



Ian Palmer

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Delivery mechanisms and roles of **municipalities and water boards** in addressing the lack of water and sanitation services

Presentation to the Water and Sanitation Summit

Information is sourced from a range of data sources and studies including DWS, Stats SA, Water Research Commission, National Treasury and CoGTA. Recent studies commissioned by SALGA DBSA and the World Bank have been particularly useful.

DBSA and the WB work in progress is on the forthcoming 'Beyond the Infrastructure Gap' report, dealing with meeting the SDGs, has provided important insights.

All these sources are acknowledged but the views expressed here are those of the author who also takes responsibility for errors and omissions.

An aerial photograph of a city skyline, likely San Francisco, showing a dense cluster of skyscrapers and buildings. A semi-transparent dark blue banner is overlaid across the center of the image, containing the text "LOCAL GOVERNMENT" in white, uppercase, sans-serif font. The sky is overcast with grey clouds, and the overall color palette is muted, with a slight blue tint.

LOCAL GOVERNMENT

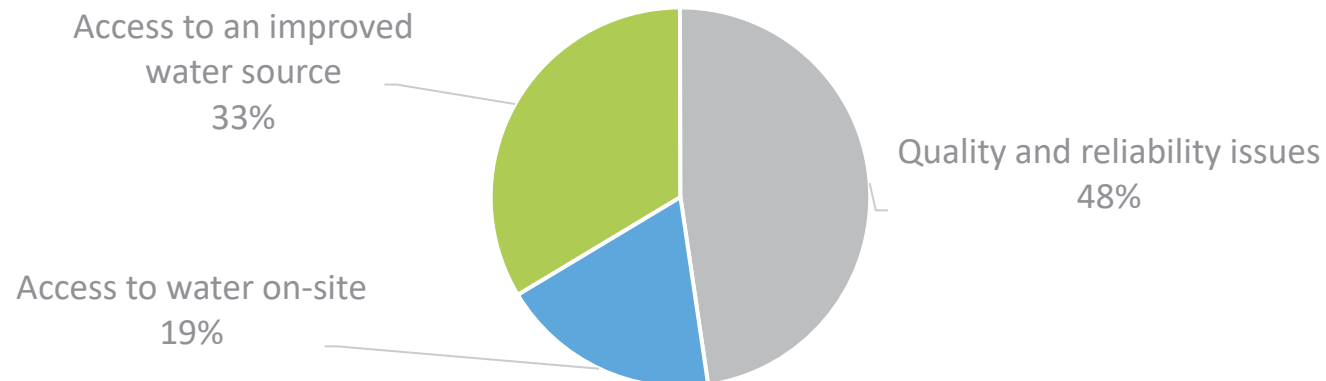
Access to water – SDG 6.1

The UN definition of acceptable water access has four dimensions:

- **Source** 95% of households have improved source (piped supply)
- **Location of supply** 84% of households have improved source within 200m; 76% on-site
- **Quality** 69% have on-site, improved access, which is not polluted (safe to drink)
- **Reliability** 54% on-site, improved access, which is not polluted or interrupted



Composition of the 46% 'gap' to achieving SDG 6.1



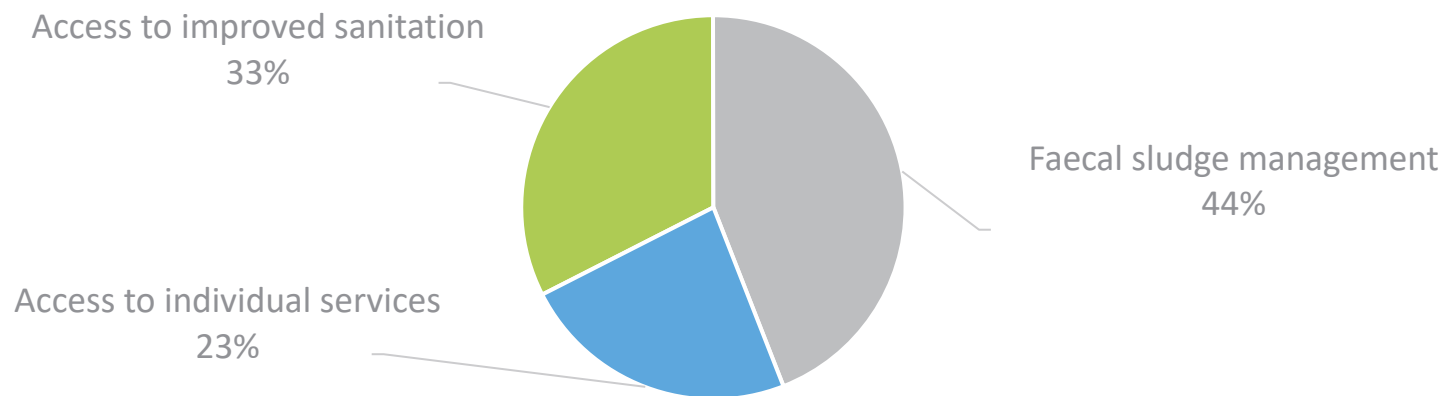
48% of the 'gap' to achieving SDG 6.1 is about resolving quality and reliability issues

Access to sanitation – SDG 6.2

The UN definition of acceptable sanitation access has three dimensions:

- Acceptability of technology 84% improved
- Individual access 72% improved, not shared
- Safe treatment of waste 51% improved, not shared, with faecal sludge management

↓
Composition of the 49% 'gap' to achieving SDG 6.2



44% of the 'gap' to achieving SDG 6.2 is about addressing faecal sludge management

State of municipalities - differentiated

Category	% population	% distressed	No access to piped water	Water interruptions > 2 days
A Metros (8)	42%	No data	2%	13%
Intermediate cities (39)	20%	33%	4%	24%
Small towns and rural LMs (157)	13%	35%	6% (See note 4)	30%
Rural districts (21)	25%	52%	23%	54%

Notes:

- 1) All figures are estimates from 2018 – 2021 data
- 2) % distressed municipalities based on CoGTA and NT 2018 assessment
- 3) Access to piped water and water interruptions from StatsSA community surveys
- 4) Figure for access to piped water only for LMs which are water services authorities

Why are things so bad?

- **Governance**
 - ▶ Weak councils, poor leadership, corruption etc
- **Technical capacity**
 - ▶ Lack of support from national and provincial spheres
 - ▶ Inability to recruit and retain engineers and technologists
- **Lack of finance**
 - ▶ Inability to raise revenue
 - ▶ Low levels of borrowing
 - ▶ Shortcomings in system of transfers (grants etc)
- **Ineffective use of water resources**
 - ▶ Inadequate attention to WCDM
- **Legislation and institutional structure**
 - ▶ Poor arrangements to support PPPs



What to do?

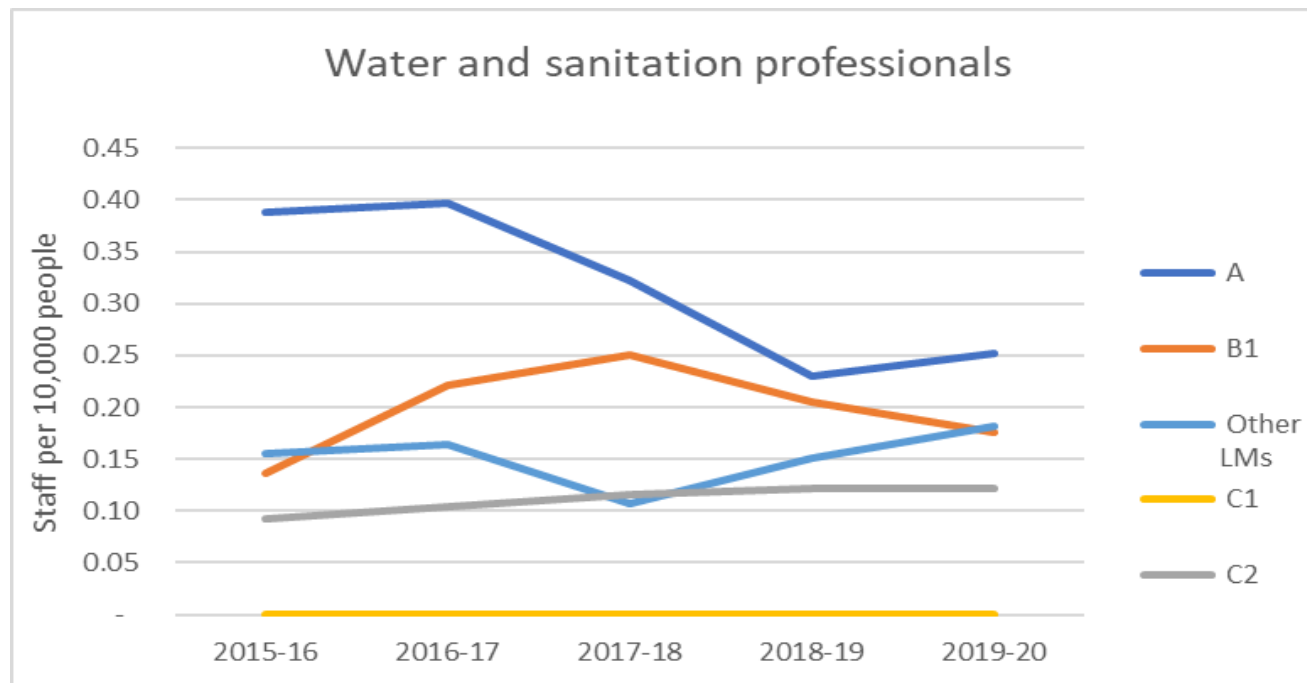
(in order of priority)

1. Improve technical capacity
2. Insist on Water Conservation & Demand Management
3. Take asset management seriously
4. Make smart technology and service level choices
5. Focus on faecal sludge management

Technical capacity

We know there are far too few engineering professionals in municipalities with alarming figures reported by Allyson Lawless (SAICE) in 2015.

What has been happening subsequently:



Cities - Decline



Smaller LMs - Some signs of increase



C2 - Low numbers off a low base

Technical capacity: importance of partnerships

- With such serious lack of capacity it becomes most important for municipalities to seek partnerships with private organisations or water boards.
- Historically there have been few water services partnerships: considering that they were mostly successful why does this situation remain?
- We need to look at a full spectrum of partnerships:
 - ▶ Concessions
 - ▶ Leases
 - ▶ BOT contracts
 - ▶ Operating contracts
 - ▶ Management contracts

Technical capacity building – Key interventions

.... It's about programmes and partnerships

Category	Support programme	Type of partnerships
A Metros (8)	Current City Support Programme needs to be sustained and perhaps given more technical capacity	Probably mainly BOT type contracts
Intermediate cities (39)	The presently conceived Intermediate City Support Programme must be ramped up	Some opportunity for concessions; full range of other contracting styles
Small towns and rural LMs (157)	The current SALGA small towns project requires a full restructuring to greatly increase its scale	Too small for concessions but leases, BOT and operating contracts possible
Rural districts (21)	The Regional Management Support Contract programme must be re-instated and ramped up	Management contract

Building capacity of the capacity builders

- In setting up or expanding infrastructure programmes, international partners have a key role to play.
- In the case of partnerships a specialised support unit is needed in Government to support partnerships – Expand GTAC capacity?
- Recruiting more professional engineers into DWS, MISA, GTAC and provincial LG Departments.

Water conservation & Demand Management

- WCDM is a win-win-win:
 - ▶ Reduces cost of treatment
 - ▶ increases financial viability (increased revenue)
 - ▶ Preserves the resource.
- Requires metering systems (bulk and retail), flow limiters, billing systems and credit control arrangements.
- There are new technology options which will can make a big difference.
- Considerable technical capacity and some capital is required.

Asset management

- It is evident from the access to services figures that the biggest concern is not with providing new infrastructure but keeping that which exists functioning properly.
- This requires sound operating and maintenance arrangements and renewal of aging infrastructure.
- Considerable technical capacity and finance (operating and capital) is required.

Service level choices and affordability

- Service level choices have a major impact on affordability of services and hence viability of service providers.
- For example, low capital cost, high operating cost options are to be avoided with urban sanitation systems (chemical toilets in urban areas is an example).
- Clear definition of basic services is required, as part of norms and standards, in order to promote cost efficiency.
- Designs need to be related to what can be afforded.

Faecal sludge management

- In the past 20 years, large numbers of on-site toilets have been provided, now these are getting full – challenge shifts from building toilets in rural areas to managing sludge / capital to operating.
- Clarity is required around the institutional responsibility for pit emptying, and then the funding can be planned.
- Faecal sludge management includes safe disposal of WWTW sludge, which requires functional plant, adequate systems, capable staff, and dedicated funding.

An aerial photograph of a water treatment plant. The left side shows several large circular clarifiers with central mechanical structures. The right side features a series of long, rectangular aeration basins. The entire image is overlaid with a semi-transparent dark blue/black rectangle in the center, containing the text 'WATER BOARDS' in white, uppercase, sans-serif font.

WATER BOARDS

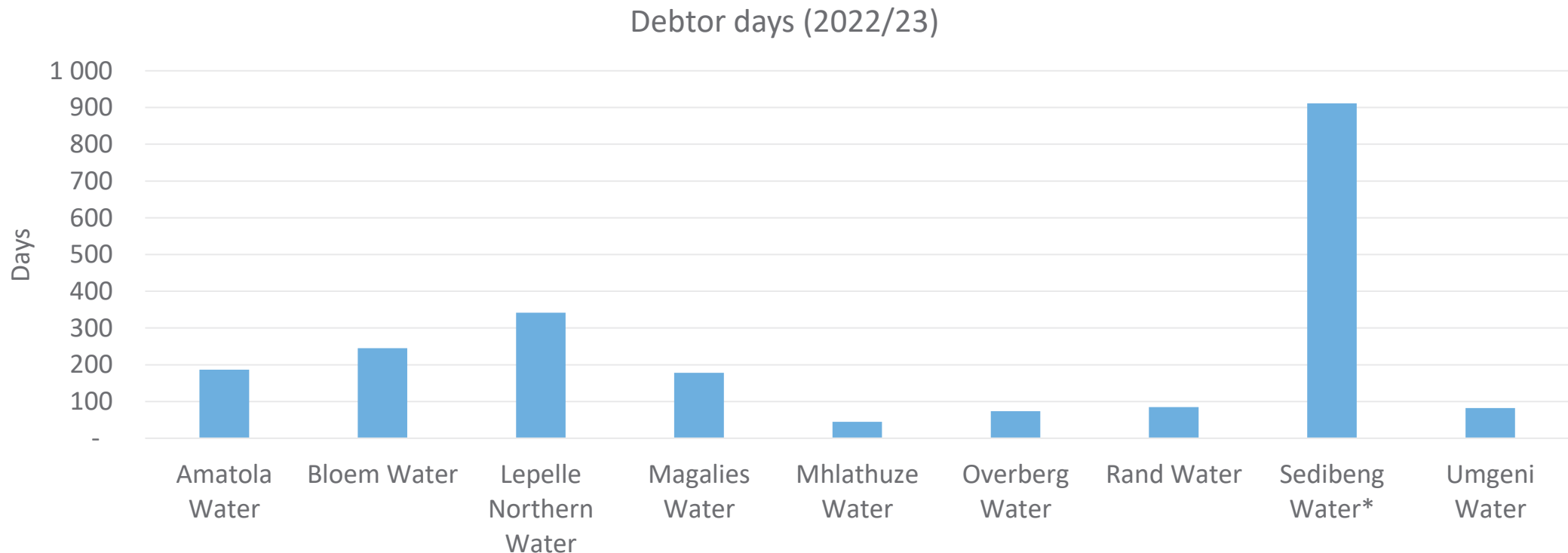
Water boards - Overview statistics

	Water sold ('000 Ml/annum) 2020/21	Staff No. (per Ml/d water sold) 2020/21	5-year average capex (per Ml/yr water sold)	Revenue (per kl '000 water sold - 2022/23 projection)
Rand Water	1599	0,9	3,7	11,89
Umgeni Water	553	0,8	5,0	8,69
Sedibeng Water	127	2,6	0,3	11,61
Mhlathuze Water	113	0,8	2,1	5,87
Magalies Water	94	1,1	5,1	9,49
Bloem Water	84	1,9	2,3	10,17
Amatola Water	40	3,4	0,9	10,97
Lepelle N Water	16	8,9	9,7	8,44
Overberg Water	3	7,2	9,1	20,85

Source: SALGA submission on water board tariffs 2022/23

Water boards and municipal debtors

Non-payment for bulk water is a serious concern for some water boards, with Sedibeng Water and Lepelle Northern Water facing the biggest challenge.



* Figure is from 2019/20 as latest available figure

Water boards: key issues

- Water boards have a rather 'luxurious' business model in that their core business is largely bulk water supply. This is contrast to most public water providers in other countries which retail water.
- There are clear indications of economy of scale, with smallest water boards having high overheads in relation to sales.
- There is inadequate price regulation: water boards all-too-often have tariffs approved which are too high.
- Several water boards are facing serious problems raising revenue from municipal customers.
- Smaller ones do not have the capacity to borrow to fund capital works and the larger ones have decreased their propensity to borrow.

Water boards - restructuring options

- There has been a consolidation of water boards but not over the past eight years or so.
- DWAF study in 2012 proposed an ultimate goal of three water boards. This should be the objective to achieve required economies of scale and improved capacity.
- Key issue is the extent to which water boards can take over responsibility from municipalities:
 - ▶ This has happened in the past (management, operating contracts and lease type deals) but these arrangements have not been sustained. Bushbuckridge is the largest scale example of failure.
 - ▶ Taking on municipal responsibilities will be difficult and require considerable capacity within water boards.
 - ▶ Probably BOT contracts to run treatment works, including wastewater works, has biggest chance of success.



www.pdg.co.za | ian@pdg.co.za | +27 21 671 1402

Ubunye House, 70 Rosmead Avenue, Kenilworth, 7702
Cape Town, South Africa