





HOLLOWING OUT THE LOCAL STATE:

Managerialism and Skills in the Water Sector

2015



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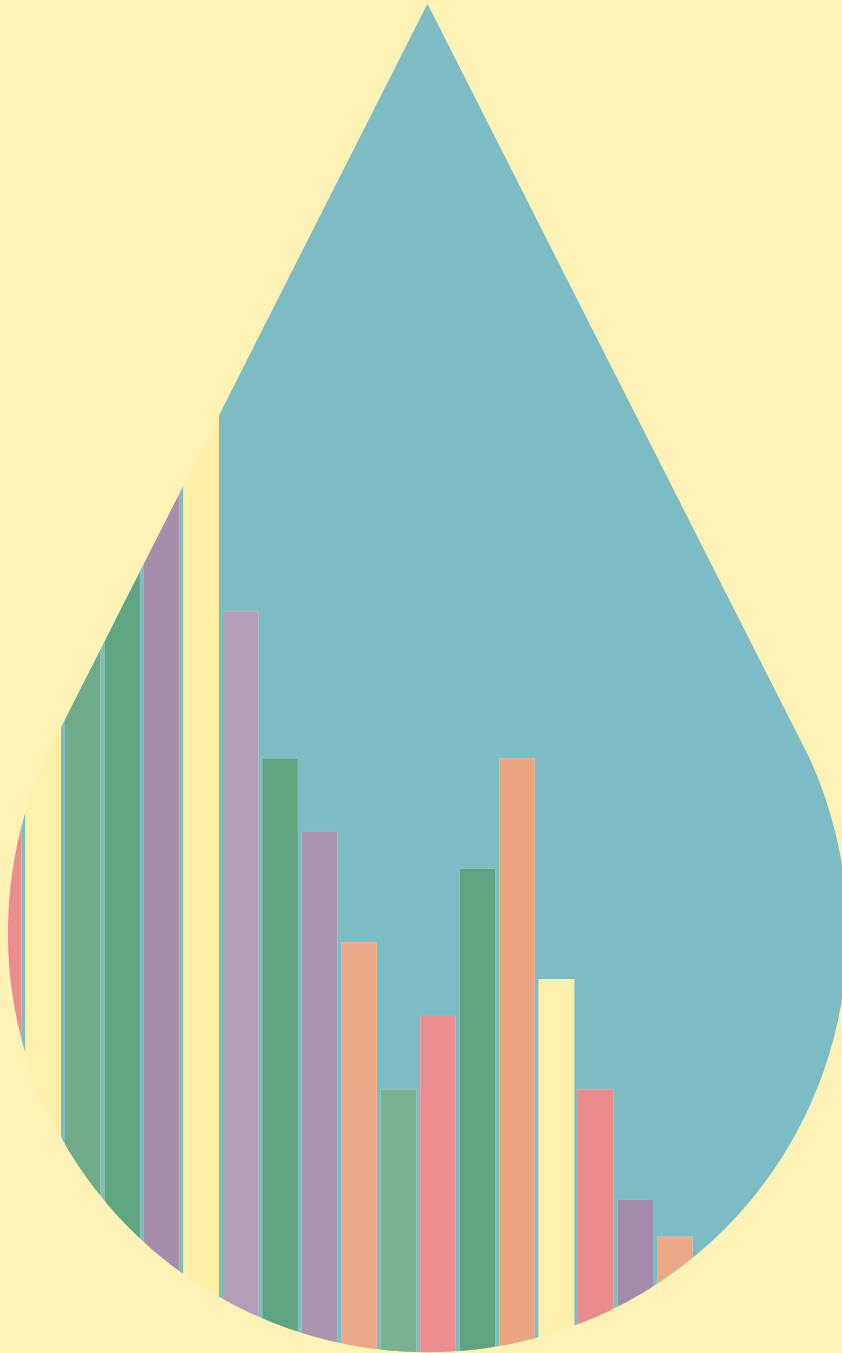
Public Affairs Research Institute (PARI)
26 Rhodes Avenue
Parktown West
Johannesburg, 2193

011 482 1739 | info@pari.org.za | www.pari.org.za
Design & Layout: www.prinsdesign.co.za
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ACRONYMS

COTT	Central Organisation of Technical Training
CRR	Cumulative risk rating
DWAF	Department of Water Affairs and Forestry
EWSETA	Energy and Water, Sector Education and Training Authority
GEAR	Growth, Employment and Redistribution
HSRC	Human Sciences Research Council
INDLELA	Institute for National Development of Learnerships Employment Skills and Labour Assessments
LGSETA	Local Government, Sector Education and Training Authority, SETA
MOE	Municipal Owned Entity
NPM	New Public Management
OSF-SA	Open Society Foundation for South Africa
RDP	Reconstruction and Development Programme
SETA	Sector Education and Training Authority
StatsSA	Statistics South Africa

Introduction



1.1 BACKGROUND

In large parts of South Africa, the management of municipal water and sanitation is in crisis. There are regular media reports of interrupted water supply and dysfunctional sanitation systems. These difficulties have coincided with an increase in civil society protests, most of which are directed at municipalities. An initiative which monitors grassroots ferment found that grievances against water and sanitation management feature consistently amongst the top five reasons why protests occur, as shown in the table below.

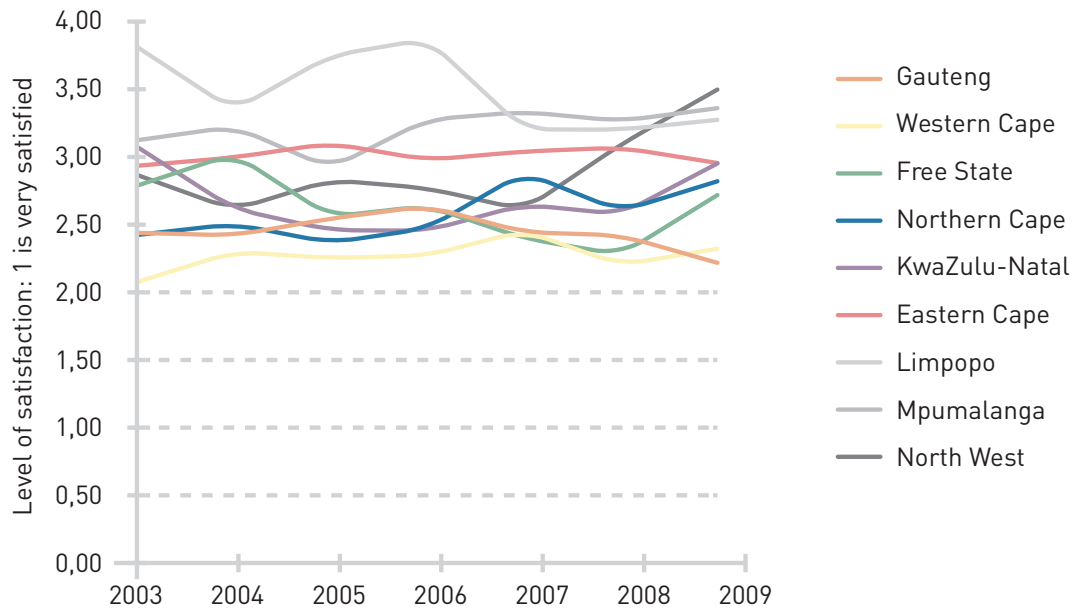
Table 1: List of top five grievances in public protests

1	Poor service delivery	Land and housing	Land and housing	Land and housing	Electricity	Land and housing
2	Land and housing	Electricity	Poor service delivery	Poor service delivery	Party political	Water/ Poor service delivery
3	Water	Poor service delivery	Corruption/ nepotism	Water	Land and housing	Electricity
4	Electricity	Water	Electricity	Electricity	Water	Ignored grievances
5	Party political	Sanitation/ waste	Sanitation/ waste	Sanitation/ waste	Sanitation/ waste	Infrastructure
	2007	2008	2009	2010	2011	2012

This perception of malaise is collaborated by the findings of a major longitudinal survey conducted by the Human Sciences Research Council (HSRC) which measures changes in social values. Every year, as part of a broader enquiry, South Africans are asked to report on their satisfaction or otherwise with water and sanitation supply. Levels of satisfaction are measured on a scale where 1 represents the highest level of satisfaction and 5 the least levels of satisfaction. 0 represents those who do not report on their levels of satisfaction in the survey. The results are reported provincially. In general, as illustrated in the figure below, between 2003 and 2009 South Africans have been unhappy. While in some provinces such as the Free State and Gauteng there have been marginal positive shifts in levels of satisfaction, in others such as North West levels of dissatisfaction have increased markedly.

Source: J. De Visser & D. Powell (2012) Service Delivery Protest Barometer 2007-2012, Cape Town: Multi-level Government Initiative, Community Law Centre

Figure 1: Levels of satisfaction with water and sanitation services

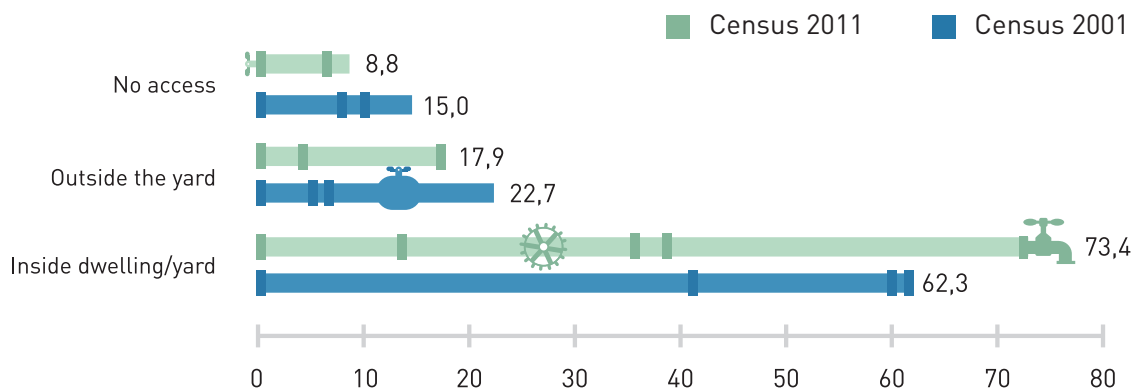


Source: HSRC SA Social Attitudes Survey

In spite of or perhaps in tandem with these levels of community dissatisfaction, there has been significant expansion of water and sanitation services. As the figure below shows, 91.3% of the population could access piped water in 2011 compared to 85% in 2001.¹

¹ The piped water may be available inside the household, in the compound or just outside the compound.

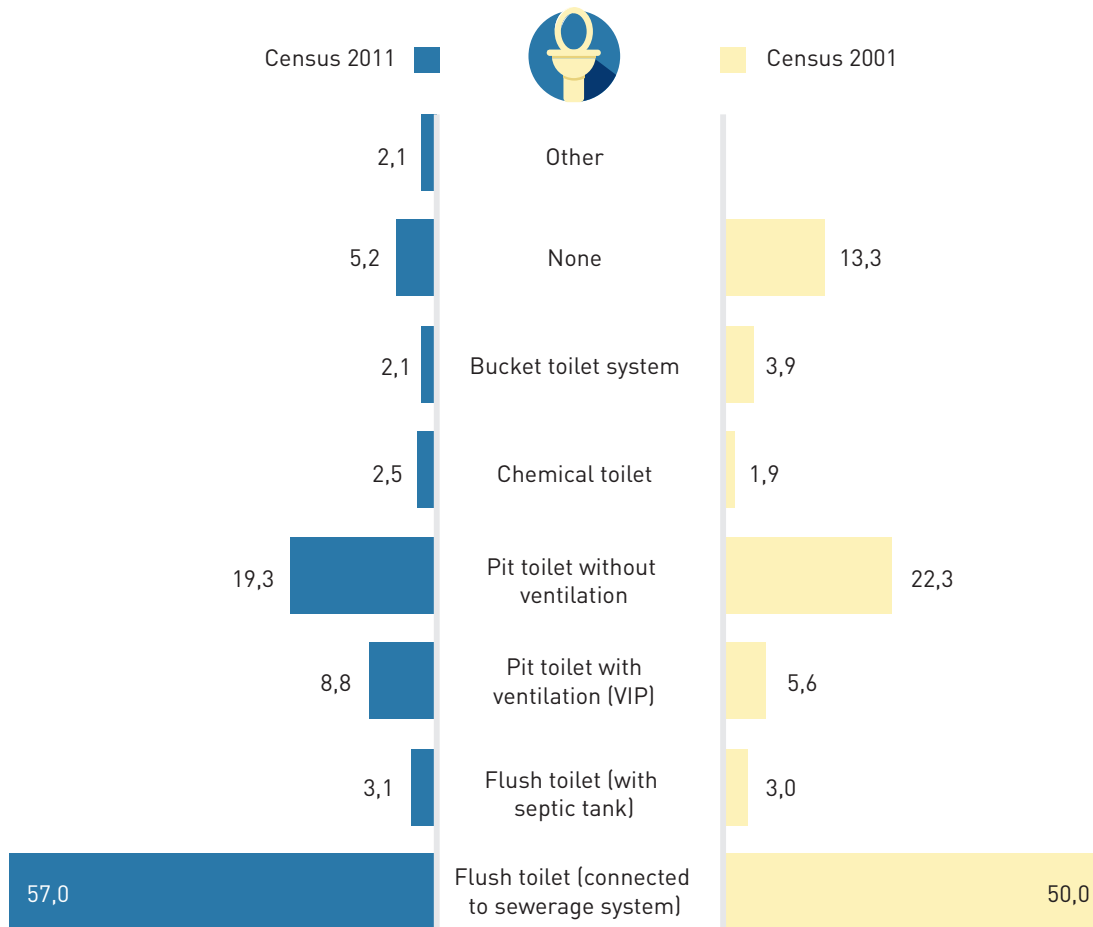
Figure 2: Percentage of households that have access to piped water



Source: Stats SA Census 2011

Similarly there have been large gains in sanitation since the democratic transition. As represented below, at the end of 2011, 94.9% of the population had access to some type of sanitation system. This percentage increased from 86.7% in 2001.

Figure 3: Percentage of households by types of toilet facility



As a result of this expansion in water and sanitation services, South Africa has already, ahead of the target dates, met its United Nations Millennium Development Goals in this area. These goals are to “halve the proportion of people not having access to safe drinking water by 2015” and to “halve the proportion of people without sustainable access to a basic sanitation service”. The water goal was reached in 2005 and the sanitation goal in 2008 (DWAF, 2009: 24; DWAF, 2013: 24).

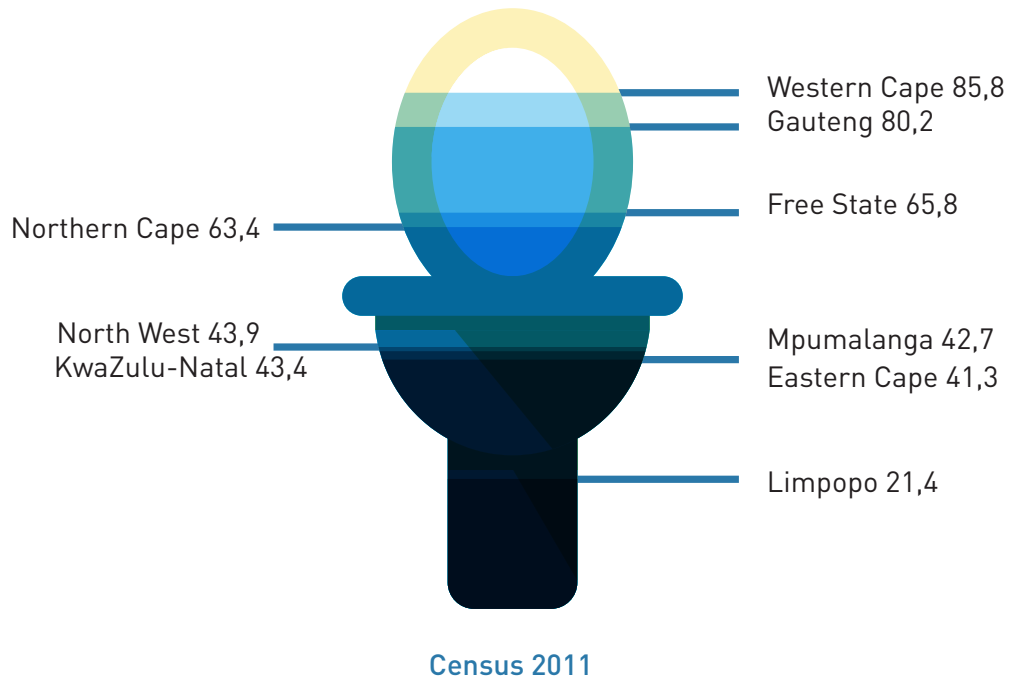
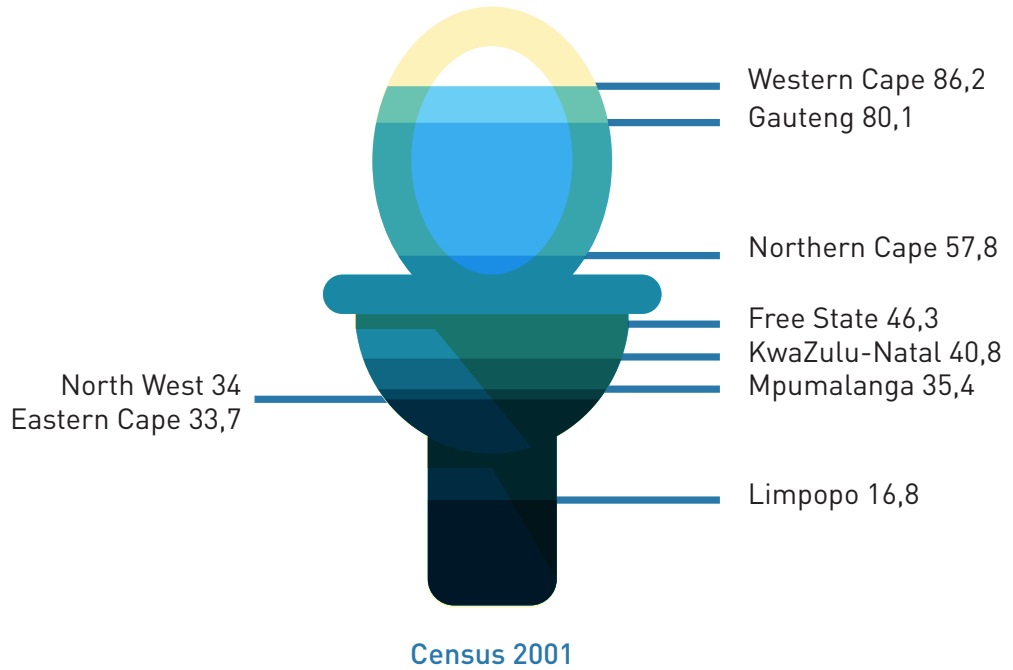
Source: Stats SA Census 2011

How do we square these impressive gains with the community dissatisfaction expressed through protests and recorded in survey findings? One answer is that the statistics show infrastructure availability and not necessarily functional services (DWAF, 2013: 24). In other words pipes may be in place but no water may be flowing through them. Or pit latrines may be available but they may not be serviced.

Another complication hidden by high level aggregate data is geographical unevenness. As the figure on the next page shows, levels of services in terms of access to toilet facilities vary dramatically across the country.² To put it simply, some locations are much better served than others.

² Refers to households with a flush toilet connected to a sewerage system and to those with pit latrines that may or may not be ventilated.

Figure 4: Percentage of households with access to toilet facilities

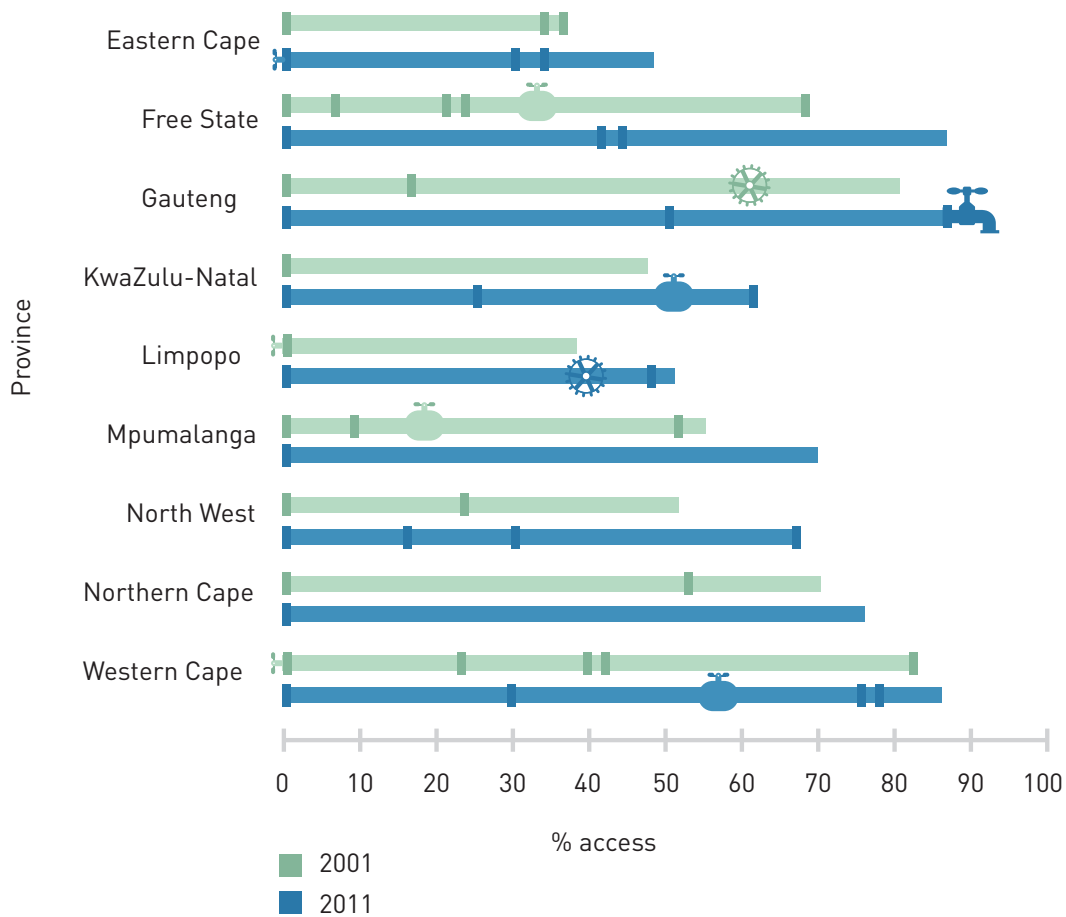


Source: Stats SA Census 2011

Similar unevenness obtains with regard to access to piped water.³
 The figure below represents percentages of households with access to piped water per province in the country.

³ Refers to households with piped water in the home, inside a compound, or immediately outside a compound.

Figure 5: Percentage of households with access to piped water

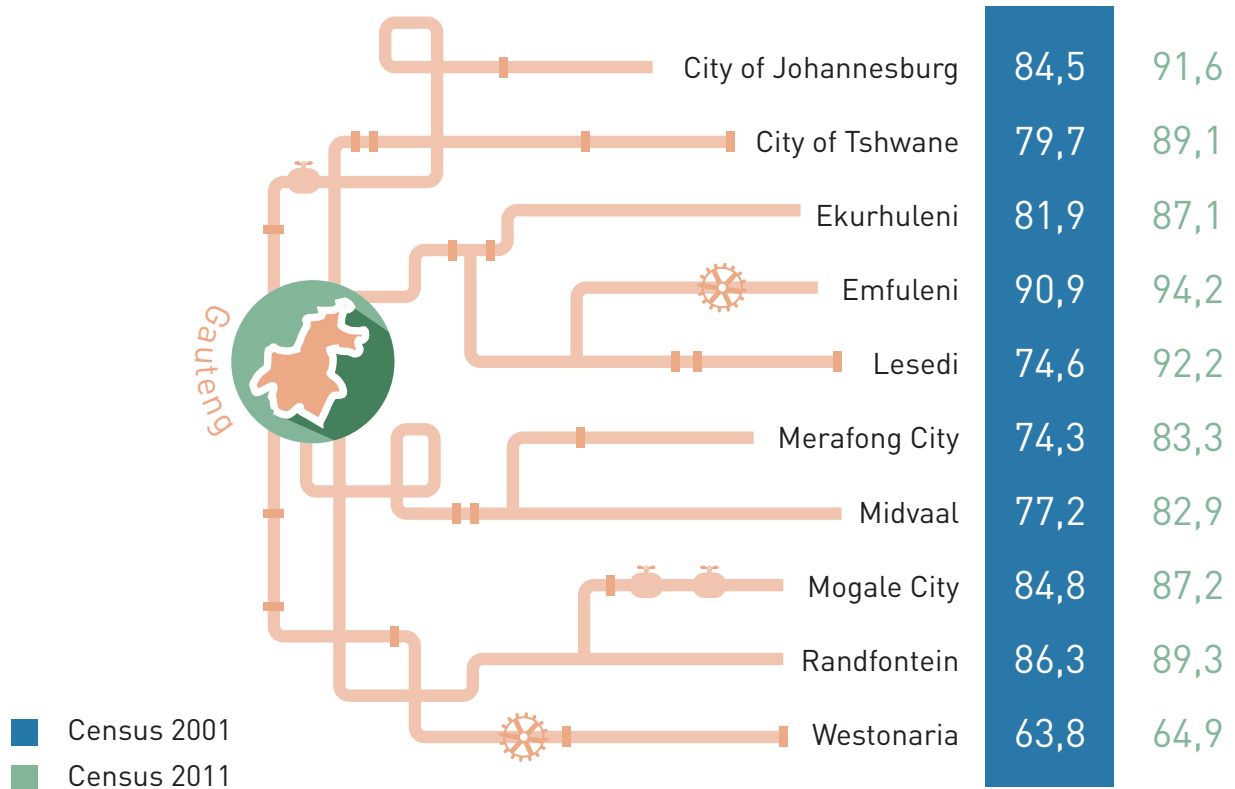


Source: Stats SA

⁴ NokengTsaTaemene Local Municipality, Kungwini Local Municipality.

If we further disaggregate to municipal level in Gauteng Province, it is clear that here also the picture is diverse. The figure below is from a sample of municipalities in Gauteng that are also water service authorities. It does not contain all of the municipalities given the limited data available from StatsSA on some of the municipalities.⁴

Figure 6: Local government percentage access to piped water in Gauteng

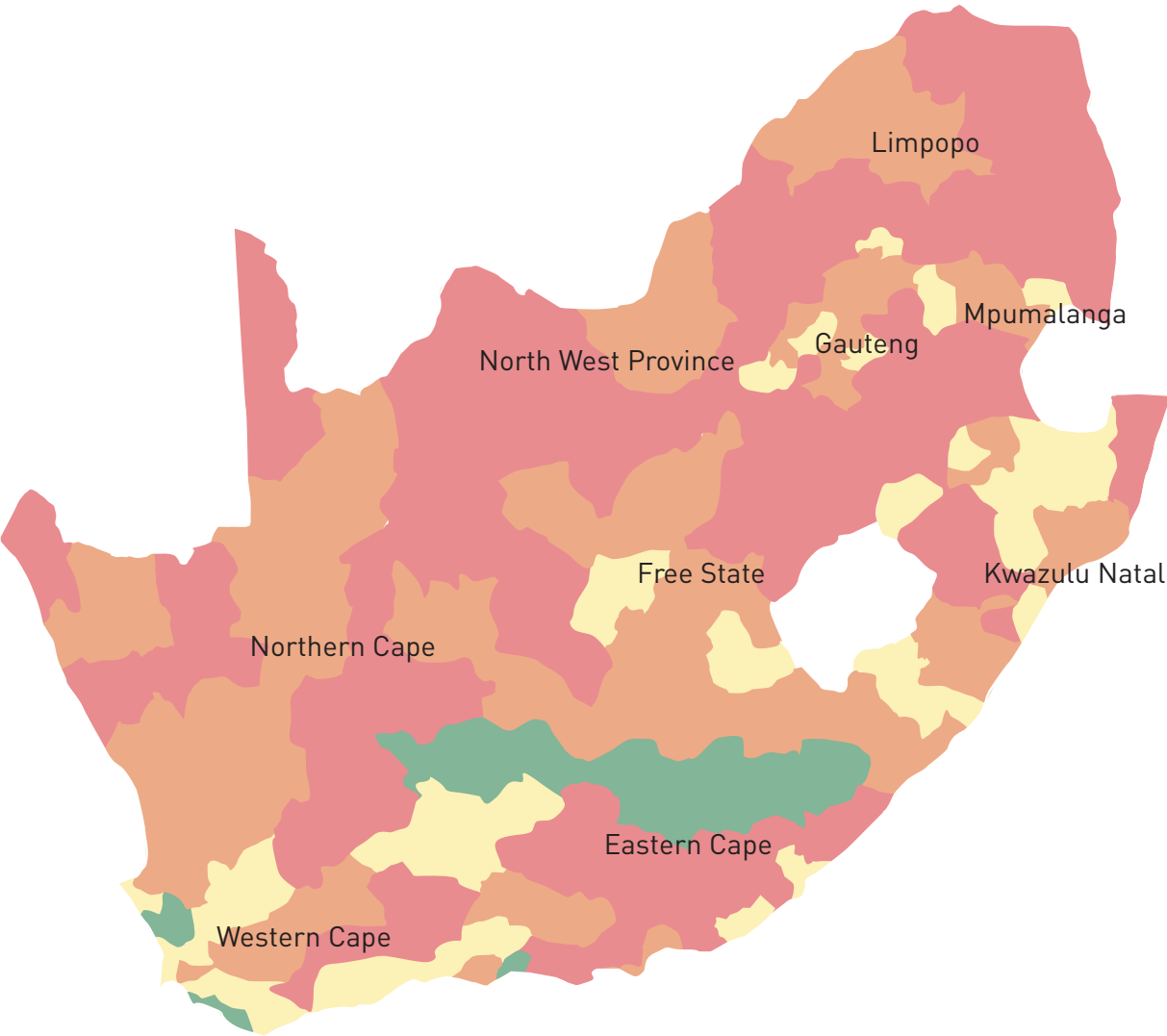


Source: <http://beta2.statssa.gov.za/>

⁵ These include water services development planning, management skills level, staff skills level, technical staff capacity, water resource management, water conservation and demand management, drinking water quality, wastewater/environmental safety, infrastructure asset management, operations and maintenance of assets, financial management, revenue collection, information management, organisational performance, water service quality and customer care.

Exploring sanitation in the same sample of municipalities, the same unevenness is apparent. Perhaps the best illustration of unevenness is the figure below illustrating municipal 'vulnerability'. The image is based on internal self assessment by municipal officials of the ability of their municipalities to deliver water services. It measures capability based on a number of domains that have been agreed as influential in internal performance (DWAF, 2013).⁵

Figure 7: Municipal vulnerability in the provision of water and sanitation services



Status	No of WSAs	%
Very high vulnerability	70	46,1%
High vulnerability	50	32,8%
Moderate vulnerability	17	17,7%
Low vulnerability	5	3,3%
	152	100%

The dominance of pink in the map (46,1%) suggests that a very large numbers of municipalities consider themselves highly vulnerable with respect to their ability to render water and sanitation services.

Source: DWAF:2013:36

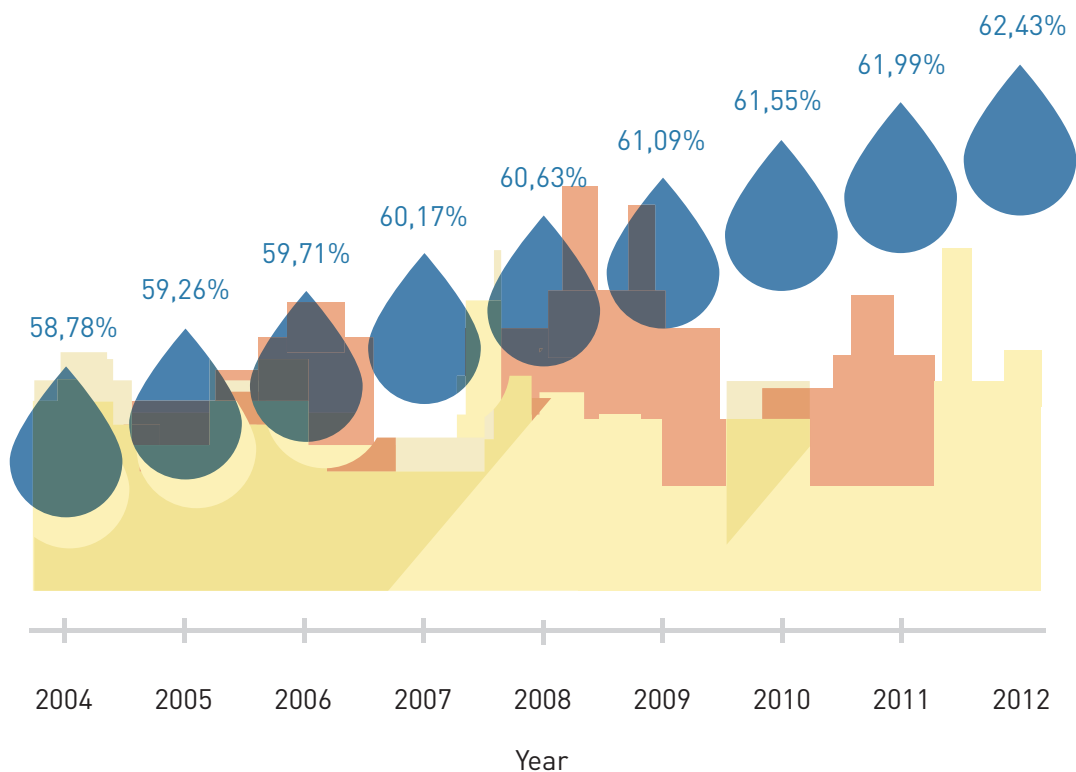
1.2. UNDERSTANDING THE UNEVENNESS

It differs. You really can't generalise and we don't really know why some municipalities don't perform and why others do. We don't, we really don't (Respondent V, 13 September 2013)

How should we understand this unevenness? Here we can find a range of different accounts that reflect the diversity that is South African local government. These reasons are complex and interlock with each other sometimes in ways that are difficult to disentangle.

South Africa is now an urban nation with the majority of the population residing in towns and cities. The figure below shows the growing percentage of the South African population that is urbanised.

Figure 8: Spatial population trends in South Africa



Source: World Bank, World Development Indicators

With this concentration which has unfolded unevenly across urban areas, some municipalities have been able to meet the demand better than others. In the Govan Mbeki Municipality, one of our respondents noted that "what is important ... is that you keep your bulk supply updated. This is the challenge that Govan

Mbeki is sitting with at the moment. The bulk designs for all the towns have been designed to cater up to a certain limit and what has happened now - and I am talking about water, sanitation and electricity - is that the optimum amount of supply has now been reached" (Respondent I, 27 November 2013). We should note that again it is not simply a matter of urbanisation which has produced in some municipalities a mismatch between infrastructure and capacity. As is well known many municipalities post democratization had to suddenly provide services to much larger population often with the same infrastructures. Some have over time extended their infrastructure but others have not.

The National Treasury suggests that there are economies of scale associated with the provision of water and sanitation services. In theory, large organisations serving larger populations can provide services more cost effectively (National Treasury, 2011: 139). Size is also an important consideration because of operational issues such as skills, and choice of technology. This is especially so in sanitation where generally more technically complex technologies are required to treat heavy volumes of effluent:

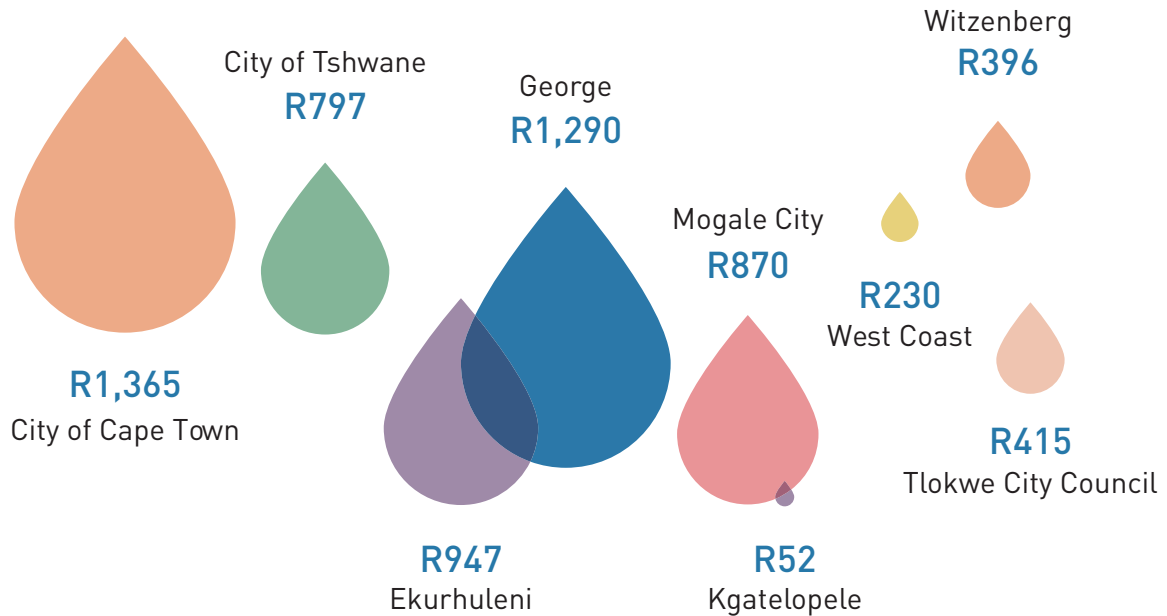
Joburg needs to get the best biological nutrient removal technology available; it needs to make it work and have it work twenty four hours a day, seven days a week. They have to have somebody on site, not only any old person: you need a technical scientist, a scientific person to actually operate it. It is much more difficult for the bigger municipalities to operate than the smaller ones (Respondent K, 29 July 2013).

Another respondent agreed with this analysis (Respondent N, 22 October 2013). This account therefore suggests a slightly more complicated relationship between size and performance.

The nature of the local tax base is also thought to play an important role in determining performance. Here, the argument goes that municipal contexts with more vibrant economies and therefore wider taxable industries and populations should be better performers. Historically this may have been the case before the introduction of the equitable share formula, the national system of levelling out geo-economic differences. However, recent evidence suggests that while this formula should place all municipal water service authorities on an even playing field, there are some flaws in it. As a result "the formula produced allocations per poor household that were lowest for municipalities with the least ability to raise their own revenue". A new revised formula that is intended to correct this design error is currently being phased in (Fanoë, 2013).

Again if this were a straight correlation we should see the wealthiest municipalities – generally metropolitan ones – consistently outperforming their peers. But when we examine trends of the Blue Drop report we see a mixed picture. The figure below shows that there is no necessary linkage between volume of expenditure and performance.

Figure 9: Operating budgets of some municipalities in the top ten Blue Drop Index (2011)



Source: Municipal Demarcation Board, 2011 Capacity Assessment; www.demarcation.org.za

⁶ The Blue Drop system is a national system where “all elements in the water supply system including sampling of water at the intake and the outflow of the water treatment works, in distribution pipelines and reservoirs and at the point of use” are assessed (DWAF, 2013: 43).

The figure above illustrates operating budget expenditure per capita (2011) of selected municipal water service authorities that appeared in the top ten rankings of the Blue Drop report between 2010 and 2012.⁶

The nature of the local tax base can also be seen as a proxy for other social variables. Rates of poverty, location, inequality, the kinds of historical relationships that exist between municipalities and local communities, demography and other related variables all ultimately influence how the municipality operates. For example, it is well known (SAICE, 2011: 12;) Peters and Van Nieuwenhuyzen, 2012: 283) as it did come up in several of our interviews, that small rural municipalities struggle to recruit the kinds of staff that they need whilst larger metropolises are spoilt for choice (Respondent Y, 16 September 2013). In addition, endemic poverty in some communities often means that municipal infrastructure is an easy target for not only outright theft but also as a source of recreation. Both of these dynamics coalesced together in one instance in a municipality. Our respondents informed us that that waste water treatment tanks are commonly damaged by children who use them as playgrounds – which are not available in their neighborhoods. The municipality tried to remedy this problem by installing fencing around one of the waste water treatments. Unfortunately the theft of the fence – made from lucrative metal – took place more rapidly than the installation (Respondent I, 27 November 2013).

As others have insisted, the apartheid legacy continues to haunt the present (Chipkin and Meny-Gibert, 2011). As we will see, spaces which were not governed for White populations continue to experience the most severe challenges with water and sanitation.

In a recent report we described the South African state – as a contract state. Here we meant that “service delivery in South Africa is decreasingly performed by government administrations and increasingly performed by private companies which tender for this role” (Brunette et al. 2014). Our fieldwork for this project revealed this to be also the case in local government. The degree to which private companies play a role in service delivery in local government is extremely variable within and across different municipalities. There is a dire need for further research in this area given the extent of transformation that seemed to have occurred. However what we found in broad strokes is that part of the challenges in water and sanitation services delivery might be attributed to this transformation; as municipalities rely increasingly on consultants or contractors, they are dehusked of technical skills. This means that they are unable to oversee the work of service providers. They are thus prone to waste resources on unnecessarily expenditures and receive shoddy work. Moreover it seems in some cases to be demoralising existing personnel who may have technical skills but cannot use this knowledge as external agents are preferred.

One of the most commonly given reasons for unevenness and poor performance however, in the popular media and some literature, is the ill-defined notion of ‘lack of capacity’. Generally, poorly performing municipalities are understood to

- suffer from high rates of corruption and nepotism (COGTA, 2009);
- experience significant skills challenges such as a lack of technical knowledge and experience (National Planning Commission, 2011: 22);
- be characterized by high degrees of staff turnover (Municipal Demarcation Board, 2012);
- suffer from poor leadership (ibid.);
- be beset with council interference in operations (Peters and Van Nieuwenhuyzen, 2012);
- be filled with lazy, incompetent officials (ibid.).

Koelble and Siddle say that the essence of the service delivery challenge besetting local government is with the bureaucracy. “We argue”, they say,

that the absence of a functioning civil service at the local level is a primary reason for this [local government] failure and that there is an urgent need to re-assess the role the municipalities are to fulfil. If municipalities are to be the “developmental arm” of central government, they need to be equipped with technical, financial and administrative staff that are up to the difficult task of policy implementation. The fact that such an administrative and technical apparatus was not created soon after 1994 is due less to a lack of commitment to the decentralization project and more to oversight that such an apparatus was indeed lacking” (Koelble and Siddle, 2013).

We argue in this report that such an analysis stops short of real explanation. It is, at best, descriptive. What is wrong with the administrations in poorly performing municipalities? This report goes some way to identifying the areas of weakness. It lays the basis for an analysis of service delivery challenges that does not simply focus on individuals or generic terms like 'skills shortages' or 'capacity constraints'. Instead, it brings municipal organisations and government institutions into a systems focus, arguing that the unevenness in water and sanitation management is the result of the uneven effect of long-term structural patterns (especially in the artisanal training field) combined with developments in the way that municipalities have been integrated and modelled since 1995, how they are staffed, how they are incentivised and who is incentivised.

1.3. EXECUTIVE SUMMARY OF REPORT

⁷ The discourse around skills often uses the word capacity interchangeably. Much policy discourse will for instance bemoan the lack of capacity to mean a shortage of people and knowledge.

As the quotation above illustrates, a lack of skills is often given as the most important explanation for inadequate performance.⁷ As might be expected, given the suggestion that centrality of skills is the main causal variable in local government performance, there have been many studies of this question. We find three broad accounts. These suggest that the problem arises because of (i) issues in the systems of education and training, (ii) changes in the economy, and (iii) issues within municipal bureaucracies.

Our analysis shows that it is important to understand the varied historical sources of the capacity challenge. We argue that while municipalities are faced with a wide range of personnel needs, in water services the most critical barriers are associated with routine operations, and that the skills needed are those of plumbers, millwrights, electricians, pipeline maintenance workers and the like. The shortages of skilled workers, hollowing out of knowledge in the occupational areas and misallocation of available workers are driven by long historical factors occurring in governance domains beyond local government jurisdiction. We argue that the country has long held technical trades in low regard. This low valuation joins with status concerns that stigmatise waste water work and those who do it. It is therefore hardly surprising that not enough people seek out a career or employment in this sector. This low valuation of technical trades has been reinforced or perpetuated by broad political and economic developments. This relates to changes over time in the structure of the economy, the nature of work in various industries, the country's race and ethnic relations, and the introduction of new public management (NPM) ideas into local government.

If these factors help explain the broader structural challenges in the water management sector, we will see that, specifically, it is has been 'managerialist' reforms in local government, and across the public sector, in the 1990s that have that have exacerbated uneven performance in the water and sanitation sector.

Our research, therefore, finds that the skills challenge in local government, while exacerbated by issues internal to municipalities, has wider political, cultural and economic origins. This accords with recent studies of skills

formation which suggest that skills development should be examined in the context of the organisation of the economies and societies in which they are located (Allais, 2013). We therefore suggest that scholarly and policy attention should pay greater attention to these dynamics.

1.4. ABOUT OUR RESEARCH APPROACH

We undertook this study for a number of reasons. Firstly, it supports and extends PARI's work on the changing nature of the state and its relationship with society. We have conducted research on other arms of the South African state but not as yet into local government. Our motivation here was in part to explore to what extent our findings about the national and provincial dimensions of the state correspond with developments at local level (Chipkin, 2011a; Chipkin, 2011b). Secondly, local government and the water and sanitation services are sectors of deep and immediate concern. The intense social demands on the state in relation to water services compel interest.

We used a mixed methodology. This involved interviews with key informants in the water and sanitation sector; document review of academic and grey literature; in-depth interviews with a range of stakeholders including officials from national and local government, civil society actors, scientists, researchers and consultants; and fieldwork in a number of municipal locations including Govan Mbeki Local Municipality and Uthukela District Municipality. Due to the sensitivities in the sector, it is important that we respect the confidentiality of our respondents who were very generous with their time and insights. We therefore use a coding system for identification purposes, referring to our respondents by random letters of the alphabet.

The report is structured as follows. The next section provides a historical account of the evolution of water and sanitation services in local government. We find it necessary and important to take a long view because most analysis and public discourse takes account only of the present. The next chapter explores the nature of the skills challenge and its impacts, attempts to paint a quantitative picture and finally explores factors that produce this challenge. The final chapter offers some conclusions and sets out a future research agenda. This research offers a preliminary glimpse into a very complex sector. While we are confident in our arguments, as we say in the conclusion, this is a first cut which identifies broad patterns occurring all over the country. These patterns are unfolding in different ways at different places. Our line of inquiry therefore needs to be extended. This should include more detailed analysis of particular municipalities.

1.5. ACKNOWLEDGEMENTS

We would like to extend a special thanks to our respondents for their generosity in taking time out from their very busy schedules.

We would also like to thank the Open Society Foundation for South Africa; this research would not have been possible without its generous support.

Sowing the seeds of unevenness



History is important in understanding current challenges confronting local government. A long view is vital because most analysis and public discourse only takes account of the contemporary moment. This is not surprising in the context of the prevailing discourse of crisis and the empirical reality of communities suffering from a lack of services, or interrupted services. To tell this story, it is useful to provide a historical account in two parts; prior to and after democratic transition. While there may be other ways of periodising, the changes introduced with the democratic transition have significantly transformed local government, creating a sharp break with what came before.

In this chapter we argue that the many challenges to local government with regard to water and sanitation delivery have deep-seated origins. Apartheid policies combined with varied local economic development patterns led to uneven institutional development and thus uneven water services delivery. Policy reforms and processes introduced in the transition period also produced unevenness. While they led to massive expansion of services, the scope and pace of change in itself led to complications in service delivery. It led to the destabilization of many local administrations, with, for example, outflows of staff and loss of databases. In other instances there was straightforward service delivery failure; some waste water treatment plants simply stopped operating. These historical factors combined with recent developments explain why the spatial patterns in service delivery apparent just prior to the democratic transition persist in broadly similar ways today.

2.1. PRIOR TO DEMOCARATIC TRANSITION

Water and sanitation governance prior to the democratic transition was complex. Different institutions were responsible for different functions in various areas, sometimes in overlapping fashion. The institutional architecture generally corresponded with prevailing governance arrangements. What follows is a short account of how different arms of government and related institutions were involved in water and sanitation services. In general, despite this complexity, the provision of water and sanitation services in urban areas has historically been linked to the development of towns and cities.

In general, water and sanitation services were provided directly to households, industry and commerce by municipal authorities. These authorities were usually self-financing, delivering water and sanitation services on a user pay principle. However they received financial support from the provincial administrations and National Government, through its various departments. The system of financial transfers through loans and grants appears to have been ad hoc and uneven. Because of apartheid spatial policies, the performance of municipal authorities corresponded to the racially-defined inequities imposed by government (Palmer Development Group, 1993: 22).

Authorities serving white areas were better resourced than those in black areas because they could draw on a healthy tax base, including revenue from ratepayers, industries and other commercial enterprises. These authorities were able to generate profits from water sales and were even able to build up reserves (Palmer Development Group, 1993: 55, 62).

Local authorities created in the late 1980s to govern black areas in townships were on the other hand severely resource constrained. They generally operated at a financial loss and resorted to borrowing from sources such as the provinces, the Development Bank of Southern Africa, the Independent Development Trust and other entities (Palmer and Eberherd, 1994: 61). The financial weakness of these administrations was a direct result of apartheid policy which did not allow commercial and industrial developments in these areas (Ministry of Provincial Affairs and Constitutional Development, 1998: 12).

⁸ This culture of non-payment of services in protest against authorities seen as illegitimate persists to this day. While the personnel involved are different, some of our respondents observed that they faced great difficulties in obtaining payment for services in areas that were formerly part of the homeland system (Respondent E, 21 November 2013).

While these authorities were supposed to deliver services directly, in practice, due to lack of their own capacity for actual implementation, they contracted out to white local authorities (ibid.: 18). Furthermore, they almost always purchased their water from adjacent white local authorities. Also, these authorities were often regarded very poorly by the communities they served since they were seen as conspiring with apartheid. As a result they experienced low levels of payment⁸ for services (Palmer Development Group, 1993: 19, 29). Many civic organisations arose to protest against their creation (van Donk and Pieterse, 2006: 109). Authorities serving coloured and Indian communities performed better than black ones. Because of their lobbying at the tri-cameral parliament they received more funding (Palmer Development Group, 1993: 20). Authorities serving coloured and Indian areas were distinct from those operating in black areas in regard to the level of authority assigned to them. Though the former had less autonomy than the white areas, they did have limited powers granted to them by the white local authorities in which they were embedded (van Donk and Pieterse, 2006: 108). In the late apartheid period, new municipal authorities called Regional Services Councils and Joint Services Boards were introduced. Some analysts see these as having been created in order to deflect growing calls for democratisation by expanding services to black communities (Ministry of Provincial Affairs and Constitutional Development, 1998: 13). Part of their mandate was provision of water and sanitation services. They functioned in different ways depending on the region in which they operated. In some areas they provided sanitation services, in others this function was performed by existing local authorities. Their funding model was similar to all other local authority entities in that they were expected to be self-financing. They could raise revenue for operations through taxes and levies on local firms and also borrow from financial markets and development institutions such as the Development Bank of Southern Africa (Palmer Development Group, 1993: 18).

The self governing territories (Transkei, Bophuthatswana, Venda and Ciskei, known collectively as the TBVC states) and non-independent territories (Gazankulu, Kangwane, Kwandebele, Kwazulu, Lebowa and Qwaqwa) had their own approaches, policies and systems of administration with respect to water and sanitation services (Palmer and Eberherd, 1994: 55). In the TBVC territories, water and sanitation services were delivered at a 'national' government level through departments (Palmer Development Group, 1993: 17). Though the TBVC states were independent entities many were completely reliant on the national government of South Africa for financial support (DWAF, 2006: 4).

Provincial administrations played a minimal role in the actual delivery of water and sanitation services. They were mainly a conduit for financial resources to local authorities, especially black local authorities. Financial support to black local authorities from provincial administrations was only introduced as a means of placating growing protests in the 1980s (Cameron, 2013: 168). In some cases, however, especially when no local authorities had been established, they were involved in direct delivery (Palmer Development Group, 1993: 53). The then provinces of the country, while not directly involved in the administration of the self-governing territories and states, exercised influence since they managed land use decisions in those territories, controlled finances and offered development assistance (Palmer and Eberherd, 1994: 56). Through its departments the national government of South Africa had a direct, though minimal, role in water and sanitation services provision. It concerned itself with overall water resource management through the national Department of Water Affairs and Forestry (DWAF). This entailed managing water basins, rivers and other sources of water. In addition, it was concerned with water management for broader national economic interests, in particular to support agriculture and industrial production, especially mining. This role, with national government involved in water only in relation to what were seen as national strategic priorities rather than everyday needs,⁹ has a long history, with national government supporting the construction of large scale irrigation schemes in the 1930s. After World War 2 significant national financial support was given to increasing water supplies to urban areas where key economic activities were emerging. Large water schemes were constructed specifically to meet the water requirements of industries such as Eskom and Sasol seen as pivotal to the economy (Muller, 2012: 12).

Gradually over time however, as demand for urban water grew, national government became more closely involved in urban affairs such as in the construction of large water reservoirs from which municipal water could be extracted (Palmer and Eberherd, 1994).

Bulk distribution of water was generally undertaken by what were and still are known as Water Boards.¹⁰ Water Boards purchased water from the national government through DWAF. Municipal authorities would then purchase water directly from these entities. However in some cases, it appears that there were ad hoc arrangements where some Water Boards were involved in direct distribution to consumers. Though Water Boards were allowed through legislation to undertake bulk waste water treatment, few did so (Palmer Development Group, 1993: 24).

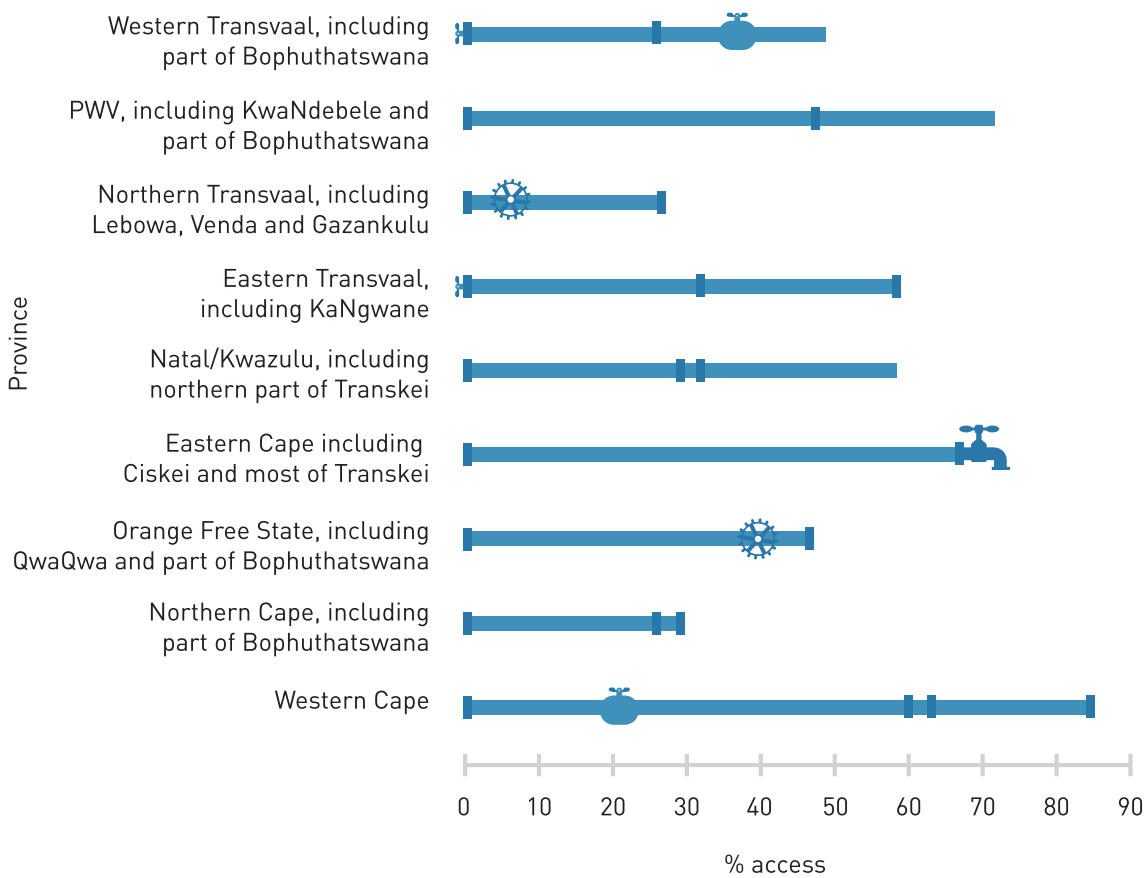
Access to water and sanitation services and infrastructure corresponded to apartheid governance arrangements as discussed above. In general, rates of access and quality of provision were best in areas governed by white local authorities. Studies on the state of access just prior to the democratic transition illustrate this. With regard to water, the studies show that the Western Cape region had the best rate of access to water services, with the former Northern Transvaal region being the worst (Palmer and Eberherd, 1994: 156).

⁹ This is also reflected in institutional forms. For example, the original national government department with some oversight over water issues was called the Department of Irrigation. It evolved into the Department of Water Affairs and Forestry, then simply Department of Water Affairs.

¹⁰ Some of these included Rand Water, Umgeni Water, Bloemarea, Goldfields, Albany Coast, Duivenhoks and Ruensveld, Kalahari-East, Kalahari-West, Karos-Geelkoppan, Mhlatuze, Pelladriфт, North Transvaal and Phalaborwe, Western Transvaal Regional Water Company, North Transvaal and Phalaborwe, and Springbok (Palmer and Eberherd 1994: 58).

Again, with respect to access to sanitation services, the Western Cape in the same early 1990s period had the best record with 85% of the population enjoying some access. The worst performing region was again the Northern Transvaal with only 27% of the population using waterborne sanitation systems and 72% using unimproved pits (Palmer Development Group, 1993: 12, 16). The image below represents geographic distribution of access to waterborne sanitation systems in urban areas just before the transition.

Figure 10: Rate of access to waterborne sanitation prior to the democratic transition period



Source: Palmer Development Group & University of Cape Town, 1993

2.2. DEMOCRATIC TRANSITION

It was against this backdrop of racially defined provision of services that the transformation of local government commenced. We will see that in the democratic period reforms in local government generally and in the water sector in particular were driven by the need to overcome this apartheid legacy. We will see also that there is good reason to revisit some of the service delivery models that come from that period and that are still with

us today. For the moment it is worthwhile outlining the broad contextual challenges in relation to what it was intended should occur. The challenges were summarised as follows in the White Paper on Local Government:

- Skewed settlement patterns which are functionally inefficient and costly
- Extreme concentrations of taxable economic resources in formerly white areas
- Huge backlogs in service infrastructure in historically underdeveloped areas
- Creating viable municipal institutions for dense rural settlements
- Great spatial separations and disparities between towns and townships, and urban sprawl
- Creating municipal institutions which recognise the linkages between urban and rural settlements
- Entrenched modes of decision-making, administration and delivery
- Inability to leverage private sector resources for development
- The need to rebuild relations between municipalities and the local communities they serve. (Ministry of Provincial Affairs and Constitutional Development, 1998: 21).

The transformation agenda (Powell, 2012: 17–18) in the period of transition to democracy was informed by various factors. Following the White Paper on Local Government (1998), they can be summarised into six broad objectives. These are (i) improving the democratic and developmental nature of local government, (ii) re-articulating the relationship with other spheres of government, (iii) changing jurisdiction in relationship to spaces, (iv) reconfiguring modes of service delivery, (v) transforming the personnel management system, (vi) introducing new financial systems. We discuss these in turn below.

2.2.1 IMPROVING THE DEMOCRATIC AND DEVELOPMENTAL NATURE OF LOCAL GOVERNMENT

The overriding critique was that local government had previously been an instrument of political and socio-economic exclusion. The broad objective was to make it democratic. There were various aspects to this agenda. First, services would be expanded to all, without racial prejudice. As a result, access to water was enshrined in the new Constitution as a basic human right. Section 27 of the Bill of Rights in the Constitution states that “everyone has the right to have access to ... sufficient ... water”. Accordingly, the “the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights” (van Donk and Pieterse, 2006: 109).

The second dimension of democratising local government involved increasing public input or participation in governance processes. While it is difficult to generalise, given the highly varied picture presented previously, some argue that, in general, municipal authorities were closed to deliberation not only internally but also in relation to local communities. Town councils

before democratisation are said to have “acted in a paternalistic manner, making decisions ‘for the good’ of communities without actually consulting with those communities, although some input and oversight was offered by rate payers associations”. This limited engagement was confined not only to local communities; other spheres of government, including provincial and national authorities, were rarely consulted (Lawless, 2007: 63, 65).

This lack of external accountability was mirrored in practices within the administration which were exemplified in a number of ways. The relationship between councillors and staff seems to have been characterized by limited engagements over policy and implementation matters. One reason for this is held to have been that councillors were volunteers, involved in an ad hoc manner with the day to day management of municipalities. Within the administration itself, a hierarchical culture obtained. The chain of command started from the Town Clerk at the top and was mirrored in a staffing system where positions were filled based on experience (Lawless, 2007: 63).

Policy makers were highly concerned to change this mode of operation. Accordingly, the White Paper on Local Government which promulgated the agenda for transformation argued that “many municipal administrations are still characterised by hierarchical line departments, poor coordination between line departments, and authoritarian management practices. Front-line workers remain de-skilled and disempowered, and women and black people are not adequately represented in management echelons” (Ministry of Provincial Affairs and Constitutional Development, 1998: 17). This type of view about authoritarian hierarchical bureaucracies dovetailed neatly with arguments made by proponents of organisational management reform theory and practices known as new public management (NPM). In general terms, it was argued that by applying “a range of ‘techniques’, including management practices, developed in the business world” (Chipkin, 2013: 6), such as flatter organisational structures and with more autonomy assigned to individuals within organisations, greater efficiencies could be gained (Lowndes, 1997: 44).

2.2.2 RE-ARTICULATING THE RELATIONSHIP WITH OTHER SPHERES OF GOVERNMENT

Another dimension of transformation involved the reform of the legal status of local government. Municipal authorities had been statutory institutions existing at the behest of provincial and national administrations (Ministry of Provincial Affairs and Constitutional Development, 1998: 37). The legal implication was that “it rendered all their actions, including the passing of by-laws [and] administrative actions, subject to judicial review”. The new constitution passed in 1996 gave local government full autonomy albeit with support and supervision from provincial and national government (SALGA, 2014).

Redefining the legal nature of local government implied a change in roles and responsibilities between the different spheres. These were set out in the White Paper on Local Government (1998). However, the key change was that local government became the central agent of the ‘developmental

agenda'. That is, it was to be the frontline actor through which material and social services would be delivered directly. Provincial and national government would play a supportive regulatory role in this agenda. With respect to water services, there was no fundamental shift in the cities. Municipal authorities had, as indicated previously, always provided water services. The major exception in this regard related to rural areas where DWAF had taken charge of direct service delivery in the transition period. Here operations were devolved down, with DWAF ceasing to supply water to communities (Ministry of Provincial Affairs and Constitutional Development, 1998: 46).

2.2.3 CHANGING JURISDICTION IN RELATIONSHIP TO SPACES

Arguably, prior to the transition, municipal authorities were ill designed in organisational size and form to engage with the populations and spaces they administered. Reforms were instituted which aimed to reconfigure them to align better with the different parts of the country. Broadly, consolidation to reduce the number of existing municipalities was a major item on the agenda since it was thought this would produce more operational efficiencies. For example it was argued that in many cases, especially in large urban centres, municipal boundaries did not correspond to actually existing social and economic activities (Ministry of Provincial Affairs and Constitutional Development, 1998: 19, 52).

2.2.4 RECONFIGURING MODES OF SERVICE DELIVERY

The ways in which municipal authorities rendered services were seen as inefficient and monopolistic as they were solely responsible for all components of service delivery. Reforms were suggested in the White Paper on Local Government (1998) to allow other actors including the private sector, non-governmental organisations and other state entities to render services on behalf of municipal authorities. Such new actors could for instance be involved in such aspects of municipal governance as policy development or infrastructure maintenance.

In addition, municipal authorities themselves could be redesigned to offer services according to different logics and models. For instance, service delivery entities could be removed from direct day to day management by councils and could operate on a more commercially oriented basis (Ministry of Provincial Affairs and Constitutional Development, 1998: 74-80). This process was known as corporatisation. It led to the creation of what are currently called Municipally Owned Entities (MOEs). These tend to be large scale service providers in areas such as waste management, water, waste water treatment and parks and recreation.

Again, these ideas about how particular transformations in organisational operations could lead to better service delivery outcomes are clearly in the spirit of the NPM agenda. As Lowndes notes, the "NPM promotes new structures designed to facilitate client/contractor splits, the

decentralisation of provider units, 'consumer' choice and feedback, and service monitoring" (Lowndes, 1997: 44). This intellectual heritage is however not acknowledged in the White Paper.

2.2.5 TRANSFORMING THE PERSONNEL MANAGEMENT SYSTEM

Consistent with the NPM agenda of reforming modes of service delivery for greater efficiency and improved service delivery, systems of personnel management were also to be transformed. Some positions, especially senior ones, were to be awarded on short-term contracts so as to incentivise delivery and focus on job outputs. This was to be regulated through performance contracts. Affirmative action policies, especially targeting senior management positions, would also transform the personnel management system to reflect the country's demographics. Moving away from what was seen as the authoritarian, hierarchical, operational model, staff would be given more discretion to execute their work individually or in self-organised teams. Communication flows would also be improved allowing for all to participate in organisational life. At the same time, a new staff training system would be developed, more inclusive than the previous model that had tended to exclude junior workers. It would also incorporate a wide range of skills development requirements and be delivered more systematically. Finally, local government training would be rationalised from two seemingly inefficient and wasteful systems into a single national system. The new system would be "flexible, decentralised, demand-led, and structured to ensure continuous evaluation and improvement" (Ministry of Provincial Affairs and Constitutional Development, 1998: 81).

2.2.6 INTRODUCING NEW FINANCIAL SYSTEMS

The final sets of reforms targeted municipal finances. At a national level, it was recognised that municipalities had uneven access to income. Therefore, firstly, the correlation between the size of the local tax base and level of performance was high. To compound this, systems of taxation were poorly designed, targeted unevenly from place to place, and weakly administered. Secondly, financial management practices were sometimes poor, characterised by "unrealistic budgeting," "poor credit control" and "lack of budgetary and financial discipline". Thirdly, it was argued that local government drew on a limited range of revenue sources. Some municipal authorities were for example accused of not exploiting the opportunities presented by borrowing from the capital markets (Ministry of Provincial Affairs and Constitutional Development, 1998: 93, 94). Fourthly, where they existed, income flows from different spheres of government were fragmented, unpredictable, poorly designed against objective needs and often did not serve developmental purposes.

Reforms sought to address these and other deficiencies in municipal finance. Many of the proposed changes, however, did not fundamentally revolutionize the municipal financial model, simply tinkering at the edges. The reality was that in general existing systems were redesigned or improved. In general municipalities had been mostly self-financing, relying on local rates and taxes. In addition they were able to seek external sources of funding such as loans or grants from capital markets or from other arms of government. This did not fundamentally change. However, there was one major change: the introduction of the principle of equity across the country. That is, no municipality was to be prejudiced by a weaker economic base since resources would be provided through the national fiscus. The financial instrument to achieve this objective was the Equitable Share of Nationally Raised Revenue (Equitable Share), which will be discussed more fully in a later section (Ministry of Provincial Affairs and Constitutional Development, 1998: 84).

These six domains constituted the broad parameters for change in local government. How was this transformation processes intended to operate with regard to water and sanitation services?

2.3. STAGES OF TRANSFORMATION

A key legislative document guiding the transformation agenda was the Local Government Transition Act of 1993 (Act 209 of 1993) (van Donk and Pieterse, 2006: 110). This act laid out three phases of change; pre-interim, interim and final.

2.3.1 PRE-INTERIM PHASE

The first, pre-interim, phase was supposed to unfold between 2 February 1994 and municipal elections in 1995/1996. In this phase, local negotiating forums were set up and charged with setting up temporary councils to govern their respective jurisdictions until elections. New boundaries were to be drawn, councillors given office through appointment and financial systems established (van Donk and Pieterse, 2006: 112). The operating mode was supposed to be consensual, with, for example, decisions on budget expenditure to be reached by two thirds majority. A key outcome in this phase was the creation of 842 municipalities, down from over 1000 (Powell, 2012: 14). Because of this model of decentralised local government, where temporary councils were given powers to establish governance models as they saw fit, a highly variegated model of local government emerged (Ministry of Provincial Affairs and Constitutional Development, 1998: 14).

Other policy transformations unfolded that affected water and sanitation services. Critical was the Reconstruction and Development Programme (RDP). One of the five main elements in the RDP was the provision of basic needs, conceptualised to include "land reform, housing and services, water and sanitation, energy and electrification, telecommunications, transport, environment, nutrition, health care, social security and social welfare". The problem the RDP identified was that 12 million people did not have access

to clean drinking water and 21 million people were without decent forms of sanitation (O'Malley, 2014). Local government was positioned squarely as the state institution with the responsibility of correcting this problem:

local governments must be made responsible for water distribution, provision of adequate sanitation facilities and waste removal, and the financing of these services through appropriate tariff and local tax mechanisms (ibid.).

Even though local government was seen as ultimately the institution to discharge these functions, there seems to have been a recognition of the scale of the task in relation to available capacity (O'Malley, 2014). That is, it did not seem possible in this early phase of state transformation that all local government entities would be able to perform to this agenda. As a result, DWAF as well as the water boards, described earlier, were to be authorised to execute special projects. This was proposed in the White Paper on Water and Sanitation. These special projects, generally large scale infrastructure development projects with a rural focus, later known as Presidential Lead Projects and then RDP Programme 1, 2, 3 and 4 were executed by DWAF in collaboration with non-governmental organisations, water boards, and local government authorities with the required capacity (DWAF, 2006: 6).

2.3.2 INTERIM PHASE (1996-2000)

The interim phase which followed the municipal elections ran from 1996 to 2000, paralleling the first democratic government under the leadership of Nelson Mandela (Powell, 2012: 14). It was thought that in this phase, the transformation agenda would be completed. Councillors would now be elected. A major constitutional change in 1996 was that local government now became formally autonomous. In this period, given the historic legacy of uneven service provision, local government was given an explicit developmental mandate (van Donk and Pieterse, 2006: 113). In this period, a watershed policy development was the publication of the Water Services Act (Act 108 of 1997). This Act formally set out the intentions of the RDP; it provided a national legislative framework for how water and sanitation services were to be governed and delivered. It stipulated that henceforth it was the responsibility of local government to provide water and sanitation services, however making two key distinctions about governance and delivery. On the one hand there would be Water Services Authorities and on the other Water Services Providers. The former held local governance authority so would ultimately decide on strategy, operations, funding allocations and related governance aspects. On the other hand, the latter would be responsible for delivery of services. Such agents could be other municipalities, water boards, private commercial entities and non-governmental organisations. The Water Services Authorities would enter into contractual arrangements with the Water Services Providers for the given service. It was however possible that the Water Services Authority and Provider would be the same entity (DWAF, 2006: 16).

A new national fiscal environment was also introduced at this time which had consequences for how local government in general and water services

in particular operated. First the country pivoted towards the macroeconomic Growth Employment and Redistribution (GEAR) policy framework. GEAR set out to achieve increased economic growth in order to create jobs, expand services and reduce inequality, albeit within a strong framework of “fiscal discipline” (Powell, 2012: 16). This meant that in theory at least, “local government reforms would be disciplined by fiscal reform goals, budget contraction and tighter treasury controls” (Powell, 2012: 13). In addition, it also meant that local governments would be much more open to forces of globalisation with attendant economic transformations; production processes of firms would change, some businesses would close, new ones would emerge. Such processes would affect the revenue base of local government but it was ultimately up to municipal institutions to manage such dynamics (Ministry of Provincial Affairs and Constitutional Development, 1998: 19).

In addition, the Equitable Share, which provided for redistribution of funds from the national fiscus to local government, was introduced in this period. Through the Equitable Share, at least according to the original design, it was intended “that local government raised 90 percent of its own revenue and only 10 percent would be subsidised” (Powell, 2012: 15). Furthermore it was to be an “unconditional” allocation meaning that local government could allocate it as they saw fit. It was based on the “cost to the municipality of providing a package of basic services and the number of indigent households in the municipality” (DWAF, 2006: 16). A portion was to be allocated for water services. However this was set against an overall fiscal framework where services were supposed to be self-financing. National transfers to local authorities were not supposed to support ongoing operations and maintenance but only where necessary subsidise costs of providing services (DWAF, 1994: 18). In 2011 there were moves to reform the Equitable Share formula, given concerns about underfunding (Powell, 2012: 25). Efforts initiated in the previous period to accelerate access by previously under-serviced communities to water services continued. DWAF sought to incorporate additional participants in infrastructure development, launching a programme where private sector actors would be paid to “build, operate, train and transfer” water and sanitation services to municipalities. In 1997 the first projects were launched in rural areas in the Eastern Cape, Limpopo, Mpumalanga and KwaZulu-Natal (DWAF, 2006: 16).

2.3.3 FINAL PHASE

The final phase was supposed to commence in 2000 after the second round of municipal elections since democratic emancipation (van Donk and Pieterse, 2006: 113). This phase was further segmented into three, the first from 2000-2002 entailing establishment of the new form of local government, the second from 2002-2005 consolidating it, and finally, from 2005 onwards, it was imagined that local government would enter a future of sustainability (Powell, 2012: 16).

An important transformation in this phase was the further reduction in the number of municipalities from more than 1000 to 284 (Powell 2012: 15). This process involved mergers of previously separate councils (DWAF,

2006: 16). A policy of free basic services was also introduced. The services considered 'basic' were water, electricity, sanitation and waste collection. With regard to water and sanitation, this was defined as "potable water supply of 25 l/person/day within 200 m cartage distance, and a ventilated improved pit latrine" (DWAF, 1994: 25). Accompanying this policy would be increases in the levels of fiscal transfers to local government (Powell, 2012: 16).

Another key development was that in this period DWAF began transferring water service projects in rural areas that it had been running to local governments. Henceforth the Department would no longer be involved in direct provision of water services to end users. It was envisaged that this process would be complete by 2008 (DWAF, 2006: 16).

2.4. TOWARDS CRISIS

"One of the problems is, systems here are so fragile and you see ... the amalgamation of municipalities, the amalgamation of various forms of local government in this country was huge, huge: don't underestimate it" (Respondent V 13 September 2013)

This orderly, sequential vision of change failed to materialize. As early as 2001 various commentators were worrying that things were going wrong (Powell, 2012: 16). The process of change envisaged in the Local Government Transition Act of 1993 (Act 209 of 1993) introduced variables that complicated the ability of municipalities not only to provide water and sanitation services evenly across the country, but also their broader developmental mandate. We have noted that consolidation was a major exercise, meaning that previously independent councils would operate as one in governance and service delivery. In practice this meant that at the bureaucratic level, previously disparate systems of financial management, rule making, tariff setting, personnel management, service delivery and other aspects would have to be brought together. It is worth quoting one of our research respondents at length to appreciate the diversity of systems:

You will find that in managing their services, some local authorities will have in house people, who will do the construction, all the maintenance etc. In another area, they would have moved away from that and outsourced some of it, so you had to balance all of this ... each local authority had their own administration, their own bylaws, their own tariff settings, policies etcetera, now all of a sudden they had to prepare, say, one bylaw, for instance for water, that will govern how we will provide water ... the tariffs were quite a challenge because you will find that some areas were much more expensive than others. To take an example, in Benoni you will pay, say, R4 per kilolitre of water, in Alberton you will pay R2.80 per kilolitre and in Germiston R3 per kilolitre. So now, all of a sudden, you need to balance this and you must phase it in over a period (Respondent P, 12 November 2013).

The processes of consolidation brought together town councils that not only had different administrative systems but also varying capabilities. For example,

in the Govan Mbeki Municipality, two town councils, Secunda and Evander, were reportedly “fairly functional in terms of ... revenue and ... operations” while on the other hand in “Leandra you wouldn’t really say the municipality was functional because it was not generating income” (Respondent C, 20 November 2013). This also meant that new administrations were inheriting debts or surpluses as the case might be (Respondent L, 28 November 2013).

Integrating such systems was an extremely difficult undertaking. Some of the difficulties were the changes in personnel. People moved geographically, assuming new responsibilities, working with new colleagues from different organisational cultures, with new salary structures being introduced, encountering these and other forms of uncertainty. As one respondent observed “you must also understand that to some, the amalgamation process in 2000 was not smooth in terms of handover. It was not a smooth process: you know, people were intimidated” (Respondent C, 20 November 2013). Another respondent helps enable us to appreciate the impact of the transition process:

People were moving all over the show ... I don’t know whether it was a political decision forced on top management or whether it was just a top management decision [to move people] ... to say ... ok, we will keep a small core: say there were twenty people working in a section, now we will leave three people here, and we will send the rest elsewhere ... in my opinion it was a disaster because all that institutional capacity that you have in a certain area, you take these people and amalgamate them, rather than leave them where they are. Over time, this thing will sort itself out but don’t deliberately move people from there to there to there. By doing that they lost a lot of institutional capacity and they also lost a lot of information ... and it also made people negative because a person living there, it was his choice to stay, say in area A, with his family there and his wife working there and his children at school there: now all of a sudden he is moved, with no choice ... all that had a very negative influence on people’s attitudes (Respondent P, 12 November 2013).

As noted previously the process itself led to service failures. One respondent gave a stark illustration of how this happened in one region:

Well they had taken the function away from the local municipality, you have these situations where the district had taken away the function from the local authority, you now had someone like a general worker in charge of a plant ... there was this picture of this flow diagram, that tracks the flow ratio [of effluent into a waste water treatment plant], with the flow rate coming in. It had just sort of stopped at one point and all the ink had drained out, it was like this moment when they left, you know the ink had just stopped and had just run out into this thing. It was like this incredible symbol of something. It was like abandonment (Respondent N, 22 October 2013).

Other examples of damage relate to losses of information. Some municipalities lost operational data such as maps of existing water infrastructure. For whatever reasons such records were not centrally archived in the new

municipal administrative headquarters. This meant that additional effort and resources had to be allocated for searching out the records wherever they might be and/or physically exploring for water pipes (Respondents Q and E). Time was lost. In other instances where municipalities may have had ongoing interactions involving sharing of operational information, amalgamation did not complicate or delay operations:

Luckily, we started with a process in the nineties, when it was still the local authorities, with the Regional Services Council where I worked. We did this because although there were independent local authorities, they were bordering each other, so what we said at that stage was that we needed to work together and we set up a forum in about 1992/93 where we worked together with the local authorities ... Instead of, say, Boksburg building a reservoir here in a certain area maybe it can also supply Edenvale or whatever. It makes sense: let's rather put our resources together and do that. So, we had already started about eight years before the metro began. We started to work like that and then we realised that we should also have an information system about all our pipes and so on, sizes and whatever, and we started to put that all together and we also did some modelling. So, when the metro came we were actually far advanced (Respondent P, 12 November 2013).

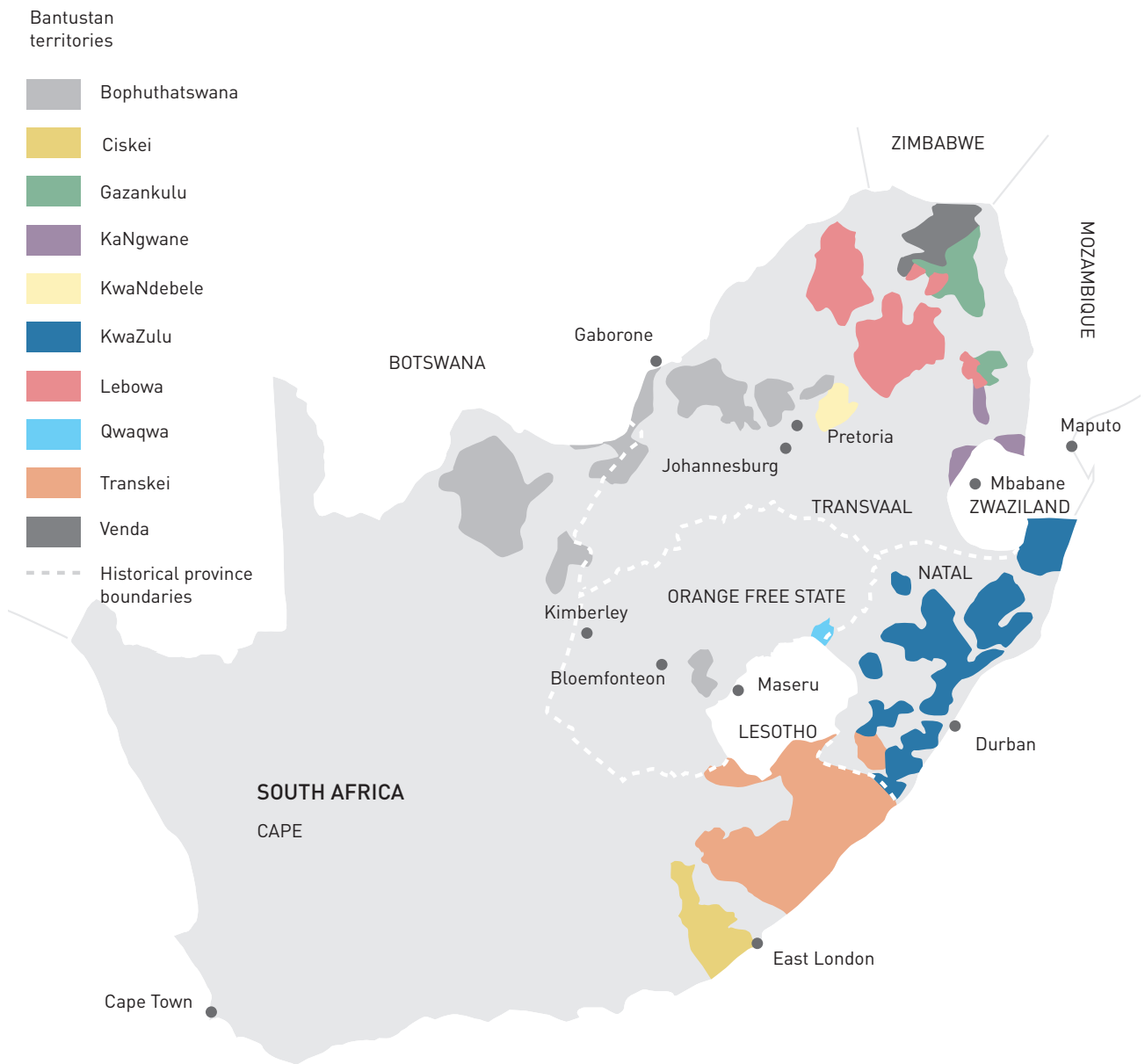
Perhaps most challenging of all was that bureaucracies which had been instruments of exclusion under apartheid, serving relatively small white populations, were now expected to expand their services to many more people, including extremely poor black populations. Overnight the gap between supply and demand increased dramatically. With commensurate increases of financial resources, personnel, infrastructure and other 'inputs' there would have no challenges. However allocation was variable and ad hoc (Ministry of Provincial Affairs and Constitutional Development, 1998: 17).

One illuminating illustration we encountered involved a merger of a homeland and white council. A water treatment plant adjacent to a homeland area had been erected to service the white area. During the transition period it was decided to extend water services to the homeland area. However the water treatment plant was not designed to supply the new volumes of water required. While some creativity in technical operation of the plant enabled it to meet the demand, this was at the expense of maintenance. In other words, the plant could not stop running some of its pumps for routine maintenance, since doing so effectively meant interrupting the water supply (Respondent E, 21 November 2013).

Due to these challenges, the vision of reformed municipalities entering a period of sustainability after 2005 became increasingly elusive. Instead, a discourse of crisis and failure began to feature, at least in popular discourse. Policy-makers and other actors have over time responded by launching repeated initiatives to address the malaise in local government. Rakabe (2009: 152) identifies at least 15 separate initiatives launched by all spheres of government, international donor agencies, and other agencies from 1996

to 2010. The financial costs of these efforts are likely to have been high. Consolidated figures are not available, but the scale of the expenditure is indicated by the more than R2 billion allocated under the Financial Management Grant in the period 2001–2012 (Peters and Van Nieuwenhuyzen, 2012:287). What is also particularly striking is that in spite of these efforts at capacity building, the historic patterns of access present just prior to the transition to democracy persist to this day, with uneven access still coinciding with historic apartheid-era patterns. Consider the maps below:

Figure 11: Map of former Bantustan territories



Source: Encyclopaedia Britannica, 2009.

The figure below shows the current provincial boundaries.

Figure 12: Current provincial boundaries



The table below presents a performance history of water delivery between 2010 and 2012 according to the Blue Drop system. Blue Drop is a national system where “all elements in the water supply system including sampling of water at the intake and the outflow of the water treatment works, in distribution pipelines and reservoirs and at the point of use” are assessed (DWAF, 2013: 43). The table lists the top ten performers in descending order from the top, showing that in general well performing municipalities continue to be those which do not originate in homelands or black local authorities, which were weakened, as discussed previously, by apartheid policies.

Source: Department of Water Affairs Blue Drop Reports, http://www.dwaf.gov.za/dir_ws/dwqr/

Table 2: Top ten Blue Drop Performers, 2011-2012

2012 Ranking			2011 Ranking			2010 Ranking		
Municipality	Category	Province	Municipality	Category	Province	Municipality	Category	Province
Ekurhuleni & Rand Water	Metro	Gauteng	City of Johannesburg & Rand Water & Joburg Water	Metro	Gauteng	City of Johannesburg & Rand Water & Joburg Water	Metro	Gauteng
City of Johannesburg & Rand Water & Joburg Water	Metro	Gauteng	City of Cape Town	Metro	Western Cape	City of Cape Town	Metro	Western Cape
Mogale City & Rand Water	Local	Gauteng	Ekurhuleni & Rand Water	Metro	Gauteng	Bitou LM	Local	Western Cape
Ethekwini Metro	Metro	KZN	Witzenberg LM	Local	Western Cape	Kgatelopele LM	Local	Northern Cape
Tlokwe LM	Local	NorthWest	West Coast District Municipality	District	Western Cape	George LM	Local	Western Cape
City of Cape Town	Metro	Western Cape	Tlokwe LM	Local	NorthWest	Ekurhuleni & Rand Water	Metro	Gauteng
Bitou LM	Local	Western Cape	George LM	Local	Western Cape	Mogale City	Local	Gauteng
Witzenberg LM	Local	Western Cape	Mogale City LM	Local	Gauteng	City of Tshwane & Rand Water & Magalies Water	Metro	Gauteng
Randfontein LM	Local	Gauteng	Bitou LM	Local	Western Cape	Ethekwini & Umgeni Water	Metro	KZN
George LM	Local	Western Cape	Emfuleni LM	Local	Gauteng	Dr J.S. Moroka LM	Local	Mpumalanga

Patterns in waste water management reveal similar dynamics. The table below represents Green Drop scores listed in descending order from the top. Like the Blue Drop system, Green Drop is a composite index measuring how municipalities treat and dispose of their waste water. In this exercise the “critical performance indicators include the design and operating capacity of the wastewater treatment works, compliance of the effluent to agreed standards, the technical skills of the management authority and the condition of infrastructure” (DWAF, 2013: 43). The rankings are based on what the process refers to as Cumulative Risk Rating (CRR). The CRR assesses rates of effluent flowing into the plant in relation to design capacity, quality of treated water being discharged from the plants, and technical skills available. Here, we only show two years since the 2009 report did not present CRR per municipality.

Table 3: Top ten Green Drop Performers, 2011-2012

2012 Ranking			2011 Ranking		
Municipality	Category	Province	Municipality	Category	Province
Bitou LM	Local	Western Cape	Bitou LM	Local	Western Cape
George LM	Local	Western Cape	Tlokwe LM	Local	NorthWest
Tlokwe LM	Local	NorthWest	George LM	Local	Western Cape
Witzenberg LM	Local	Western Cape	Witzenberg LM	Local	Western Cape
City of Johannesburg	Metro	Gauteng	City of Johannesburg	Metro	Gauteng
Ethekwini Metro	Metro	KZN	Emfuleni LM	Local	Gauteng
City of Cape Town	Metro	Western Cape	City of Cape Town	Metro	Western Cape
Randfontein LM	Local	Gauteng	Ekurhuleni	Metro	Gauteng
Ekurhuleni	Metro	Gauteng	Mogale City	Local	Gauteng
Mogale City	Local	Gauteng	West Coast District Municipality	District	Western Cape

Source: Department of Water Affairs Green Drop Reports, http://www.dwaf.gov.za/dir_ws/GDS/Docs/DocsDefault.aspx

How do we understand the spatial persistence of these patterns? Most analyses attribute local government failures to lack of capacity. As noted in the introduction, a variety of other explanations, including corruption, urbanisation, and the effect of intergovernmental relations are frequently cited as the causes. No doubt all of these have some influence as we confirmed in our empirical work. We have also shown here how longer institutional legacies of administrative capacity – allowed, even designed, to develop unevenly in South Africa under apartheid – still shape service delivery today. Services were expanded at an impressive rate post-1994. This expansion often took place in the context of and relied upon institutions of local government that were undergoing massive transformation. Areas which brought together white councils and former homeland areas faced a particularly complex task in the amalgamation process, as shown. This goes a long way to understanding the extent of unevenness of water service provision across the country. But it is not the whole story. As noted, the dominant explanation in policy reform discourse and popular debates is that of a skills deficit. And indeed we will show this to be the case, yet the nature of the skills crisis and the conditions which have created it are not those commonly referred to in popular discourse. We turn to this fuller analysis in the following chapter.

Understanding capacity: All about officials' skills?



“If I showed you the vulnerability index in this country,¹¹ it is horrific in terms of ... the colour coding system. There are three or four municipalities that are in the green zone, the rest are in the yellow, amber and red zones. That means that they are extremely vulnerable going forward, so there are a lot of vulnerability flags coming up. It ... all revolves around skills and capacity, the ability to run a proper business, twenty four seven, 365 days a year” (Respondent F, 7 October 2013)

3.1. INTRODUCTION

As the quotation above illustrates, lack of skills is the most commonly given explanation for poor performance.¹² This has two meanings. One refers to an absence of people to fill particular positions. For example the significance of personnel shortages was underlined in a survey where a majority of municipalities directly providing water and sanitation services complained about staff shortages (Mjoli and Schoeman, 2007: 44).¹³ The other dimension refers to a lack of relevant knowledge. With the former, most policy discussions point to vacancy rates. With the latter people may be appointed to positions without the ability to carry out their responsibilities (SAICE, 2011: 11).

This chapter explores the nature and impact of the skills challenge. It attempts a quantitative picture, and finally explores factors that generate the challenge. It argues that while municipalities are confronted, quantitatively and qualitatively, by insufficiency or absence of a wide range of skills, the picture is uneven across the country. Large metropolitan municipalities may attract and retain the people and skills that they need while others struggle. In addition, in water services, the most critical shortages occur in a range of basic technical operational functions. It shows that these shortages, in terms of numbers of people available, and vacancies, have a long history and are intimately tied to wider national political and economic dynamics.

3.2. IMPACT OF THE SKILLS MALAISE

The role of skills in influencing performance is often emphasised. A national review of local government perceived correlations between poorly performing municipalities and low levels of staff skills (COGTA, 2009: 9). More recently, the South African Human Rights Commission argued that “while water and sanitation service delivery is the competency of local government, many municipalities, particularly in poor or rural areas, do not have the skills and capacity to implement their mandate” (SAHRC, 2014: 16). Similarly, it was argued in a survey of the state of waste water treatment plants in South Africa that the most significant problem they faced was not funding or even the need to upgrade the infrastructure but a “critical shortage of trained, skilled and experienced process controllers and mechanical/ electrical maintenance staff” (Synman and van Niekerk, 2008:10).

¹¹ The Municipal Vulnerability Index. Refer to the introduction for this index.

¹² The discourse around skills often uses the word interchangeably with ‘capacity’. Much policy discourse for instance bemoans the lack of capacity, meaning a shortage of people and knowledge.

¹³ This excluded those that outsourced the function or had set up semi-autonomous entities such as Municipal Owned Entities to provide the services.

Decline is a recurrent trope in the narrative about government, local government in particular (Muller, 2009: 2; National Treasury, 2011: 116). Effectively, the story goes that the state of governance, in this case of water management, was once good and that since 1994 there has been a systematic deterioration. Even government departments have become accustomed to telling this story. The National Treasury, for example, reports that, “whereas in 1994, there were 20 engineers per 100 000 people, this has now dropped to 3 per 100 000 people” (National Treasury, 2011: 140).

The skills crisis is also understood to affect small and rural municipalities most (SAICE, 2011: 12; Peters and Van Nieuwenhuyzen, 2012: 283). Spatial unevenness of skills is certainly an observable fact. For example registered professional engineers are mainly found in metropolitan municipalities (Municipal Demarcation Board, 2012: 51). One reason is that larger municipalities, which tend to be in major urban centres, are seen by many professionals as more attractive places in which to live (Respondent Y, 16 September 2013). As a result it is reasonable to expect a corresponding variability in municipal performance.

What are the consequences of this skills malaise? The absence of such skills leads to failures in operations and in the maintenance of existing assets (National Treasury, 2011: 140; Lawless, 2007: 323). Concretely this means that users experience interruptions in water supply or waste water is not treated, leading to raw sewage spilling into water courses (Water Research Commission, 2013). Sometimes, as we observed in our research, it means that basic and simple infrastructural problems, that can severely undermine the operations of waste water treatment plants as a whole, cannot be solved. For example, staff at a waste water treatment plant we visited had been unable to correct a balancing mechanism allowing waste water to circulate. Two tanks had therefore stopped running. One of our interview respondents described acutely how staff shortages impact on daily operations:

You know, we are working ad hoc. We don't even have a maintenance department to do maintenance. We are doing things ad hoc because if we say we are going to maintain, it will take forever because each and every day when you come in, there are service requests, you understand? We need to address those service requests because we can't say I am busy with my maintenance programme while there is a sewer blockage or people don't have water. You have to go and repair the pipe, you have to go and unblock that sewer, so it is difficult if you are operating at a forty seven percent staff complement (Respondent I, 27 November 2013).

In other words day to day operations of this water and sanitation unit are characterised by a sense of crisis. Staff appeared to be constantly struggling to catch up with the challenges.

3.3. THE SCALE OF THE CHALLENGE

Is it possible to quantify the skills challenge? As many have observed, there are numerous problems with the data on the extent of the skills problem (DWAF, 2009). Most of the data available is therefore only suggestive and should not be taken as a completely accurate representation of the extent of the problem.

What skills are we talking about? Some literature refers to skills deficits in the entire municipal environment. This broad category often includes management, project management, supply chain management, leadership and financial management (Peters and Van Nieuwenhuyzen, 2012: 280; Hosking and Jacoby, 2013; DWAF, 2009: 55; Mjoli and Schoeman, 2007: 47). It also includes “health and hygiene practitioners, environmental health officers, community/health development workers, home-based caregivers, trainers, economic and legal experts” (DWAF, 2009: 88). Some of these skills are generic and not sector specific.

However, it is often stated that the lack of technical skills is greater in water services than in other branches of government. In this category of workers are often included engineers, technologists, water scientists, technicians, artisans, process controllers, health and hygiene practitioners (National Planning Commission, 2011: 22; National Treasury, 2011: 140; Synman and van Niekerk, 2008; Mjoli and Schoeman, 2007). In water services most research seems to agree that the greatest number of vacancies occur in waste water management (National Treasury, 2011: 116). In a sample of municipalities in South Africa, one survey found that departments responsible for water services had an average vacancy rate of 34% (Water Research Commission, 2013: 2). Other research found that in 2007 about 3,000 civil engineers were needed in the water sector. This represented 57% of what was required (DWAF, 2009: 68). At the time of our research, the Govan Mbeki Municipality reportedly had a 47% vacancy rate for water and waste water functions (Respondent I, 27 November 2013). These vacancies occur unevenly even within one municipality. For example during our fieldwork we discovered that in Uthukela District Municipality one waste water treatment plant was staffed by 28 people while another in the same municipality only had two (Respondent E, 21 November 2013).

There is debate on which are the most vital skills within the range of relevant occupations for the day to day operation of water services. Some have proposed that “civil engineering is the critical profession for service delivery” (Lawless, 2007: 23). Others have emphasised that while civil engineering skills are important, it is often more mundane skills that are, day to day, most critical in this sector:

[Municipalities] don't fill their low level vacancies which is actually the operational level. That is the level of the guys that are working in the water plant, the guy who has to throw the chemicals into the pond every three hours or whatever he needs to do. He is actually the really important person (Respondent V, 13 September 2013).

Another respondent was similarly unequivocal, saying that “the people who need to get water services going are the artisans”, as they are involved in daily maintenance of infrastructure (Respondent O). Another supported this view,

holding that “as much as you need skilled management, the crisis in the water sector sits there at the bottom with artisans” (Respondent H, 31 January 2014).

If there is a shortage of skills in every area, then which skills are especially important? In these terms, the skills question is transformed into an institutional one. Which functions or roles are more vital to institutional performance than others? In the case of water, in which areas is the skills shortage especially detrimental?

Is it necessary, for example, for every municipality to have its own engineer? One respondent answered that it depends on the size of the municipality or on collective agreements amongst various municipalities to share an engineer. (Respondent K, 29 July 2013).

Senior engineering skills are not required continuously for the smooth operation of, for example, waste or water treatment plants. Available data suggests that shortages are most acute in the more elementary skills that our two respondents discuss. For instance a report by DWAF states that the “water sector urgently needs 4,000 artisans / technicians”. These include boilermakers, welders, bricklayers, carpenters, electricians, fencemakers, fitters and turners, instrument mechanics, machine operators, masons, mechanics, millwrights, painters, plumbers, treatment works operators, process controllers, sewerage works operators, water works operators (DWAF, 2009: 118). This was also emphasized by the Local Government SETA (LGSETA) which argued that even though “staffing levels within local government have remained relatively stable since 2002” the highest vacancy rates occurred “in elementary occupations, clerical and plant and machine operators”. It is also noteworthy that there are more employees in local government in such positions than in any other (LGSETA, 2010: 13, 15).

At the same time there is a high demand in municipalities for these positions. 44% of respondents agreed in a survey conducted by the Energy and Water SETA (EWSETA) that the highest demand for skills occurred within the broad category of Technicians and Trade Workers. This group includes artisans, boilermakers, chemistry technicians, electricians, plumbers, pipeline maintenance technicians and water treatment operators (EWSETA, 2011: 87–90). The critical demand for such skills was demonstrated aptly in our research in the Govan Mbeki Municipality:

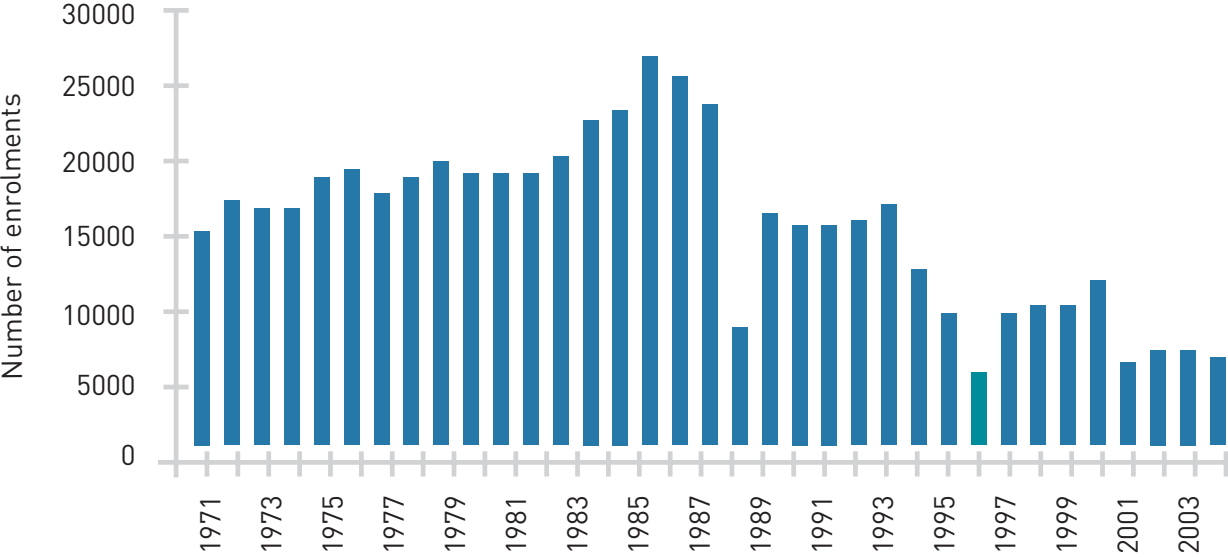
Currently I only have two millwrights and those are the people that are responsible for the maintenance of the pumps, maintenance of your motors and so forth. So we have eleven towns, six water waste treatment works, eleven water and water pump stations, also thirty-six sewer pump stations. For those activities, for the pumps and the tools that need to be maintained, with two millwrights it is highly impossible. It is too much on their plate, you understand? (Respondent I, 27 November 2013).

Another respondent observed that there had been a shortage of millwrights for some time: “from the beginning we used to talk about it, we were complaining that we need extra people because we must do preventative maintenance on the pumps. But there are no people to do it” (Respondent H, 31 January 2014).

While there has been high demand for such skills, there appear to be fewer people going into the education system to acquire them. Consistent with the narrative of decline referred to earlier, while in the 1980s there were over 12,500 registered artisans, the number had declined to about 2,500 in the early 2000s (LGSETA, 2010: 30). The graph below represents historical data on enrolments for apprenticeship exams. This is data collected by the Institute for National Development of Learnerships Employment Skills and Labour Assessments (INDLELA). INDLELA, previously known as the Centre for Trade Tests, is, as the name suggests, a national centre where, after training, artisans are tested to check if they are fit for purpose.



Figure 13: Enrolments for apprenticeship exams



How are we to understand this situation of absolute shortage in the number of people in local government required to perform basic technical operational functions in water services? The next section turns to this question.

Source: Mukora 2009:28

3.4. WHY THE SHORTAGE IN BASIC SKILLS?

It has already been mentioned that the skills or capacity crisis is seen by many as the main causal variable in local government performance. There have, as might be expected, been many studies of this question. There are three broad explanations. They suggest that the problem is produced by (i) issues in the systems of education and training, (ii) changes in the economy, and (iii) issues within municipal bureaucracy.

3.4.1 EDUCATION AND TRAINING

In the first case the problem is understood to lie with the processes of education and training that are designed to produce the required personnel:

Skills development should form part and parcel of a life-long learning approach. As such, it involves a 'delivery pipeline' that starts at pre-school level, continues through primary, secondary and tertiary levels and is further developed and refined towards full capability within the workplace ... Within South Africa severe problems have been identified in respect of each of these components of the delivery pipeline (Mjoli and Schoeman, 2007: 53).

The argument here points to the apartheid education system which provided poor training to students, especially black students. Though there are efforts to change this, legacy factors prevail. As a result there is a limited pool of candidates especially in the more technical disciplines; science and accounting for example (Erasmus and Breier, 2009: 1).

Others point to problems in systems of workplace training and development and vocational training, from which lower level skills would emanate. Training systems developed or used by local government are accused of being short-term and unsystematic (Mjoli and Schoeman 2007: v, 50). Some municipalities are seen not to prioritize staff training and development. When they do, the selected training programmes are poorly designed in terms of content and do not necessarily meet municipal requirements (Peters and Van Nieuwenhuyzen, 2012: 295; COGTA, 2009: 83).

3.4.2 DYNAMICS WITHIN MUNICIPAL BUREAUCRACY

Some (e.g. Lawless 2007: 329-332) have argued that personnel problems are compounded by internal dynamics. Some act as push factors leading to outflows. Others prevent possible candidates from entering the profession. Finally, others lead to inappropriate appointments of staff. These problems include;

- an ageing workforce,
- affirmative action policies and related encouragement for early retirement in order to change the composition of the workforce,
- processes of institutional restructuring as local governments were consolidated, triggering an exodus,
- Frustrations over low pay and the changing nature of work within administrations, eliciting feelings of being undervalued and leading some to exit local government for the private sector or overseas,
- Introduction of short term contract appointments for senior management positions, giving hiring officials the ability to let staff go more easily and regularly,

- Appointments through patronage networks. (Lawless, 2007: 329–332; DWAF, 2009: 1119; Muller, 2009: 2 and respondents P, S, J and Z).

3.4.3 DEMAND FOR SKILLS IN OTHER SECTORS OF THE ECONOMY

Others have pointed to dynamics external to the professions. The demand for skills, especially engineering, in other sectors of the economy is seen as a central cause of outflows, particularly to the private sector (DWAF, 2009: 68). As a respondent put it, “what we have noticed here, is that ... the more the rest of the economy is in a growth phase, the more difficult it is for municipalities to attract staff” (Respondent V, 13 September 2013). ‘Poaching’ of skills is occurring not only from within the workforce, but prior to job placement. Some employers in industries such as mining and civil engineering recruit actively in the tertiary system, employing people who might otherwise work for local government (DWAF, 2009: 69). For example it is reported that the 2010 Fifa World Cup led to a heightened demand for artisans (Erasmus and Breier, 2009: 228). Shortages of qualified people in senior management positions are exacerbated by competition from the private sector where salaries are better (LGSETA, 2010: 22). This was also observed to affect elementary skills:

A millwright that we needed to keep on ...was the only one, there was only one left. He was responsible for all the telemetric readings at the reservoirs. He got a job offer from a mining company that was going to pay him fifty thousand rand. He wanted sixty thousand rand from us: there is no way we could afford to pay him that (Respondent H, 31 January 2014).

At the time of our interview the Govan Mbeki Municipality was seeking to attract more artisans but envisaged that they would face competition from surrounding industries:

I think with the millwrights, we might struggle to fill those positions. For millwrights and artisans, given that we are in an industrial area, you know, you have competition like Sasol and the surrounding mines. These are skilled positions that we need and the private sector pays better than local government, so you might be faced with that challenge (Respondent Q, 3 December 2013).

These accounts offer a degree of understanding. However, firstly, they are limited because they comprise a very broad analysis of the forces undermining skills development in local government. They do not specifically explain the shortages in elementary skills as well as allocation difficulties. Secondly, they offer explanations located in particular moments from which it is difficult to generalise.

3.5. HOW DO WE UNDERSTAND THE SHORTAGE IN ELEMENTARY SKILLS?

There are other accounts, partly built on those already mentioned, that begin to shed light specifically on why it is that occupations associated with basic operations are linked to performance crises in water services in local government.

3.5.1 A LONG PERSISTENT HISTORY OF DEVALUING ELEMENTARY SKILLS

Firstly, South Africa has a long history of devaluing elementary skills. We suggest that this devaluation explains in part why it has over time proven difficult to attract and retain people into the sector.

The long history of devaluing basic operational skills is shown in great detail by Badroodien (2004) in a historical account of the evolution of technical and vocational education provision in South Africa. He observes how a system designed to produce workers such as carpenters, iron-workers, cobblers and other trades suitable for growing sectors of the economy has historically suffered an image problem. Up to the 1960s, technical and vocational education was seen as a solution for marginal people in society: the “poor whites”, “the mentally backward”, “indigent children”, “the aimless”, “the socially deviant”, “the kaffirs”.

Such education and training was designed not only to provide employment but also to cultivate more respectable citizens who could contribute positively to society. This theme of correction - of cultivating the good citizen - continued even when job reservation policies began to fall away, with more training, at least formally, being made available for non-white groups. For example it was argued in the 1950s that the purpose of technical education was to “build up happy, useful and productive African, coloured and Indian communities that were able to realise the potential of individual members to the fullest extent”. This focus on technical and vocational education as a means of “correcting” individuals, that is, of producing disciplined “good workers and good citizens” meant that insufficient focus was given to the “learning” dimension (Badroodien, 2004: 41).

These conceptions and practices whereby elementary skills were seen as being for socially ‘marginal’ people arguably persist to this day. As Allais notes, in the democratic dispensation, “the first problem with ‘skills development’ ... is that ‘skill’ is seen as salvation for poor people, posited as a ‘bridge’ into a world of formal employment or an enabling factor for self-employment” (2013: 209). More broadly, as one respondent remarked, “we want to send students to universities rather and think we can teach them skills as artisans, to work with their hands” (Respondent 0, 31 January 2014).

The general prejudice against technical trades has joined up with long historical and cultural perceptions about what it means to dispose of waste matter. In the course of this study researchers heard how segregationist racial/ethnic politics led to a particular clan of the Xhosa community being allocated the task of collecting buckets of sewage. These people were perceived in a similar light to untouchables in India. As a result, their clan

name has evolved to generally refer to someone who works at a sewerage plant. In more recent times, the same respondent told us how a family friend was perceived as working in a “shameful” profession as a worker in a sewerage plant (Respondent N, 22 October 2013). Another respondent noted how in some municipalities poor workmanship was punished by sending the employee concerned to work in a waste water treatment plant:

I spoke to one gentleman who told me that when there is a disciplinary action taken against a general worker, with the guy working perhaps in the graveyards or in the street, and he is not doing well, one of the disciplinary actions that they take against such a person is to place him at the waste water treatment plant. It was a penalty to be placed at the waste water treatment works because it is a horrible place to work. What morale does that person have when he goes to work in the morning? (Respondent K, 29 July 2013).

We were also told during our fieldwork how the allocation of workers for waste water treatment seems in some places to be given a subordinate place even for very unskilled jobs. In the context of limited budgets, municipal staff “instead of prioritising ... treatment works ... will prefer to come and cut the grass in town, obviously” (Respondent I, 27 November 2013).

This long history of prejudice against artisanal and technical skills and against sanitation related professions in particular, which has been sustained by politico-economic structures and traditions, partly explains why it has proven difficult to attract workers into the profession.¹⁴ For example in the late 1930s despite sustained interventions, the government of the time was unable to attract the large numbers of recruits into its programmes it required in order to support the growing economy. This was in part because the system of training was still perceived as for those of ‘lower intelligence’ (Badroodien, 2004: 32). So we argue that South Africa has a long history of seeing technical trades, especially those associated with waste water management, as inferior and degrading. This way of seeing has been reinforced by national political and economic decisions. We illustrate this in the next section.

¹⁴ The conditions of service associated with these ‘elementary occupations’ including salaries and associated benefits are a major disincentive. Historically this is known to be the case. The 1948 De Villiers Commission, in its inquiry into the artisan system, found that in spite of extensive state support to young white poor people to train and find work in relevant occupations, many were not seeking employment. One of the reasons for this was precisely linked to wage grievances (Mukora, 2008: 44).

3.5.2 LARGER NATIONAL POLITICAL-ECONOMIC DYNAMICS

The second point to make is that ebbs and flows in the absolute numbers of people in the professions have been intimately tied to wider national political and economic developments. This relates to changes over time in the structure of the economy, the nature of work in various industries and the country’s race and ethnic relations. These dynamics have had and continue to have fundamental impacts on the availability of potential candidates to fill elementary positions, have shaped the development and destruction of training

institutions, have led to changes in approaches to training, and finally have made employee-employer relations precarious and confrontational. We present these arguments through a compressed historical account of the evolution of elementary technical professions from the early 17th century to the present day.

Gamble (2004) tracks the origins of artisanship - welders, masons, printers, carpenters and others - and the associated apprenticeship training system, to Dutch, French, German and British immigrants. In its earliest manifestations at the Cape in the mid 1800s, artisan training for crafts such as masonry, carpentry, shoemaking and tailoring was introduced for so-called coloured men (Gamble, 2004; Badroodien, 2004: 23). As the economy industrialised with the development of mining and railways, technical trades were required. Given the absence of such skills in South Africa, workers were initially imported from the United States, Europe and Australia (Mukora, 2008: 41).

In the early 1900s increasing urbanisation driven by drought and the devastation of Boer farms during the Anglo-Boer war saw a huge influx of largely Afrikaans-speaking 'bywoners' into the cities. In the context of a still emergent urban industrial economy there were limited employment opportunities. Competition therefore arose for available jobs including in vocational and technical areas (Gamble, 2004). Poor whites over time successfully lobbied for these positions to be occupied only by white workers. Prior to this, artisanal and other basic technical jobs had been done by black people or immigrants (Badroodien, 2004: 23; Mukora, 2008:41). The move towards reserving these trades solely for white people was cemented over time through a variety of legislation. For example the Apprenticeship Act of 1922, which regulated the apprenticeship system, introduced high educational requirements for entry. Given the unequal structure of education, the Act effectively reserved these positions for white South Africans (Erasmus and Breier, 2009: 232). This Act was also a watershed not only because it introduced state regulation but also because it prescribed the formation of state led training institutions. Technical colleges were to be established by the state for the first time, severing the direct relationship between trainee and workplace (Gamble, 2004). Nonetheless at the time there were generally insufficient skilled artisans available for all sectors, including local government. Between the 1930s and 1960s the numbers of artisans as well as enabling institutions grew rapidly. This was driven by a number of factors. Firstly, the government sought to respond to increased poverty in the white community. Secondly, the economy experienced steady growth, requiring skilled artisans in some sectors such as mining. At the same time, new state owned enterprises such as the steel manufacturing firm, ISCOR, were created. These state owned enterprises opened their own technical training colleges and became significant suppliers of artisans (Mukora, 2008:43). For example, almost all of the millwrights we encountered or were told of in our research had been trained at ISCOR in the 1980s (Respondents O and D, 31 January 2014).

Another key institution created in this period, in 1940, was the Central Organization of Technical Training (COTT). COTT became a key supplier of skilled black artisans such as "fitters, machine tool operators, welders, blacksmiths, tool repairers, electricians and sheet metal workers". The organisation had training centres all over the country. As a result

of its efforts “by the end of 1943 nearly 22,000 black workers had been trained at the various COTT centres” (Badroodien, 2004: 37).

Subsequently, however, as ever more racist policies gripped the country, non-white South Africans were increasingly formally marginalised from skilled trades. For example COTT, which had been providing training to black workers, shifted its approach to offering training to mostly white men returning from World War II (Badroodien, 2004: 37). The constriction of the supply of possible workers was encoded through legislation such as the Apprenticeship Act of 1944 and the Training of Artisans Act of 1951 which reserved these trades for whites only (Erasmus and Breier, 2009: 232). Later, as a result, in the 1960s and early '70s, in the context of a growing economy there were shortages of skilled artisans. Many industries resorted to recruiting workers from overseas (Mukora, 2008: 44).

In the late 1970s social protests from the disenfranchised black community increased dramatically. These protests were driven by exclusion from the benefits of a thriving economy, including exclusion from skilled work in industry. One state response was to grant some concessions to non-white communities including de-racialising the artisan system through the Manpower Training Act of 1981 (Mukora, 2008: 45). Amongst other things, in response to the economy's skilled labour crisis this Act dismantled the racially based system of training. In practice however, though black South Africans could now formally join the training system, few state training institutions or companies enrolled black candidates (Erasmus and Breier, 2009: 233).

The Act did, however, lead to overall increases in the numbers of artisans passing through the system (Erasmus and Breier, 2009: 233). Also, as a result of the Act, “13 training centres and/or their satellites” were established with “each centre ha[ving] a training centre manager, fulltime staff, a training centre committee and a provincial training committee” (LGSETA, 2010: 39). The racial composition of the student body also changed significantly. In 1990, sixty percent of the students enrolled in technical colleges were white, with only sixteen percent being black. By 2000, seventy five percent of the students were black and twelve percent were white (Allais, 2013: 203).

From the mid 1980s, changes in the economy led to a downward spiral in the apprenticeship system. This was prompted by structural shifts in the economy from manufacturing towards services. At the same time the South African economy went into recession. Large scale state owned companies, which were major institutional supporters of the apprenticeship system, were either sold off or transformed into more commercially oriented entities. The privatisation of these enterprises followed global trends towards recalibration of state-market relations. Prior to this transformation, these entities were able to train artisans beyond their own needs. The traditional apprenticeship system was also seen increasingly as racist and therefore illegitimate (Erasmus and Breier, 2009: 242). After the 1989 privatisation of ISCOR, “the training of artisans reduced rather dramatically from 250 a year to 70 by 2000 in just one plant” (Mukora, 2008: 46). This was because such state owned enterprises stopped training in excess of their needs and even sold off training centres as they sought to cut costs in the new profit oriented dispensation (ibid.: 51).

The other significant transformation to occur under late apartheid, cemented in the transition period, related to approaches to training in technical trades. This was a shift to competency based training and what was later known as the outcomes based system. Some of the criticism of the prevailing system was contained in a report produced by the Human Sciences Research Council and the National Training Board (Gamble, 2004). It was seen as inadequate since (i) it was producing poor quality artisans, (ii) it took too long to produce graduates, and (iii) the one-size fits all nature of the learning process was not catering to the differentiated learning needs of candidates (Mukora, 2008: 45–46). A new system was needed that would meet some of these deficiencies. The advantages of such a competency based system were described as follows:

[Competency-based modular training] consists of a detailed analysis of the occupation into its basic competencies or skills, each of which then forms a module in a training programme. Modules are arranged in a logical training sequence and performance standards are set for each module. The competence of each trainee is tested at the end of each module and he is only able to proceed to the next module when he has reached measurable competence in all subordinate modules. It is possible by means of modular training course maps to arrange training so that all modules lead from the unskilled worker, through jobs requiring limited skills, to more highly skilled occupations. The employee can see a clear career path within the industry and advance by means of modular training to levels compatible with his aptitudes and abilities (Human Sciences Research Council/National Training Board, 1989: 183, in Gamble, 2004).

In such a system, the relationship between student and teacher changes. The seemingly hierarchical arrangement where the instructor, teacher or master (to use the terms in the original apprenticeship model) imparts knowledge to the student is transformed. The students are now in charge of setting their learning pace, with the instructor, now seen as a facilitator, being consulted for necessary learning materials as well as authorisations, conducted through tests, to proceed to the next stage of the learning module (ibid.).

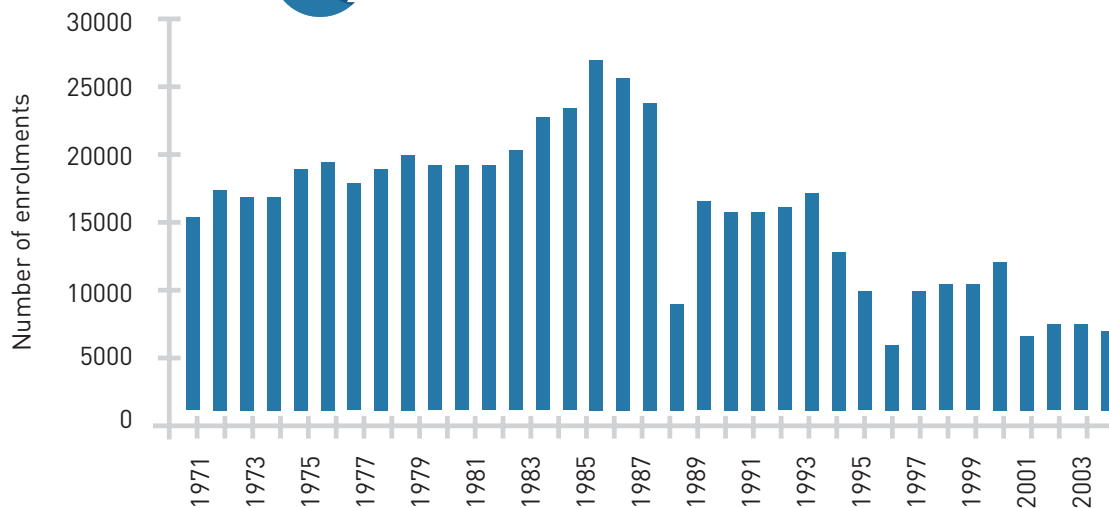
These reforms paved the way for a system of training in which knowledge and skills could be increasingly grouped into separate 'units of competence', or 'unit standards' (Allais, 2013: 213). This was realised through the National Qualifications Framework, a new policy reform instrument that would "replace all existing qualifications with a set of new outcomes-based qualifications and part qualifications" in "all learning programmes and curricula, at all levels, in all sectors" (ibid.: 204). The old apprenticeship system where a student learned all related aspects for a trade such as carpentry would be replaced by what are known as learnerships. Institutions such as technical colleges providing education for artisan development needed to conform to the new regulations.

These reforms have weakened artisan development. One perverse effect was to introduce further precariousness in employment. This is because in the old system, the contract signed between employer and employee obliged the employer to keep on the student for the entire duration of the apprenticeship, usually at least three years. In the new

model, the contractual period was limited to the duration of the particular module that the trainee was undertaking, which could be over several months but would certainly be less than three years (Mukora, 2008: 49). This system was unlikely to attract new entrants. It is perhaps why, as represented in the graph below, the numbers of students enrolling for apprenticeship examinations declined sharply from the mid-1990s.



Figure 13: Enrolments for apprenticeship exams



The other consequence of these reforms was, as others have argued, to weaken the knowledge and skills imparted to students. Instead of gaining knowledge suitable to a whole profession or occupation, students instead learn individuated bits of knowledge related to particular tasks (Allais, 2013: 213). Instead of gaining “all-round expertise” in a particular industry, a “learner ... [is] trained on only one or two machines, or on restricted but specialised work routines” (Gamble 2004). Perhaps this is why “most companies are sceptical about learnerships and have questioned the quality from learnership programmes” (Mukora, 2008: 58). Others even in the public sector have agreed, arguing that the “competencies of the students completing many of the courses in FET colleges is considered very low by some state employers” and as a result “some state employers feel they need to undertake a further three years of internal training in order to have new artisans work ready” (PSETA, 2014: 81-2).

Source: Mukora 2009:28

Recent policy attention to increasing the numbers of artisans does however seem to have born fruit. In the 2011/2012 financial year alone, 6, 000 students enrolled for artisan training examinations at Indlela (DHET, 2013:34).

3.5.3 INTRODUCTION OF NPM REFORMS

If the factors above help explain the long-term evolution of South Africa’s water management crisis, reforms in the structure of government in the late 1990s brought the situation to a head. The previous account showed how changes in the political economy have over time shaped the flow of possible candidates

into the profession, affected the nature and development of training institutions, and led to changes in employee-employer relations. Here we show briefly how shifts in organisational management, or new public management (NPM) theories, associated with neoliberalism, explain the high rates of vacancy in basic operational positions including technical trades in local government.

NPM is associated with a range of reforms that unlike the “traditional bureaucratic modes of operation based on rule following, specialism, hierarchy and line-management” are seen to produce better organisational results since they introduce “operating principles based on efficiency, quality, flexibility, competition and management by contract”. This is to be achieved by “greater use of competition and contracting, transfer of business methods, such as quality assurance and performance management, managerial autonomy and individual responsibility, with an emphasis on devolving operational responsibilities, and services that are user-focused and user responsive” (Lowndes, 1997: 44).

In the previous chapter we described how these ideas were systematically introduced into local government through the White Paper on Local Government. A central element of these moves was to elevate the role of the manager in the bureaucracy. The new manager, who would replace the old figure associated with the apartheid state, was envisaged as dynamic and innovative. This new person would be unshackled from the old rules of the system. They would be given “greater discretionary power, reducing, in particular, procedural constraints on the handling of contracts, cash and staff” (Chipkin: 46). Further, this move towards foregrounding the role of the manager was often interpreted as meaning that senior officials should be focused on questions of leadership, policy, strategy and vision. This came at the expense of operational and/or administrative questions and issues (TAU, 2012).

Therefore, over time, in the imagination of policy-makers and in the making of human resource policy decisions at local level, it was this managerial figure who appears to have received most attention. As one respondent noted, “technical capacity in some municipalities is not seen as important ... technical experts are not necessarily seen as adding value and the technical skills that they have are not valued, not seen as important. Then they will get rid of that person and bring in somebody who doesn’t have the experience or who doesn’t have the know-how even” (Respondent Z, 24 October 2013).

This dynamic is well captured by one of our respondents who describes what (s)he observed over time as typical staffing decisions prioritising senior management positions. Given the high salaries these positions command and the limitations on the proportion of the overall operational budget that can be spent on salaries, then it is the lower level positions that are sacrificed:

This is what actually happens, and it is not only in the technical field, but this is why municipalities have such a high level of vacancies at elementary level and then at clerical level. What they do is they appoint senior level people, your municipal manager at the top and then your section 56 and 57s who are all your senior level managers in municipalities. Those people fall outside of bargaining council agreements, so they negotiate their own salaries directly with council ... so what is happening is that the whole salary bill

gets pushed up to the top. And then you are left to say, OK ... I need a few engineers and other such people around, where do I cull, where do I make my savings? OK, we have got four thousand elementary workers, surely we only need half, we have got eight thousand clerical staff, surely we only need a thousand. Never mind that your bills might not be sent out - elementary workers, clerical and admin are the engine of the municipality (Respondent V, 13 September 2013).

While we do not have access to figures on types of vacancies, we can confirm how management positions in local government have gained favour in personnel management decisions. The graph below represents

Figure 14: Ratio of managers to all positions in local government



managers as a percentage of all positions between 2006 and 2012. It shows that in all provinces except Limpopo, Free State and the Northern Cape there was significant growth in the ratio of managers to other positions in local government between 2006 and 2012. On a smaller scale, we see similar trends in the Govan Mbeki Municipality where there has been constant growth in the number of management positions as a share of all staffing positions as shown in the on the next page. The data contains information based on official organograms and includes vacant and part time positions.

In contrast when we examine trends for all other positions within the same period we see constant declines, as the graph on the next page shows.

Figure 15: Trends in staffing of management positions in Govan Mbeki Municipality

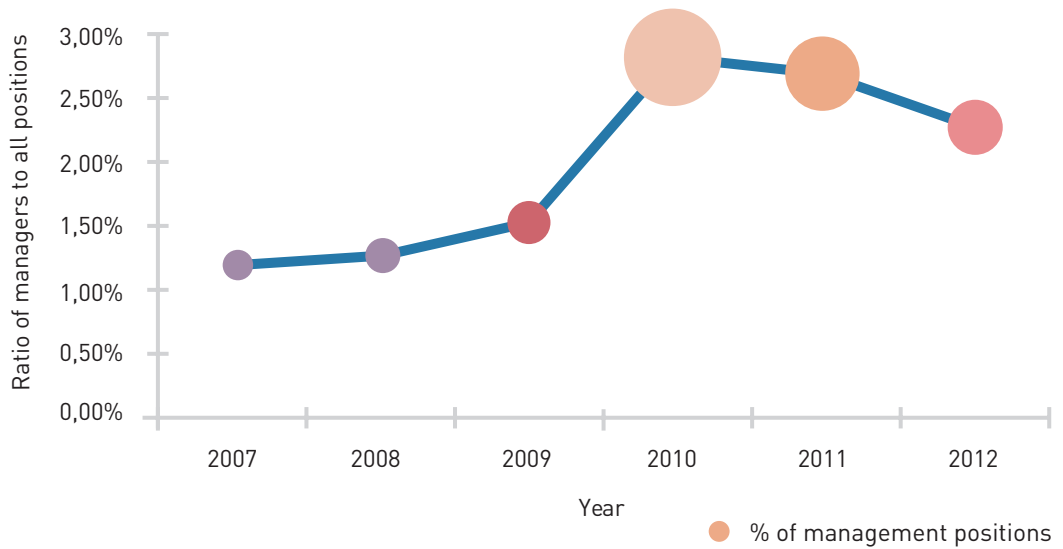
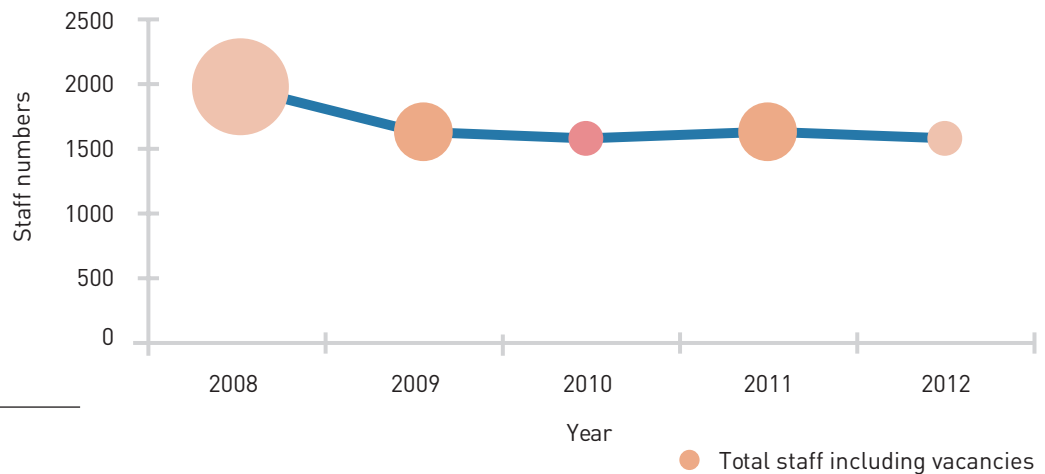


Figure 16: Trends in staffing of non-managerial positions

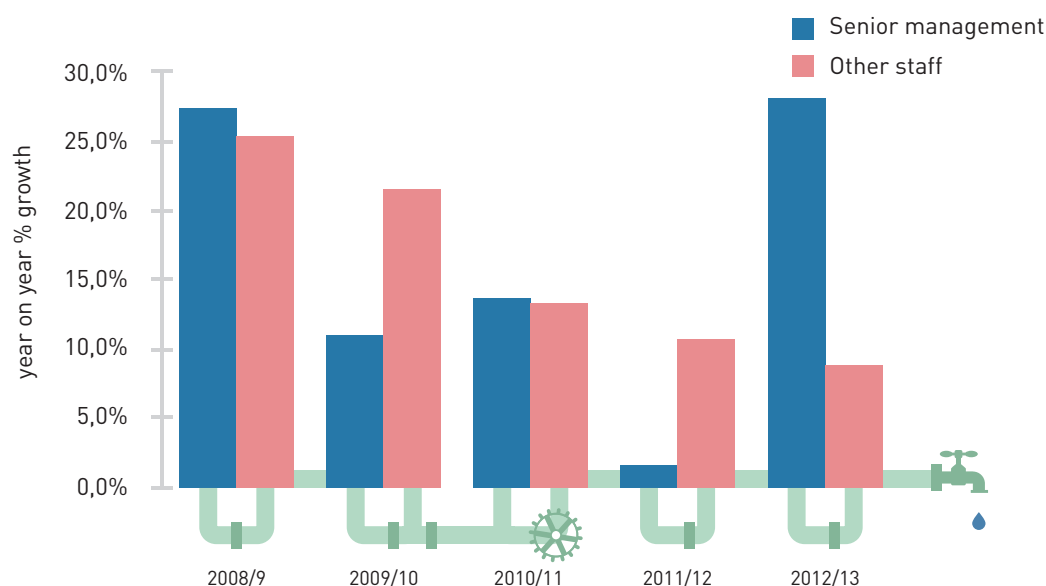


Source: Stats SA Non-Financial Municipal Census

Again when we examine time series data on municipal salaries and benefits to employees we see greater allocations at the top end. The graph on the next page represents a constant decline in the rate of growth of salaries and wages, pensions, overtime pay, bonuses, allowances such as housing and vehicle, medical aid contributions and other benefits and allowances for positions lower than senior management.

On the other hand, the movements for senior management positions have been characterized by considerable variations in the rate of growth of salaries, ranging from very high percentage increases to comparatively modest ones, with very large recent increases. We obtained a micro level illustration of how financial allocations favour management positions over

Figure17: Trends in salaries and benefits in local government



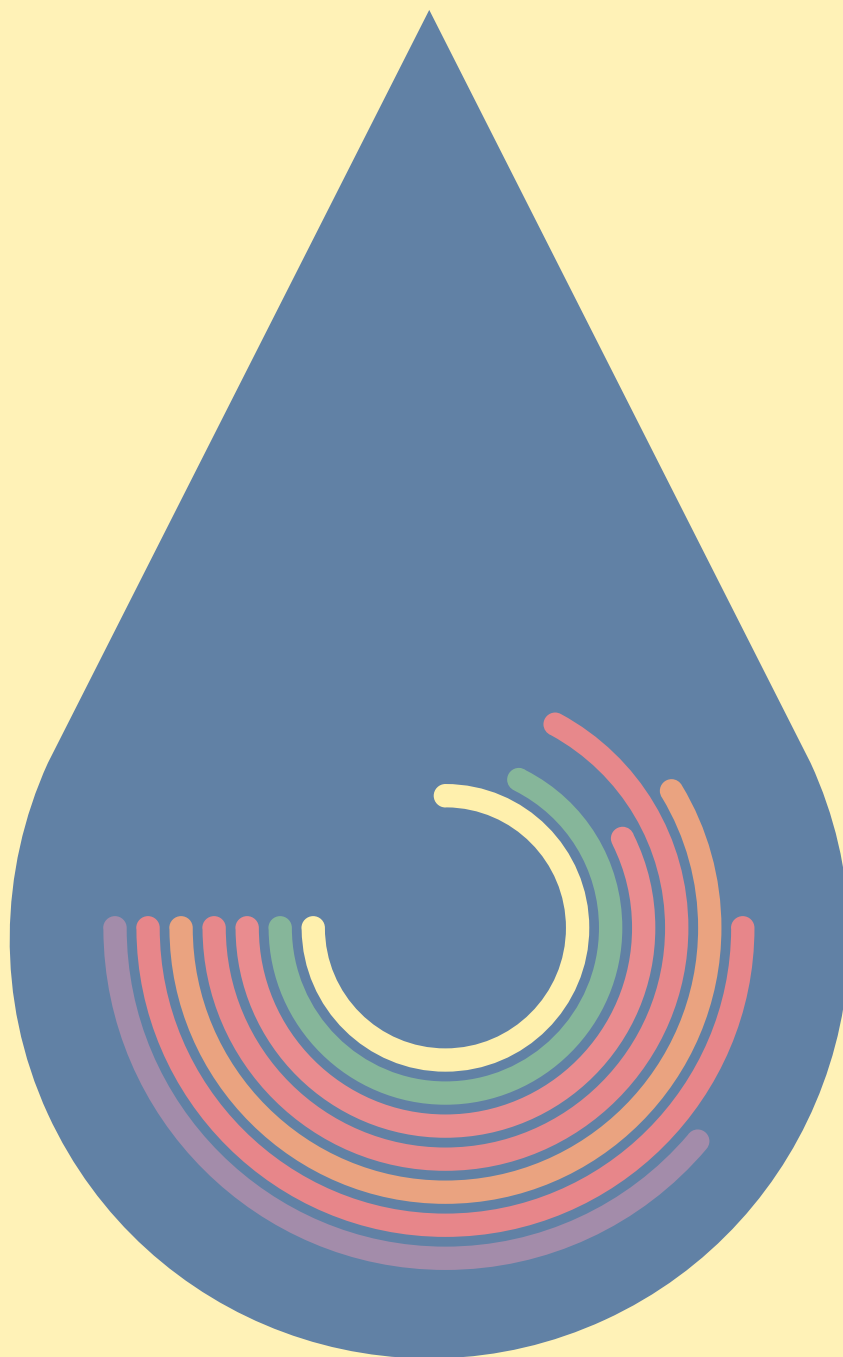
those of artisans. We were told of a particular water services institution that wished to retain an artisan who had been offered an attractive salary by a mining company. However the authority was unable to match the rate offered by the mining company because it faced legal constraints which stipulated what the salary band needed to be. On the other hand, the pay scale for senior management positions was outside these legal constraints and as a result they were receiving very handsome packages (Respondents O and H).

Source: Stats SA Non-Financial Municipal Census

3.6. SUMMARY

This chapter has explored the role of skills in the performance of local government in water services. It found that while municipalities are faced with a wide range of personnel needs, in water services the most critical barriers are associated with routine operations, with the need for the skills of plumbers, millwrights, electricians and others. It has argued that the problem - of shortages, of the hollowing out of knowledge in the profession and of the allocation of available workers - is driven by historical factors on a scale beyond the possibility of control by local government alone.

Historical evidence suggests that the country has held technical trades in low regard. This low valuation links with longstanding aversions to waste water management. Low valuation of technical trades has been reinforced or perpetuated by developments in the political economy relating to changes over time in economic structures, the nature of work in various industries, the country's race and ethnic relations, and the introduction of NPM ideas into local government. Taken together, these factors have had and continue to have fundamental impacts on the availability of candidates for elementary positions. They have shaped the development and destruction of training institutions, led to changes in approaches to training, made employee-employer relations precarious, and in decisions about personnel have led to a neglect of occupations serving technical and operational needs.



Twenty years into South Africa's democracy, there have been great improvements in the material conditions of the population. According to the last census, over 90% now have access to some type of sanitation system and piped water. However in spite of this impressive record, there are problems with service quality. Pit latrines may be available but they may not be serviced. Pipes may be in place but there may be no water flowing through them. Moreover, as we demonstrated earlier, there are large spatial variations in rates and quality of access. This report has sought to answer why there is unevenness in water services provision across the country and the factors impacting on service delivery in this area. There are a multitude of interlocking factors that explain spatial variation. These factors include apartheid policies whose effects still echo today, the relationship between politics and administration, rates of urbanisation, the size of municipalities, the extent of local tax bases, the nature of skills and organisational capacity. We found that all of these affect the performance of municipalities. Our research has emphasised the impact of longer apartheid era legacies on administrative capacity, the ripples of which are still felt today, as explaining 'unevenness' and how the process of forging local government in the democratic period has been and is still a task of immense complexity.

We also found that with respect to water services, a lack of skilled workers in municipalities in terms of vacant positions and diminished knowledge is a significant barrier to effective delivery. While this problem occurs across a range of relevant occupations, in water services the challenge is most acute in basic operational positions. These positions, such as those of millwrights, plumbers, electricians and pipeline maintenance technicians, are vital to the day to day operations of water pipelines, waste water treatment works, pumping stations and other related water services infrastructure. Here too the conditions for the emergence of this problem have a long history.

We have also shown how technical trades, specifically those associated with waste water management, have been held in low regard over time. As Badroodien (2004) shows, in the period of formal apartheid and earlier, technical and vocational education was seen as a natural home for people regarded as marginal. Even during and after the democratic transition there is a degree of continuity where technical education is seen as a solution to the problem of poverty (Allais, 2013).

The drivers of and constraints to skills development often occur beyond the direct sphere of influence of local government. Our research has suggested that in order to understand the formation, utilisation and retention of these skills, and arguably others too, in local government, it is also important to look more broadly than local government itself. This is in line with recent studies of skills formation which hold that skills development should be examined in the context of the organisation of the economies and societies in which it is located. Further "it is the structure of the labour market, the nature of industrialisation, and the extent of social welfare that will create the conditions for an extensive and long-term skill formation system" (Allais, 2013:214). Or, as Marock has argued, "any focus on skills development must take the nature of the economy into account" (Marock, 2010:4). Education and training systems are in other words inextricably enmeshed in the societies in which they exist.

If policy solutions are conceived of as lying solely in the education system (including the vocational system whether based at the workplace or elsewhere), then they are unlikely to make a substantial dent in the problem, because skills formation is also the product of labour market relations, the nature of industrialisation, and the nature of the social welfare system. In our study we saw significant movements into the profession whenever interventions were made in any of these domains. For instance recall that when the profession was deracialised through the Manpower Training Act of 1981, many more apprentices enrolled into training institutions; also recall that the 1948 De Villiers Commission, in its inquiry into the artisan system, found that in spite of extensive state support to young, poor white people to train and find work in relevant occupations, many did not seek employment. One reason for this was linked to wage grievances (Mukora, 2008:44). These two examples and others in this report suggest that more attention should be paid to factors outside education and training. In other words, the skills challenge outlined here is not necessarily solely an education and training one.

This analysis also provide clues as to why the skills crisis, at least that pertaining to artisanal skills, seems intractable. Our research in this regard is an initial exploration. However, there is a clear need for further study. Such a study could take a broader approach and select two periods associated respectively with high and low supplies of artisans and analyse the nature of the labour market, social welfare distribution and the structure of the economy and investigate their interactions with the education and training system. Alternatively it might take a narrower focus and attempt to review shifting wage relations over time including conditions of service, salary levels and benefit systems.

Our research suggests that more attention should be given to the nexus between the education institutions, and skill and education policy on the one hand, and public management models on the other. More recent public sector reform choices in the post-1994 period have also impacted on the skills deficit in areas key to water service delivery.

We have shown that major policy reforms 'de-skilled' municipalities and led to a neglect of basic operational positions. The 1998 White Paper on Local Government, echoing changes adopted in other parts of the state, introduced a sweeping range of reforms, some inspired by the NPM ideas current at the time. These ideas tend to privilege the manager in a particular guise. We have seen how because of this, over time financial and personnel decisions have been taken in local government that have cumulatively denuded waste water and water treatment works of the everyday technical operatives they need.

We do not aim to suggest that local government has no agency, and that it is a helpless victim of whatever winds may blow in and around it. In fact, as noted earlier, a key reform of the transition era was to grant this sphere of government full autonomy. This might suggest why in spite of the one size fits all reform agenda in the seminal 1998 White Paper on Local Government, change has been uneven. For instance, while the City of Johannesburg embraced NPM reforms rapidly and in the early 2000s "hived off several of its main functions (electricity, water, roads and parks, urban renewal) into

stand-alone business units”, now called MOEs, the City of Cape Town only has one. Water, sanitation and electricity services for example are provided by city departments (Chipkin, 2013: 7; City of Cape Town, 2014). Local government politicians and civil servants have a degree of autonomy that they can exercise.

This report has attempted to move beyond broad discussions of capacity and “skills crises” to understanding questions of local government capacity, in particular as this plays out in water and sanitation provision, with more nuance. We suggest that the findings of this report in the area of water and sanitation services delivery raise important questions for improvements in public sector service delivery more broadly. In conclusion, we suggest that this conceptual framework of exploring skills formation and utilisation might be of significant value in understanding capacity constraints in other parts of the South African state.

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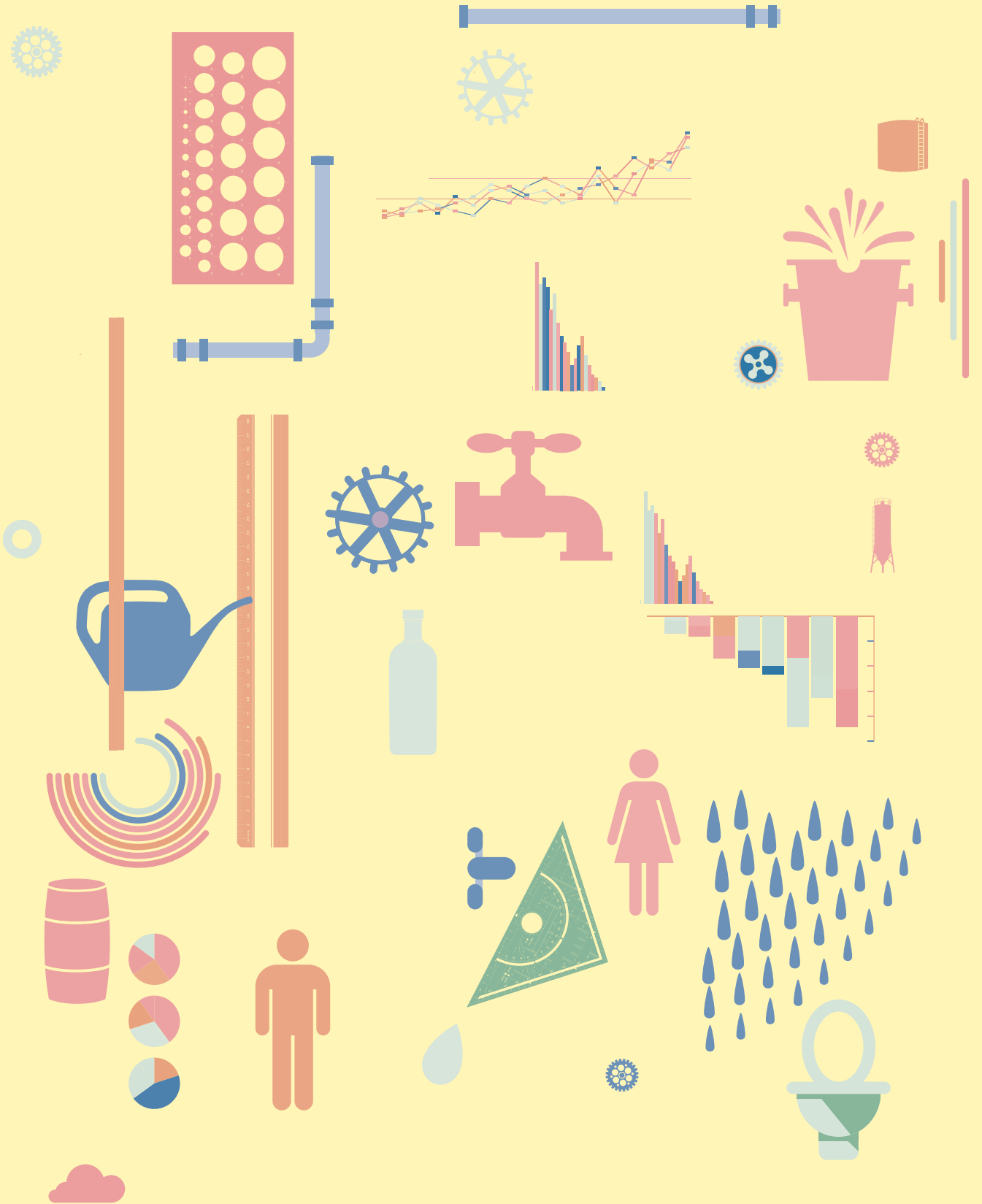
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Public Affairs Research Institute (PARI)

26 Rhodes Avenue
Parktown West
Johannesburg, 2193

011 482 1739 | info@pari.org.za | www.pari.org.za