48	105	55	21
64	Kapsabet Nandi	32,500	6,417	1,365	1	3	209	64	89	32	14
65	Uasin Gishu	61,773	8,392	1,350	6	3	545	48	178	93	53
66	Iten Tambach	45,387	7,888	1,322	1	5	253	47	88	47	14
67	Muthambi	22,273	9,180	1,299	1	2	389	40	116	69	12
68	Ndaragwa	25,000	5,802	1,201	1	No data	700	No data	330	No data	11
69	Teso	47,550	7,008	1,091	2	2	198	No data	77	No data	7
70	Maralal	40,974	5,900	970	1	10	500	30	232	163	23
71	Tachasis	23,152	3,536	752	3	1	341	60	264	104	5
72	Rumuruti	12,000	3,344	532	1	1	7	No data	6	No data	14
73	Tia Wira	6,200	2,030	358	1	0.4	123	67	166	54	3
74	Upper Chania	25,700	7,148	341	1	1	45	No data	17	No data	10
75	Vihiga	8,600	784	206	2	0.5	No data	No data	No data	No data	17
76	Kathita Kiirua	32,000	7,020	162	1	7	523	26	204	151	16
77	Trans Nzoia	6,000	408	124	1	0.2	14	26	94	69	7

Table 3.1 summarizes basic data from the 77 WSPs analysed for 2008/9. They are placed in four categories depending on the total number of registered water and sewerage connections. Average consumption without NRW of 30 l/c/d and below arises most probably from erroneous data resulting likely from an over-estimation of population served by the WSPs concerned. Any WSPs whose consumption without NRW is below 30 l/c/d must verify their data.

Table 3.2 gives a summary of the respective categories with respect to turnover, production, people served and staffing.

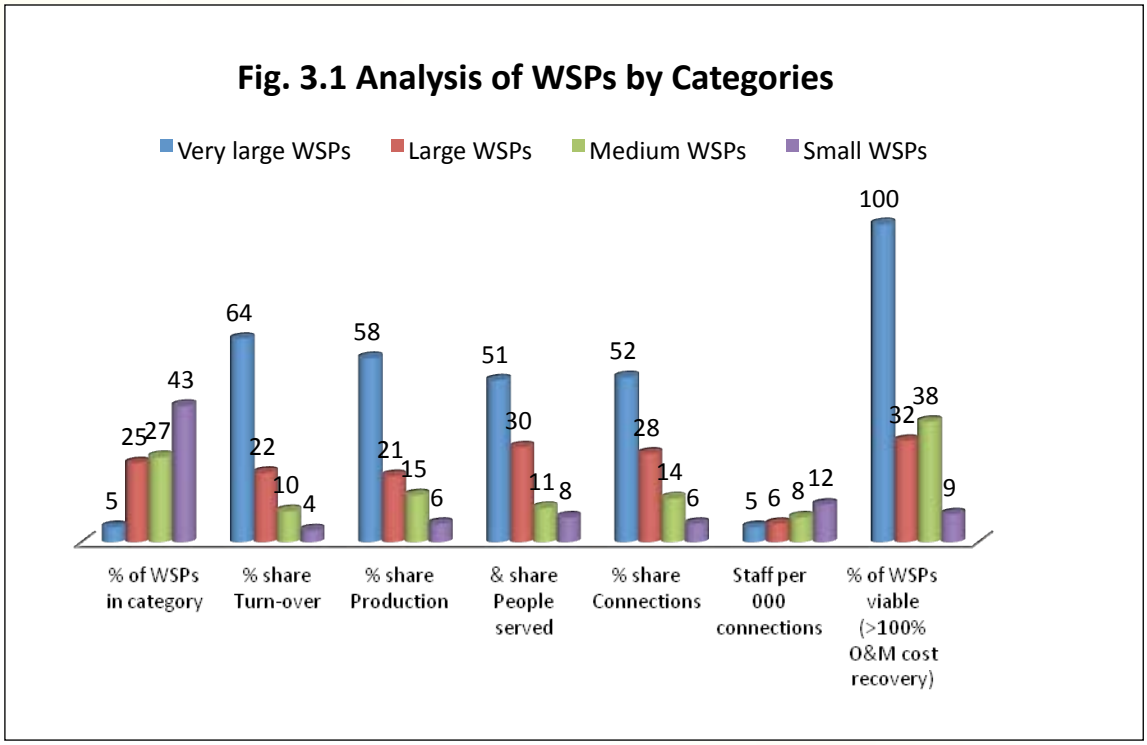
Table 3.2 Summary of WSP Categories

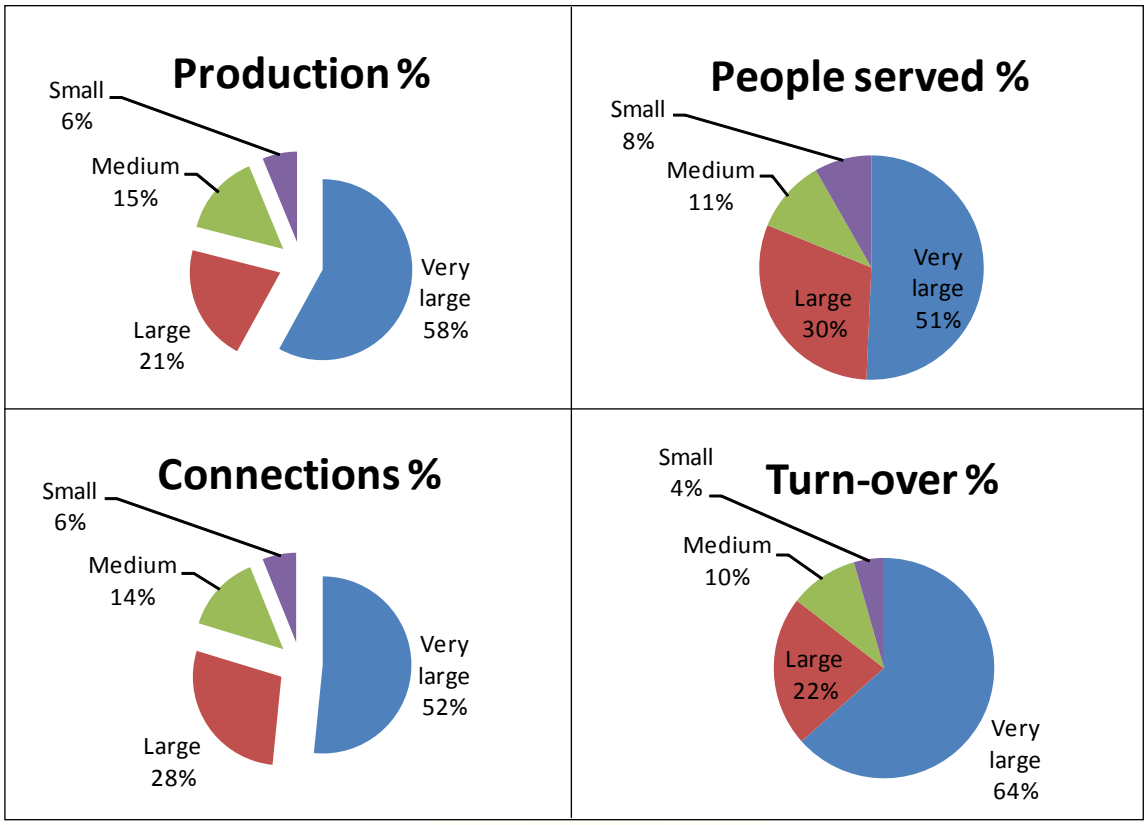
WSP category	No. of WSPs	Turn-over in Billion Kshs	Production in million m^3	People served in millions	No. of connections	No. of staff
Very Large	4	4.6	196	3.5	556,970	2799
Large	19	1.6	71	2.1	303,335	1847
Medium	21	0.73	50	0.73	153,007	1260
Small	33	0.32	21	0.57	65,867	778

Analysis of WSPs by categories (Fig 3.1) shows that, whereas there are only 23 WSPs within the Very Large and Large Categories (out of a total of 77 that reported), their combined turnover represents 85% of the total reported turnover and they account for 81% of the total population served in the sector. Further, all WSPs in the Very Large Category fulfill the criteria for O&M cost recovery, which firmly establishes the case for clustering for viability. In order to ensure viability of a WSP, there is need to ensure a minimum threshold of connections.

The remaining 54 WSPs, forming the Small and Medium Category, have a combined turnover equivalent to only 14% of the reported total and account for only 19% of the served population. Little wonder then that 91% of WSPs in the Small Category achieve an 'unacceptable' rating with respect to O&M cost recovery. The small WSPs, forming 43% of the WSPs that reported, account for only 8% of people served, 6% of production, 6% of connections and 4% of turnover. On the other hand, the very large WSPs, which form 5% of reporting WSPs, account for 51% of people served, 58% of production, 52% of connections and 64% of turnover. It is very clear that for water supply and sanitation services to be sustainable, clustering of utilities must be implemented.

Fig 3.1 Analysis of WSPs by Categories





3.2 Data Collection and Data Source

Data used in performance analysis was generated mainly from WARIS. To guarantee a higher level of data reliability, due to unsatisfactory data submission by some WSPs, the data was cross-checked with inspection reports, data from RTAs where available, annual Licence reports of WSPs and, where needed, through direct enquiry from WSPs.

Due to the delayed process of data capture that led to the backlog in *Impact* 2, this report covers two periods, 2007/8 and 2008/9. The special circumstances in reporting are reflected in the fact that while the overall ranking and improvement over time covers the periods 2007/8 and 2008/9 (Table 3.6a, 3.6b, 3.7), the performance of WSPs by indicator displays data covering 2006/7 and 2008/9.

Out of 122 registered WSPs in 2008/9, only 77 submitted fairly complete information. Therefore the performance analysis is based on information from the 77 WSPs. Table 3.3 shows the degree of non compliance with information submission by WSPs. The best WSB in terms of compliance is RVWSB while the worst are Tanathi, LVN, Athi and Northern.

Table 3.3 Non Compliance with Data Submission

WSB	Incomplete Submission		No Submission	
RV	Gitei	Nyakanja		
	Mawingo	Kinja		
Coast			Hola Tana River	
Tana	Mirungi		D.O.M Kathita Katunga	
			D.O.M Ruiru Thau	
LVS	Sibo	Nyando	Boya	
	Mikutra	Ahono	Nyasare	
	Gulf			
Northern	Moyale		Liboi	Laikipia East
			Mandera	Laikipia North
Athi	Karuri		Thika	Runda
			Limuru	Wamuya
LVN	Busia		Amatsi	Lugari Kakamega
			Nandi	Mt Elgon
			Butere-Mumias	Bugoma
			Marakwet	Samia
Tanathi			Wote	Kikima Mbooni
			Yatta	Oloitokitok
			Olekejuado	Namanga
			Matungulu Kagundo	Kiaka
			Tana Boreholes	Mbika
			Kwithi	

Incomplete submission
No submission

One of the biggest challenges with the analysis of the data submitted was data quality, completeness and the timeliness of reporting. Tackling these is of utmost importance for continuously improving the quality of this report and will involve:

i. Capacity building with the agents that are responsible for data collection (WSBs and WSPs)

ii. Further sensitization of agents as regards their responsibilities in data collection and provision as well as the benefits from proper fulfilment of those obligations

iii. Improvement and better implementation of control mechanisms to check reliability and completeness of submitted data and to ensure timely reporting.

Wasreb strongly recommends that the MWI should oblige all WSBs to submit comprehensive data and ensure that the WSPs under their jurisdiction do the same. This should be realized through the performance contract system, with Wasreb being involved in assessing compliance to this.

3.3 Categorization of WSPs

In order to facilitate comparative analysis, WSPs have been categorized based on total water and sewerage connections as per Table 3.4.

Table 3.4 WSP Categories Based on Registered Connections

Total registered water and sewerage connections	**< 5,000**	**5,000 – 9,999**	**10,000 – 35,000**	**> 35,000**
Category of WSP	Small	Medium	Large	Very Large

3.4 Sector Benchmarks and Scoring Criteria

WARIS is able to capture 67 indicators on sector performance. Out of these, nine KPIs have been selected for the purpose of ranking WSPs. The sector benchmarks and the scoring criteria adopted are indicated in Table 3.5. The scoring criteria will gradually improve to eventually match the sector benchmarks.

Table 3.5. Performance Indicators, Sector Benchmarks and Adopted Scoring Regime

Indicator			Sector Benchmarks			Scoring Criteria			
						Upper limit		Lower limit	
			Good	Acceptable	Not Acceptable	Performance	Score	Performance	Score
1	Collection efficiency		>90%	85-90%	<85%	≥90%	30	≤50%	0
2	Non-Revenue Water (NRW)		<20%	20-25%	>25%	≤20%	30	≥70%	0
3	Water Quality	Drinking water quality	>95%	90-95%	<90%	≥95%	20	≤80%	0
		Compliance with residual chlorine test	>95%	90-95%	<90%	≥95%	10	≤50%	0
4	Hours of Supply	Population>100,000	21-24	16-20	<16	20-24hrs	20	≤8hrs	0
		Population<100,000	17-24	12-16	<12	16-24hrs	20	≤4hrs	0
5	O&M cost coverage		≥150%	100-149%	<100%	≥130%	20	≤70%	0
6	Metering ratio		100%	95-99%	<95%	100	20	≤50%	0
7	Staffing(No per 1000 connection)	Large and very large WSP	<5	5-8	>8	≤5	20	≥20	0
		Medium and small companies(with up to3 towns)	<7	7-11	>11	≤7	20	≥20	0
		Medium and small companies(with more than 3 towns)	<9	9-14	>14	≤9	20	≥25	0
8	Water Coverage		>90%	80–90%	<80%	≥90%	20	≤30%	0
9	Sanitation Coverage		>90%	80–90%	<80%	≥90%	10	≤20%	0
	Total Maximum score:						200		
10	Personnel Cost as a % of (O&M) costs	Large and Very Large Companies	<20%	20-30%	>30%	N/A	N/A	N/A	N/A
		Medium Companies	<30%	30-40%	>40%				
		Small Companies	<40%	40-45%	>45%				

The scoring criteria show the upper and lower limit defined for each indicator and weighted scores assigned thereof. Performance on or above the upper limit was awarded the maximum score while performance on or below the lower limit was awarded the minimum score. Performance between the upper and lower limits was interpolated to determine the individual score. The aggregation of weighted scores for all the nine indicators was then used to rank the WSPs.

3.5 Ranking Analysis

The overall ranking has been considered separately for the year 2007/8 and 2008/9. From the scores for the overall ranking for the year 2007/8, Nyeri emerged in first position, followed by Meru. Nakuru was ranked third, with Ruiru-Juja and Makindu at position four and five respectively.

The five least performing WSPs for the period 2007/8 were Upper Chania, Tavevo, Rumuruti, Nyanas, and Kapenguria.

Table 3.6 (a) Ranking Analysis 2007/8

	INDICATORS												
Name of WSP/ main Town	Drinking Water Quality	Compliance with Chlorine Standards	Unaccounted for water in %	Water coverage in %	Total Sanitation coverage in%	Hours of supply No.	Staffing	Collection efficiency in %	Cost recovery O&M in %	Metering ratio in %	Total Score	Ranking	Overall Ranking
WSPs Very Large (More than 35000 Connections)													
Nairobi	88	100	40	66	16	11	7	82	125	93	133	1	8
Mombasa	77	95	31	71	92	5	8	87	89	55	109	3	22
Eldoret	86	60	42	62	75	24	4	70	105	90	128	2	10
WSPs Large (10000- 34999 Connections)													
Nyeri	100	100	48	73	86	24	7	101	137	96	173	1	1
Nakuru	100	91	46	78	100	12	6	79	105	93	146	2	3
Malindi	93	No Data	11	No Data	No Data	24	8	85	91	98	135	3	7
Kericho	100	100	51	40	15	23	16	89	106	98	130	4	9
Tetu Aberdare	40	100	67	64	100	19	9	93	114	74	123	5	11
Kisumu	91	92	59	31	7	18	12	91	118	96	122	6	12
Nanyuki	No Data	98	46	58	94	16	8	69	110	76	118	7	16
Kiriny aga	100	97	84	38	No Data	24	20	107	139	72	112	8	19
Kikuy u	No data	No data	32	79	39	16	4	128	76	45	107	9	24
Chemosit	100	100	No Data	77	No Data	10	2	93	39	27	106	10	25
Mathira	100	100	57	18	67	20	10	78	91	37	105	11	26
Nakuru Rural	77	100	22	42	No Data	6	11	90	111	18	98	12	28
Nzoia	95	0	51	39	50	No data	7	108	91	53	95	13	35
Kilifi Mariakani	83	88	38	43	48	10	26	88	89	75	87	14	38
Kahuti	81	100	75	18	75	16	14	95	91	47	78	15	48
Western	100	83	27	44	27	11	13	No Data	No Data	No data	72	16	53
Othay a Mukurw eini	75	99	75	47	95	16	12	78	40	31	70	17	55
Murang'a South	80	94	58	30	80	No Data	11	83	63	28	62	18	60
WSPs Medium (5000- 9999 Connections)													
Meru	94	98	27	44	100	24	12	86	111	97	161	1	2
Isiolo	67	97	43	39	89	18	10	132	128	84	137	2	6
South Ny anza	100	100	45	72	No Data	16	10	91	44	37	121	3	13
Ny ahururu	74	94	56	35	87	18	11	103	102	82	121	4	14
Embu	No Data	No data	58	44	89	20	7	77	138	92	118	5	15
Murang'a	93	92	58	54	96	6	10	117	71	82	117	6	17
Garissa	100	98	65	83	85	17	11	63	65	87	113	7	18
Gatanga	100	100	51	25	No Data	No Data	6	95	86	51	97	8	29
Ngagaka	No Data	No Data	71	42	No Data	8	9	88	155	95	95	9	33
Naiv asha	No Data	No Data	32	22	50	12	3	98	82	3	95	10	34
Tuuru	No Data	No Data	75	46	No data	24	24	99	101	98	85	11	41
Gatamathi	99	78	79	19	69	13	19	107	93	30	81	12	43
Imetha	100	100	77	13	35	15	21	99	48	40	79	13	46
Kwale	82	82	23	48	38	14	5	43	46	2	77	14	50
Karimenu	No Data	No Data	95	20	75	No Data	7	82	115	49	66	15	59
Gatundu	No Data	No Data	87	11	12	11	10	81	104	36	58	16	61
Tav ev o	69	100	60	No Data	No Data	9	35	56	95	No Data	30	17	71
WSP Small (<5000 Connections)													
Ruiru Juja	79	96	31	53	92	12	9	90	118	96	139	1	4
Makindu	100	96	47	24	65	22	21	104	130	94	138	2	5
Tarda Kiambere	100	96	28	45	3	12	26	95	92	No data	111	3	20
Olkalou	No Data	No Data	20	13	97	12	15	101	45	99	110	4	21
Kathita Kiirua	No Data	No Data	28	58	No Data	14	180	96	101	90	107	5	23
Kibw ezi Mtito	100	100	39	14	7	24	43	82	94	No data	100	6	27
Ndaragw a	100	No Data	No Data	26	100	5	6	85	128	No Data	97	7	30
Teso	100	97	No Data	20	76	13	8	84	40	52	96	8	31
Kiambu	100	100	No Data	16	94	No Data	11	74	106	80	95	9	32
Muthambi 4K	No Data	No Data	44	34	No Data	24	12	75	78	98	90	10	36
Mav oko EPZA	67	100	38	22	No Data	5	16	117	107	80	90	11	37
Maralal	96	95	35	68	No Data	6	27	45	26	97	86	12	39
Githunguri	100	100	38	4	No Data	12	15	61	88	69	85	13	40
Lodw ar	26	71	No Data	26	57	16	16	100	110	20	84	14	42
Lamu	19	No Data	33	No Data	No Data	12	18	89	82	70	80	15	44
Narok	75	100	52	42	85	10	11	60	31	88	80	16	45
Eldama Rav ine	100	79	82	25	44	12	20	108	86	25	78	17	47
Gusii	100	100	40	13	7	No data	61	142	50	No Data	78	18	49
Embe	50	42	49	19	39	15	31	113	108	18	76	19	51
Oloolaiser	92	100	43	11	31	8	24	107	60	53	75	20	52
Sibo	100	98	40	14	No Data	3	78	80	67	No Data	71	21	54
Ny andarua	50	100	43	16	100	19	34	56	17	70	69	22	56
Tia Wira	No Data	No Data	67	33	10	16	9	84	78	No data	67	23	57
Iten Tambach	100	97	46	13	82	12	21	51	22	9	67	24	58
Nithi	78	79	71	22	No Data	22	30	97	63	54	58	25	62
Mikutra	100	25	No Data	19	No Data	3	38	100	16	57	53	26	63
Tachasis	No Data	No Data	68	15	45	24	14	66	70	No Data	51	27	64
Kitui	No Data	96	76	29	No data	6	18	81	50	75	46	28	65
Vihiga	No Data	No Data	No Data	15	70	12	144	79	4	40	42	29	66
Uasin Gishu	No Data	No Data	53	13	31	8	124	78	5	No data	39	30	67
Kapenguria	23	100	56	10	72	11	29	34	22	7	37	31	68
Ny anas	42	No Data	62	15	No Data	3	20	84	39	No Data	36	32	69
Rumuruti	No Data	No Data	64	20	85	6	200	73	19	No Data	33	33	70
Upper Chania	60	67	No Data	27	27	18	32	51	83	4	30	34	72

Table 3.6(b) Ranking Analysis 2008/9

NAME OF WSP/ MAIN TOWN		INDICATORS												
		Drinking Water Quality	Compliance with Chlorine Standards	Unaccounted for water in %	Water coverage in %	Sanitation coverage	Hours of supply No.	Staffing	Collection efficiency in %	Cost recovery O&M in %	Metering ratio in %	Total Score	Ranking	Overall Ranking
WSPs Very Large (More than 35000 Connections)														
Nairobi		100	98	40	67	29	13	5	80	113	94	144	1	6
Nakuru		64	100	47	70	73	16	5	92	118	89	138	2	8
Eldoret		71	94	52	65	80	24	4	81	101	90	131	3	12
Mombasa		58	91	35	63	88	6	10	90	114	55	110	4	22
WSPs Large (10000- 34999 Connections)														
Nyeri		100	99	39	68	87	24	6	90	143	96	176	1	1
Malindi		82	96	7	80	53	24	6	85	70	98	146	2	4
Nanyuki		100	99	46	60	98	16	7	84	81	85	143	3	7
Kericho		100	100	52	51	15	23	11	86	102	99	136	4	10
Tetu Aberdare		44	100	63	68	100	20	7	80	107	78	119	5	14
Nyahururu		73	96	57	37	65	18	10	95	108	85	115	6	18
Kisumu		91	94	62	29	6	18	10	84	97	96	111	7	21
Kirinyaga		100	99	86	32	No Data	23	18	107	105	85	109	8	23
Gatamathi		95	91	79	23	81	16	5	101	91	29	105	9	25
Mathira		100	100	61	30	67	20	7	78	90	39	105	10	27
Nzoia		60	99	57	46	62	20	7	88	87	62	104	11	28
Kikuyu		No Data	No Data	46	34	70	16	5	94	70	96	103	12	29
Othaya Mukurweini		100	97	65	61	97	17	9	69	66	41	96	13	33
Kilifi Mariakani		76	90	39	56	52	24	20	83	86	62	96	14	36
Nakuru Rural		78	100	36	46	No Data	7	9	90	111	18	92	15	38
Western		98	84	41	29	29	11	11	79	53	0	85	16	47
Kahuti		84	100	72	19	70	18	13	87	85	51	82	17	49
Chemosit		100	90	67	46	No Data	10	19	78	25	85	75	18	54
Murang'a South		83	90	57	30	78	8	10	96	48	32	73	19	58
WSPs Medium (5000- 9999 Connections)														
Meru		99	97	28	50	100	24	11	110	127	97	173	1	2
Embu		100	93	57	48	92	22	6	92	135	92	160	2	3
Murang'a		96	98	50	53	96	18	9	103	80	83	146	3	5
Isiolo		50	100	38	40	88	18	10	110	113	86	137	4	9
South Nyanza		97	97	39	No Data	No Data	18	15	95	49	80	120	5	13
Ruiru Juja		87	96	34	44	100	12	8	86	59	67	116	6	17
Gatanga		100	100	42	26	100	6	6	70	168	54	113	7	19
Garissa		99	100	64	65	74	17	10	74	67	77	113	8	20
Ngagaka		No Data	No Data	87	42	No Data	8	9	90	141	96	96	9	34
Ngariama Njukiini		No Data	No Data	96	32	No Data	18	8	120	154	6	89	10	40
Tuuru		No Data	No Data	62	48	4	24	22	101	94	98	88	11	42
Naivasha		No Data	No Data	47	27	72	12	3	88	82	3	87	12	43
Ngandori Nginda		63	100	77	39	No Data	6	6	93	131	No Data	86	13	45
Oloolaiser		88	100	40	8	40	9	15	78	63	78	86	14	46
Karimenu		No Data	No Data	98	40	94	8	6	84	81	78	75	15	55
Imetha		100	100	81	12	39	16	34	64	51	60	60	16	61
Machakos		No Data	No Data	41	7	16	No Data	9	82	43	25	58	17	63
Gatundu		No Data	No Data	69	12	80	24	10	53	122	67	57	18	65
Tavevo		46	100	No data	49	100	9	18	65	No Data	64	54	19	66
Gusii		87	100	45	19	8	No Data	26	72	34	No Data	51	20	68
Kwale		72	84	59	39	36	12	21	34	46	2	32	21	76
WSP Small (<5000 Connections)														
Kiambu		100	100	38	17	94	No Data	9	92	104	80	132	1	11
Kibwezi Mtito		100	100	24	16	92	24	27	88	76	0	118	2	15
Makindu		100	97	48	30	70	22	16	80	57	94	116	3	16
Mavoko		100	100	35	21	No Data	5	15	95	27	93	106	4	24
Lodwar		39	100	29	30	51	16	14	99	77	26	105	5	26
Iten Tambach		100	97	47	17	91	12	14	84	No Data	38	102	6	30
Maralal		100	100	30	14	No Data	6	26	81	48	99	101	7	31
Tarda Kiambere		100	98	39	35	2	12	16	123	53	59	97	8	32
Muthambi		No data	No data	40	41	No data	24	10	72	79	98	96	9	35
Kathita Kiirua		No Data	No Data	55	22	No Data	18	99	96	159	90	95	10	37
Githunguri		100	100	No Data	5	No Data	12	13	84	104	64	90	11	39
Teso		100	99	No Data	15	87	13	11	78	35	0	89	12	41
Eldama Ravine		100	83	80	49	74	12	19	106	No Data	26	86	13	44
Narok		75	100	58	43	100	10	11	67	33	90	84	14	48
Tachasis		No Data	No Data	60	15	45	24	13	94	94	0	82	15	50
Trans Nzoia		100	88	26	7	No Data	8	113	39	3	90	77	16	51
Kapenguria		32	100	42	8	67	12	34	99	38	15	77	17	52
Lamu		19	No Data	34	No Data	No Data	12	16	104	84	No Data	76	18	53
Tia Wira		No Data	No Data	67	33	34	16	9	93	80	0	74	19	56
Kyeni		No Data	No Data	40	17	100	5	11	89	51	29	74	20	57
Olkalou		No Data	No Data	No Data	23	50	14	6	89	45	55	73	21	59
Nithi		70	93	74	23	5	22	23	71	78	84	64	22	60
Nol Turesh		No Data	No Data	64	75	30	24	15	66	32	29	60	23	62
Engineer Town		No Data	No Data	No Data	22	93	8	3	78	64	13	58	24	64
Nyandarua North		73	98	No Data	13	100	19	29	51	12	78	52	25	67
Uasin Gishu		No Data	No Data	48	14	34	10	115	83	6	0	50	26	69
Ndaragwa		100	No Data	No Data	23	100	7	12	No Data	0	No Data	48	27	70
Kitui		No Data	96	70	25	No Data	6	17	75	38	75	43	28	71
Kapsabet Nandi		75	100	64	20	No Data	6	33	84	41	35	43	29	72
Vihiga		No Data	No Data	No Data	9	91	8	No Data	61	5	93	42	30	73
Embe		69	47	80	14	36	7	53	101	80	44	40	31	74
Rumuruti		No Data	No Data	No Data	28	88	6	No Data	83	21	0	38	32	75
Upper Chania		60	67	No Data	28	No data	No Data	30	62	51	4	12	33	77

From the scores in the overall ranking of year 2008/9, Nyeri again clearly emerged as the best performing WSP, followed by Meru. Embu ranked third, followed by Malindi and Muranga in the 4th and 5th positions respectively.

The five overall least performing WSP for the period 2008/9 were Upper Chania, Kwale, Rumuruti, Embe and Vihiga.

3.6 Overall Ranking

Table 3.7 shows the overall ranking of WSPs between 2007/8 and 2008/9. Comparing the performance of WSPs by ranking is essential for assessing the relative sector performance. However, it does not award those that have been able to make progress in terms of performance but cannot sufficiently improve in the short- to medium-term to emerge at the top, due to factors beyond their control. Also, it does not necessarily penalize those that have declined in performance. The former applies to WSPs that for different reasons such as dilapidated infrastructure have their starting position at the bottom, the latter to those that started off at the top of the sector. Acknowledging the fact that there is not always a level playing field, Wasreb has decided to recognize the WSPs that have shown progress and shame those that have declined in performance.

Table 3.7 Overal Ranking 2007/8 2008/9 and Movement

	WSPs	Overall Ranking				WSPs	Overall Ranking		
		2008/9	2007/8	Positions gained (+)/dropped (-) from 2007/8 to 2008/9			2008/9	2007/8	Positions gained (+)/dropped (-) from 2007/8 to 2008/9
Best Ten Performers	Nyeri	1	1	0		Ngariama Njukini	40	NS	N/A
	Meru	2	2	0		Teso	41	31	-10
	Embu	3	15	12		Tuuru	42	41	-1
	Malindi	4	7	3		Naivasha	43	34	-9
	Muranga	5	17	12		Eldama Ravine	44	47	3
	Nairobi	6	8	2		Ngandori Nginda	45	NS	N/A
	Nanyuki	7	16	9		Oloolaiser	46	52	6
	Nakuru	8	3	-5		Western	47	53	6
	Isiolo	9	6	-3		Narok	48	45	-3
	Kericho	10	9	-1		Kahuti	49	48	-1
	Kiambu	11	32	21		Tachasis	50	64	14
	Eldoret	12	10	-2		Trans Nzoia	51	NS	N/A
	South Nyanza	13	13	0		Kepenguria	52	NS	N/A
	Tetu Aberdare	14	11	-3		Lamu	53	44	-9
	Kibwezi Mtito	15	27	12		Chemosit	54	25	-29
	Makindu	16	5	-11		Karimenu	55	59	4
	Ruiru Juja	17	4	-13		Triawira	56	57	1
	Nyahururu	18	14	-4		Kyeni	57	NS	N/A
	Gatanga	19	29	10		Muranga South	58	60	2
	Garissa	20	18	-2		Olkalou	59	21	-38
	Kisumu	21	12	-9		Nithi	60	62	2
	Mombasa	22	22	0		Imetha	61	46	-15

	Kirinyaga	23	19	-4		Noi Turesh	62	NS	N/A
	Mavoko	24	37	13		Machakos	63	NS	N/A
	Gatamathi	25	43	18		Engineer Town	64	NS	N/A
	Lodwar	26	42	16		Gatundu	65	61	N/A
	Mathira	27	26	-1		Tavevo	66	71	5
	Nzoia	28	35	7		Nyandarua North?	67	56	-11
	Kikuyu	29	24	-5	Worst Ten Performers	Gusii	68	49	-19
	Iten Tambach	30	58	28		Uasin Gishu	69	67	-2
	Maralal	31	39	8		Ndaragwa	70	30	-40
	Tarda Kiambere	32	20	-12		Kitui	71	65	-6
	Othaya Mukurweini	33	55	22		Kapsabet Nandi	72	NS	N/A
	Ngagaka	34	33	-1		Vihiga	73	66	-7
	Muthambi	35	36	1		Embe	74	51	-23
	Kilifi Mariakani	36	38	2		Rumuruti	75	70	-5
	Kathiita Kiirua	37	23	-14		Kwale	76	50	-26
	Nakuru Rural	38	28	-10		Upper Chania	77	72	-5
	Githunguri	39	40	1					
					NS = No Submission				
					N/A = Not Applicable				

3.7 Performance of WSPs by Indicators

To provide the reader with a more detailed insight in terms of comparative performance, the following section discusses the performance of WSPs in the nine (9) afore-discussed KPIs. It is a novelty in this report that graphs not only display WSPs' current performance by indicator but also their performance in the last period analysed in *Impact* 2 (2006/7). This allows the reader to detect specific trends of WSPs.

3.7.1 Water Coverage

Defined as the percentage of population served with water by a WSP compared to the total population living within the service area of the WSP, water coverage measures the performance of WSPs in supplying people within their service area with water.

While there has been an increase of 8% in the weighted average, namely from 37% in 2006/7 to 45% in 2008/9 (with a spread ranging from 5% to 80%), the sector average is still clearly below the minimum acceptable benchmark of 80% and far from reaching a good level with more than 90% coverage. Only Malindi Water and Sewerage Company improved sufficiently to meet the benchmark in 2008/9 (in 2006/7 no WSP was able to meet the benchmark). This can be attributed to better data quality in 2008/9 and rehabilitation works undertaken by the WSP.

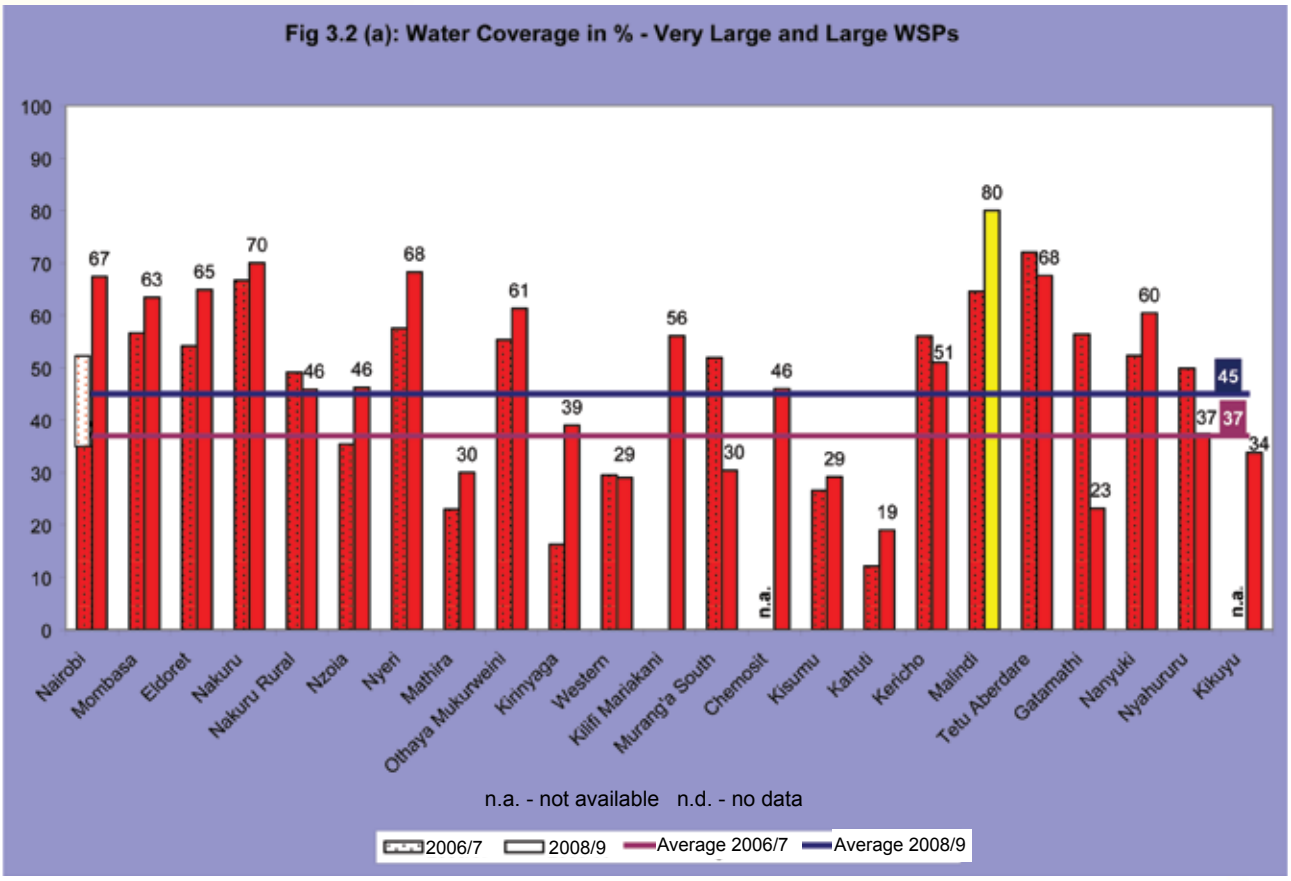


Fig 3.2 (a): Water Coverage in % - Very Large and Large WSPs
100
90
80
70
60
50
40
30
20
10
0
67
63
65
70
46
46
68
30
61
39
29
56
30
46
n.a.
29
19
51
80
68
23
60
37
n.a
45
37
34
Nairobi
Mombasa
Eldoret
Nakuru
Nakuru Rural
Nzoia
Nyeri
Mathira
Othaya Mukurweini
Kirinyaga
Western
Kilifi Mariakani
Murang'a South
Chemosit
Kisumu
Kahuti
Kericho
Malindi
Tetu Aberdare
Gatamathi
Nanyuki
Nyahururu
Kikuyu
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

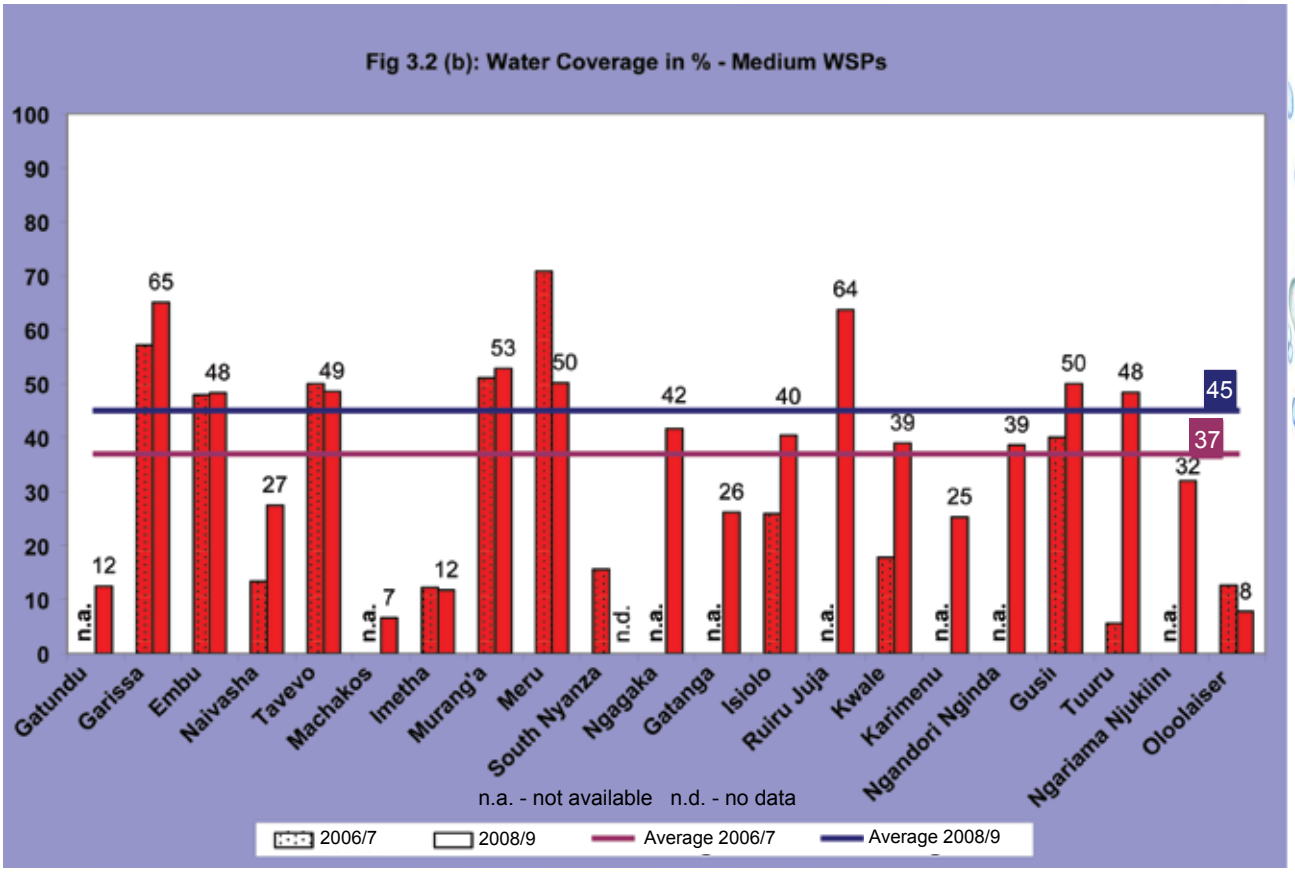
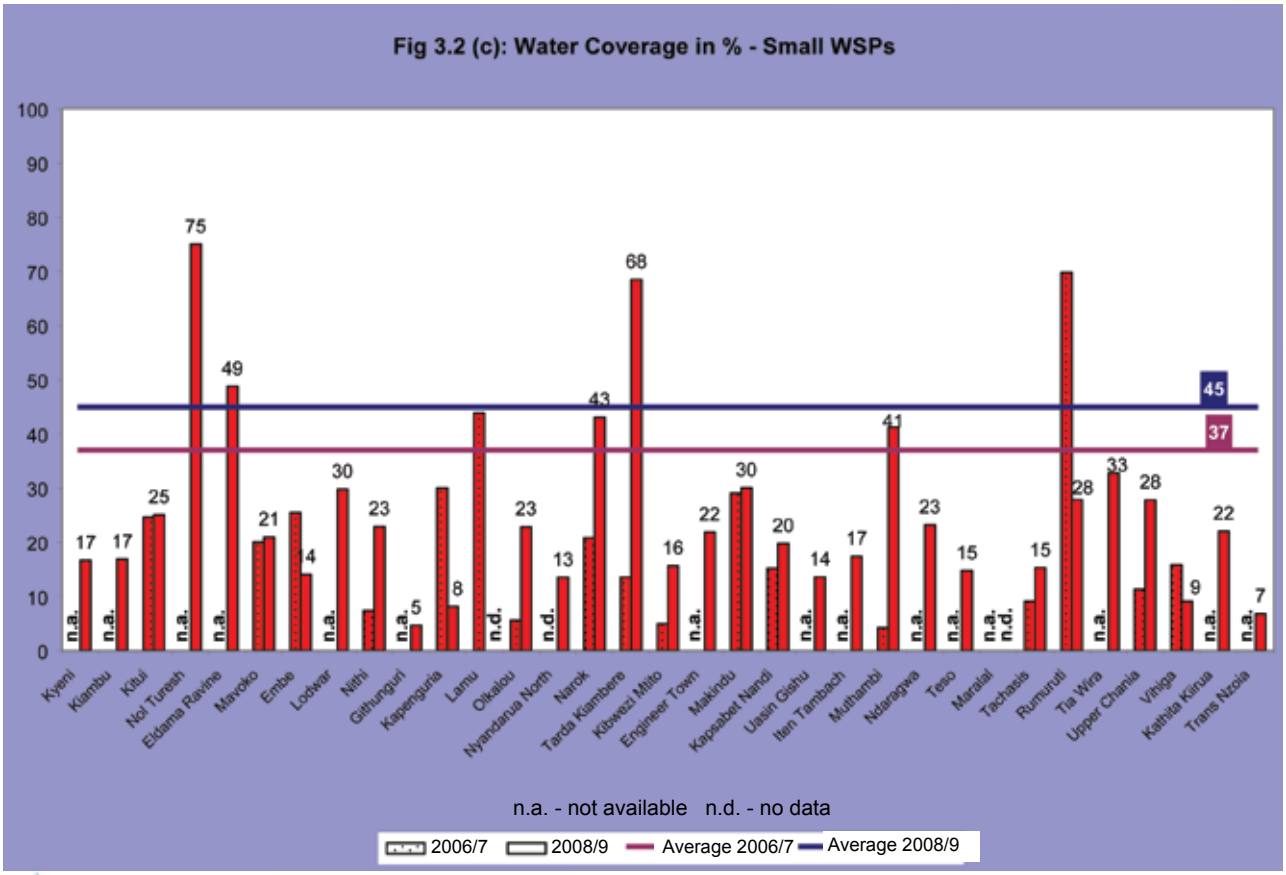


Fig 3.2 (b): Water Coverage in % - Medium WSPs
100
90
80
70
60
50
40
30
20
10
0
n.a.
12
65
48
27
49
n.a.
7
12
53
50
n.d.
n.a.
42
n.a.
26
40
n.a.
64
39
n.a.
25
n.a.
39
50
48
n.a.
32
8
45
37
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Oloolaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9



The overall increase in the weighted average of water coverage can be attributed to:

a) Increase in investments in infrastructure development in the WSBs of Lake Victoria North, Athi and Coast. This can be attributed to major investment projects supported by development partners including World Bank, KfW, AfDB and AFD.

b) Some of the larger WSPs like Nairobi and Kirinyaga, which have a considerable impact on the weighted average, reported a significant increase in water coverage. The same is true for smaller WSPs like Kwale and Nithi. However, the increase in coverage could largely be attributed to improved data accuracy. For example, the coverage reported by Nairobi in 2006/7 has been revised upwards by 20% in the new submission (white bar, Fig 3.2 (a)). The population served by Nairobi in 2006/7 was captured at 1,107,330 but this did not include the population served by water kiosks and Yard taps/ flatsconnections. Including the population served by water kiosks and yard taps, the population served with water in 2006/7 is 1,668,321.

c) Further, in the 2007/8 period, Nairobi embarked on metering the informal settlements of Mathare and Mukuru using the Meter Chambers System, as well as the *"Nairobi Tunabisha"* customer data cleanup campaign which led to the increase in the population served by the Company.

On the other hand, improved data accuracy and, in some cases, increase in service area with low coverage and high population explains the clear reduction from one period to the other for WSPs such as Gatamathi, Gusii, Meru, Nyahururu, Kapenguria or Rumuruti. Nyahururu, for example, expanded its coverage to encompass the rural scheme of Marmanet with a higher percentage of unserved population.

Taking the WSPs that reported in 2006/7 as a baseline (minus those that did not report in 2008/9), we get a clearer picture of the trend in terms of water coverage. It confirms the improvement of the sector with respect to water coverage.

Indicators	2006/2007*	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Water Coverage %	37	45	8	45

** Excludes WSPs that did not report in 2008/9. The same applies to the rest of the indicators in the report.*

However, due to the unequal distribution of available water, people living in informal settlements are usually discriminated against. This is because they are in the unfavourable position of getting less of the share while at the same time paying more for it than those living in formal settlements. To change this, coverage has to be improved through increased use of low-cost technologies such as water kiosks and yard taps, bringing formal service provision into low-income settings.

WSBs and WSPs have the opportunity to work in partnership with the Water Services Trust Fund (WSTF) to address this gap. The latter, through its Urban Projects Concept (UPC), works to increase water and sanitation coverage in low-income areas by financing pro-poor water and sanitation projects of WSPs.

Generally, it can be concluded that although there is a clear positive trend, increasing investment levels in the sector has not yet fully translated into corresponding coverage. Increasing levels of NRW and skewed distribution of available water negatively affect the attainment of the sector benchmark.

3.7.2 Sanitation Coverage

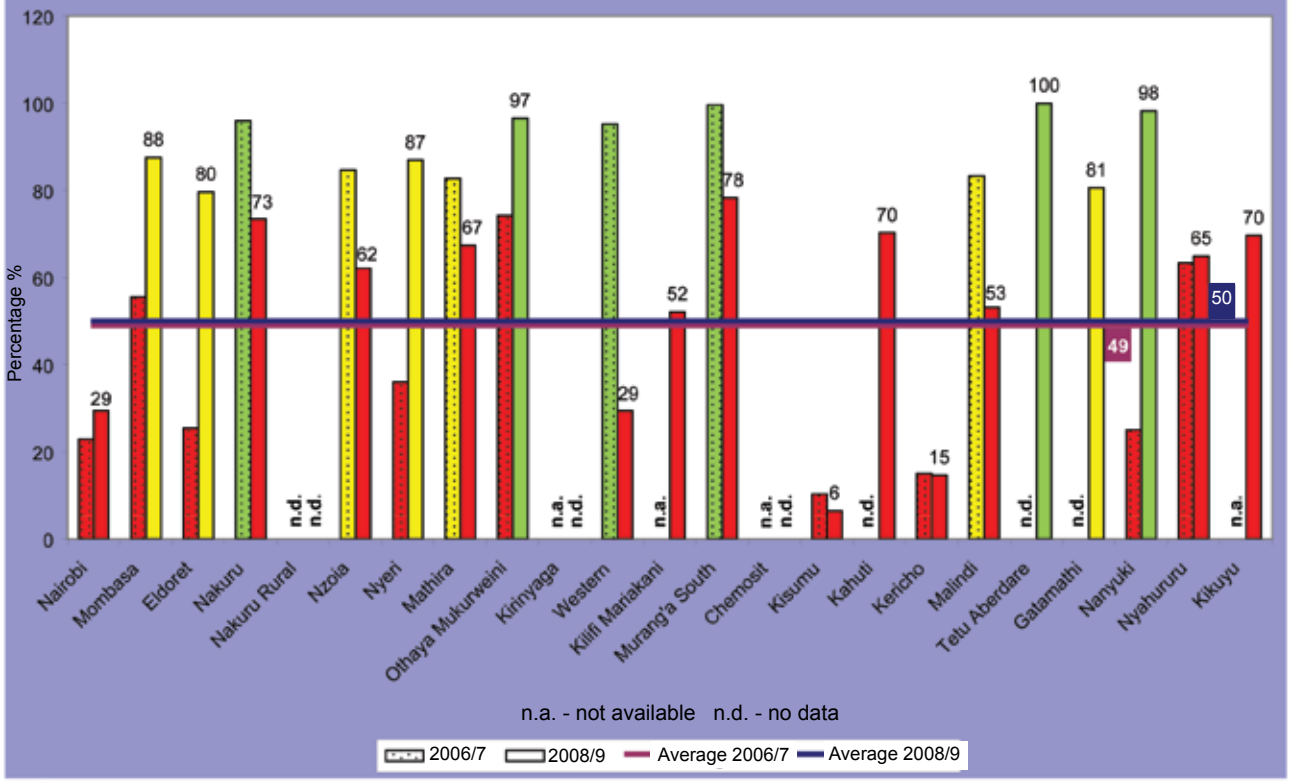
Sanitation coverage is defined as the proportion of the population within the service area of the WSP that uses improved sanitation facilities. The latter include flush or pour-flush to piped system, septic tanks, ventilated improved pit latrines and traditional pit latrines.

Sanitation is critical for human dignity and also for public health reasons. Inadequate sanitation coverage contributes to the pollution of ground and surface water. The current scenario in Kenya is characterised as follows:

a) Often the sanitation infrastructure is not available;

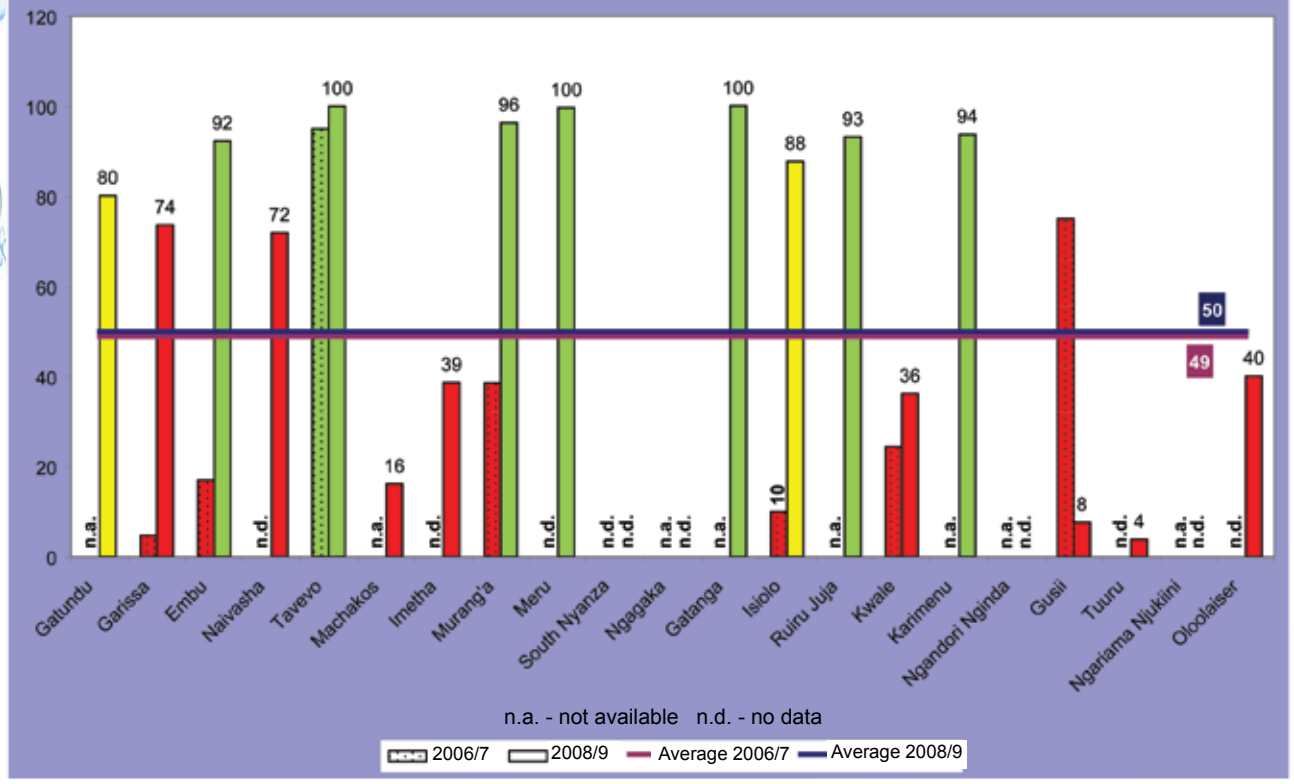
b) Where the infrastructure exists, it is poorly operated and maintained, which leads to pollution of the water resource.

Fig 3.3 (a): Sanitation Coverage in % - Very Large and Large WSPs

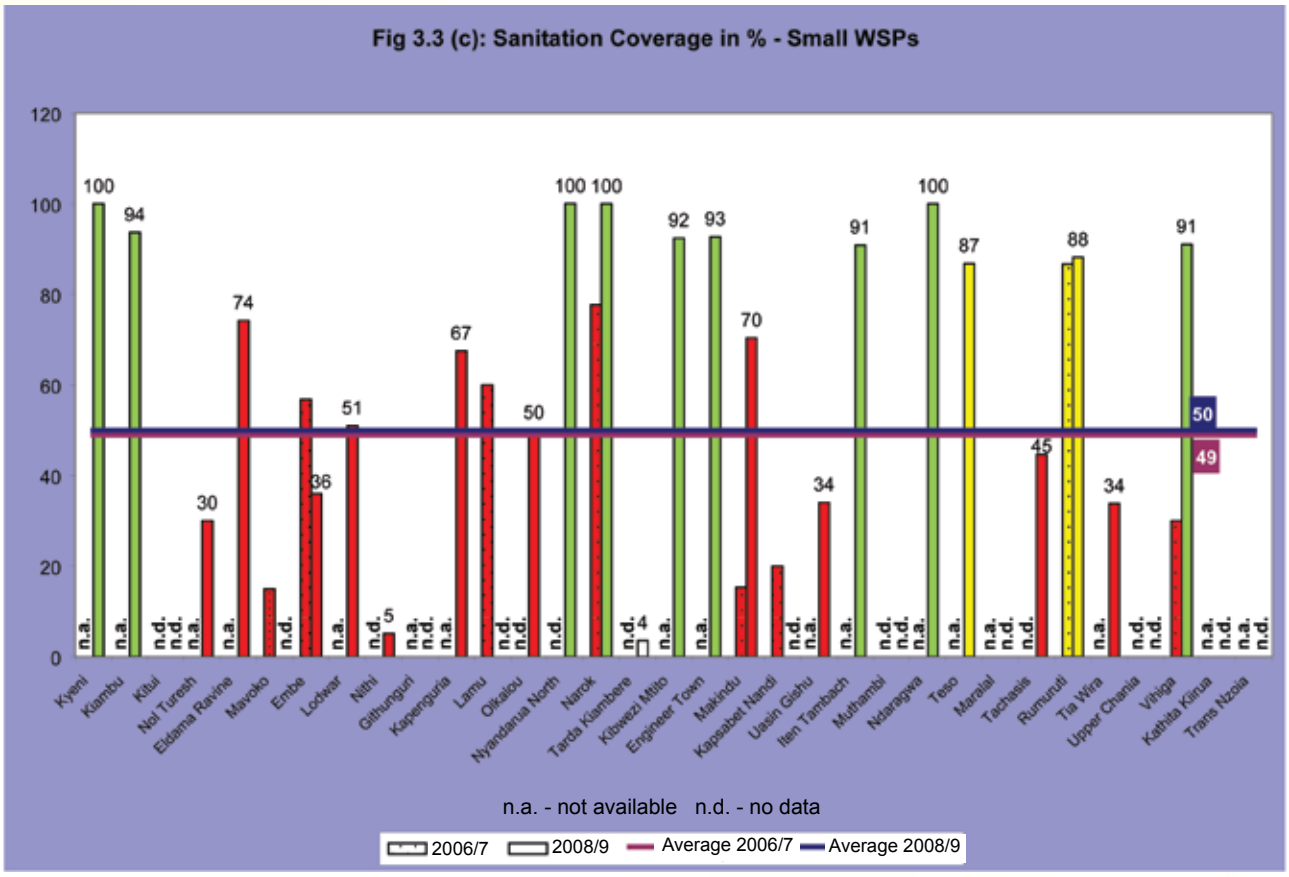


n.a. - not available n.d. - no data

Fig 3.3 (b): Sanitation Coverage in % - Medium WSPs



n.a. - not available n.d. - no data



With an average sanitation coverage of 50% for the reporting period 2008/9, the sector average slightly improved compared to 2006/7 (49%). This is still clearly below the acceptable sector benchmark of at least 80% coverage. This is despite the fact that the number of WSPs which were within the acceptable sector benchmark in 2006/7 and 2008/9 increased from 8 to 26 respectively. Using the 2006/7 baseline, sanitation coverage decreases by 3%, as shown below:

Indicators	2006/2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Sanitation Coverage %	50	47	-3	50

It is, however, important to note that most WSPs do not manage on-site sanitation facilities like pit latrines and therefore may not have realistic data on the sanitation situation and/or cannot be fully held responsible for performance (positive and negative). Hence it has to be acknowledged that data displayed in this section is partly unrealistic. Drastic improvements of some WSPs can be attributed to a situation where in 2006/7, some WSPs were only reporting on sewerage coverage whereas in the period of 2008/9, they also reported on on-site sanitation. Some extremely low values, such as Kisumu with a sanitation coverage of 6%, result from WSPs having continued to report on sewerage only.

For some WSPs, data captured understates actual coverage (Kisumu, Gusii, Nithi,Tuuru and Tarda Kiambere). At the same time, there are other examples (Gatanga, Meru,Tavevo, Tetu Abadare, Kyeni, Ndaragwa, Narok and Nyandarwa North) where coverage is clearly overstated. To address this anomaly and make more reliable data available for future reports, a lot of work remains to be done, including WSPs adopting

a standardised definition of sanitation. The continued neglect of sanitation in the sector, largely regarding it as a household issue, contributes to the current scenario.

A differentiation between sanitation and sewerage coverage gives a clearer picture on the efforts of WSPs to improve sanitation coverage. For the period 2008/9, reported sewerage coverage was 8%, which reflects the challenge of addressing the traditional lack of investment in sewerage and treatment systems. The latter is due to associated higher costs and lack of priority by WSPs, WSBs and development partners. Also, the impact of the legal requirement that implementation of all water projects have to include sewerage components is yet to be felt.

3.7.3 Non Revenue Water

Non Revenue Water (NRW) is defined as the difference between the amount of water produced for distribution in the system and the amount of water billed to consumers. Total NRW results from a combination of physical losses (leakage) and commercial losses (illegal connections/ 'water theft', unmetered public use, meter error, unbilled metered use and water for which no payment is collected).

Average NRW rose from 47% in 2006/7 to 49% in 2008/9. This can partly be attributed to the lower efficiency level of the newly included WSPs.

The reported national annual water production is 346,654,449 m^3 while the average NRW is 49%. The average national consumption per capita (including NRW) is 116l/c/d. If NRW is excluded, this figure comes to 59 l/c/d. Therefore the amount of water lost (56 l/c/d) is almost equivalent to the consumption per capita (excluding NRW). At an average tariff of Kshs. 40/m^3, the annual financial loss through NRW is approximately Kshs. 6.8 billion, slightly more than 25% of the sector budget for 2008/9. Wasreb recommends that WSBs and WSPs keenly focus measures and strategies to reduce NRW.

Sector performance in NRW is far from meeting the set benchmark of 25%. Only Malindi, with NRW at 7%, having improved by 18% points since 2006/7 (NRW at 25%), and Kibwezi Mtito (24%) were able to meet the benchmark. In comparison to Malindi, Western could not build on its previous performance (25%) and recorded a drop to an unacceptable level of 41%. Wasreb inspections established that inadequate measuring devices (master and consumer meters) make it difficult for WSPs to precisely determine water production and consumption. Many of them resort to using estimation in such circumstances.

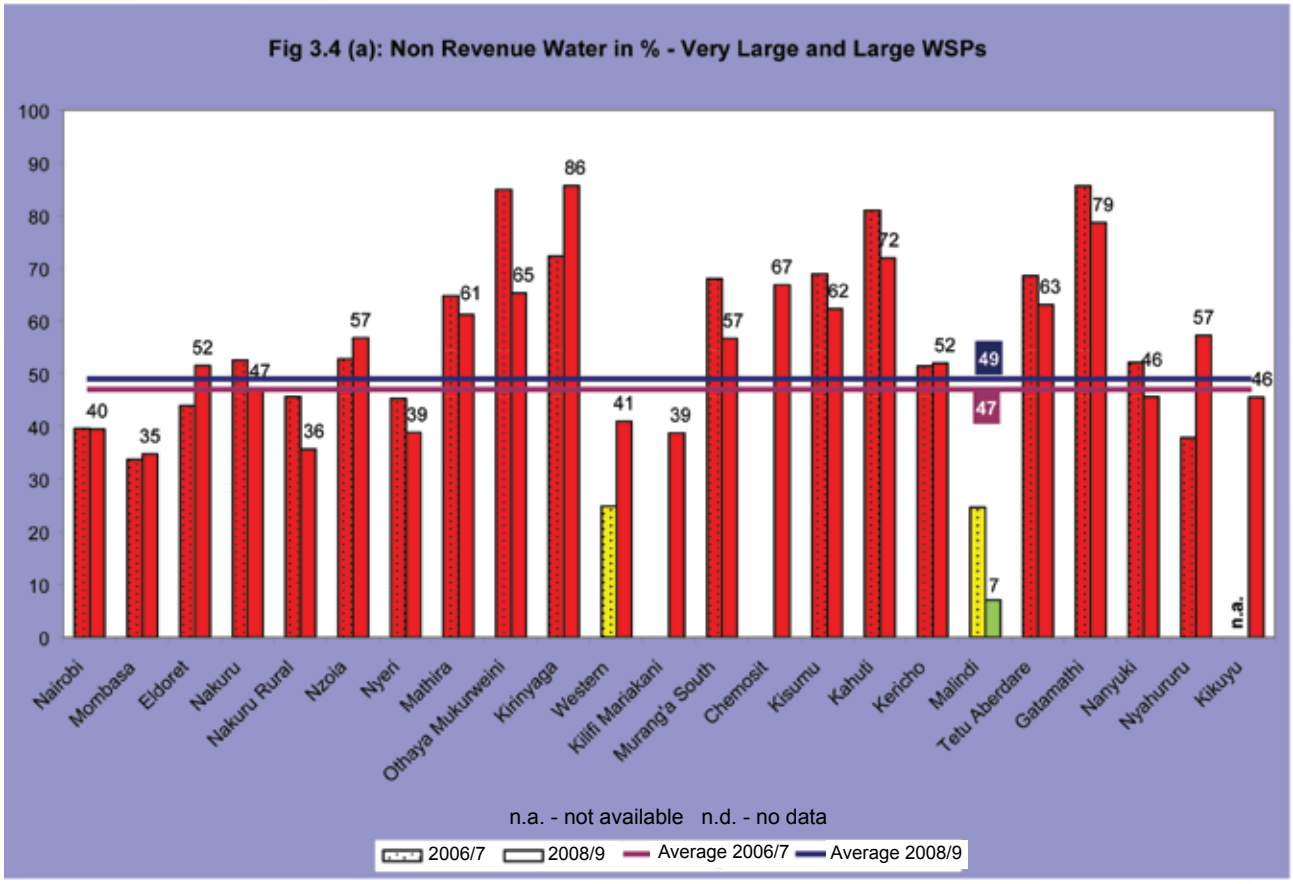


Fig 3.4 (a): Non Revenue Water in % - Very Large and Large WSPs
100
90
80
70
60
50
40
30
20
10
0
40
35
52
47
36
57
39
61
65
86
41
39
57
67
62
72
52
49
47
7
63
79
46
57
n.a.
46
Nairobi
Mombasa
Eldoret
Nakuru
Nakuru Rural
Nzoia
Nyeri
Mathira
Othaya Mukurweini
Kirinyaga
Western
Kilifi Mariakani
Murang'a South
Chemosit
Kisumu
Kahuti
Kericho
Malindi
Tetu Aberdare
Gatamathi
Nanyuki
Nyahururu
Kikuyu
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

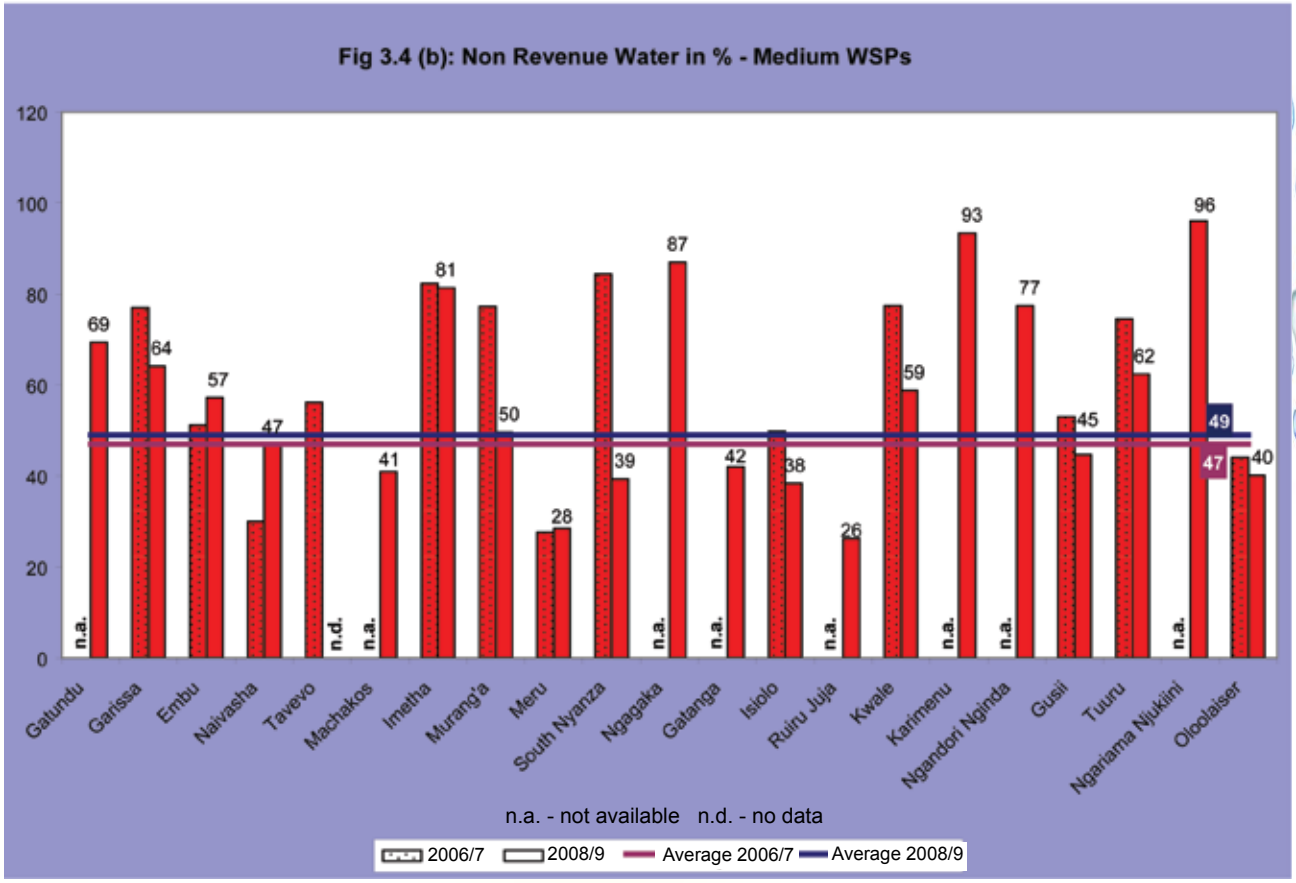
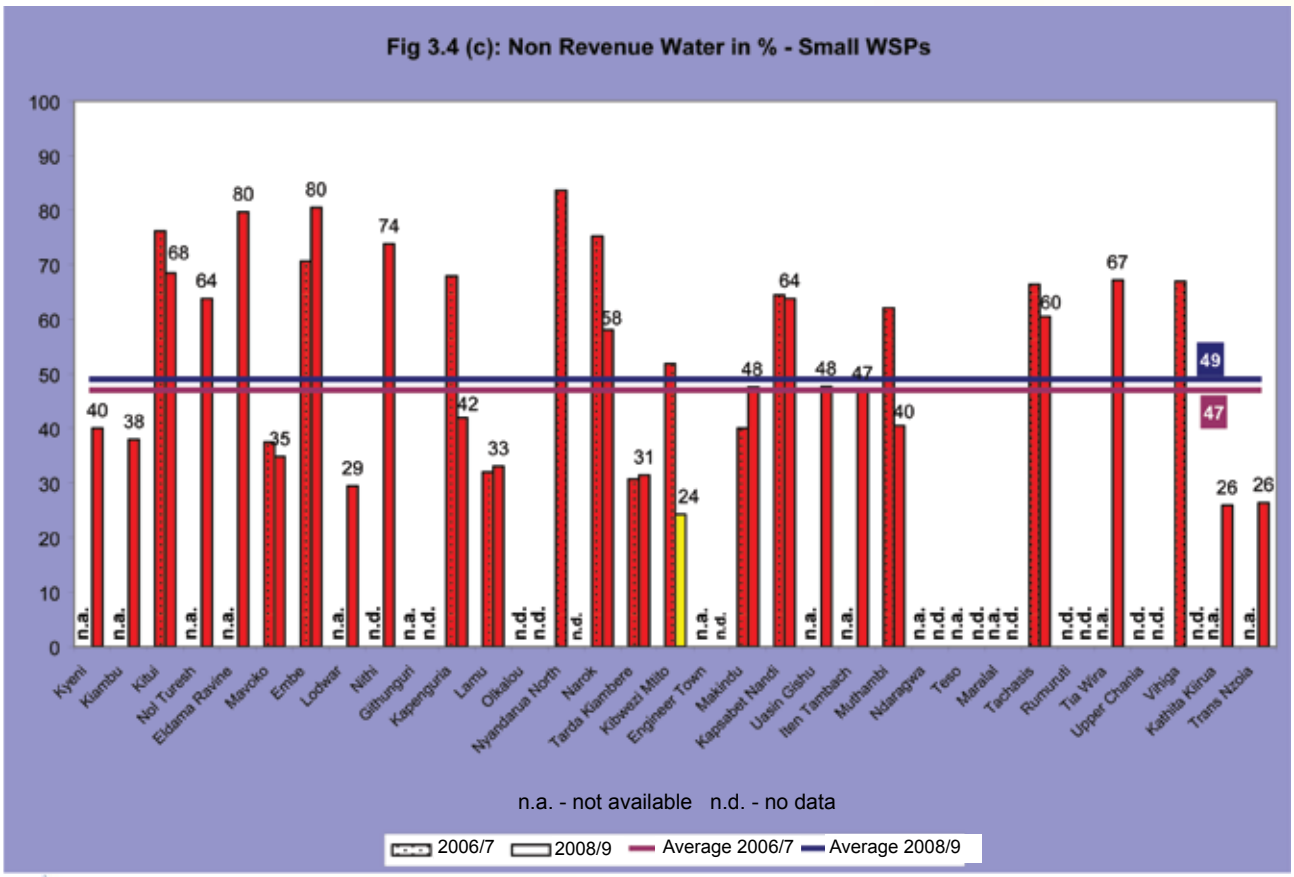


Fig 3.4 (b): Non Revenue Water in % - Medium WSPs
120
100
80
60
40
20
0
n.a.
69
64
57
47
n.d.
n.a.
41
81
50
28
39
87
n.a.
n.a.
42
38
n.a.
26
59
93
n.a.
n.a.
77
45
62
n.a.
96
49
47
40
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Ngindu
Gusii
Tuuru
Ngariama Njukiini
Ololaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9



Considering the WSPs that reported in the period of 2006/7 and comparing their performance then with year 2008/9 (same baseline), there has been a slight average reduction in NRW. This can be attributed to investments in measuring devices by some WSBs.

Indicators	2006/2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
NRW %	47	45	-2	49

Still, the continuously high level of NRW represents one of the major challenges for the financial sustainability of WSPs and the whole Kenyan water sector. Through its inspection programme, Wasreb has identified commercial losses as the main contributor to NRW. Generally, a high level of commercial losses can be associated with poorly managed WSPs. The WSPs lack good corporate governance and accountability, which are necessary for the provision of reliable services.

High NRW directly translates into bad service and huge revenue losses for the WSPs, making it impossible to reach full cost recovery and financial sustainability. Therefore, coming up with strategies to reduce NRW levels has to be the top priority for WSPs.

3.7.4 Dormant Connections

Dormant connections are defined as connections which have had no water supply for more than three months. The ratio of dormant connections (inactive) to total connections (active + inactive) is a good indicator of the capacity and efficiency of WSP ability to discharge its core mandate. Percentages above 20%

for dormant connections are extreme. This could imply the lack of sufficient investments and skills within a WSP to provide reliable and sustainable services.

The national average for dormant connection for the year 2008/9 is 37% compared to 20% for the year 2006/7.

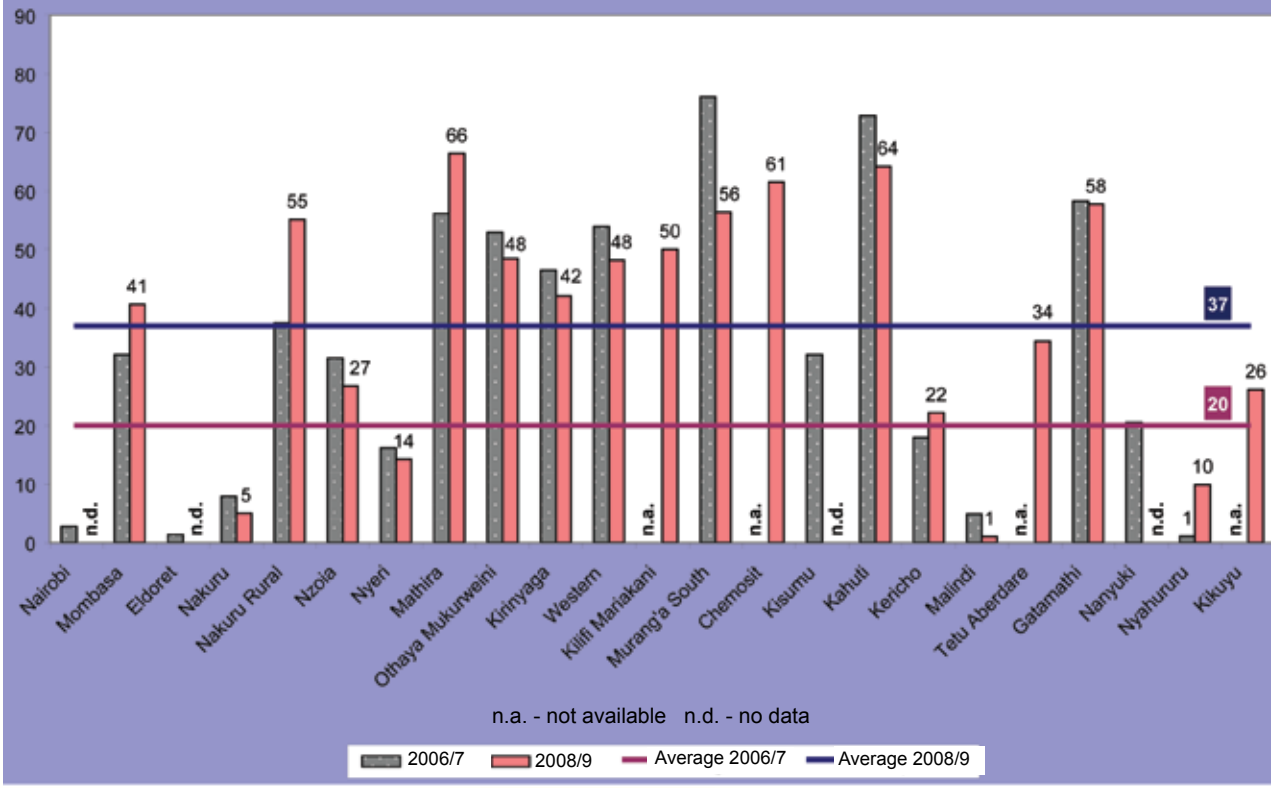
Through Inspections, Wasreb has established the major reasons for dormant connections to be:

1) Normal water disconnection and presence of alternative sources of water
2) Reduction in water production due to loss of capacity of the water system, resulting in lack of water in some areas
3) Demand outstripping supply due to rapid population growth, resulting in some areas not getting water over prolonged periods
4) Presence of a high number of illegal connections, manifested in large commercial water losses
5) Existence of reliable alternative sources of water supply within the area of a WSP.

In order to address the problem where alternative sources of service exist, notably from small informal operators, Wasreb has made it a requirement for all such operators to register with their respective WSBs and to discharge their responsibility under the principal WSP.

Such sources will be allowed to operate subject to the principal WSP not having adequate capacity to serve the area in question. For now, information on small water providers offering alternative sources of water supply within the service area of a WSPs is still scanty.

Fig 3.5 (a): Dormant Connections - Very Large and Large WSPs.)



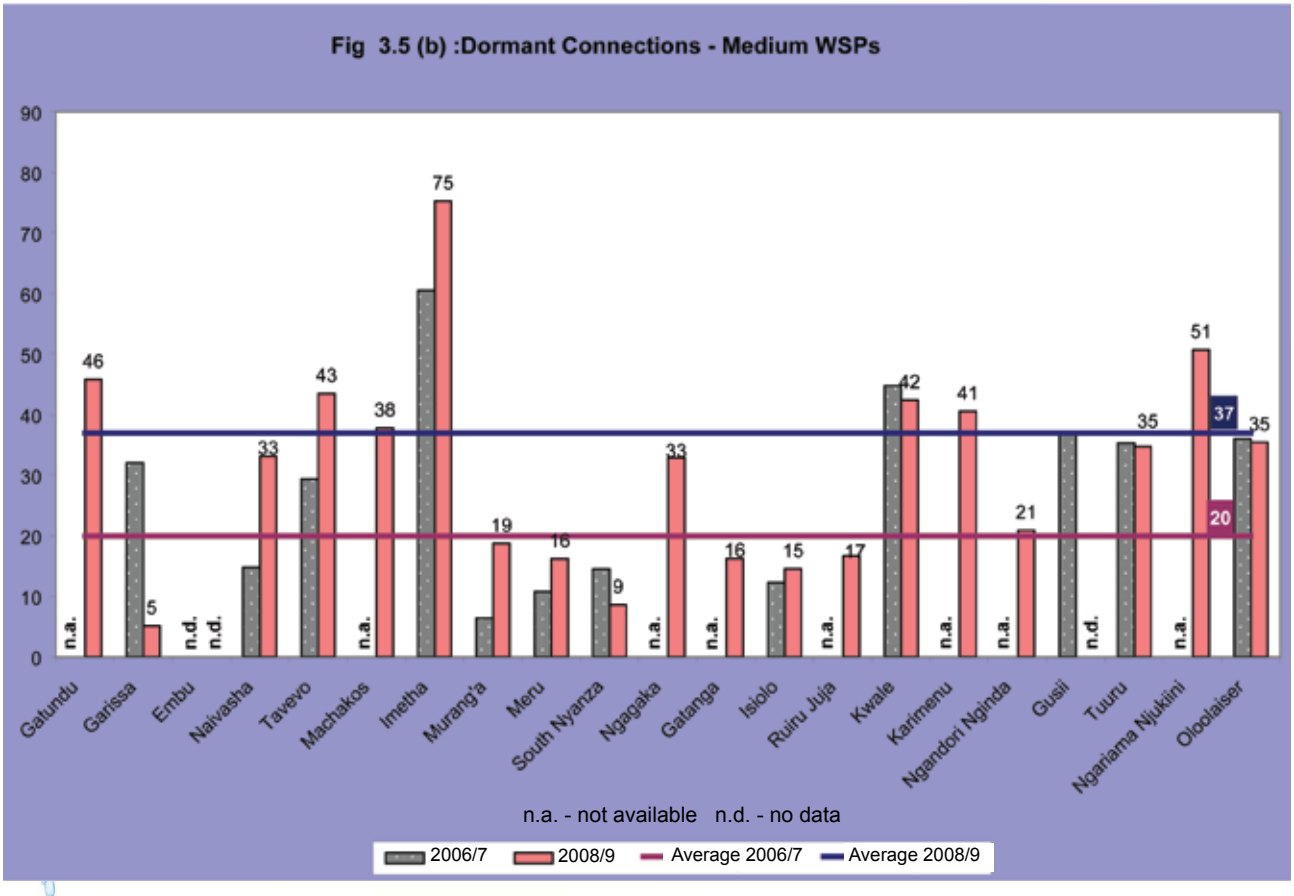


Fig 3.5 (b) :Dormant Connections - Medium WSPs
90
80
70
60
50
40
30
20
10
0
n.a.
46
5
n.d.
n.d.
33
43
n.a.
38
75
19
16
9
n.a.
33
n.a.
16
15
n.a.
17
42
41
n.a.
n.a.
21
n.d.
35
n.a.
51
37
20
35
Galundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Ololaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

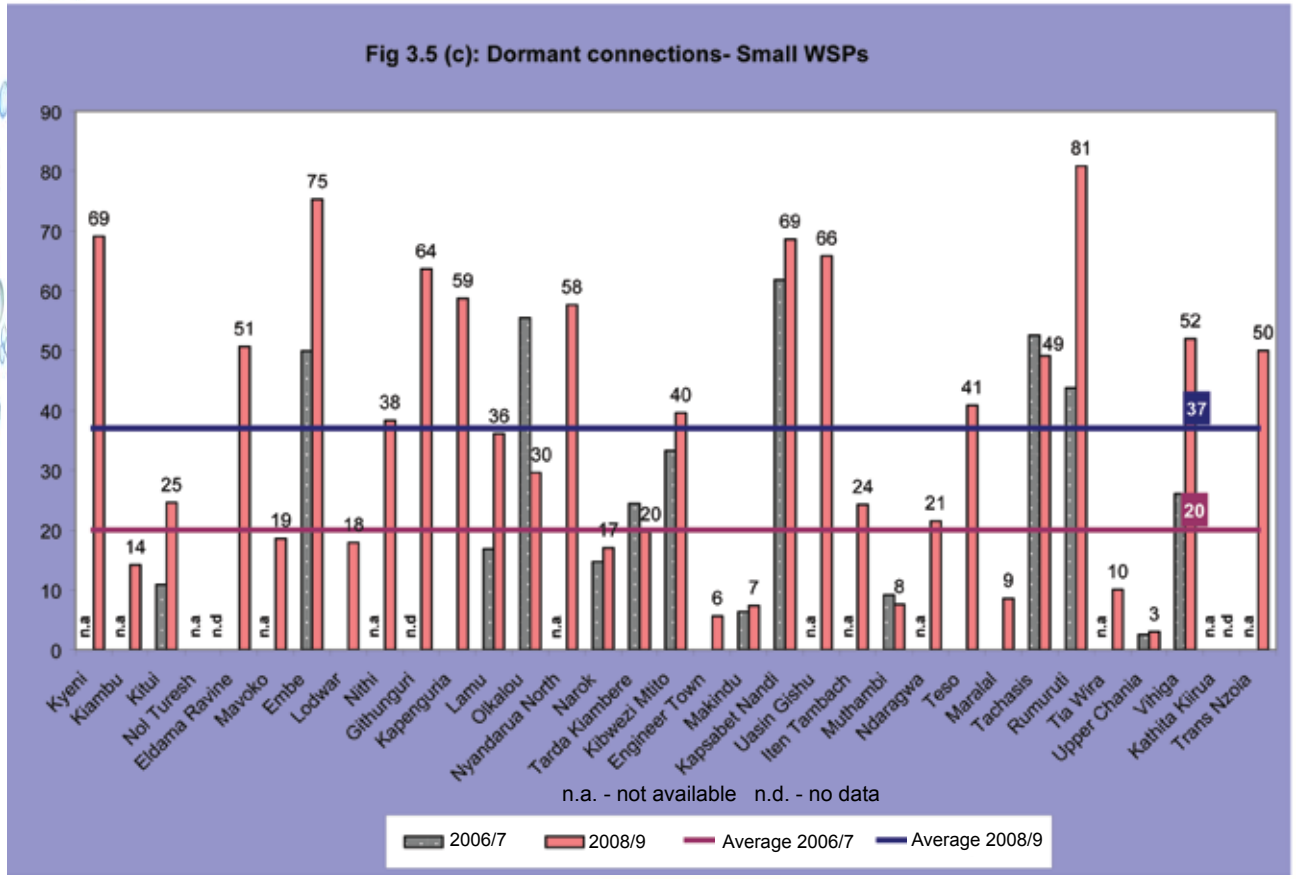


Fig 3.5 (c): Dormant connections- Small WSPs
90
80
70
60
50
40
30
20
10
0
n.a
69
n.a
14
11
25
n.a
n.d
51
n.a
19
50
75
18
n.a
38
n.d
64
59
17
36
55
30
n.a
58
15
17
20
33
40
6
7
62
69
n.a
66
n.a
24
8
n.a
21
41
9
53
49
44
81
n.a
10
3
26
52
20
37
n.a
n.d
n.a
50
Kyeni
Kiambu
Kitui
Nol Turesh
Eldama Ravine
Mavoko
Embe
Lodwar
Nithi
Githunguri
Kapenguria
Lamu
Oikaiou
Nyandarua North
Narok
Tarda Kiambere
Kibwezi Mtito
Engineer Town
Makindu
Kapsabet Nandi
Uasin Gishu
Iten Tambach
Muthambi
Ndaragwa
Teso
Maralal
Tachasis
Rumuruti
Tia Wira
Upper Charia
Vihiga
Kathita Kirua
Trans Nzoia
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

Comparing sector performance to the 2006/7 baseline, the percentage of dormant connections to total number of connections is seen to increase.

Indicators	2006/2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
% dormant connections	20	36	16	37

WSPs are required to have in place strategies to reduce the number of dormant connections for their own sustainability and in order to build consumer confidence.

3.7.5 Water Quality

In the period 2007/08 Wasreb disseminated the Guideline on Water Quality and Effluent Monitoring. However, there is still room for improvement of water quality monitoring according to the guideline. At the moment, Wasreb does not take samples to cross-check results from WSPs but relies on certification and random tests by KeBS.

Water quality is one of the central indications for the level of service a WSP is providing. Water quality has a direct impact on the health of the water consumers. In this report, water quality was assessed in terms of drinking water quality and compliance with residual chlorine standards.

a) ***Drinking water quality***

This is measured in terms of the number of actual residual chlorine tests carried out by a WSP against the number planned according to the guideline. The number of tests carried out by WSPs improved from 79% to 90% in the period 2006/7 and 2008/9 respectively. Twenty seven (27) of the WSPs (35%) were within the sector benchmark classification of good (>95%) while 2 WSPs were within the acceptable sector benchmark (90-95%). The remaining 48 WSPs fell within the unacceptable range or did not submit any information.

Inspections showed, however, that the number of residual chlorine tests planned by WSPs is still far below the level prescribed by the guideline. This leads to an overstatement of actual performance. Thus, many of those that are classified within the good or acceptable range may actually be in the unacceptable range if guidelines were followed.

Twenty-seven percent of the WSPs, comprising mainly small WSPs, that reported did not include information on the number of tests carried out.

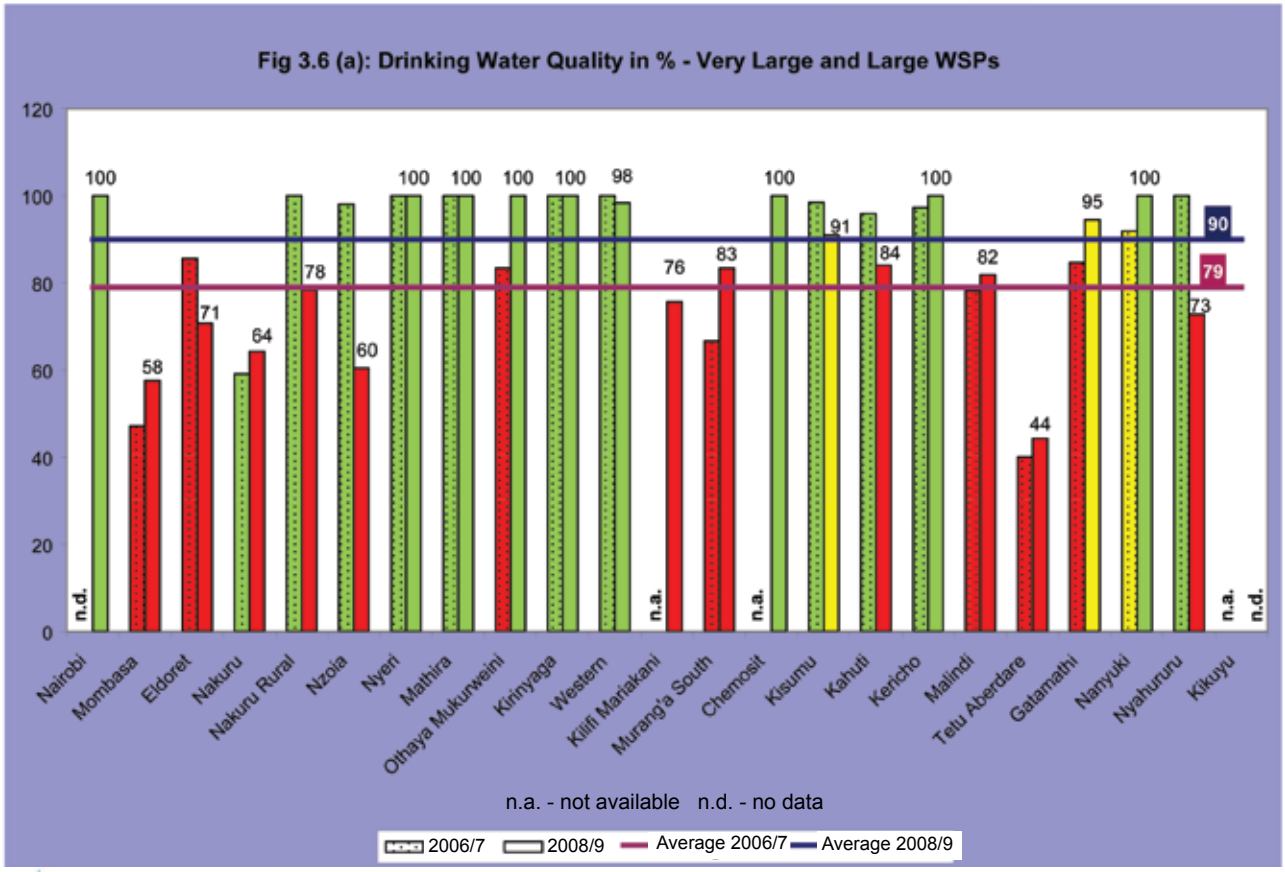


Fig 3.6 (a): Drinking Water Quality in % - Very Large and Large WSPs
120
100
80
60
40
20
0
n.d.
100
58
71
64
78
60
100
100
100
100
98
n.a.
76
83
n.a.
100
91
84
100
82
44
95
100
90
79
73
n.a.
n.d.
Nairobi
Mombasa
Eldoret
Nakuru
Nakuru Rural
Nzoia
Nyeri
Mathira
Othaya Mukurweini
Kirinyaga
Western
Kilifi Mariakani
Murang'a South
Chemosit
Kisumu
Kahuti
Kericho
Malindi
Tetu Aberdare
Gatamathi
Nanyuki
Nyahururu
Kikuyu
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

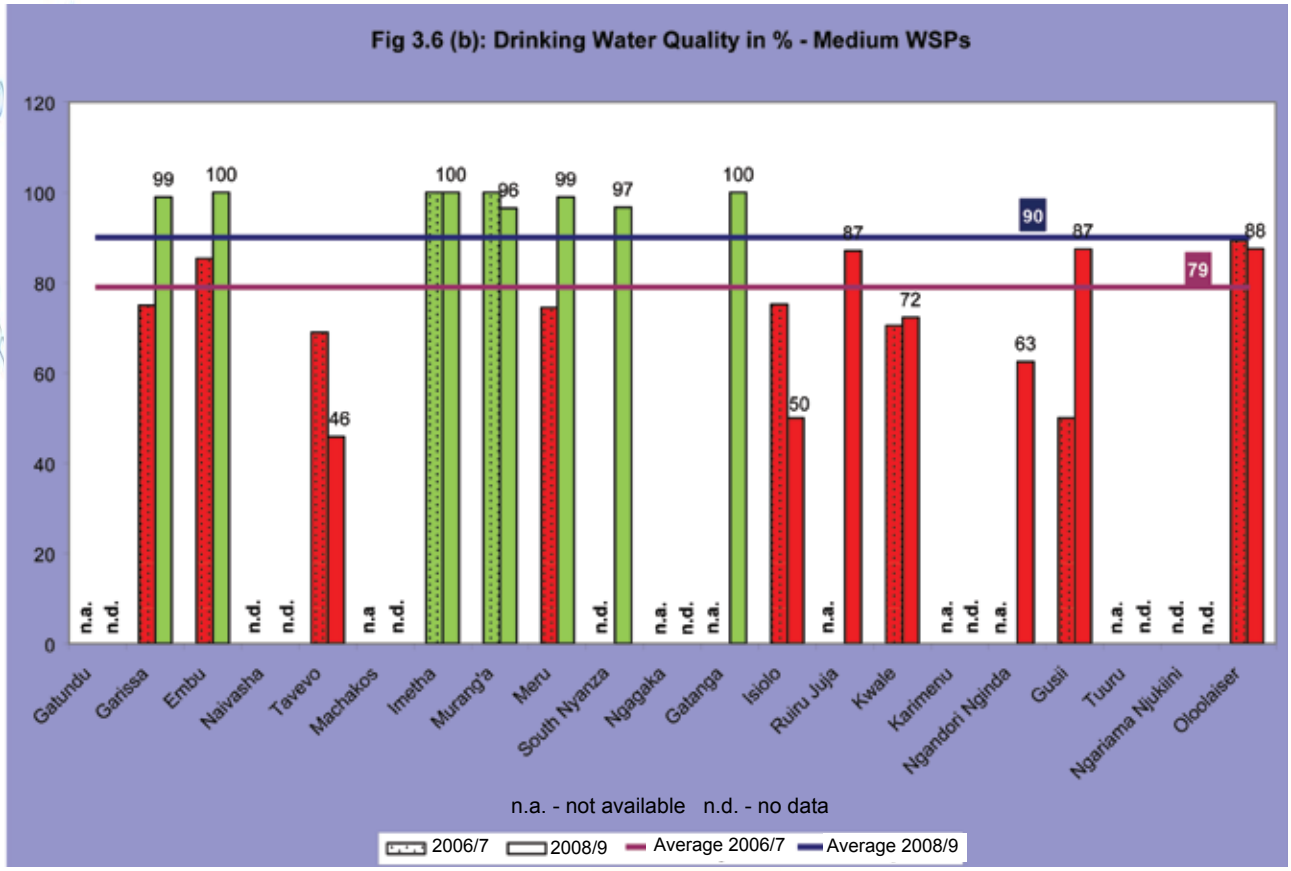
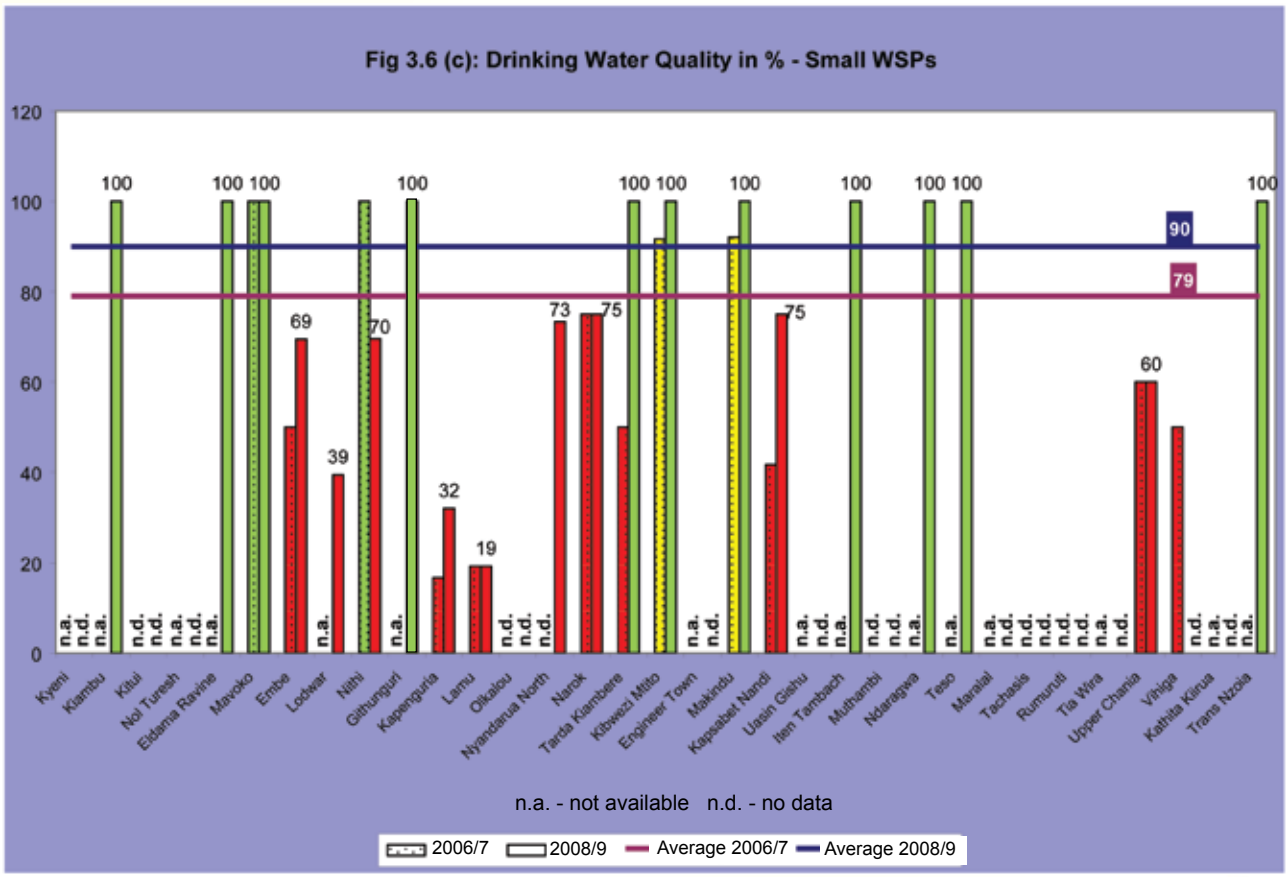


Fig 3.6 (b): Drinking Water Quality in % - Medium WSPs
120
100
80
60
40
20
0
n.a.
n.d.
99
100
n.d.
n.d.
46
n.a
n.d.
100
96
99
n.d.
97
n.a.
n.d.
n.a.
100
50
n.a.
87
72
n.a.
n.d.
n.a.
90
63
87
n.a.
n.d.
n.d.
n.d.
79
88
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Ololaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9



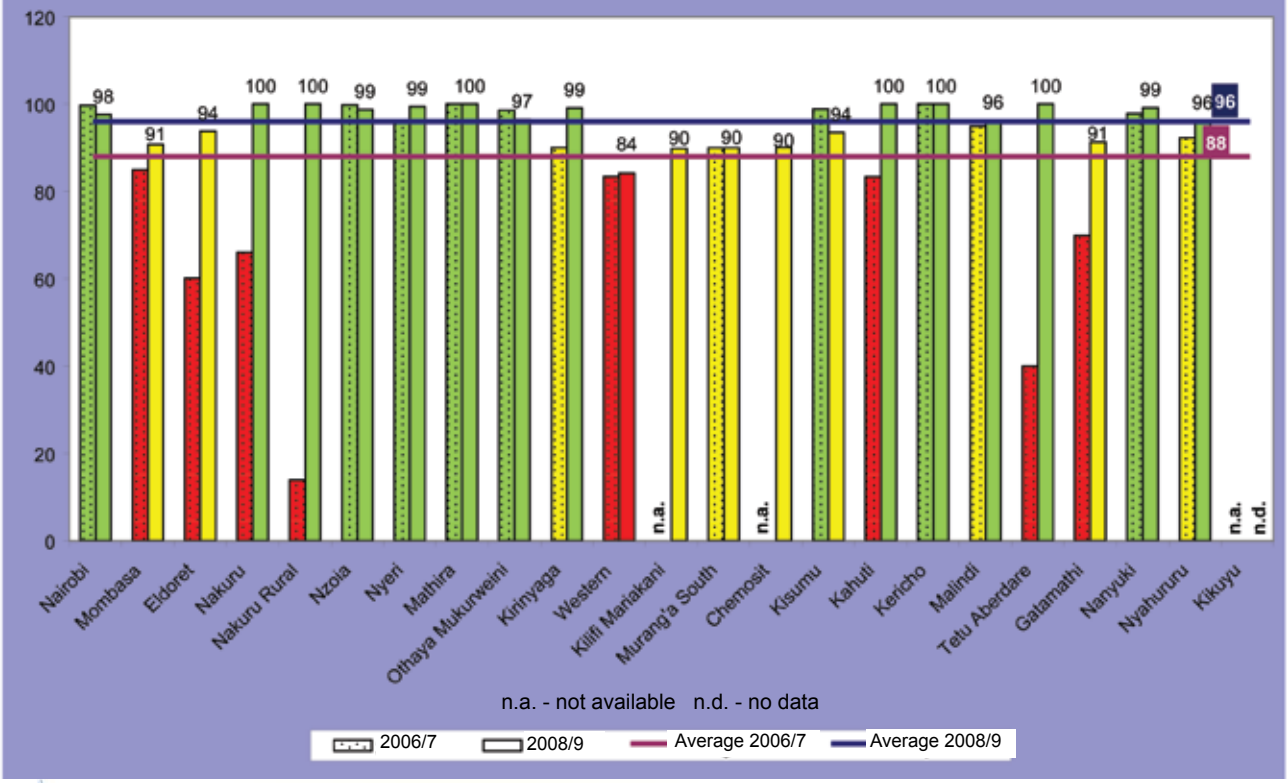
Comparing sector performance to the 2006/7 baseline, the above-indicated positive trend is further qualified.

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Drinking Water Quality Tests %	88	90	2	90

b) ***Compliance with residual chlorine standards.***

This measures the ratio of the number of samples within norm against the total number of samples taken. At 96% in 2008/9, (versus 88% in 2006/7), the weighted average was within the good range of the sector benchmark (i.e > 95%). It has, however, to be noted that 5 WSPs out of 77 (6.5%) recorded unacceptable performance (<90%) and 22 WSPs (29%) did not submit data at all (mostly small WSPs) and thus are not reflected in the weighted average. Once more stringent measures are applied (bacteriogal tests etc), a more comprehensive picture of sector performance in terms of compliance to water quality standards can be expected.

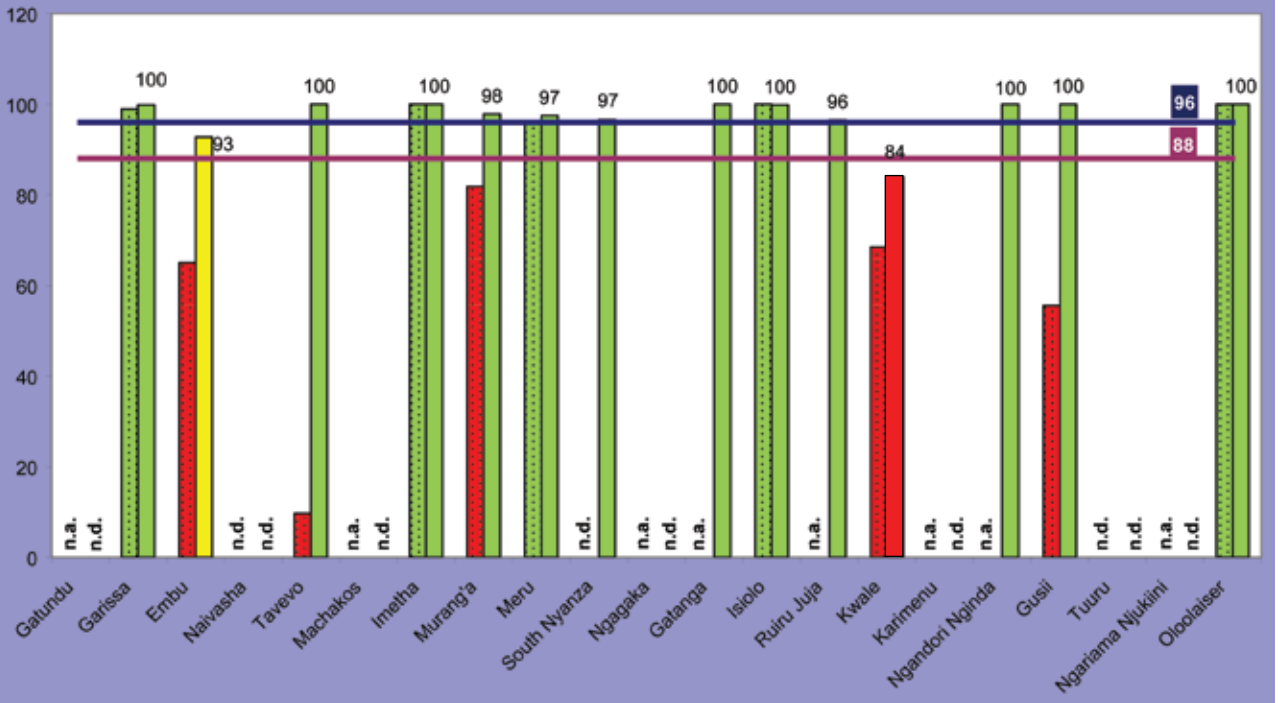
Fig 3.7 (a): Compliance with Residual Chlorine Standards in % - Very Large and Large WSPs



n.a. - not available n.d. - no data

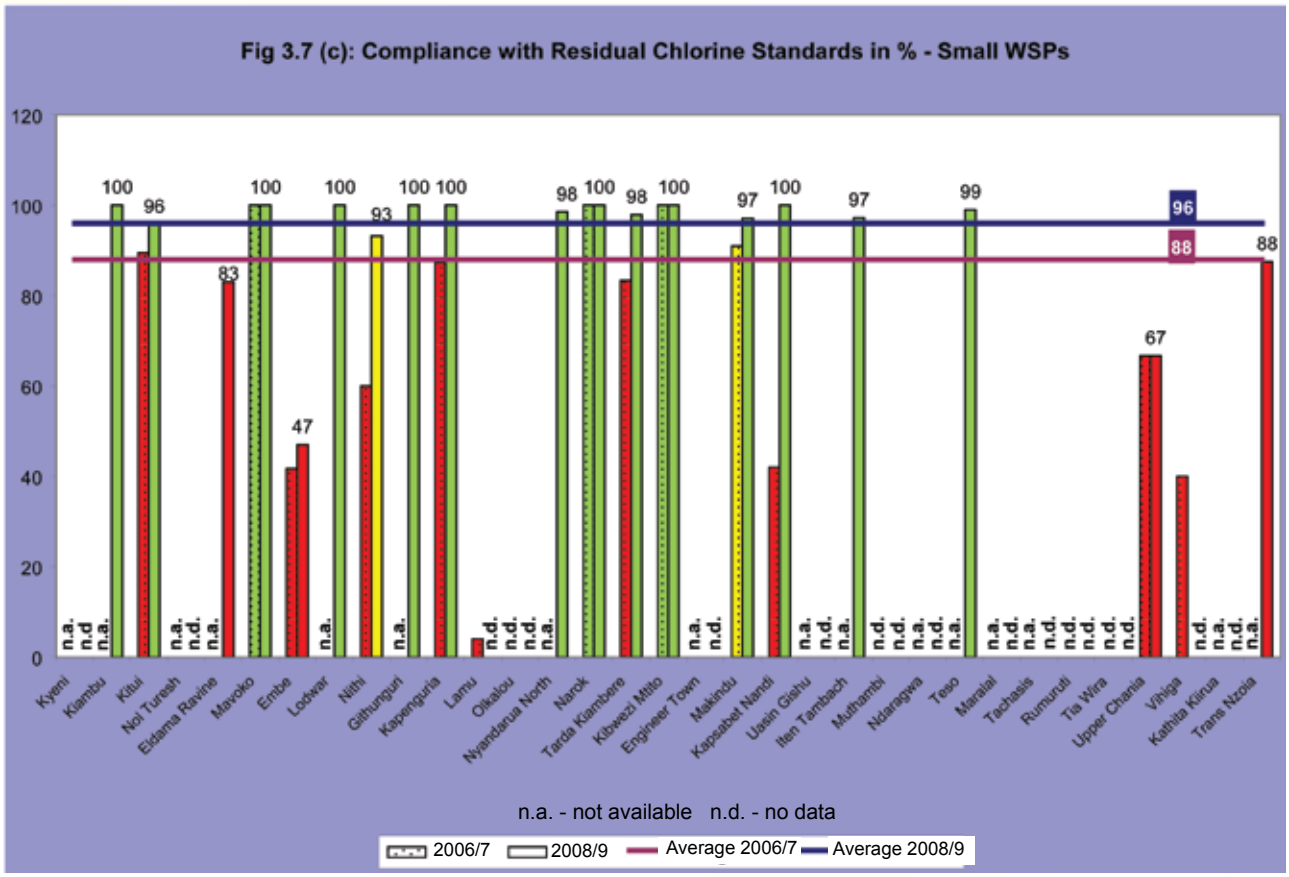
2006/7 2008/9 Average 2006/7 Average 2008/9

Fig 3.7 (b): Compliance with Residual Chlorine Standards in % - Medium WSPs



n.a. - not available n.d. - no data

2006/7 2008/9 Average 2006/7 Average 2008/9



Comparing sector performance to the 2006/7 baseline, the above-indicated positive trend in performance can be confirmed.

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Compliance to Residual Chlorine standards %	86	96	10	96

3.7.6 Hours of Supply

Hours of supply measures of the average number of hours per day that a utility is able to provide water. Through its inspection programme, Wasreb has established that most of the consumer complaints other than billing are due to irregular water supply. This indicates that hours of supply is a service level indicator of prime significance to customers. Accordingly, customer satisfaction – and thus willingness to pay – is directly connected to this indicator.

The indicator has been considered in terms of the two major classifications. That is, those utilities serving a population of over 100,000 persons and those serving a population of less than 100,000 persons. By international standards, utilities serving a population of over 100,000 would be in major urban centres. Due to higher demand, they would be expected to provide more service hours than those serving less than 100,000 persons (mostly in rural and peri-urban areas).

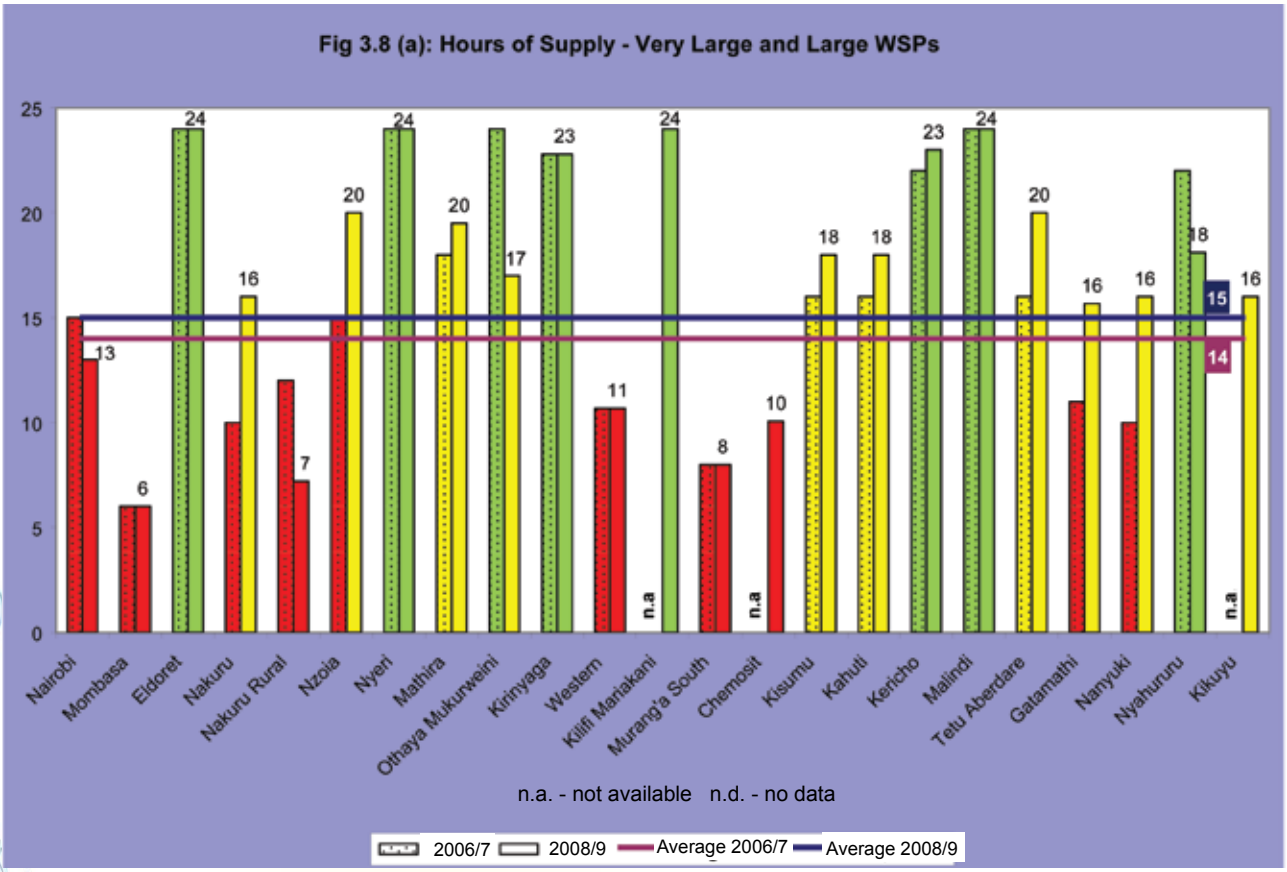
During the reporting period, the average hours of supply improved from 14 hrs/d to 15 hrs/d between the period 2006/7 and 2008/9.

Yet some WSPs like Nairobi, Kwale, Nakuru Rural, Othaya, Nyahururu, Oloolaiser, Embe, Lamu, Mikutra, Naivasha and Rimuruti reported a significant drop in hours of supply. This drop is attributed to:

a) The prolonged period of drought in the period 2008/9, which led to scarcity of water necessitating rationing of the water supply

b) Power cuts by KPLC due to the inability of some WSPs to settle their electricity bills

c) Demand outstripping supply due to either inadequate level of existing water production or distribution infrastructure.



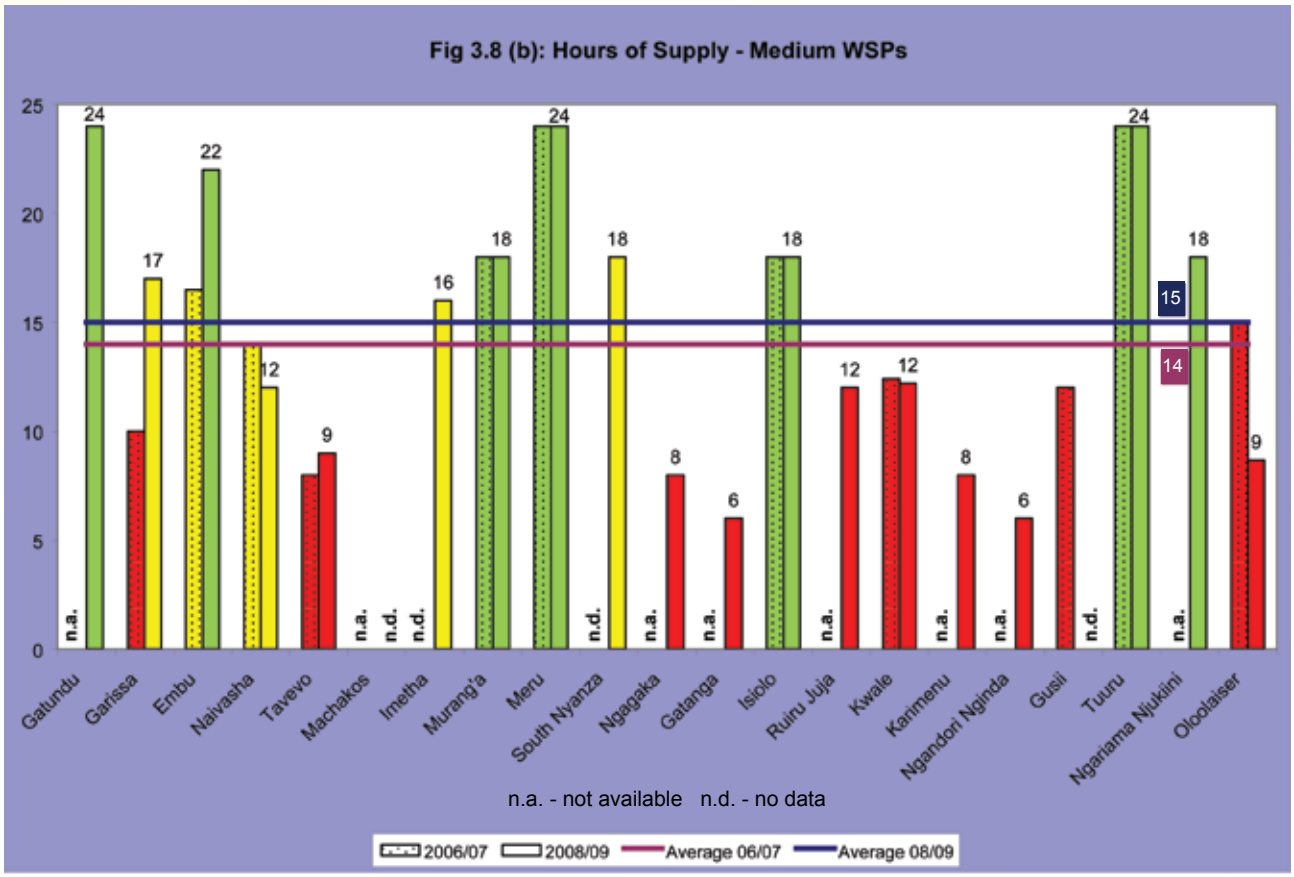


Fig 3.8 (b): Hours of Supply - Medium WSPs
25
20
15
10
5
0
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Ololaiser
n.a. - not available n.d. - no data
2006/07
2008/09
Average 06/07
Average 08/09

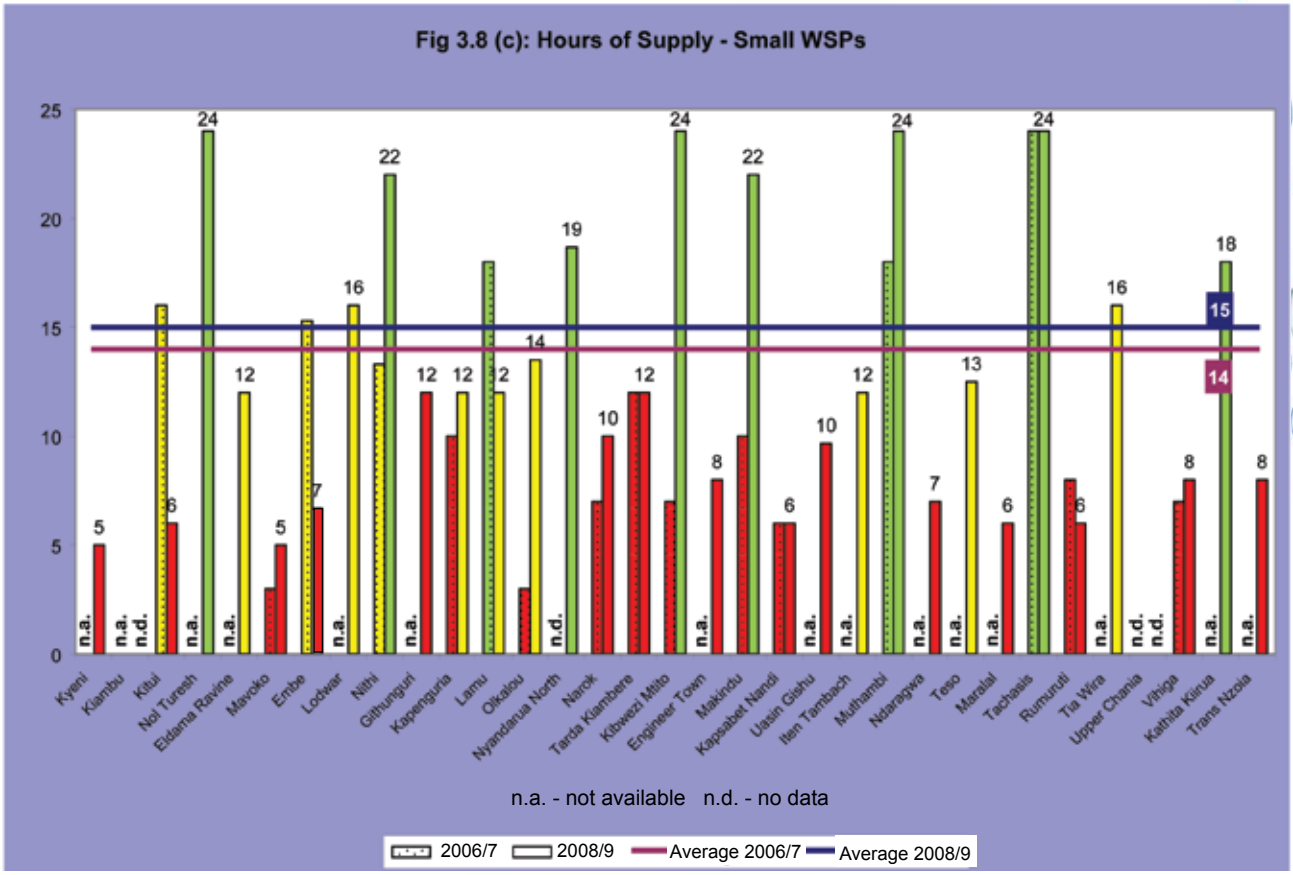


Fig 3.8 (c): Hours of Supply - Small WSPs
25
20
15
10
5
0
Kyeni
Kiambu
Kitui
Nol Turesh
Eldama Ravine
Mavoko
Embe
Lodwar
Nithi
Githunguri
Kapenguria
Lamu
Olkalou
Nyandarua North
Narok
Tarda Kiambere
Kibwezi Mtito
Engineer Town
Makindu
Kapsabet Nandi
Uasin Gishu
Iten Tambach
Muthambi
Ndaragwa
Teso
Maralal
Tachasis
Rumuruti
Tia Wira
Upper Chania
Vihiga
Kathita Kirua
Trans Nzoia
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

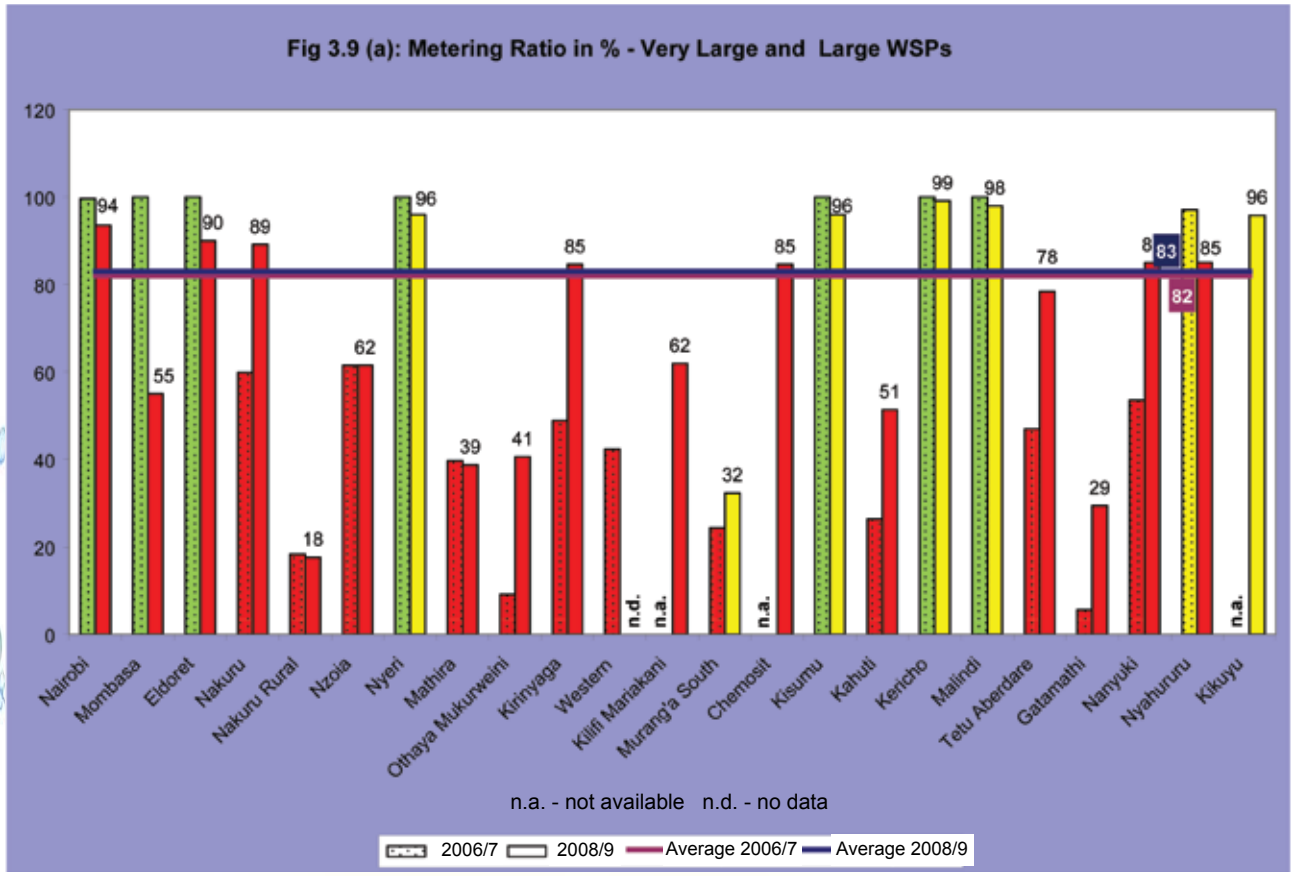
Taking the baseline of 2006/07 WSPs, the positive trend is more pronounced.

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Hours of supply	14	16	2	15

3.7.7 Metering Ratio

Metering Ratio is defined as the number of active metered connections compared to the total number of connections. Metering is a prerequisite in order to charge consumers according to what they actually consume. It is an important tool for controlling NRW - specifically the commercial losses – and for reducing per capita water consumption.

The graphs below show the performance of the WSPs with respect to this indicator.



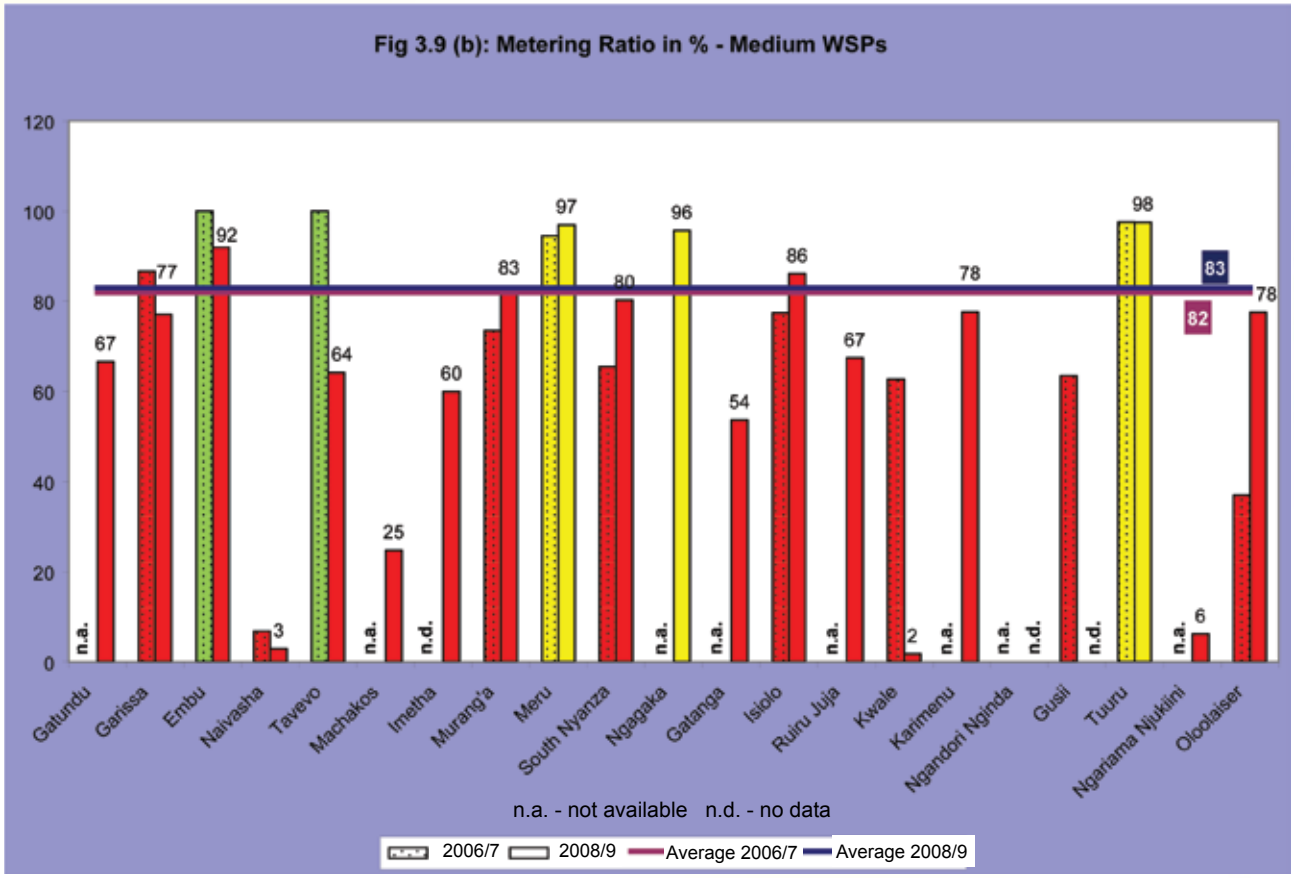


Fig 3.9 (b): Metering Ratio in % - Medium WSPs
120
100
80
60
40
20
0
n.a.
67
77
92
3
64
25
60
83
97
80
96
54
86
67
2
78
98
83
82
6
78
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Ololaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

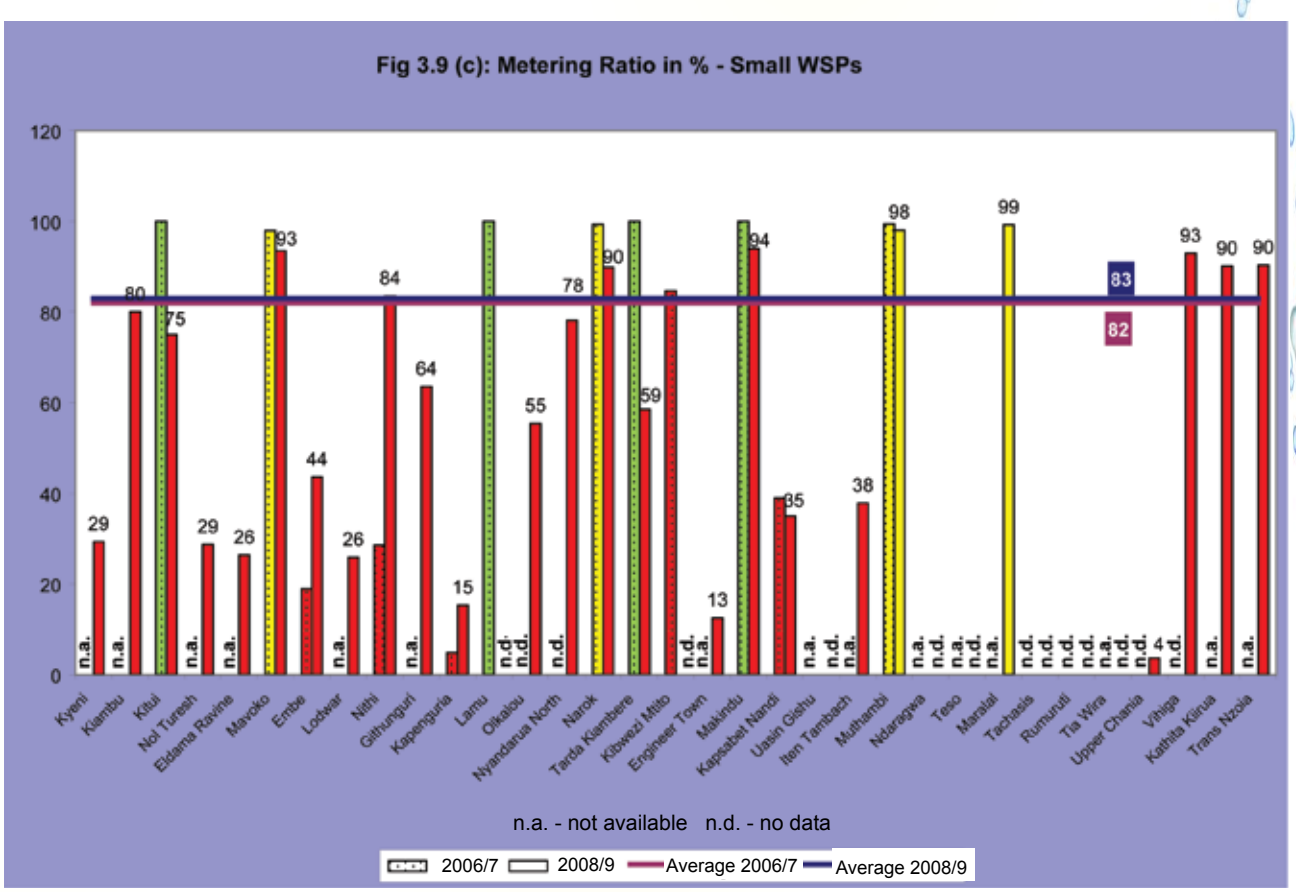


Fig 3.9 (c): Metering Ratio in % - Small WSPs
120
100
80
60
40
20
0
n.a.
29
80
75
29
26
93
44
26
84
64
15
100
55
78
90
100
59
85
13
94
39
35
38
98
99
83
82
93
90
90
4
Kyeni
Kiambu
Kitui
Nol Turesh
Eldama Ravine
Mavoko
Embe
Lodwar
Nithi
Githunguri
Kapenguria
Lamu
Olkalou
Nyandarua North
Narok
Tarda Kiambere
Kibwezi Mtito
Engineer Town
Makindu
Kapsabet Nandi
Uasin Gishu
Iten Tambach
Muthambi
Ndaragwa
Teso
Maralal
Tachasis
Rumuruti
Tia Wira
Upper Chania
Vihiga
Kathita Kilirua
Trans Nzoia
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

The average metering ratio increased by 1% from the period 2006/7 (82%) to 2008/9 (83%) but is still below the acceptable sector benchmark of 95%. Importantly, the current average of 83% is overstating the actual metering ratio as per definition. Inspections showed that a considerable percentage of reported metered connections have meters that are not functional. This finding is supported by cases where NRW levels are high despite reported high levels of metering. For example, Kirinyaga reports a metering ratio of 85% and NRW at 86%. A high metering ratio is usually reflected in low levels of NRW and vice versa.

Taking the baseline of 2006/7 WSPs, the positive trend is reversed. This is in contrast to the baseline comparison in NRW where, with a reduction of 2%, the relative trend was positive, while the overall sector performance deteriorated (+2%). The inconsistency can partly be explained by the fact that for 2008/9 overly high metering ratios were counterchecked with the respective WSPs and then corrected (this was not done for 2006/7).

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Metering ratio %	82	81	1	83

The high level of non-functioning meters skews the metering ratio reported here and must be of concern to WSPs and the sector as a whole in the pursuit of commercial and financial sustainability. Without being able to measure actual consumption, effective management becomes impossible. Meanwhile, through the provision of earmarked funds in the RTAs, which are ongoing, Wasreb has reinforced its efforts to ensure 100% metering.

3.7.8 Revenue Collection Efficiency

Revenue Collection Efficiency is defined as the total amount collected by a WSP vis-a-vis the total amount billed. It is a measure of the revenue management system that a WSP has put in place and the willingness of customers to pay, reflecting customer satisfaction. In the period 2008/9, collection efficiency fell from 86% (2006/7) to 83%.

While a number of WSPs showed considerable improvement, with 38 WSPs (49%) recording a collection efficiency of equal or more than 85% and hence being in the acceptable range, the number of WSPs collecting arrears dropped, which led to the lower average figure reported.

A number of WSPs recorded a collection efficiency of over 100%, which can be attributed to collection of arrears, mainly from government institutions.

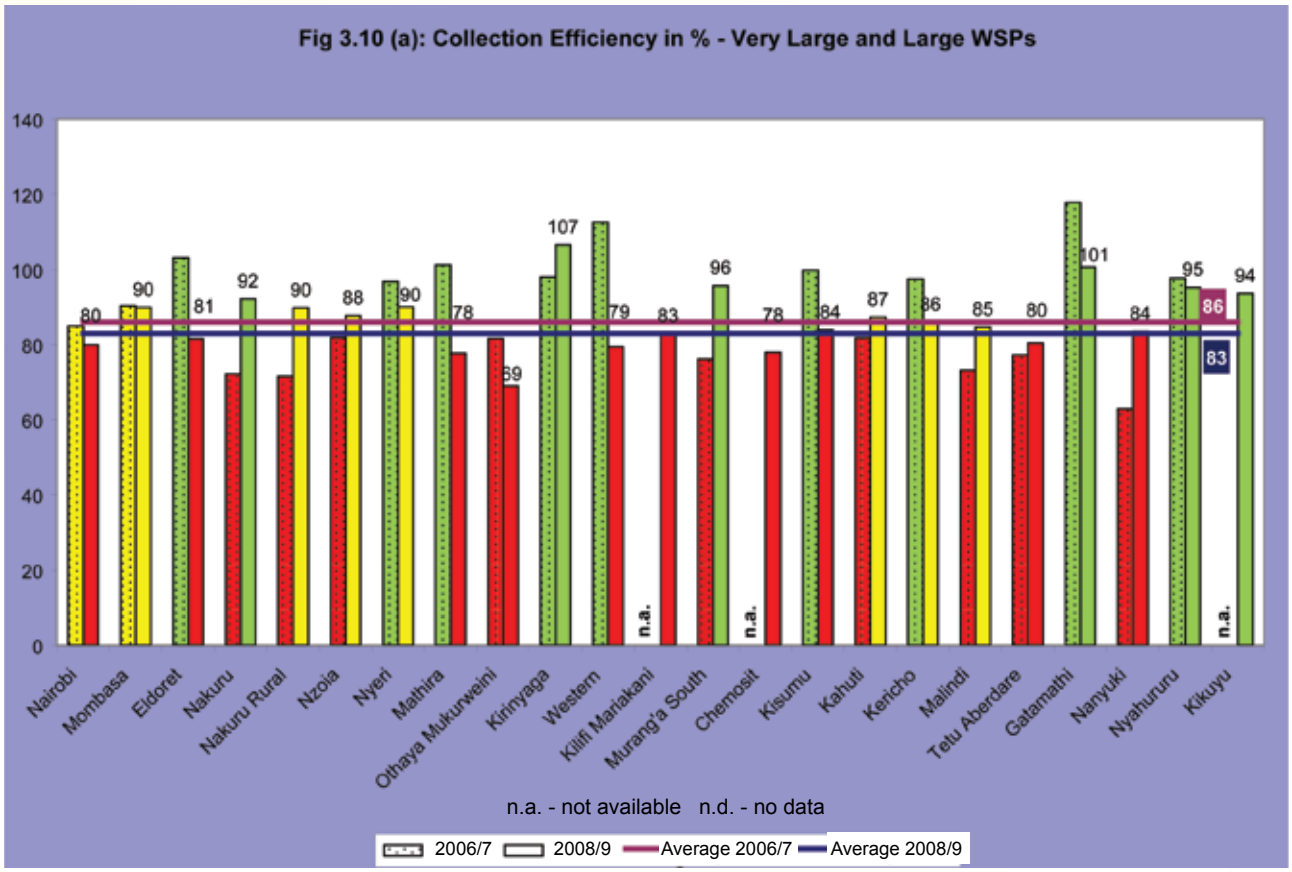


Fig 3.10 (a): Collection Efficiency in % - Very Large and Large WSPs
140
120
100
80
60
40
20
0
80
90
81
92
90
88
90
78
59
107
79
n.a.
96
n.a.
78
84
87
86
85
80
101
84
95
86
83
n.a.
94
Nairobi
Mombasa
Eldoret
Nakuru
Nakuru Rural
Nzoia
Nyeri
Mathira
Othaya Mukurweini
Kirinyaga
Western
Kilifi Mariakani
Murang'a South
Chemosit
Kisumu
Kahuti
Kericho
Malindi
Tetu Aberdare
Gatamathi
Nanyuki
Nyahururu
Kikuyu
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

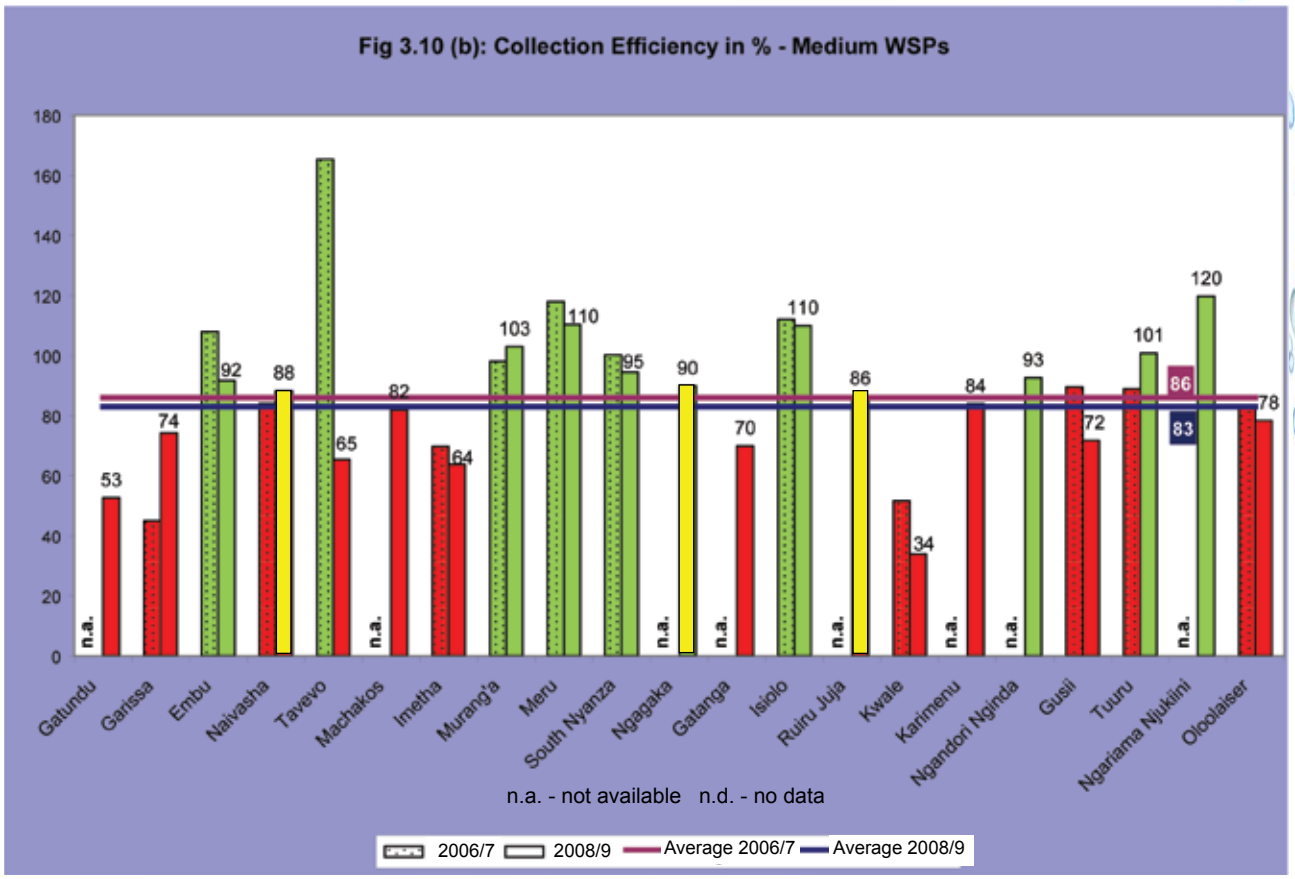
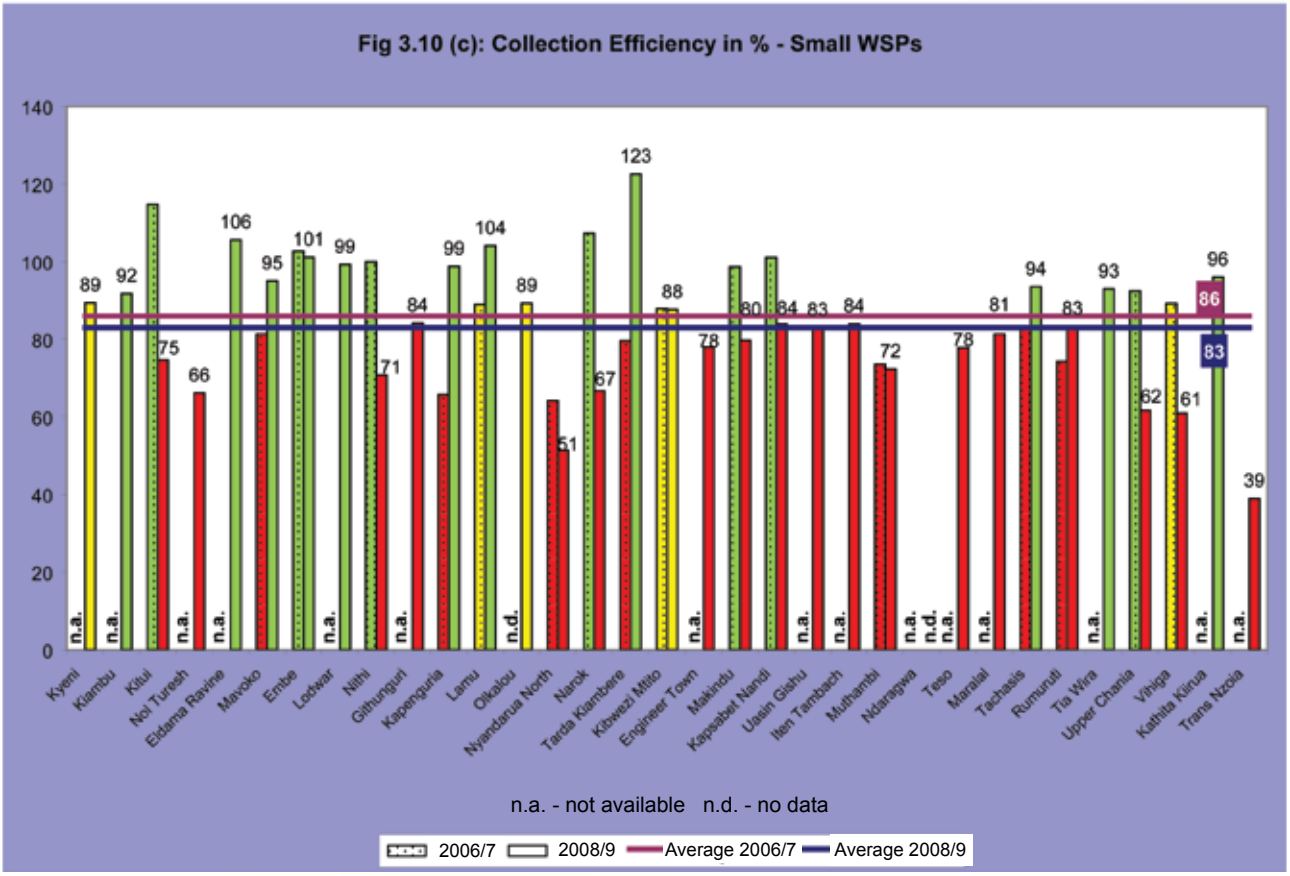


Fig 3.10 (b): Collection Efficiency in % - Medium WSPs
180
160
140
120
100
80
60
40
20
0
n.a.
53
74
92
88
65
n.a.
82
64
103
110
95
n.a.
90
n.a.
70
110
n.a.
86
34
n.a.
84
n.a.
93
72
101
86
83
n.a.
120
78
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Oloolaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9



Looking at the baseline, the above-outlined negative trend is confirmed for the same reasons.

Table 2.16 Baseline Indicator for Collection Efficiency

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Collection efficiency %	86	83	-3	83

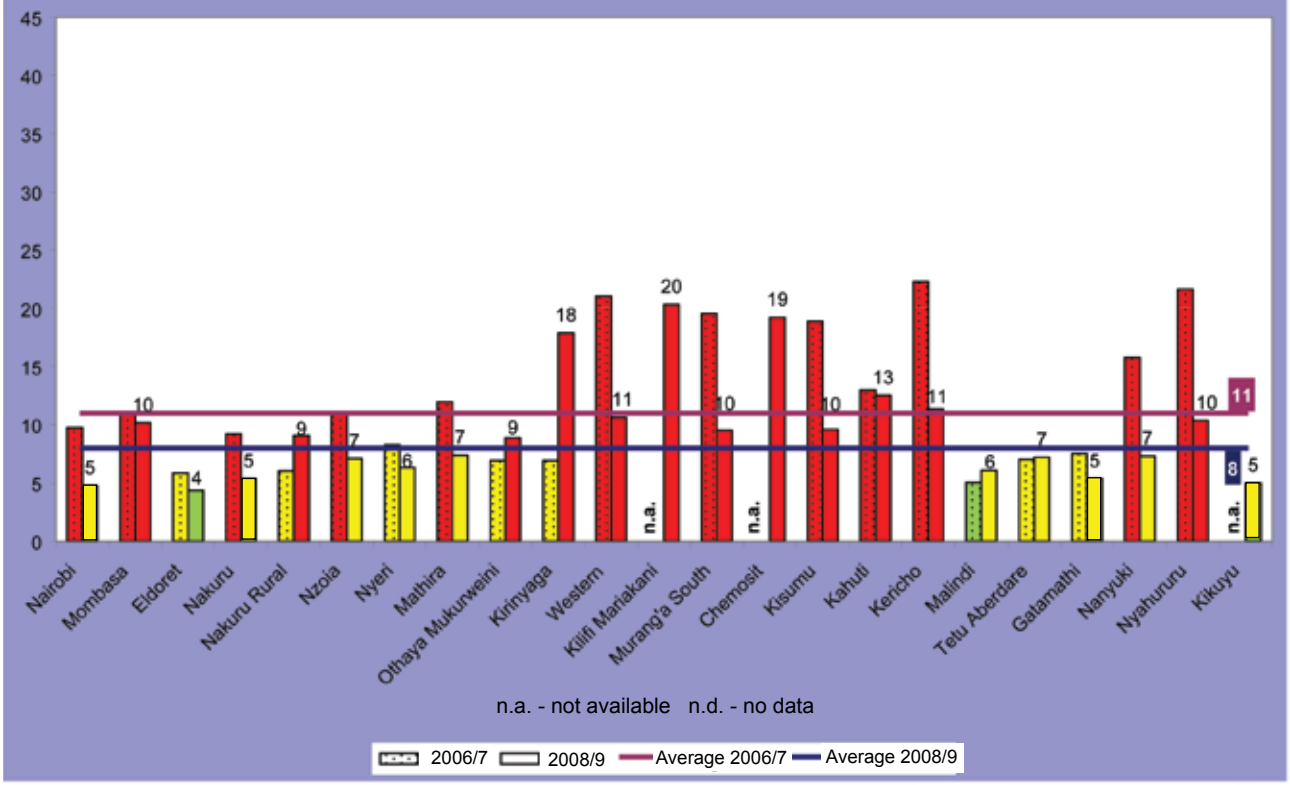
3.7.9 Staff per Thousand Connections

Staff per 1000 connections describes the number of staff a WSP utilizes for every 1000 connections. Being one of the cost drivers in WSPs, a low number indicates high efficiency whereas a high number points at low efficiency. It is, however, important to note that this indicator is not the only one measuring the efficiency of a company.

The average indicator improved from 11 to 8 staff per 1000 connections for the period 2006/7 and 2008/9 respectively. Hence, the national average moved to the acceptable sector benchmark for all sizes of WSPs (in 2006/7 the benchmark was just acceptable for medium and small WSPs). Yet it has to be pointed out that whereas in 2006/7 the indicator was based on the number of water connections only, in 2008/9 sewer connections were added. This partly contributes to the improvement in the weighted average.

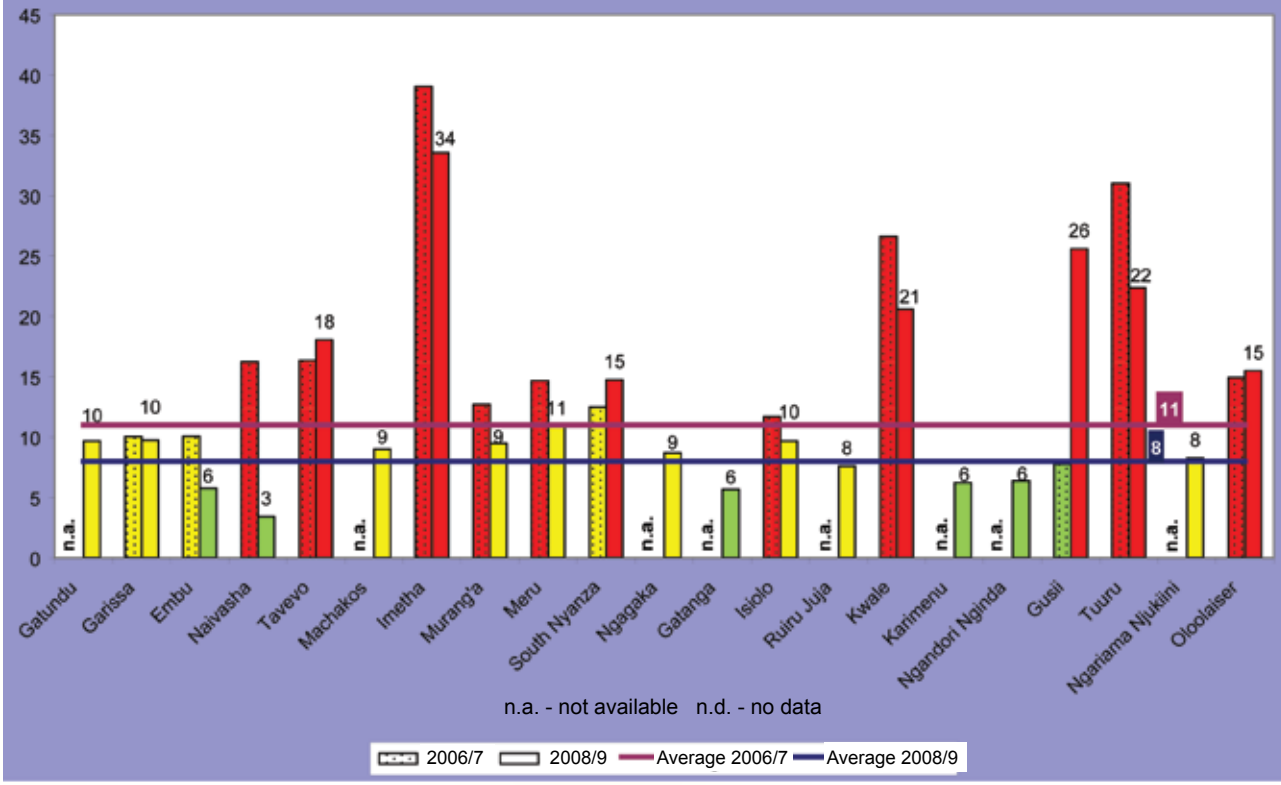
Also, there were big variations between individual WSPs not only in different categories but also within same categories. For example, whereas Naivasha shows the best performance in the category of medium WSPs, Imetha, with 34 staff per 1000, shows the worst performance in that category. Importantly, most of the WSPs reporting a high ratio are rural WSPs. The delay in finalization of the staff transfer plan following the water sector reforms negatively influences the ratio as well.

Fig 3.11 (a): Staff per 1000 Connections - Very Large and Large WSPs

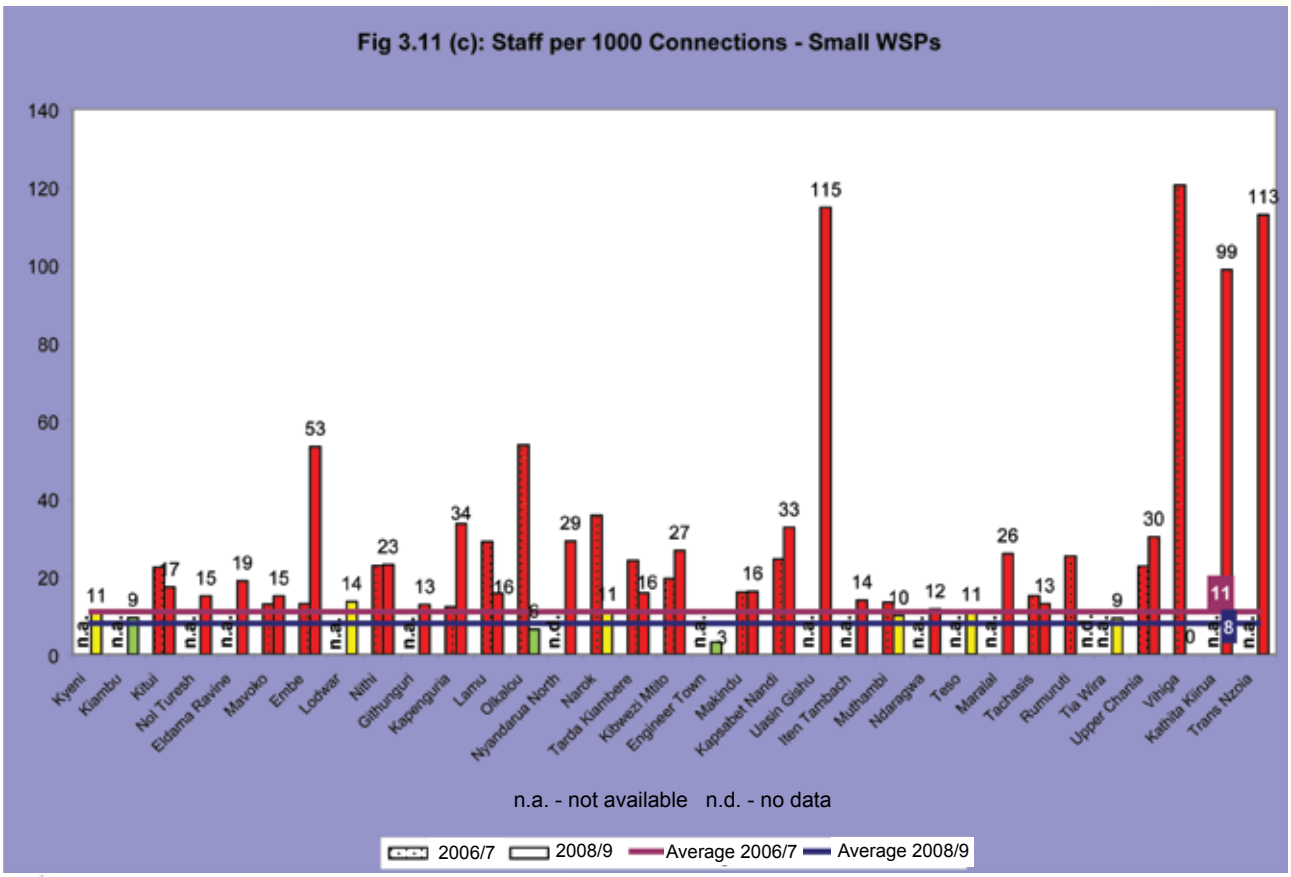


n.a. - not available n.d. - no data

Fig 3.11 (b): Staff per 1000 Connections - Medium WSPs



n.a. - not available n.d. - no data



The optimum staff per 1000 connections depends on the number of towns under a WSP area of coverage. Table 3.1 on page 17 shows the number of towns served by a WSP to facilitate correct interpretation of this KPI.

Comparing sector performance to the 2006/7 baseline, the above-indicated positive trend in performance appears even stronger.

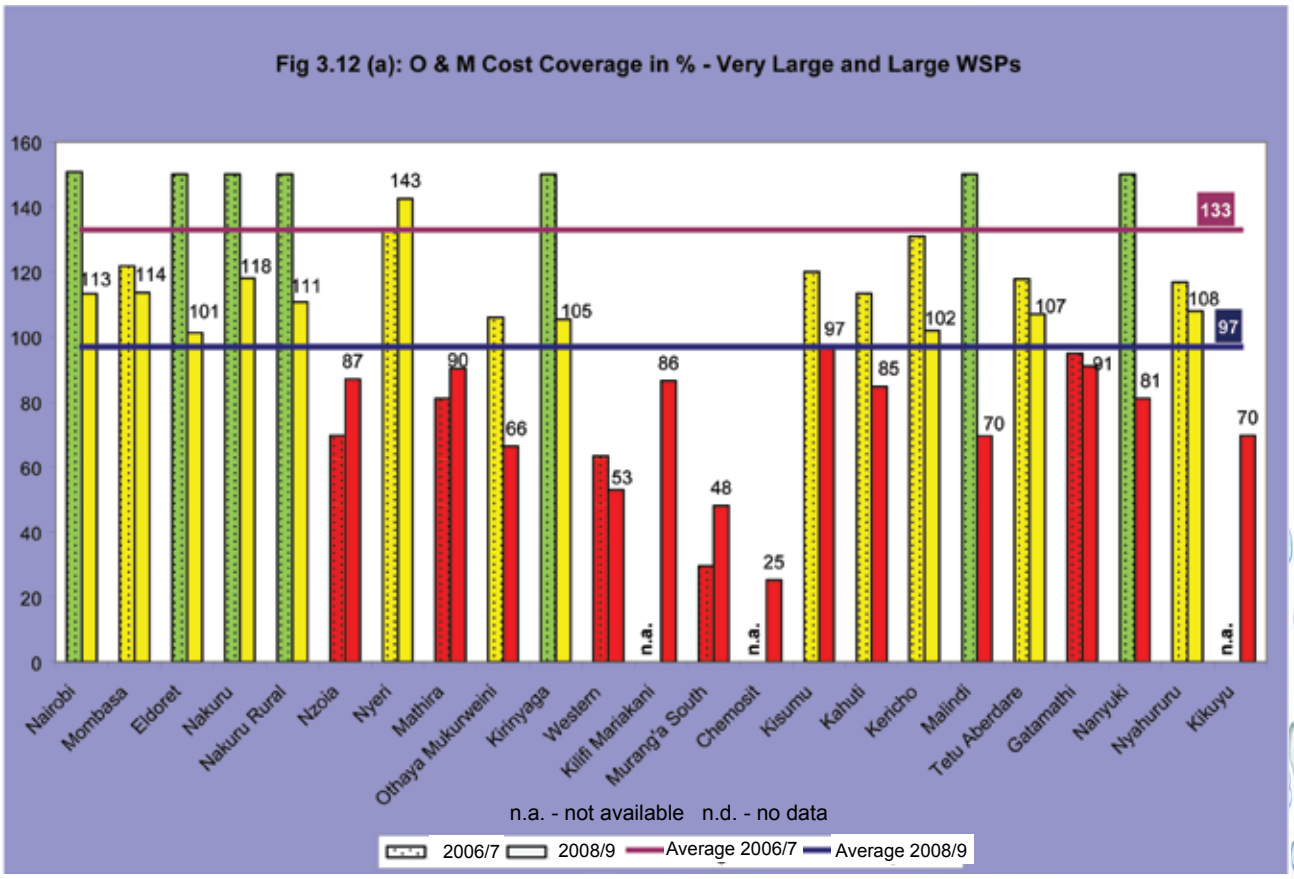
Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Staff per 1000 connections	11	7	-4	8

Although the sector benchmark was attained in 2008/9, it has been noted that the majority of the WSPs do not have the right skills mix and/or qualified personnel. Often, this is due to their small size, which again impacts on their efficiency. WSPs should strive to follow Wasreb's criteria for the employment of staff so that a higher level of skills and consequently capacity will be attained.

It is noted that a combination of staff reduction and rationalisation to achieve the right skills mix leads to a reduction of personnel costs and improved efficiency.

3.7.10 O&M Cost Coverage

Operations and Maintenance (O&M) costs are the costs incurred to operate a system and maintain its infrastructure. They include personnel costs, energy costs, chemical costs and maintenance of plant and equipment. O&M cost coverage indicates that a WSP has reached short term sustainability. It is the first step towards total cost recovery which requires investment costs to be covered as well. Through ongoing tariff negotiations, Wasreb's objective is that WSPs reach the second level of sustainability utilizing tariffs that cover not only O&M costs but also investment costs. An indication of sustainability for a WSP would be the attainment of the benchmark O&M Cost Coverage greater than 150%. A higher average tariff does not automatically mean that the poor pay more or lose access. The tariff structure distributes the cost burden to the different consumer groups. Wasreb is paying a lot of attention to ensure that tariff increases do not lead to exclusion of the poor.



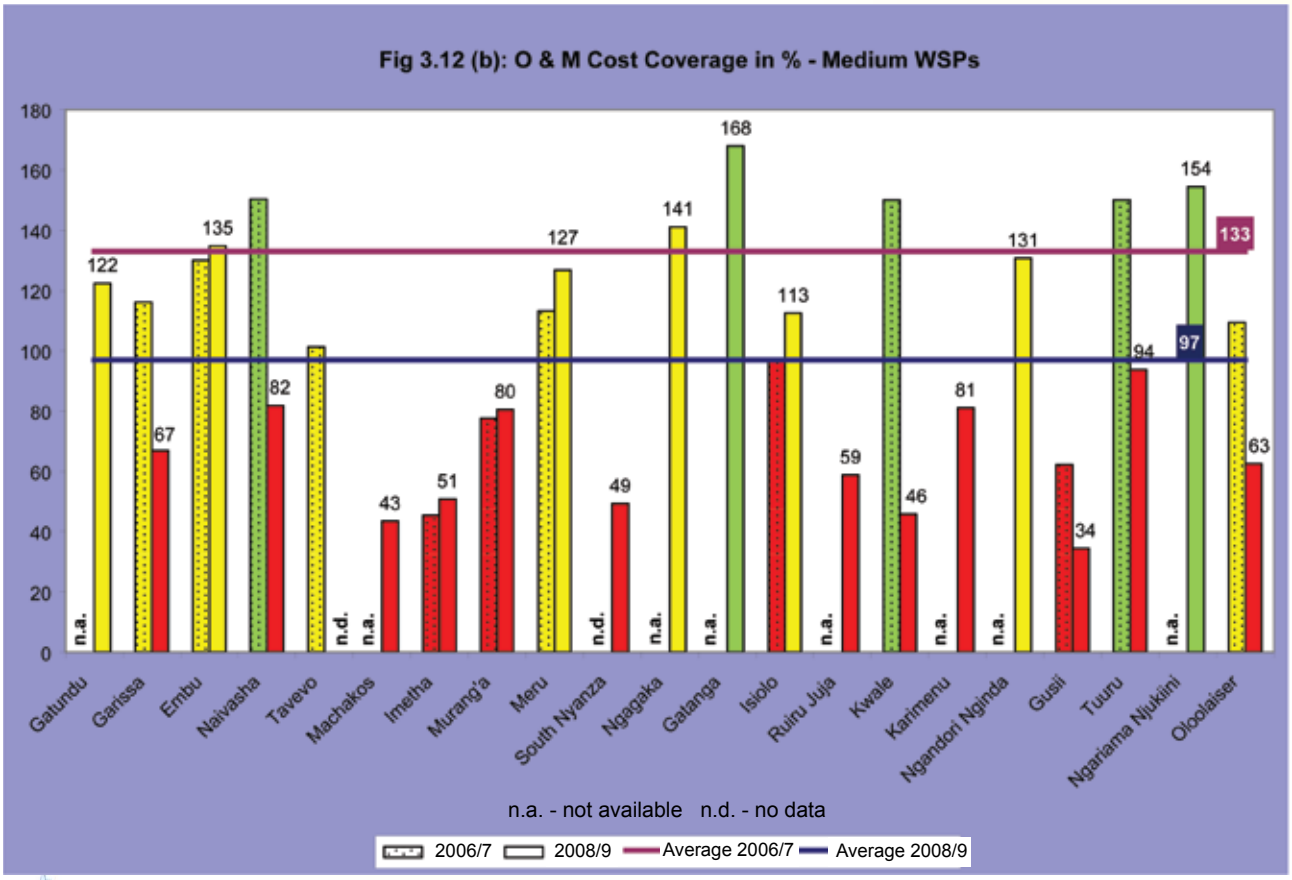


Fig 3.12 (b): O & M Cost Coverage in % - Medium WSPs
180
160
140
120
100
80
60
40
20
0
122
67
135
82
43
51
80
127
49
141
168
113
59
46
81
131
94
34
154
97
63
133
n.a.
n.d.
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Nginda
Gusii
Tuuru
Ngariama Njukiini
Oloolaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

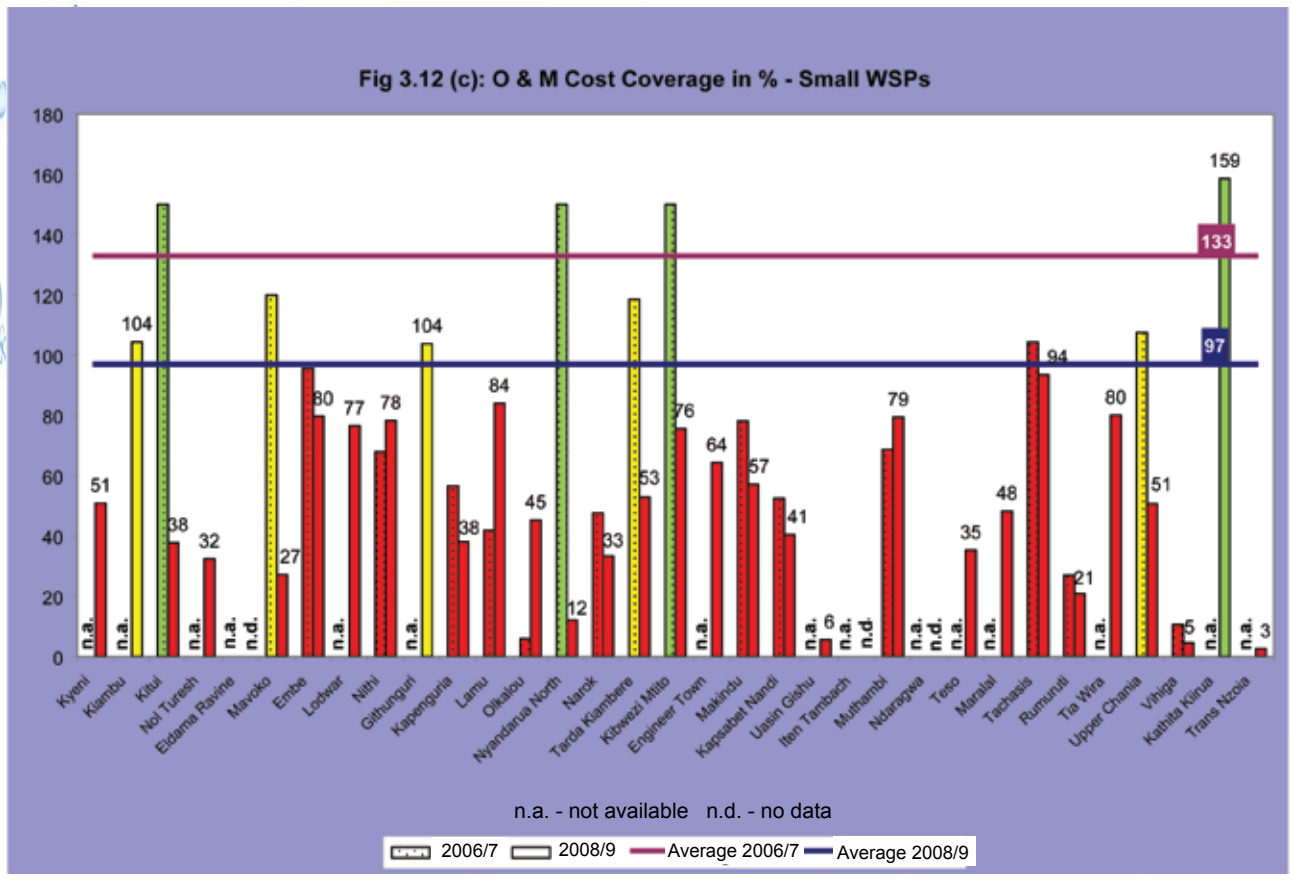


Fig 3.12 (c): O & M Cost Coverage in % - Small WSPs
180
160
140
120
100
80
60
40
20
0
51
104
38
32
27
120
80
77
78
104
38
84
45
12
33
53
120
76
64
57
41
6
79
35
48
94
21
80
51
5
159
133
97
3
Kyeni
Kiambu
Kitui
Nol Turesh
Eldama Ravine
Mavoko
Embe
Lodwar
Nithi
Githunguri
Kapenguria
Lamu
Olkalou
Nyandarua North
Narok
Tarda Kiambere
Kibwezi Mtito
Engineer Town
Makindu
Kapsabet Nandi
Uasin Gishu
Iten Tambach
Muthambi
Ndaragwa
Teso
Maralal
Tachasis
Rumuruti
Tia Wira
Upper Chania
Vihiga
Kathita Kirua
Trans Nzoia
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

The average O&M cost coverage in 2008/9 was 97%, a decrease of 36 percentage points from 2006/7 (133%).

In the last *Impact* Report, this indicator was calculated by consideration of billing figures. In this report, a more realistic figure of actual revenue collected has been considered and hence the big decrease of 36 percentage points. WSPs who cannot be sustainable in the medium and long term because of their size need to merge with bigger and better managed WSPs (clustering). In addition, subsidies do not encourage improvement of performance and need to be phased out. If subsidies must be provided, then it must be linked to performance increments.

A tariff analysis carried out by Wasreb on 25 WSPs in the category of Very Large to Medium indicates that the O&M cost recovery for most WSPs is below 100%. Further, most WSPs continue receiving subsidies in the form of chemicals, payment for electricity bills and staff salaries from the government. A majority of WSPs fail to capture these costs as part of their O&M.

While Wasreb effected an ETA to cushion WSPs against the rising costs of inputs during the period 2008/9, it did not translate to higher levels in cost coverage. This could either be attributed to misallocation of funds or the short duration of the ETA.

Taking the 2006/7 baseline, the decrease in the weighted average is even more significant.

Indicators	2006/2007	2008/2009 - same baseline	Increase/ Decrease	2008/2009 - including new WSPs
O&M Cost Coverage %	146	100	-46	97

3.7.11 O&M Cost Coverage by Billing at 85% Collection Efficiency

This indicator measures the level of O&M cost coverage if utilities were to collect 85% of the amount billed, which is the acceptable collection efficiency level.

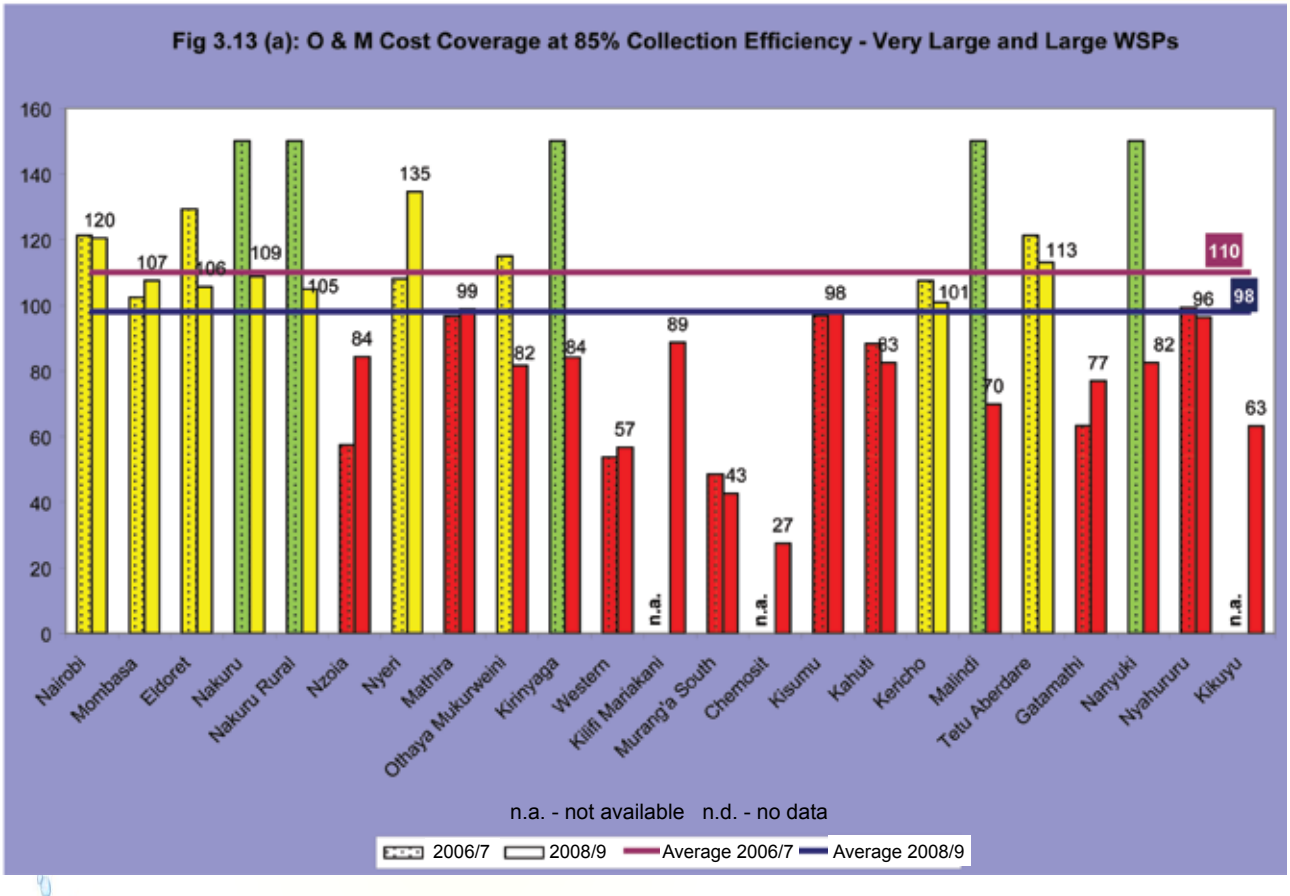


Fig 3.13 (a): O & M Cost Coverage at 85% Collection Efficiency - Very Large and Large WSPs
160
140
120
100
80
60
40
20
0
120
107
106
109
105
84
135
99
82
84
57
n.a.
89
43
n.a.
27
98
83
101
70
113
77
82
96
n.a.
63
110
98
Nairobi
Mombasa
Eldoret
Nakuru
Nakuru Rural
Nzoia
Nyeri
Mathira
Othaya Mukurweini
Kirinyaga
Western
Kilifi Mariakani
Murang'a South
Chemosit
Kisumu
Kahuti
Kericho
Malindi
Tetu Aberdare
Gatamathi
Nanyuki
Nyahururu
Kikuyu
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9

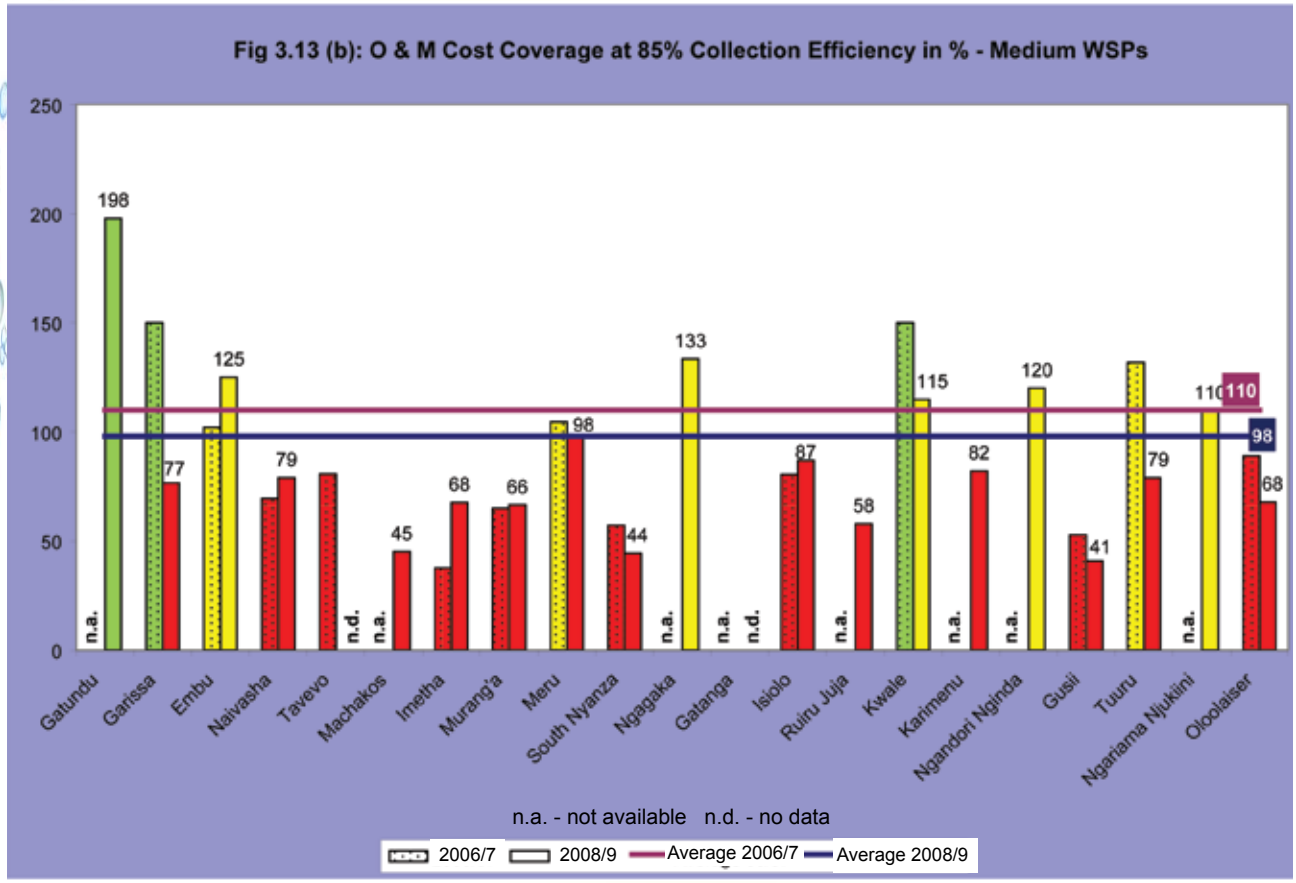
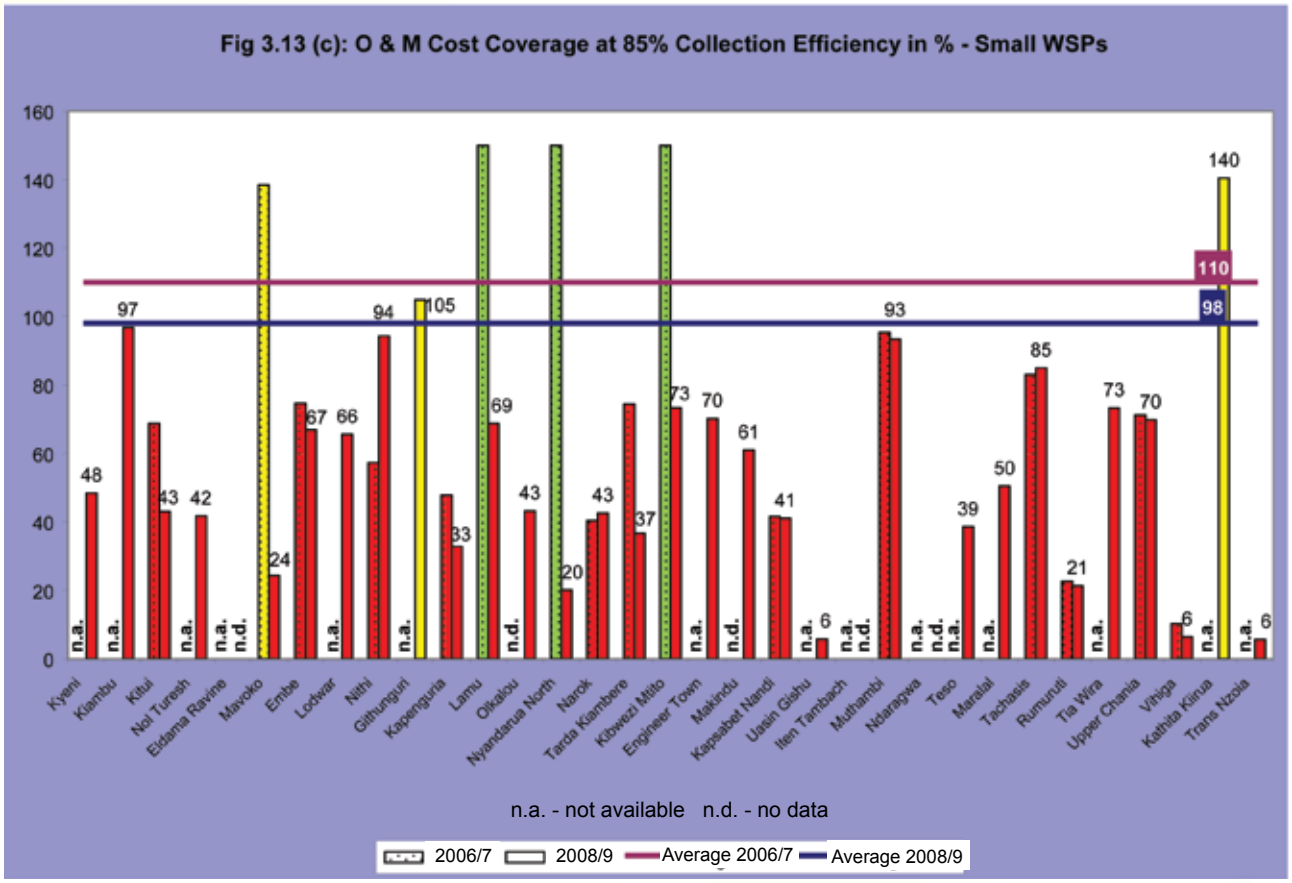


Fig 3.13 (b): O & M Cost Coverage at 85% Collection Efficiency in % - Medium WSPs
250
200
150
100
50
0
n.a.
198
77
125
79
n.d.
n.a.
45
68
66
98
44
n.a.
133
n.a.
n.d.
87
n.a.
58
115
n.a.
82
n.a.
120
41
79
n.a.
110
110
98
68
Gatundu
Garissa
Embu
Naivasha
Tavevo
Machakos
Imetha
Murang'a
Meru
South Nyanza
Ngagaka
Gatanga
Isiolo
Ruiru Juja
Kwale
Karimenu
Ngandori Ngindu
Gusii
Tuuru
Ngariama Njukiini
Oloolaiser
n.a. - not available n.d. - no data
2006/7
2008/9
Average 2006/7
Average 2008/9



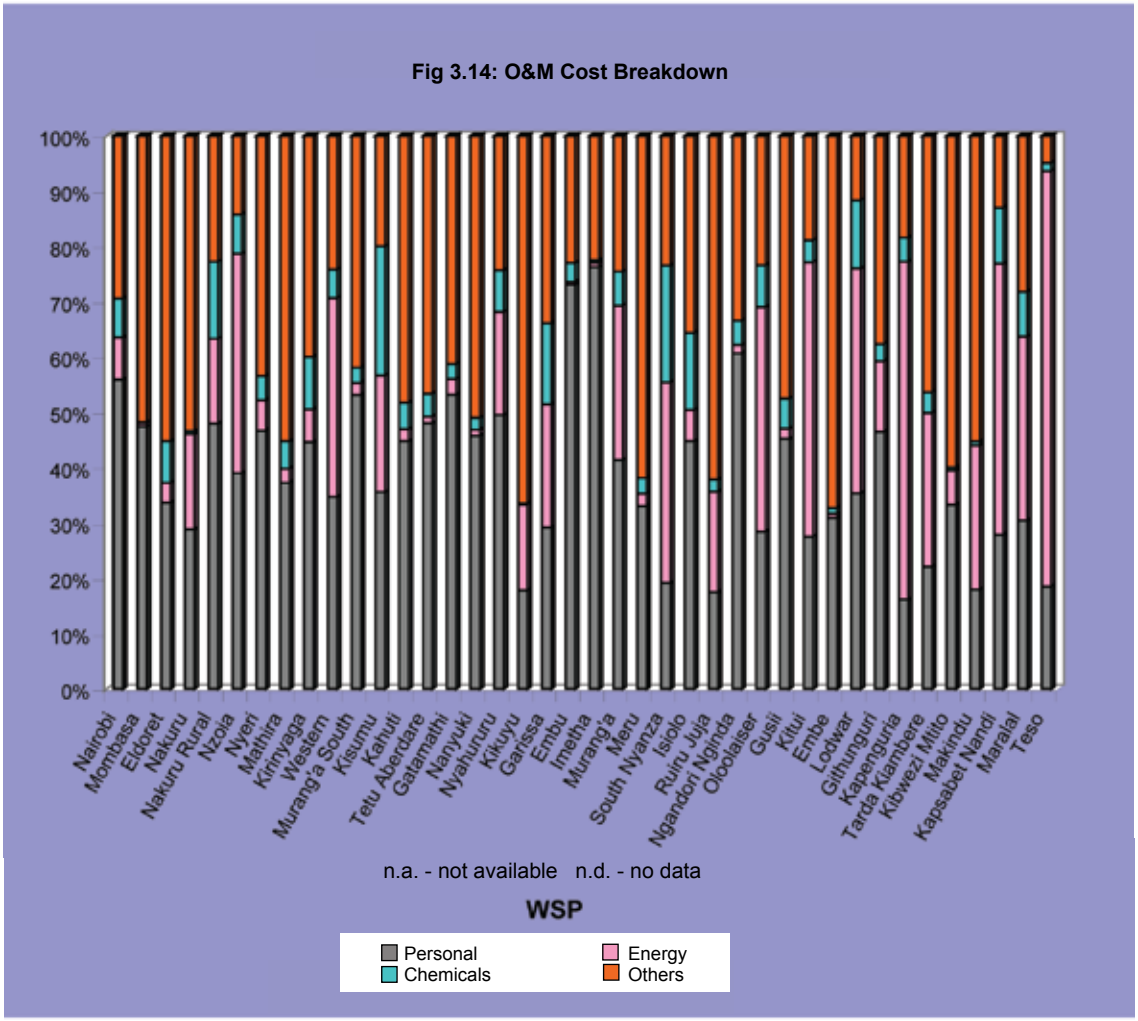
The average for this indicator declined from 110% in 2006/7 to 98% in 2008/9. At 85% collection efficiency, 61 WSPs could not fully cover their O&M costs or did not provide any data. This points to the need to further assess WSPs costs through the application of RTAs.

Considering the 2006/7 baseline, the above-trend becomes more pronounced.

Indicators	2006/2007	2008/2009 - same baseline	Increase/Decrease	2008/2009 - including new WSPs
O&M Cost Coverage at 85% collection efficiency %	120	102	-18	98

3.7.12 Cost Structures

Figure 3.14 below shows the breakdown of O&M cost into the main cost categories of Personnel, Energy, Chemicals and others.



3.7.13 Personnel Costs as Percentage of O&M Costs

Personnel costs are expenses incurred on hiring and maintaining staff. The national average on personnel expenditure as a percentage of O&M cost for the years, 2006/7 and 2008/9 was 48 and 45 respectively. This depicts a positive trend towards the sector benchmark.

Personnel cost as a share of O&M cost	GOOD	Acceptable	Not Acceptable
Large WSPs	<20%	20-30%	>30%
Medium WSPs	<30%	30-40%	>40%
Small WSPs	<40%	40-45%	>45%

However, one needs to acknowledge that to the extent that in some cases WSPs costs are higher than those of Best Practice, this is largely attributed to unjustified hiring of staff and casual labourers. Another factor causing high personnel costs is the inclusion of salary packages paid to employees drawn from various public and private institutions. WSPs are therefore required to focus on staff harmonization to ensure that employees are treated equitably and that no individual receives unjustified pay.

Fig 3.15 (a): Personnel Expenditure as a % of total O & M Expenditures - Very Large and Large WSPs

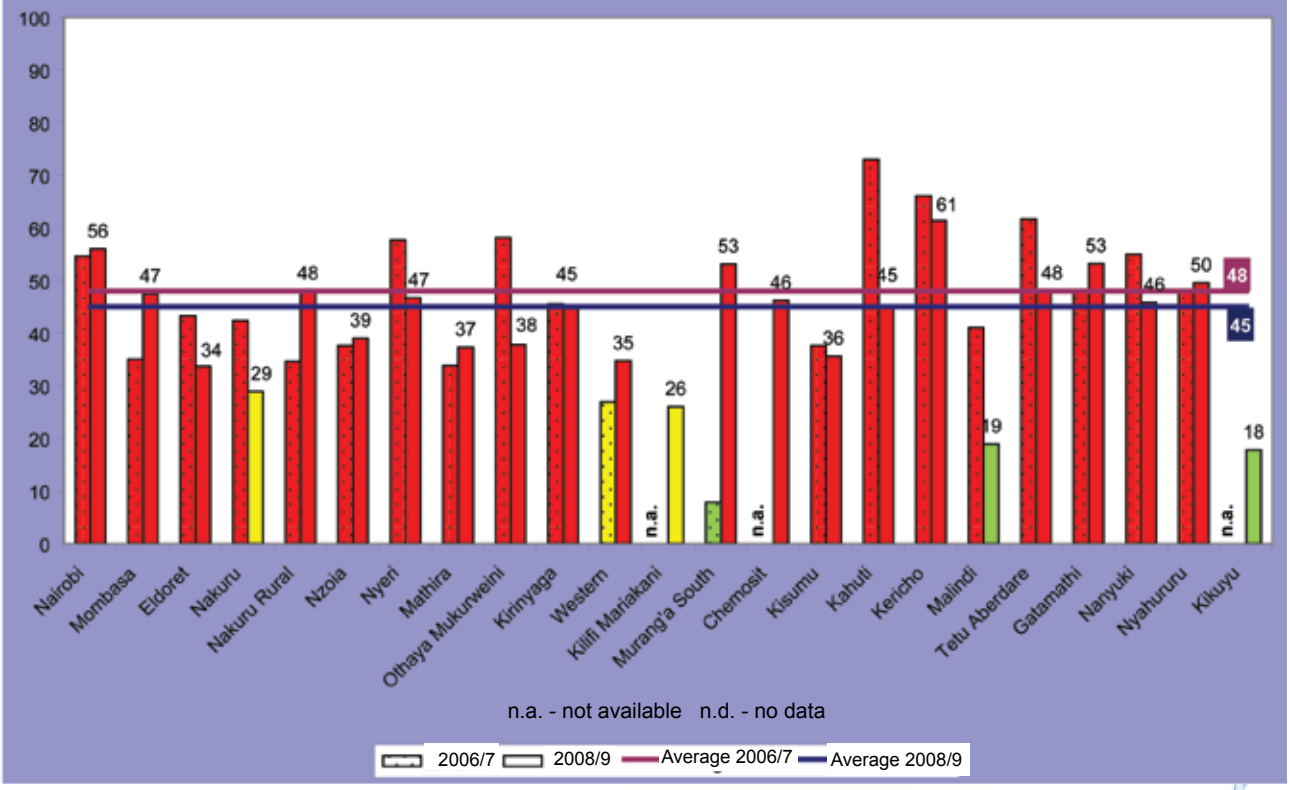
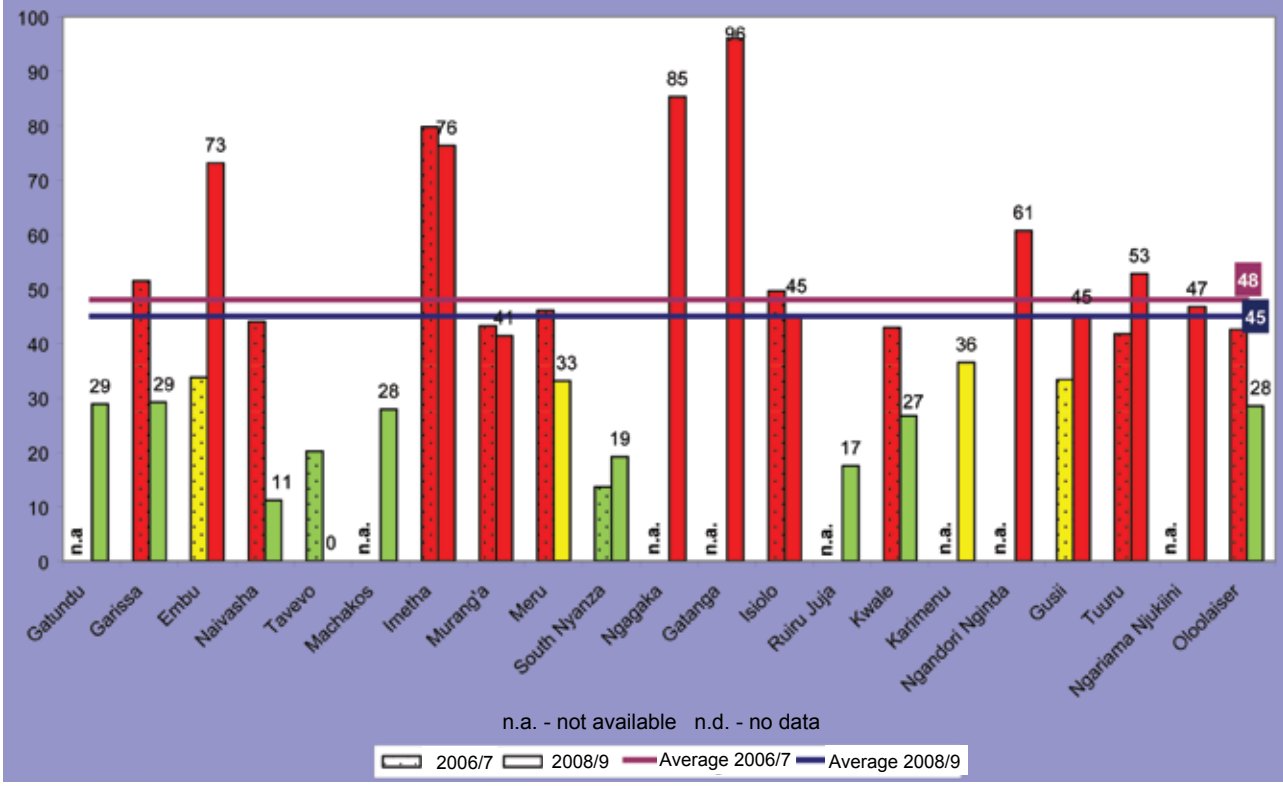
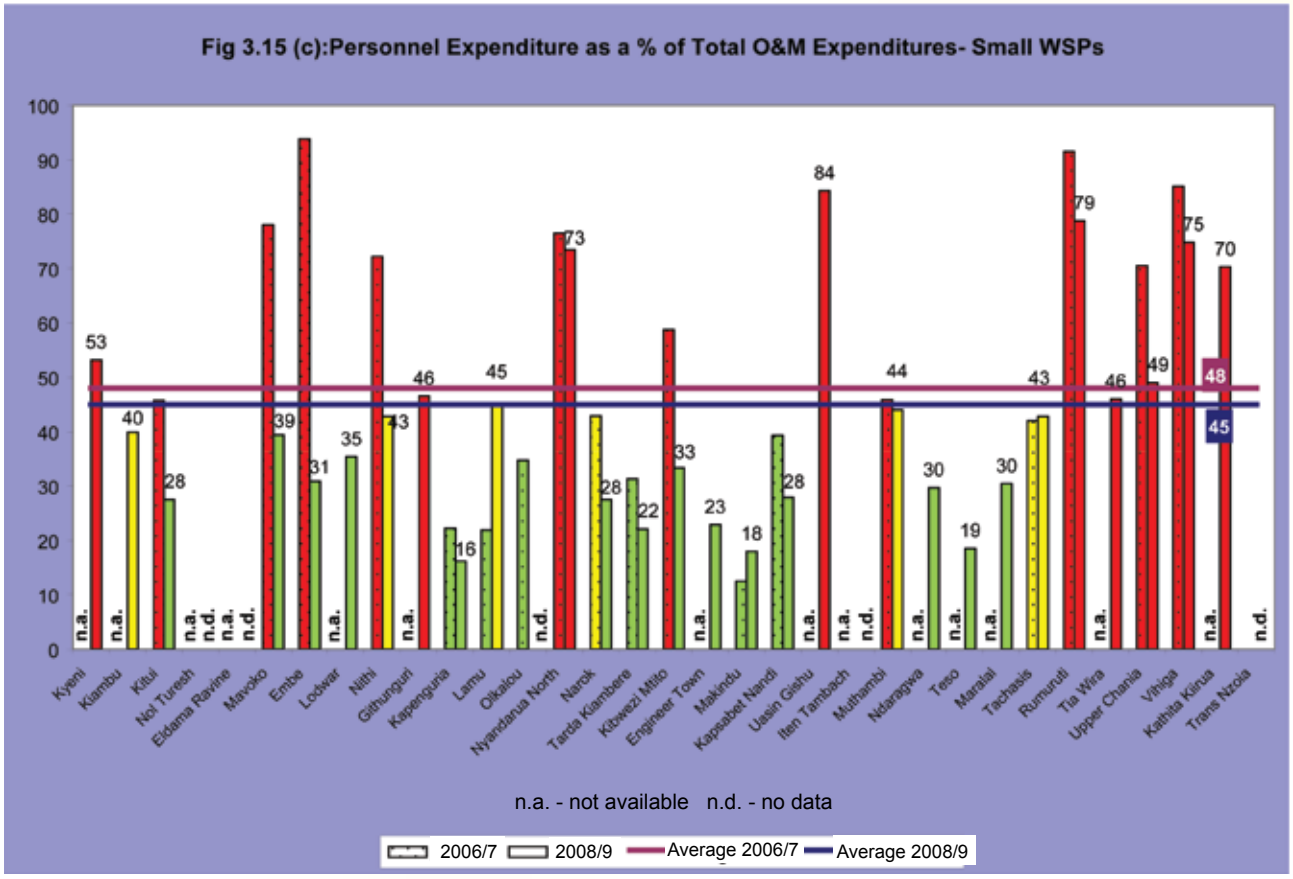


Fig 3.15 (b): Personnel Expenditure as a % of Total O&M Expenditures - Medium WSPs





The baseline comparison confirms the the positive trend.

Indicators	2006 / 2007	2008/2009 - same baseline	Increase / Decrease	2008/2009 - including new WSPs
Personnel expenditure as a % of O&M Cost	48	46	-2	45

3.7.14 Unit Cost of Operation and Average Tariff

A fundamental principle is that the price of water and sanitation services should reflect the fact that they are both social and economic goods. The sustainability of the entire water value chain is entirely dependent on payment by end users. So debts are covered by payment from consumers. Inefficiencies in operation increase the cost of production and WSPs must have strategies to reduce the NRW to the sector bench-mark.

The rising block tariff has been adopted for all WSPs in Kenya in order to ensure that high usage consumers pay marginally higher unit prices to discourage excessive consumption, while the poor (low usage consum-ers) have access to water through affordable tariffs.

	Average Tariff (Ksh/m^3)	Unit Cost of production (Ksh/m^3)	Unit operating cost of water billed (Ksh/m^3)
2006/2007	36	18	26
2008/2009	40	23	35

From the above tabulation, the average tariff, the unit cost of production, and the unit operating cost of water billed increased between the period 2006/7 and 2008/9. This can be attributed to:

a) Increase in cost of water production (chemicals, electricity and maintenance)
b) Inclusion of a higher number of small WSPs in this report
c) High levels of NRW.

Chapter 4

Performance Analysis of Water Services Boards

The performance of WSBs is based on four investment driven output indicators from WSPs within the WSB area. These are Water Coverage, Sanitation Coverage, Hours of Supply, and Reduction of NRW

Boards not Adequately Taking Responsibility

All Water Services Boards (WSBs) submitted information for the years 2007/8 and 2008/9, except Tanathi which was only established in the year 2008. Therefore Tanathi only submitted data for the period 2008/9. Compared to the previous reporting period, the data submitted was more comprehensive in most of the areas although still insufficient for purposes of thorough analysis. For instance, data on investments, subsidies, and schemes operated by WSBs through District Water Officers (DWOs) is lacking for all the WSBs. Tanathi did not provide information on income figures received from the WSPs. Also, WSBs are not separating operational costs for urban and rural providers, amongst others. If WSBs cannot report on schemes they operate, it shows how badly these schemes are managed!

4.1 Data Coverage

The population in the area served by the 77 WSPs in this report is 17.8 million, most of whom reside in urban areas. This represents approximately 40% of the country's total population. The combined turnover of these WSPs is Kshs 7.2 billion, which is estimated to be around 90% of the total subsector turnover considering that there are 122 registered WSPs. Therefore, the outcome of the analysis can be regarded to be representative of the subsector.

4.2 General Information

Table 4.1 provides general information on the WSBs for the period 2008/9. This information provided a basis for assessing the WSBs.

Table 4.1 General Information on WSPs (2008/9)

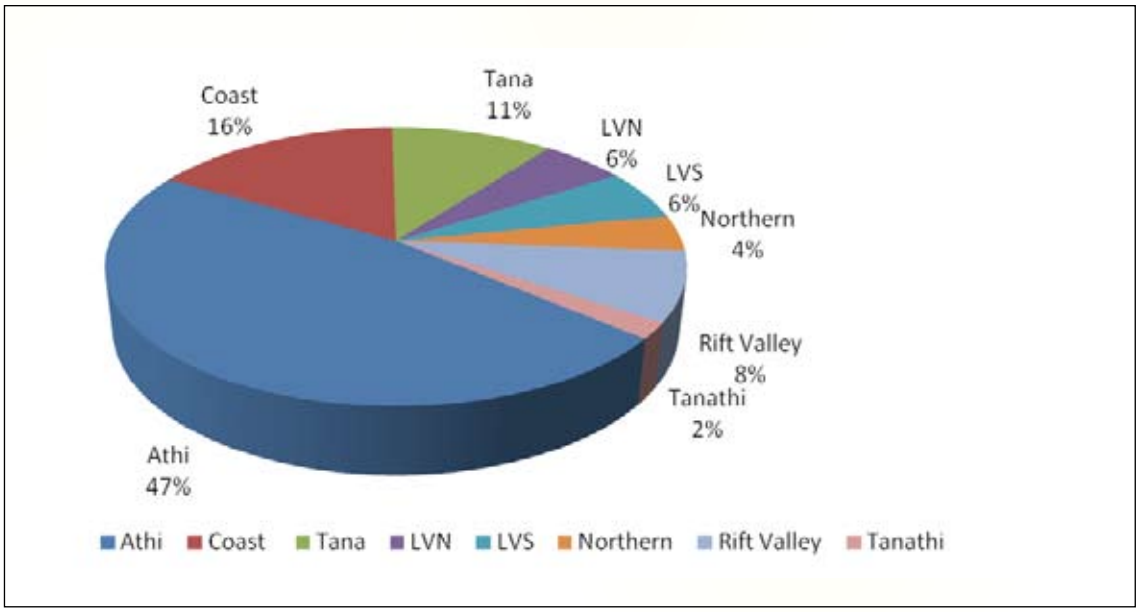
WSB	Turn-over, mio Ksh,	No of WSPs,		No. of WSPs below O&M coverage	Water coverage, %,	Sanitation coverage,%	Metering Ratio %	O&M Cost Coverage, %,	Hours of Supply,	Staff per 1000 Connections,	Compliance with Residual Chlorine Standards, %,	Non Revenue Water (NRW), %,	Collection Efficiency, %
Athi	3375	S	2	3 out of 8 (38%)	58	40	92	112	13	5	98	40	80
		M	4										
		L	1										
		V L	1										
Coast	1183	S	1	4 out of 6 (67%)	59	70	88	97	14	12	95	39	84
		M	2										
		L	2										
		V L	1										
LVN	391	S	5	7 out of 8 (88%)	47	55	86	76	18	7	96	51	83
		M	0										
		L	2										
		V L	1										
LVS	423	S	1	5 out of 6 (83%)	37	8	95	72	18	7	96	51	83
		M	2										
		L	3										
		V L	0										
Rift Valley	577	S	11	11 out of 14 (79%)	48	75	55	102	13	8	98	44	91
		M	1										
		L	1										
		V L	1										
Tana	772	S	5	11 out of 21 (52%)	39	66	71	106	19	10	95	70	91
		M	8										
		L	8										
		V L	0										
Northern	301	S	2	4 out of 6 (67%)	50	79	83	83	17	10	99	53	86
		M	2										
		L	2										
		V L	0										
Tanathi	134	S	6	8 out of 8 (100%)	22	45	63	43	12	15	97	55	82
		M	2										
		L	0										
		V L	0										
Total	7162			77									

Legend:

S=small, M=medium, L=large, VL=very large

From Table 4.1, it can be seen that all the WSPs in Tanathi cannot cover their O&M costs despite the recent tariff adjustment. The number of WSPs falling in this category is 83% for LVS, 79% for RVWSB, 67% for Northern, 67% for Coast and 52% for Tana. This means that apart of Athi WSB, all other WSBs need to urgently consider clustering their providers to create viable institutions for the benefits of the consumers. Other indicators such as turnover support this recommendation. (Fig 4.1).

Figure 4.1: Turnover of WSBs in the Year 2008/9



4.3 Ranking of WSBs

The ranking has been established by the indicators outlined in Table 4.2. Other critical indicators such as investments per capita and investments in rural and urban areas are missing in the table because the WSBs have not been reporting on them. This, to a great extend, hampered Wasreb from undertaking comprehensive analysis for informed decision making. It can be said that there is a huge potential for improving effectiveness in the use of funds if transparency and accountability of WSPs and WSBs improve through better reporting to Wasreb.

Nevertheless, arising from the strategic focus of Wasreb and the agreed conditions in the licence, in the meantime, the performance of a WSB can be based on the following indicators:

i. Four investment driven output indicators from WSPs within the WSB area. These are Water Coverage, Sanitation Coverage, Hours of Supply, and Reduction of NRW.

ii. Four financial indicators on WSB performance, namely Personnel Expenditures as a percentage of Operational Costs, BoD Expenditures as a percentage of Total Administrative Expenditures, Cost Coverage of Operational Expenditures through fees, and expenditure of WSBs as percentage of turnover in WSB area.

iii. Four qualitative indicators derived from the duties of WSBs: monitoring and motivation of WSPs, driving efficient investments in WSB area, improving customer service of WSPs, and transparency and interaction with Wasreb.

Information was verified through inspections, reports, and other information available to Wasreb.

To be able to rank the performance of the WSBs on the criteria above, the indicators were assigned weights as indicated below:

Table 4.2 Performance Indicators and Scoring Criteria

	Indicator		Good		Unacceptable	
			Performance	Score	Performance	Score
a)	Water coverage		>90%	15	<30%	0
	Non Revenue Water, NRW		<30%	15	>70%	0
	Sanitation coverage		>90%	10	<20%	0
	Hours of supply		> 20	10	< 12	0
b)	Cost coverage of Operational expenditures through fees from WSPs		>100	7	<50	0
	Personnel expenditures as a % of Operational costs		<20%	7	>70%	0
	BoD expenditures as a % of Total Operational expenditures		<2%	7	>5%	0
	Operational Expenditure of WSBs as percentage of turn-over in WSB area	> 1.5 Bio KSh Turnover	< 3.5%	9	> 10%	0
		> 0.75 < 1.5 Bio Ksh Turn-over	<10 %	9	>20 %	0
		< 0.75 Bio Turn-over	< 15 %	9	> 25 %	0
c)	Monitoring and incentivising of WSPs	(1) Performance based incentives in SPA?*	Available	3	Unavailable	0
		(2) Monitor compliance by WSPs with regulatory regime	Complying	3	Not complying	0
		Submitting tariff proposals in cooperation with WSPs	All WSPs in WSB area work with RTA	4	No WSP in WSB area works with RTA	0
	Driving efficient investments in WSB area	Facility Management System (and register)	Available	2	Unavailable	0
		Ten-year capital plan, including detailed investment strategy	Available	5	Unavailable	0
		Five year Business and Capital works plan for the WSB area	Available	2	Unavailable	0
		Pro-poor efforts and strategies	Available	3	Unavailable	0
		Adherence to procurement procedures	Available	3	Unavailable	0
	Improving customer service of WSPs	Use of Model customer contract	Available	3	Unavailable	0
		Use of customer complaints procedure	Available	2	Unavailable	0
	Transparency and interaction with WASREB	WARIS data submitted (timely, accurate)	Available	5		0
		WSB duties derived from License (Public information officer in place, information available on website etc.)	Available	2		0
		Provision of Performance Guarantee	Available	3		0
	Total maximum Score		120			

** Scores for the qualitative indicators derived from the Licence achievement report and inspection findings*

Based on the criteria set out under 4.3 above, the performance of the WSBs was ranked for the two years as shown in Table 4.3 below.

Table 4.3 Scores and Ranking of WSBs

WSBs	Score 2008/2009	Ranking 2008/2009	Score 2007/2008	Ranking 2007/2008	Change in ranking
Athi	64	1	64	1	-
Coast	63	2	38	7	+5
Northern	60	3	62	2	-1
RV	57	4	49	5	+1
Tana	52	5	56	3	-2
LVN	51	6	45	6	-
LVS	43	7	52	4	-3
Tanathi	33	8	-	-	-

Tana, LVS and Northern WSBs dropped in position as compared to 2007/8, while Coast and Rift Valley improved their performance.

Nevertheless, most WSBs are not enforcing regulation sufficiently. One example is the submission of data from the WSPs, where WSBs are not vigorous enough to demand compliance by WSPs and do not analyze the data with regard to completeness and quality. Furthermore, WSBs do not report on schemes still operated by DWOs. If ranking would be done according to the criterion of enforcement of regulation to WSPs, one of the parameters of compliance would be submission of data by WSPs. The outcome would be as shown in Table 4.4 below.

Table 4.4 Ranking of WSBs According to Data Submission by the WSPs

Performing level	WSBs
Good (5/5)	-
Medium (4/5)	Rift Valley, Northern, Tana
Mediocre (3/5)	Coast
Worst (2 or less/5)	Tanathi, LVS, LVN, Athi

Considering the lack of control on data submission and data quality by WSBs, it becomes obvious that WSBs do not sufficiently monitor their WSPs. This is, however, one of their key responsibilities given under the Water Act 2002. Therefore, it is recommended that all WSBs put more emphasis on reporting requirements of WSPs and in case of non-compliance take corrective measures as outlined in the SPAs. It is also recommended that WSBs improve their own reporting to Wasreb in order to demonstrate their willingness to improve transparency and accountability.

4.4 Detailed Performance Analysis of WSBs

A detailed analysis of performance of the WSBs is limited by the inadequate information they provided. The section below analyses their performance on selected indicators.

4.4.1 Coverage of Operational Costs

The sector envisages financing of WSBs' operations, at least for urban water supply and sanitation, through fees from WSPs. A policy by the MWI on financing of operational costs for rural water supply and sanitation is lacking. This could either be covered through subsidies from the Ministry (MWI) budget or through the urban water and sanitation customer bills.

Arising from the above and considering that WSBs do not separate between operational costs for rural and urban WSPs, a cost coverage of 100% would imply that operational costs for rural providers are subsidized by the urban consumers. Unfortunately, the WSBs did not submit any data on subsidies to WSBs and WSPs by the MWI. Therefore, the analysis does not give the right picture of the financial situation of the WSBs. This needs to change if WSBs want to be seen as managing in a transparent manner.

Income of WSBs above 100% operational costs must be regarded as capital for investments. Unfortunately, WSBs have not submitted sufficient data on investments, which makes it impossible to verify how they use surplus income. This is lack of transparency, which is unacceptable.

The ongoing process of evaluation of RTAs for WSPs includes the assessment of operational costs of the WSBs. This should be based on justified costs as assessed by Wasreb and apportioned to the WSPs based on their turnover. Beyond operational costs for WSBs, Wasreb might allow provision for funds for asset development in cases where WSPs are already meeting their own O&M costs plus the portion of the operational costs attributed to the WSB.

Table 4.5: Cost Coverage of Operational Costs

WSB	Coverage of operation costs in 2006/2007, %	Coverage of operation costs in 2008/2009, %
Athi	115	474
LVN	30	38
Northern	11	6
Rift Valley	18	52
Coast	No data	120
Tana	63	73
LVS	12	20
Tanathi	No data	No data

Table 4.5 shows the coverage of operational costs by the different WSBs

For further analysis, it would be necessary to document how Athi WSB is utilizing the surplus income (374%) for investment. The same applies to Coast WSB which would need to account for the use of the 20% surplus above the operational costs.

Although all WSBs, except Northern, improved on the coverage of operational expenditures through fees, it is only Athi and Coast WSBs which are able to cover their operational expenditures from the fees they collect from their WSPs. This means that most WSBs still rely heavily on government subsidies. There is a wide gap between viable WSBs such as Athi, Coast, Tana and Rift Valley and the remaining four WSBs, which still require to be heavily subsidized in the medium to long run. The analysis indicates that 3-5 WSBs would be an adequate number to avoid subsidies from tax payers' contribution. A merger of the WSBs would be an appropriate option to ensure their sustainability and reduce the charges for the consumers.

4.4.2 Expenditure of WSBs as Percentage of Turnover in WSB Area

Operational expenditure can also be related to the total turnover for each WSB.

Table 4.6: Expenditure of WSBs as Percentage of Turnover in WSB Area

WSB	Opera-tion costs 2006/2007 in Mio. KSh.	Opera-tion costs 2008/2009 in Mio KSh.	Turnover WSB 06/07 in Mio KSh.	Turnover WSB 08/09 in Mio KSh.	Operation costs % of Turnover 06/07	Operation costs % of turnover 08/09
Athi	209	108	3110	3375	7	3
LVN	45	53	403	397	11	13
Northern	93	300	247	301	37	100
Rift Valley	185	109	607	577	30	19
Coast	No data	462	919	1183	No data	9
Tana	57	71	454	772	12	52
LVS	123	218	274	423	45	52
Tanathi	No data	No data	No data	No data	No data	No data

The turnover for most WSB areas has increased significantly mainly due to the implementation of the ETA and RTAs plus the inclusion of a bigger number of WSPs as compared to 2006/7. Northern, LVS and Tana WSBs did not provide any explanation to justify the huge increase in operational costs.

4.4.3 Personnel Cost as Percentage of Operational Costs

Table 4.7 Personnel Cost as Percentage of Operational Cost

WSB	Personnel cost % of operational cost 2006/2007	Personnel cost % of operational cost 2008/2009
Athi	54	72
LVN	32	57
Northern	25	No reliable data
Rift Valley	46	41
Coast	No data	25
Tana	14	36
LVS	No data	16
Tanathi	No data	29

Athi WSB needs to reduce its ratio of personnel costs compared to total operational costs. Considering the figures in Table 4.7 and table 4.8 (below), this reduction can be achieved by avoiding further salary increments and paying attention to costs arising from hiring new employees.

4.4.4 Average Gross Monthly Salary per Staff

The following table illustrates the development of the gross monthly salary per staff in the WSBs.

Table 4.8 Average Gross Monthly Salary per Staff

WSB	Total no. of staff 06/07	Total no. of staff 08/09	Average monthly gross salary per staff in 2006/07	Average monthly gross salary per staff in 2008/09	% increase/ Decrease
Athi	32	44	180,042	146,483	-19
LVN	42	40	40,784	63,300	55
Northern	28	28	38,361	62,071	62
Rift Valley	36	39	113,122	96,665	-15
Coast	87	170*	65,105	56,175	-14
Tana	40	50	23,970	41,684	74
LVS	53	39	46,157	73,281	59
Tanathi	No data	43	No data	83,591	N/A

The average gross salary per staff increased for all WSBs except Athi, Rift Valley and Coast. Although Tana has the lowest average gross salary per staff at 41,654, it had the highest salary increase at 74%. WSBs (LVN, Northern, Tana and LVS) need to justify the salary hike within two years. The high average gross salary of Athi WSB is a concern expressed under 4.4.3.

4.4.5 Administrative Cost as Percentage of Operational Costs

The following table shows the amount WSBs spend for their administrative costs (rent, communication, stationery, PR, travelling etc.) in relation to the total operational costs.

Table 4.9 Administrative Cost (WSB offices) as Percentage of Operational Cost

WSB	Administrative cost in Mio Ksh for 2006/2007	Administrative cost in Mio Ksh for 2008/2009	Administrative cost % of operational cost 2006/2007	Administrative cost % of operational cost 2008/2009
Athi	40	24	13	22
LVN	22	11	52	21
Northern	41	78	45	26
Rift Valley	91	18	57	17
Coast	37	41	11	9
Tana	33	46	69	64
LVS	29	46	23	21
Tanathi	No data	89	No data	61

The substantial decrease in administrative costs for Rift Valley and LVN needs be explained. It is most probably also a sign of poor data quality.

It would be interesting to compare operational costs with investments carried out, which unfortunately is not possible due to poor data. This needs to change urgently to ensure transparency.

4.4.6 Board of Directors (BoD) Expenditure as Percentage of Operational Expenditure

Wasreb has promulgated the Corporate Governance Guideline which, among other things, sets a benchmark on the expenditure on BoD. The latter is measured as a proportion of the total operational expenditure. The acceptable proportion depends on the size of the WSB. The benchmark for spending on BoDs for the WSBs is 4% but bigger WSBs like Athi and Coast should be significantly lower than the smaller ones.

Table 4.10 Board of Directors (BoD) Expenditure as Percentage of Operational Expenditure

WSB	Board Expenditure Mio Ksh 2006/2007	Board Expenditure Mio Ksh 2008/2009	As % of operational Cost 2006/2007	As % of operational Cost 2008/2009
Athi	7.6	4.5	4	4
LVN	2.5	8.4	5	16
Northern	4	8.2	4	3
Rift Valley	5.4	9.0	3	8
Coast	9.8	7.0	3	2
Tana	6.3	11.1	11	16
LVS	4.6	9.3	4	4
Tanathi	No data	4.9	No data	3

It is unacceptable that the costs for the BoDs in LVN and Tana jumped to 16% and in Rift Valley to 8%. This indicates poor corporate governance and requires to be corrected urgently.

4.4.7 Investments

WSBs have a mandate to ensure provision of efficient and economical services. Asset development carried out by the WSBs is therefore a critical function. Information submission on investments continues to be poor as reflected in the table below.

Table 4.11 Investment Realization by the WSBs for Water and Sewer Systems and Rural Infrastructure

WSB	Investments in WSPs Mio Ksh 2006/2007	Investments in WSPs Mio Ksh 2008/2009	Investments Rural networks Mio Ksh 2006/2007	Investments Rural networks Mio Ksh 2008/2009	Investments Rural Point Sources Mio Ksh 2006/2007	Investments Rural Point Sources Mio Ksh 2008/2009	Total Investments planned in Mio Ksh 2008/2009	Investment Realisation, %
Athi	60	No data	26.7	No data	6.1	17.05	1,477	1
LVN	8.8	No data	27.3	No data	2.4	25.13	No data	-
Northern	No data	109.76	No data	No data	No data	No data	No data	-
Rift Valley	655	47.8	148	No data	142	No data	No data	-
Coast	No data	No data	No data	No data	No data	No data	No data	-
Tana	No data	306	No data	No data	No data	No data	432	71
LVS	No data	1,058	No data	No data	No data	No data	1,674	63
Tanathi	No data	Not appl	No data	No data	Not appl	No data	No data	-

Against this background, the result of the analysis of the above table is very unsatisfactory as the information provided by the WSBs is incomplete and of poor quality. The key responsibility of WSBs is the development of assets. Reporting in this area is dissappointing and illustrates the unwillingness of WSBs to be transparent. More effort on investment planning and project monitoring (e.g. using WaSBIT software as a management tool) needs to be done by the WSBs so that they can fulfill the key responsibility assigned to them by the Water Act 2002.

Investments in all WSB regions remain at unacceptably low levels. It has also been noted that most WSPs have not clearly linked their business plans with the Minimum Service Levels (MSLs) agreed with Wasreb. WSBs should therefore ensure that these plans are aligned with the agreed MSL targets and reflected in the tariff adjustments. Considering that a number of WSPs have had their tariff adjustments approved by Wasreb recently, investments from these resources should clearly be reflected.

4.4.8 Other Performance Indicators for WSBs

a. Performance based incentives in SPA

Under the licence agreements, WSBs are obliged to put in place a performance-based incentive scheme for their WSPs. None of the WSBs has put a system in place to satisfy minimum conditions. It is therefore important that WSBs improve on this obligation.

b. Submission of tariff proposals

The ETA expired in December 2009. Within this period, WSBs were required to submit RTAs for their WSPs. Unfortunately, Wasreb could only approve tariffs for 25 out of 124 registered WSPs due to non submission of applications and incomplete or inaccurate data submission. This further demonstrates that WSBs do not fulfill their responsibilities adequately. All WSBs score very poorly (1/4), except Northern and Tana who score slightly better with 2/4.

c. Asset management / registers

Most WSBs (6/8) have a listing of assets but many do not have asset values. Therefore, most of the WSBs can be considered as lacking an acceptable register of assets. Northern and Tanathi still lack a listing of assets. With the absence of an acceptable register, no WSB can fulfill its responsibility of asset management and development. Therefore, all WSBs are urged to take action now to establish such a register.

d. Ten-year capital works (investment) plan

Table 4.12 Capital Works Plan and Implementation

WSB	Availability of Plan (Ten Year)	Submission of Report on implementation to WASREB
Athi	5 year plan	Submitted
LVN	5 year plan	Not Submitted
Northern	5 year plan	Submitted
Rift Valley	10 year plan	Submitted
Coast	5 year plan	Not Submitted
Tana	5 year plan	Submitted
LVS	5 year plan	Not Submitted
Tanathi	Not Available	Not available

Except for Rift Valley, none of the WSBs complies with this requirement of the Water Act 2002. Furthermore, neither LVN, nor Coast, nor LVS submitted a report on the implementation, as required by the licence. Therefore, the implementation of capital works is not transparent. It is imperative that WSBs submit these reports.

e. Five year business and capital works plan for the WSB area

Under clause 9.1of the licence, WSBs are required to develop and maintain a five-year business and capital works plan for the WSB area. All WSBs have developed these plans. However, the business and capital works plans of the WSBs and the business plans of the WSPs are not linked. WSBs should ensure that the business plans of the WSPs are harmonized with the capital works plan of the WSBs and contain clear targets to attain the MSLs.

f. Pro-poor efforts and strategies

With the cooperation of WSBs, WSPs are very active in submitting proposals to the WSTF in order to enlarge their services into low income areas. Nevertheless, as WSBs do not practice adequate investment planning, it is left more to WSPs and the UPC to improve service provision to the poor. WSBs should pay more attention to the areas of the underserved by mapping out these areas within their service areas and include extension of their services through low-cost technology.

g. Adherence to procurement procedures

Adherence to the Public Procurement and Disposal Act 2005 is mandatory. WSBs performed poorly (1/4) in this aspect, except Tana, Athi and Rift Valley, who scored a a little better (2/4). Also, WSBs should step up inspections of WSPs to ensure compliance with the Public Procurement Act. Wasreb will continue to publicize cases of non-compliance with procurement procedures.

h. Outsourcing of operation by the WSBs

According to the Water Act 2002, WSBs should outsource operations to WSPs and not operate water and sewerage systems themselves. Athi, Tana and LVS are good examples of those who have followed this requirement. In contrast, Tanathi and LVN are bad examples, as they still operate such systems on their own, breaching the requirements of the Water Act 2002. This has to stop. All WSBs still operating systems themselves must set a timeframe for transferring operation to WSPs. Wasreb has recently disseminated a criterion for the appointment of WSPs and expects WSB to comply with this when recruiting their agents.

i. Use of model customer contracts

All WSBs have model customer contracts for use by their WSPs as per clause 7.1 of the licence. The WSBs should ensure that the minimum requirements as per the New Water Services Regulations are contained in these Model Contracts.

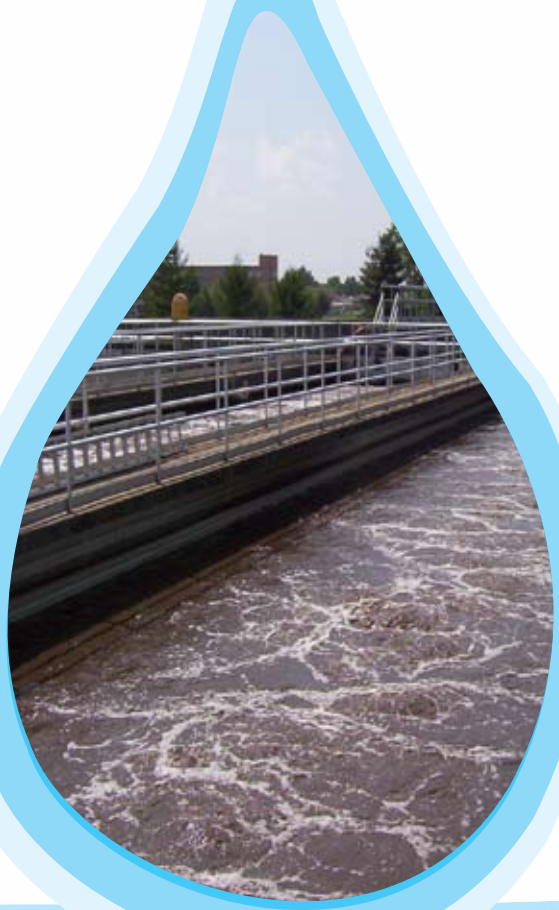
j. Use of customer complaints procedure

The development of a complaints handling mechanism is mandatory under Clause 7.2 of the licence. All WSBs should ensure they submit to Wasreb a customer complaints handling procedure for their WSPs. This is in addition to ensuring that each WSP has an officer designated to handle complaints. The concept of consumer engagement through the Water Action Groups is currently being piloted and may be replicated in all WSB regions.

k. Performance guarantee

During the period under review, only Northern and Tana WSBs had provided performance guarantees to Wasreb. The remaining WSBs should ensure that they provide performance guarantees to Wasreb as required by the licence.

Chapter 5



Conclusion

Some Key Challenges Remain

Though remarkable performance was brought about by the water sector reforms, the water services sub-sector still faces key challenges in its endeavour to increase service coverage.

5.1 Corporate Governance

Good corporate governance remains a major challenge in all sector institutions. This is especially pronounced in cases where local politicians still function as Directors on Boards of WSPs. In extreme cases, there is a conflict of interest when individuals function as Directors at both the WSB and WSP Boards. This has often led to politicization, interference in the work of management, and often-times undesirable resolutions which are not in the interest of the company and the public. Similarly, management of some WSPs has been accused of failing to provide data, hence failing to be transparent and accountable. It is, however, expected that the Corporate Governance Guideline issued by Wasreb, the establishment of WAGs, and the publishing of the WSP and WSB performance report shall redress this situation.

Inspections conducted by Wasreb show adherence to the tenets of Corporate Governance as a major weakness in the water services sub-sector:

- Institutions deliberately ignore prescribed standards in order to have grey procedures in accounting, procurement and human resources issues so they cannot be adequately audited.
- Institutions maintain data negligently, so it cannot independently be verified in spite of there being standards for public sector institutions.
- Institutions are reluctant to supply required data. In some cases, they submit different data on the same indicators for different purposes.
- There has been resistance to comply with the Corporate Governance Guideline by the shareholders of the WSPs. Thus, the required demarcation on roles of shareholders, Boards of Directors, management and staff is still blurred.
- Shareholders and Board members load personal interests into the entities by bloating the payroll regardless of the benchmarks in SPAs on staff ratios. They trade with the entities created and interfere with the daily running of operations either by demanding payments that are not budgeted for or requiring operations to be conducted in a manner that is outside the SPA. They hold institutions at ransom for personal interests by trading with the institutions and even encouraging the management of WSPs to defy established management principles.
- Managers hoard information from the Principal, the Board of Directors and the public at large so that the information required by the principals to make decisions is either not available or is of poor quality. Thus, the public is starved of information on water service issues.

In the ensuing confusion, the consumer is denied sustainable and efficient delivery of services, as all these activities lead to revenue losses through illegal connections, flawed procurement procedures, poor collection of revenue and unauthorized expenditure. Until the established legal rules and standards are followed by all the institutions, the anticipated gains from the Water Act 2002 will not be fully realized.

5.2 Financial Sustainability of WSPs and WSBs

One of the greatest challenges the sector has faced is financial sustainability. This is particularly important because WSBs and WSPs are expected to be sustained by revenues collected by WSPs. These revenues were affected by reduced water levels. While the objective of reforms was to create autonomous institutions, the MWI continued subsidizing many WSPs for manpower, chemicals and electricity, since WSPs were not able to meet their own operating costs. Such subsidies are not linked to performance and therefore do not serve as incentives for improvement. On its part, Wasreb continued monitoring the performance of sector institutions, promoting the objectives of efficiency, affordability and sustainability to ensure universal access to water services.

5.3 Uncompleted Staff Transfer and Transfer of Assets

The transfer of assets (facilities and land) by the MWI and other government agencies is yet to take place. The pending situation is counter-productive and leads to a huge drain of funds out of the sector. It is estimated that more than 15% (over 1 billion Kshs) of the water sector income (around 8 billion Kshs) in the urban water sector is paid to shareholding municipalities and used for expenditure outside the water sector while the majority of people have no access to clean water and basic sanitation.

Human resource issues still hang in balance as delinking of staff from the MWI and from the Ministry of Local Government is yet to be completed.

5.4 Rural Water and Sanitation

Challenges have been encountered in dealing with small community operators. They generally struggle with sustainability and do not provide the needed water and service quality. They also need to embed the culture of transparency and accountability in their operations. Where appointed agents are serving largely rural populations, there have been protests against metering with consumers preferring to maintain the status quo. Therefore, sensitization is needed on benefits of metering and responsible water use. Wasreb and WSBs have to explore appropriate tariff structures, service levels, and subsidies from the MWI in order to serve the rural areas in an efficient and sustainable manner.

In Arid and Semi Arid areas which are considered to be marginalized, there has to be an understanding that government support will continue to be needed to sustain water service provision. Another way of achieving sustainability would be the clustering of WSPs and a cross-subsidization between consumers. However, the kind of support given must be well structured and be transparently reported and accounted for. This will ensure that the subsidizing of O&M costs does not cover up for inefficiency.

5.5 Sanitation / Sewerage Services

All urban centres are not adequately provided with sewerage systems, yet population growth is rapid. While WSBs have been given targets to develop the sewerage systems, they face the following challenges:

- Encroachment on land set aside for sewerage facilities
- Poor planning for and maintenance of sewerage systems

- Lack of a coordinated method to harness finances either from the public sector or private sector to develop sewerage
- WSBs are yet to be incorporated in the physical planning committees under the Physical Planning Act.

WSPs and WSBs should concentrate on improving sanitation as the MWI has to report on national progress. The Sanitation Concept for the Water Sector adopted by the MWI should be the guiding document for the involvement of Sector Institutions.

Water Services Regulatory Board
5th Floor, NHIF Building, Ngong Road
P.O. Box 41621 - 00100 GPO Nairobi, Kenya
Tel: +254 (0) 20 2733559/61
Fax: +254 (0) 20 2733558
Email: info@wasreb.go.ke
Website: www.wasreb.go.ke

Design & Layout: RealONE Concepts Ltd. Tel: 020-2014741, 2694177, Cell: 0721-605591, Email: info@realoneconcepts.co.ke