



**water affairs**

Department:  
Water Affairs  
REPUBLIC OF SOUTH AFRICA

**Sanitation Services –  
Quality of Sanitation in South Africa**

**Report on the Status of sanitation  
services in South Africa**

**Executive Summary**

**March 2012**



THE PRESIDENCY  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT: PERFORMANCE MONITORING AND EVALUATION



**human settlements**

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

National Sanitation Programme Unit

*It should never be forgotten that “Sanitation is Dignity” and dignity is a basic human right.*

Department of Water Affairs; *Free Basic Sanitation Implementation Strategy*; 2009

## **Executive Summary**

### **1. Background to the study**

In the run up to the 2011 Local Government Elections, the lack of dignified sanitation services in the form of un-enclosed toilets in the Western Cape (Khayelitsha located within the City of Cape Town Metropolitan Municipality), and the Free State (Rammulotsi located within the Moqhaka Local Municipality) made media headlines when political parties lodged complaints on these failures in service delivery.

The Khayelitsha case was heard by the Cape High Court and the South African Human Rights Commission (SAHRC) was requested to investigate the allegations concerning Rammulotsi. The Cape High Court and the South African Human Rights Commission (SAHRC) found in both cases that the sanitation services (or inadequacy thereof) violated the right to human dignity, privacy and the right to a clean environment, and in both cases, the relevant municipalities were ordered that the existing toilets be enclosed as a matter of urgency.

Among the recommendations made by the SAHRC was that the Ministry: Performance Monitoring Evaluation and Administration in the Presidency, within 3 months, prepare a report for the SAHRC on the quality of sanitation services delivered by local government across the country. (The timeframe was however reviewed in light of the scope and magnitude of the study required and consequently extended to allow for the report to be submitted by the end of February 2012.)

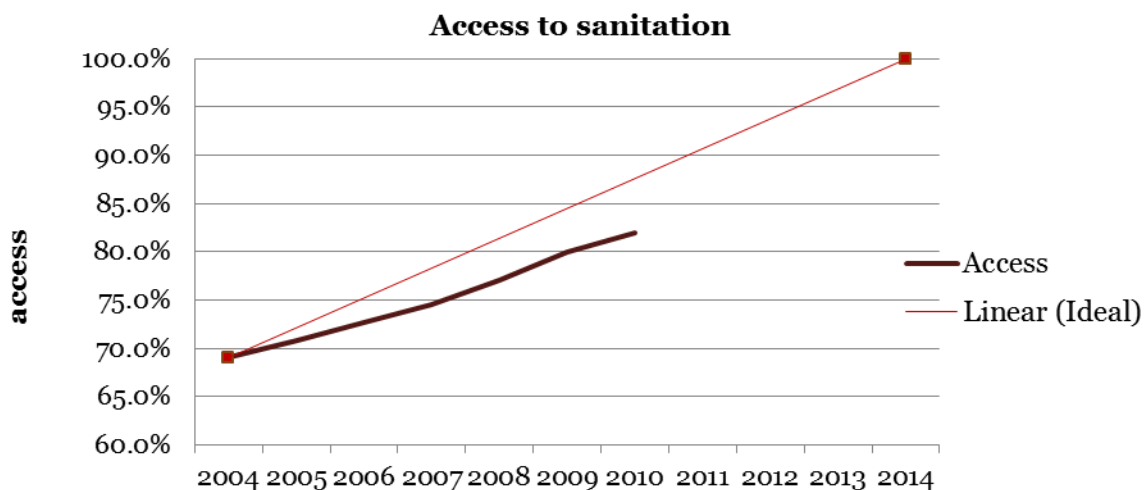
To this end, the Department of Performance Monitoring and Evaluation in The Presidency (DPME), in collaboration with the Department of Human Settlements (DHS), the Department of Water Affairs (DWA), the Department of Cooperative Governance (DCoG) and National Treasury (NT), undertook the task to establish *“The quality of sanitation in South Africa”*.

### **2. Factors impinging on the provision of adequate sanitation services**

The World Health Organisation (10 Facts on Sanitation)<sup>1</sup> has reported on the significant benefits - social, environmental and economic - of improved sanitation. In South Africa, the government has made important strides towards addressing both sanitation and water supply backlogs since 1994. South Africa achieved the Millennium Development Goal (MDG) of halving the number of people without access to sanitation in 2008. In 1994 more than 50% of households did not have access to sanitation; one of the terrible legacies of apartheid inherited by the new democratic state. By 2010 this was reduced to 21% of households. Not content with achieving the MDG target, South Africa set itself the target of achieving universal access to sanitation services by 2014 and access has continued at an average rate of 300 000 households per annum. However the rate of delivery of around 300,000 household units annually, is not sufficient to achieve the target of universal access by 2014 and will need to be stepped up (see graph below).

---

<sup>1</sup> <http://www.who.int/features/factfiles/sanitation/facts/en/index1.html>



*Source: December 2011 Mid-Term Review; Department of Performance Monitoring and Evaluation, The Presidency*

In addressing the sanitation service backlogs and the provision of ongoing adequate sanitation services, several challenges surfaced including the upgrading and expansion of bulk infrastructure capacity, ensuring the quality of sanitation facilities built, the maintenance of reticulation and/or on-site infrastructure, revenue collection to fund the ongoing provision of services, community liaison and participation to ensure acceptability and responsibility for the services, and the effective oversight, regulation and management of sanitation services at all levels of government. The sanitation sector is also faced with ongoing growth of formal and informal settlements, particularly in urban areas, due to the rural-urban migration, population growth and the influx of foreign nationals. In 2009 it was estimated that there were more than 2 500 informal settlements with some 1.2 million households.

Lack of clarity regarding the institutional, policy and regulatory frameworks and poor coordination between the key actors involved in various aspects of sanitation service provision is also a major factor affecting the sector. In terms of the institutional roles and responsibilities for sanitation service provision, the constitution places the direct responsibility at local government level (this was then assigned to authorised local government institutions (Water Services Authorities), which are either at district municipality level or at local municipality level. All metropolitan councils are designated as Water Services Authorities. From a national and provincial perspective, the responsibility initially resided within the Department of Water Affairs and Forestry from 1994 to 2001. The funding and monitoring function subsequently moved to the Department of Provincial and Local Government in 2001 via the Municipal Infrastructure Grant (MIG) funding instrument. In 2009 the National Sanitation Programme Unit (NSPU) was moved from DWA to the Department of Human Settlements, but with DWA retaining certain responsibilities in the sector including regulation in respect of waste water aspects and the high level planning and management of the Regional Bulk Infrastructure Grant (RBIG). At a provincial level the local government technical support function in respect of sanitation service delivery also moved from DWA Regional offices to provincial departments dealing with Human Settlements, but with certain links to the Departments of Health, Water Affairs, Education and Public Works. This fragmentation and the lack of a single national body

taking the lead in the sector, has resulted in particular challenges in terms of the coordination and upholding of norms and standards.

Systemic failures ranging from gaps in critical technical and management skills, neglect of operation and maintenance, poor revenue management and under-spending on capital budgets at municipal government level are also major factors.

### **3. Understanding sanitation needs**

The sanitation need in South Africa may be defined as a combination of:

- service delivery backlogs (people who have never been served);
- refurbishment backlogs (sanitation infrastructure that has deteriorated beyond regular maintenance requirements);
- extension backlogs (existing infrastructure that needs to be extended to provide the service to new households in the communities)
- upgrade needs (infrastructure that does not meet the minimum standards)
- operation and maintenance (O&M) backlogs (infrastructure that has not been properly operated and maintained, but can be adequate if sufficient staff and funds are allocated to ensure proper operation and maintenance)

These five aspects constituted the analytical framework for the study into the quality of sanitation from an adequacy and functionality point of view.

Various sources of backlog type information are available, including:

- Water Services National Information System (WSNIS) based on STATS SA census data with annual adjustments for calculated service delivery and population growth (this data does not estimate the refurbishment, upgrade or O&M backlogs)
- STATS SA data based on census and the General Household Survey data from 2002 to 2010 (useful as it also records household perceptions and problems encountered with services at household level, but being based on a sample does not give sufficient data for planning purposes).
- DWA Water Services Reference Framework Planning data set (updated Dec 2011) determined through first principles from satellite data linked to reported water service infrastructure status gleaned through on the ground surveys. Within this dataset need is based on dwelling numbers which is useful for planning purposes as it enumerates the delivery needs and priorities.
- Other planned and ad-hoc audits and surveys (e.g. the National Sanitation Sustainability Audit of 2005, the 2007 DWA/CSIR Spot Checks).

For the purposes of the report to the SAHRC and the description of the five areas of need, the DWA Water Services Reference Framework data has been used as a basis for the analysis of the current situation, with the following sanitation need classification system<sup>2</sup>:

---

<sup>2</sup> Satellite spot imaging was used to map 68 000 settlements and calculate population and household information. The settlements were then evaluated and updated according to their current water services needs. Field work at the municipal level (not household) was done to profile the settlements according to the classification used in the table.

Definition	Classification	Description	Categorisation		
<b>FORMAL SETTLEMENTS</b>					
- BELOW	- No Service	Whole community never had any formal (municipal) sanitation system	10		
	- Infrastructure Upgrade	Existing infra not on RDP standard (functioning VIP minimum)	7	8	9
	- Infrastructure Extension	Communities have grown - there are households that do not have sanitation			
	- Infrastructure Refurbishment	Deterioration of existing infrastructure - can be restored to RDP by repair or replacement			
	- O&M Need	Can be restored to RDP by enough staff + sufficient funds for O&M	6		
	- Water Supply Needs	Includes source development Conserving & Demand Management	5		
- ADEQUATE	- Waterborne	Adequate Infra	1 ( A )		
	- Waterborne Low Flush	Adequate Infra	1 ( B )		
	- Septic Tanks / Conservancy	Adequate Infra	1 ( C )		
	- Non Waterborne (VIP)	Adequate Infra	1 ( D )		
<b>INFORMAL SETTLEMENTS</b>					
- BELOW	- No Services	Upgrade or relocate settlement	4		
- ADEQUATE	- Informal	upgrade and formalise housing	2		

#### 4. Demographic Profile of South Africa

The current population of 50.5 million (2011) was geo-spatially grouped into more than 68 000 settlements, of which:

- 21.2 million people (or 42% of the population) live in large metropolitan areas
- 9.1 million people (or 18% of the population) live in medium-sized cities and towns
- 4.5 million people (or 9% of the population) live in small towns in rural areas
- 15.5 million people (or 31% of population) live in small rural villages and scattered settlements

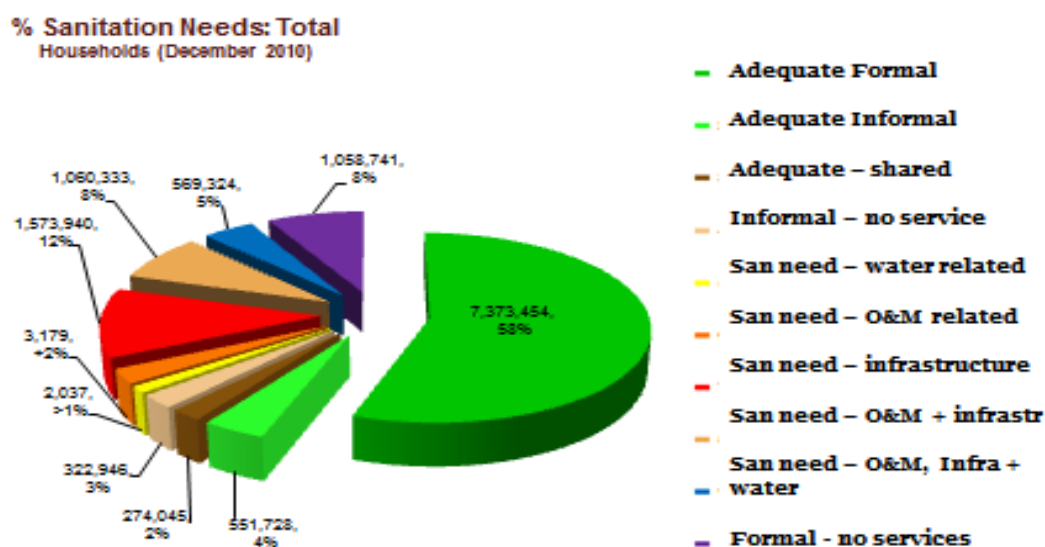
In terms of settlements numbers, 87% of the approximately 68,000 are within rural areas, and 13% urban.

The demographics as described above places the following particular requirements on the sanitation sector:

- Provision of adequate services to dwellings in (transient) informal settlements requires a strategy that takes into consideration permanency and land use objectives together with other considerations of topography, geo-hydrology, proximity to bulk services, etc.
- Rural-urban migration dynamics
- Maintaining norms and standards in areas lacking institutional (especially technical and financial) capacity.
- Providing affordable sanitation to rural areas that require low maintenance.

### 5. Key findings of the study: National perspective of sanitation needs

From a national perspective the sanitation needs are indicated in the following diagram:



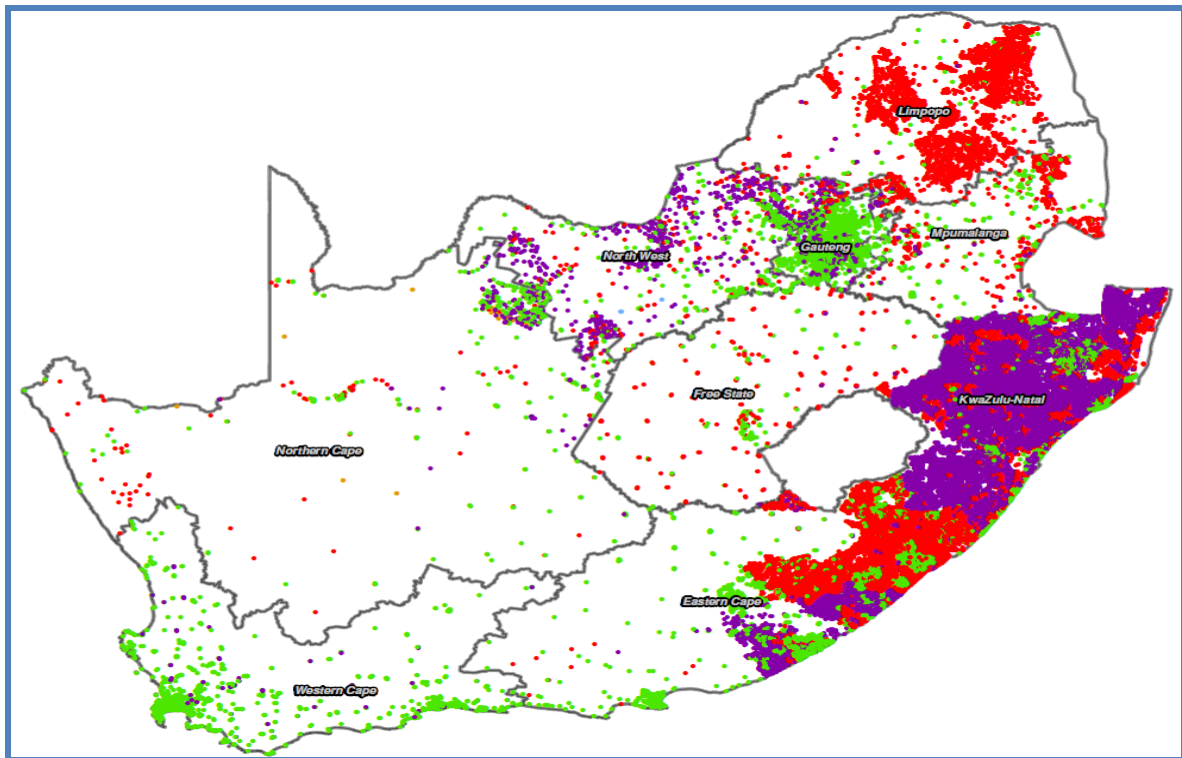
14

From this summary of needs, the following challenges are evident:

- Approximately 11% of households (Formal – no services and Informal – no services) still have to be provided with sanitation services (these households have never had a government supported sanitation intervention);
- Additionally a disturbing 26% of households have sanitation services which do not meet the standards due to the deterioration of infrastructure caused by a lack of technical capacity to ensure effective operation, timely maintenance, refurbishment and/or upgrading, pit emptying services and/or insufficient water resources.

The startling finding is that while access to sanitation is increasing (albeit at less than an optimal pace) from a functionality and adequacy point of view, as many as 26% (or about 3.2 million households), apart from the 11% (or 1.4 million households) that have no services, are at risk of service failure and/or are experiencing service delivery breakdowns.

The distribution of these sanitation needs at a community level is indicated on the following map, noting that the predominance of small rural settlements in certain regions diminishes the visibility of the other need classifications:



Although the un-served population is 11% of the national total, their predominance (purple) is in the widely dispersed rural settlements of KwaZulu-Natal, North West and the Eastern Cape. The areas with high levels of infrastructure maintenance needs are located within Limpopo, KwaZulu-Natal, Free State, Mpumalanga, Northern Cape and the Eastern Cape. Gauteng and Western Cape are the provinces with the highest percentage of communities with adequate services; however these provinces do have large numbers of informal settlements that pose particular challenges.

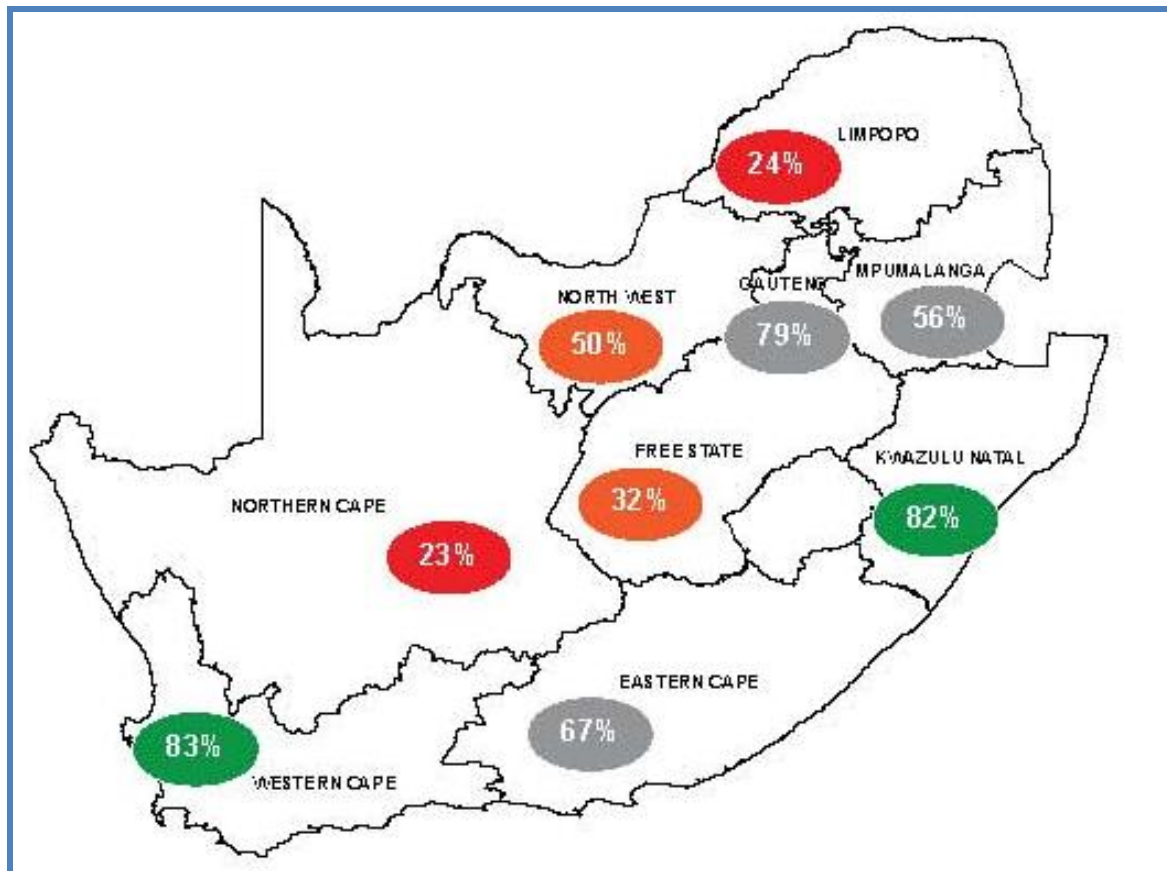
## 6. Status of bulk infrastructure

Of particular concern is the status of bulk sanitation infrastructure in the country. This mainly relates to the communities served with waterborne sewerage systems, where the maintenance, refurbishment and/or upgrading of collection and treatment infrastructure has been neglected over the years. The general assessment of the status of wastewater treatment works (WWTWs) carried out annually by the Department of Water Affairs (the Green Drop Report) indicates a low rate of achievement of standards with only 40 out of 826 works assessed achieving Green Drop status. The results of the 2011 survey indicate:

- 317 WWTWs require urgent attention
- 143 WWTWs have a high risk of failure

- 20% of WWTWs are running over their design capacity
- 90% of WWTWs are non-compliant on more than 3 effluent determinants

The average green drop status per province is indicated in the following map:

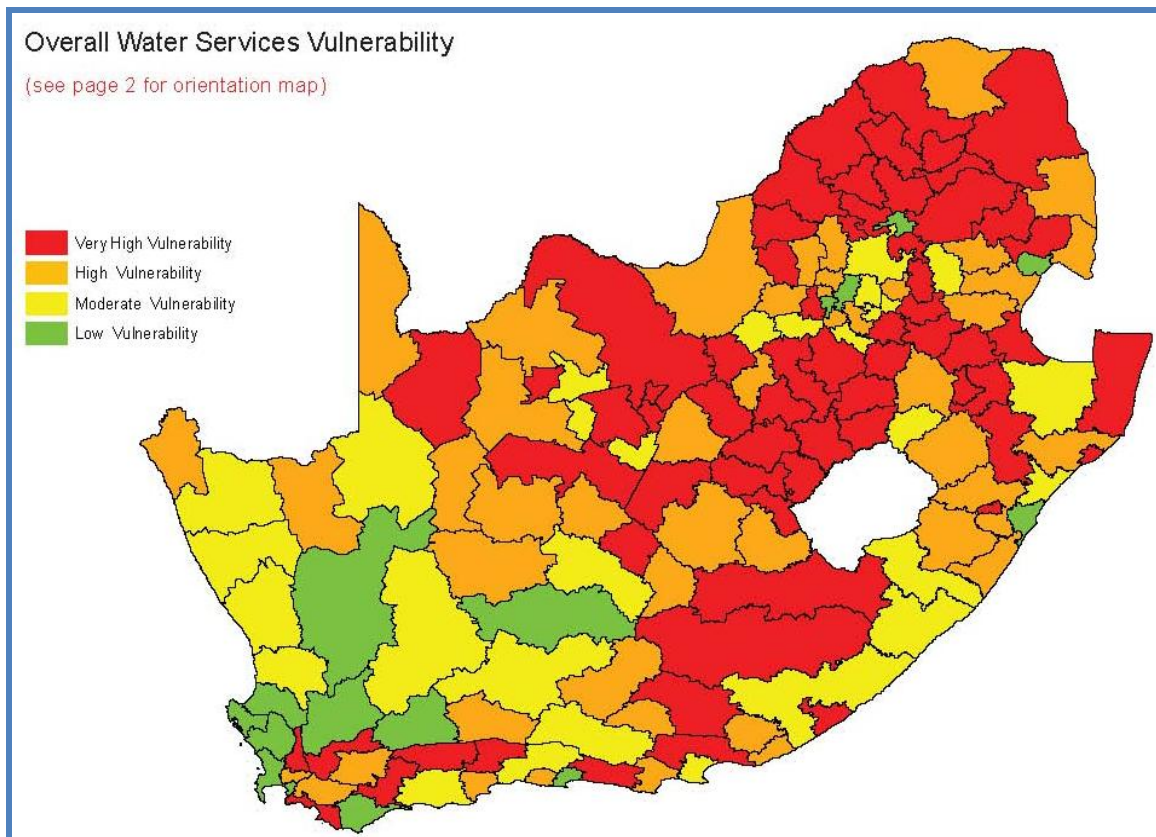


The extremely poor state of WWTWs has dire implications for health, the environment and economy.

### 7. Status of Water Services Institutions

One of the key contributors to the parlous state of existing infrastructure is the under-capacity of water service authorities to plan, implement and manage the infrastructure effectively. The vulnerability of water services authorities was assessed through a self-assessment process undertaken by the Department of Water Affairs. In the majority of WSAs the level of vulnerability (based on an assessment of 16 indices) is high to very high as per the below vulnerability map. Focussing on the criteria for assessing the technical and financial capacity for water and sanitation service delivery, the number of Water Services Authorities (WSAs) falling into the “very high vulnerability” classification increases to approximately 80% of all WSAs. This is of significant concern, and although programmes have been instituted to boost the capacity of WSAs, these have generally taken the form of short-term interventions that did little to transfer skills and build and retain capacity within the WSAs.





## 8. Funding requirements to address the sanitation needs

It is estimated that based on the 2011 pricing structure, an amount of R44.75 billion is required to provide basic services to the un-served (R13.5bn) and to refurbish and upgrade existing infrastructure (R31.25bn). This excludes financing for bulk infrastructure requirements for the provision of new services, as well as to address the upgrading of households in informal settlements.

These financial needs should be seen in the light of the total grants to municipalities of R41 billion in 2011/12 of which the conditional MIG (Municipal Infrastructure Grant) allocations for sanitation amounts to approximately R3.2 billion per annum.

Financing of operation and maintenance is a further challenge which, unless adequately addressed, will continue to result in rapid deterioration of infrastructure and poor quality of services. The key financial instruments for funding operation and maintenance are the equitable share (which being an unconditional grant is often not allocated for the purposes proposed in the formula) and municipal revenue from rates and tariffs (which in most category B and C municipalities is a very small proportion of the revenue).

## 9. Key factors affecting the poor progress in the provision of sanitation services

The key factors affecting inadequate sanitation service provision include:

- Fragmentation of responsibilities for sanitation at national, provincial and local levels resulting in no single national authority taking responsibility for performance monitoring of municipal service provision (including monitoring of construction of infrastructure) and unclear performance standards

- Lack of technical capacity at local government level resulting in poor planning (e.g. new sewer networks connected without increasing capacity of bulk infrastructure) and neglect of operation and maintenance
- High turn-over of staff (lack of focus on training and retention of staff)
- Ineffective support programmes to municipalities (e.g. from provincial and national government)
- Insufficient financial planning and management leading to inadequate budget allocations for maintenance by municipalities (e.g. from equitable share) and/or inappropriate use of allocated funds (e.g. funds channelled to roads at end of financial year to facilitate quick expenditure) as well as weak revenue management

To address these constraints effectively will require a well coordinated national programme that is closely coordinated and interlinked with other programmes aimed at supporting municipalities to effectively plan and provide municipal services.

## **10. Conclusions**

The key conclusions arising from this study are the following:

- There is a need for improved service delivery planning at national, provincial and local levels, including the development of sanitation master plans, capital and finance plans as part of the Integrated Development Plan (IDP) process and aligned to municipal Comprehensive Infrastructure Plans (CIP).
- There is a need to boost capacity at local government level in particular, especially in the fields of technical and financial management, through an interim intervention and through longer term capacity building initiatives. Where it is unlikely that capacity can be developed in the foreseeable future, alternative mechanisms will need to be put in place so that service delivery to the poor does not suffer.
- There is a need to improve the effective utilisation and management of funding allocated for sanitation service delivery and to ensure adequate funding of O&M.
- The challenge of institutional fragmentation needs to be addressed as a matter of urgency, including clarification of roles and responsibilities; regulatory and monitoring and evaluation (M&E) activities.
- Performance monitoring and reporting needs to be significantly improved through a well coordinated M&E framework with KPIs enabling relevant, enhanced assessment and control of service delivery.

## **11. Recommendations**

Key requirements to improve the quality of sanitation provision in South Africa are deemed to be as follows:

- The establishment of a single unit responsible for policy formulation, oversight, monitoring, regulation and support of the entire sanitation service value chain and its linkages with water resource management and water service delivery within DWA (as the custodian of

water resources in South Africa) with sufficient capacity to support planning, and ensure effective regulation and monitoring (which is to include an early warning mechanism)

- Legislative amendments to resolve oversight, planning, financial allocations and accountability
- Improved and coordinated support programmes to municipalities at national and provincial level
- Upgrading of municipal staff skills (and/or the interim establishment of a municipal infrastructure support agency (national or 9 provincial))
- Support for basic service delivery planning in municipalities where backlogs are most acute through sector-based service delivery management structures

Given that government has set itself the target of achieving universal access to at least a functional and adequate basic sanitation service by 2014, the findings from this study will be presented to Cabinet for discussion and action, including resolving the problems with current institutional arrangements.

A key focus should be on the households which are “un-served” or “under-served” and where access has not met performance norms and standards.

March 2012