

Water and sanitation

Introduction

Water is a scarce resource in South Africa and should therefore be carefully managed. Erratic rainfalls often lead to droughts or floods, with disastrous consequences.

Water is a scarce resource

Despite the progress made in the first 10 years of democracy with providing access to safe drinking water and proper sanitation, substantial backlogs still remain. The President, in his State of the Nation Address on 21 May 2004, committed government to ensuring that all households would have easy access to clean running water in the next five years. In addition, more than 300 000 households will be provided with basic sanitation in the current financial year.

The President has committed government to the delivery of water and sanitation

This chapter builds on the findings of the *2003 Intergovernmental Fiscal Review*. It provides:

- an overview of the water services sector
- an overview of recent reforms
- an analysis of trends in expenditure and budgets.

Overview of the water services sector

According to the 2001 census, of the 44,8 million people living in South Africa, about 5,0 million (or 11 per cent) had no access to safe water and 18,1 million (or 41 per cent) had inadequate sanitation services. This exposes them to waterborne diseases such as cholera.

Five million South Africans have no access to safe water

The Department of Water Affairs and Forestry (DWAF) defines water services as water supply and sanitation services, including regional water services schemes, local water schemes, on-site sanitation, and the collection and treatment of waste water.

Table 10.1 provides an overview of the size of the water services sector.

The water services sector is dominated by a few big players. On the supply side, bulk water provision is dominated by a few big water boards, such as Rand Water and Umgeni Water. Similarly, the demand side is dominated by the irrigation segment (59 per cent) and by the mining, bulk and industrial users segments (6,5 per cent).

A few big players dominate the water services sector

Table 10.1 Overall size of the water services sector, 2003

R billion	Assets	Investments	Turnover
DWAF	40,0	1,2	1,7
Water boards	12,0	1,0	3,5
Municipalities	50,0	2,8	6,8
Total	102,0	5,0	12,0

Source: Strategic framework for water services, DWAF, 2003

The water services authority function is divided between local and district municipalities

In terms of the Constitution, municipalities are responsible for water reticulation. In January 2003, the Minister of Provincial and Local Government authorised municipalities to perform the water services authority function. Metropolitan (category A) municipalities exclusively provide the retail function within their jurisdictions, except in cases where the function has been corporatised. The water authority function, however, is being split between local (category B) municipalities and district (category C) municipalities. These authorisations differ from province to province. For example, in Western Cape all the local municipalities are authorised to perform the water services authority function, while in KwaZulu-Natal it is mostly the district municipalities.

In terms of the Municipal Systems Act (2000), authorised municipalities may decide to appoint internal or external service delivery providers. It is unclear how this process has unfolded or what the effect has been on service delivery.

Overview of recent reforms

DWAF has published a comprehensive strategic framework

DWAF published a strategic framework for the water services sector in September 2003, which sets out a comprehensive approach to the provision of water services in South Africa.

The strategic framework seeks to ensure that:

- all people in South Africa have access to an appropriate, acceptable, safe and affordable basic water supply and sanitation service
- all people living in South Africa are educated in healthy living practices (specifically with respect to the use of water and sanitation services) and the wise use of water
- water and sanitation services are provided equitably, affordably, effectively, efficiently, sustainably and in a gender-sensitive manner
- all water services authorities are accountable to their citizens, have adequate capacity to make wise choices (related to water services providers) and are able to regulate water services provision effectively
- all water services providers are accountable, cost-effective, efficient and viable, and implement appropriate employment and gender equity policies
- the prices of water and sanitation services reflect the fact that they are both social and economic goods
- water and sanitation services are effectively regulated with a view to ensuring the ongoing achievement of these goals.

Institutional reforms are still in the early stages and are likely to take several years to complete. DWAF will approach Cabinet soon for approval for the process.

Reforms are in the early stages

Trends in expenditure and budgets

National government

Table 10.2 shows expenditure and budgets for DWAF over the seven-year period from 2000/01 to 2006/07. In 2004/05, the budget for DWAF amounts to R3,3 billion, which is R1,3 billion (or 28,8 per cent) less than in 2003/04.

The DWAF budget decreases by R1,3 billion in 2004/05

Table 10.2 Department of Water Affairs and Forestry expenditure by programme, 2000/01 to 2006/07

	2000/01	2001/02 Outcome	2002/03	2003/04 Preliminary outcome	2004/05	2005/06 Medium-term estimates	2006/07
R million							
Administration	190	211	229	286	253	269	285
Water resources management	724	904	1 074	1 319	1 366	1 487	1 597
Water services	1 787	1 933	1 974	2 608	1 334	1 413	1 354
Forestry	341	434	403	427	350	373	396
Total	3 042	3 483	3 681	4 639	3 302	3 542	3 631
<i>Percentage</i>		14,5%	5,7%	26,0%	-28,8%	7,3%	2,5%

1. The sharp decline in expenditure in the medium term period is due to the removal of capital and operating costs for the water services schemes from the Department's vote.

Source: 2004 Estimates of National Expenditure

Table 10.3 shows the transfers from DWAF to local government. These dropped by 51,6 per cent in 2004/05 owing to the incorporation of the bulk of the water capital grant into the municipal infrastructure grant (MIG) on the Vote of the Department of Provincial and Local Government. The remaining portion of the water capital grant relates to commitments where DWAF is the implementing agent. This arrangement will come to an end in 2005/06 when these commitments have been honoured completely.

The bulk of the water capital grant has been incorporated into the MIG

Operating support, which amounts to R858 million in 2004/05, will be phased out over the medium term, as the water schemes owned and operated by DWAF will be transferred to municipalities.

Operating support will be phased out over the medium term

In terms of the policy on the MIG, allocations to municipalities are made in terms of a formula, based on backlogs, powers and functions, and poverty. The weights allocated to the different components and sectors depend on policy priorities. Water and sanitation receives the bulk of the MIG funds, as shown in table 10.4, because of its present high priority.

Table 10.3 Department of Water Affairs and Forestry transfers to local government, 2000/01 to 2006/07

R million	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
	Outcome			Preliminary outcome	Medium-term estimates		
Operations of water resources	786	692	700	1 001	858	934	991
Basic water and sanitation	725	757	999	1 102	160	139	–
Institutional support	4	5	–	–	–	–	–
Total	1 515	1 454	1 699	2 103	1 019	1 073	991
Percentage change		-4,0%	16,8%	23,8%	-51,6%	5,4%	-7,7%

1. The sharp decline in expenditure in the medium term period is due to the removal of the bulk of the water capital grant into the municipal infrastructure grant on the Vote of DPLG.

Source: 2004 Estimates of National Expenditure

The bulk of the MIG funds go to water and sanitation

Over the 2004 medium-term expenditure framework (MTEF), R8,1 billion has been allocated for water and sanitation. These funds will make a significant contribution to maintaining and raising current spending levels.

Table 10.4 Municipal Infrastructure Grant allocations by sector, 2004/05 to 2006/07

R million	Weighted share	2004/05	2005/06	2006/07
		Medium-term estimates		
Special Municipal Infrastructure Fund and Management	4,0%	178	208	239
Municipal Infrastructure Grant (formula)	96,0%	4 268	4 985	5 748
<i>Of which Municipal Infrastructure Grant (formula)</i>				
B Component	75,0%	3 201	3 739	4 311
Water and sanitation	72,0%	2 305	2 692	3 104
Electricity	0,0%	–	–	–
Roads	23,0%	736	860	991
Other	5,0%	160	187	216
P Component	15,0%	640	748	862
E Component	5,0%	213	249	287
N Component	5,0%	213	249	287
Total	100,0%	4 446	5 193	5 987

Source: National Treasury local government database

Municipal budgets

Municipalities were projected to spend close to R7 billion on water and sanitation

Table 10.5 shows that municipalities are projected to spend R6,8 billion on water and sanitation in the 2003–04 municipal financial year, which ended in June 2004. Of concern is that the total budgeted expenditure on water and sanitation increased by only R109,7 million from 2002–03. The more encouraging trend is an increase of R546,3 million (or 27,6 per cent) in capital expenditure from 2002–03.

In 2003–04, metropolitan municipalities still account for the bulk of spending on water and sanitation, at R3,9 billion (or 56,3 per cent) of the total expenditure on water and sanitation by municipalities.

Table 10.5 Water and sanitation expenditure by category of municipality, 2002–03 and 2003–04

R million	Operating		Capital		Total		Percentage change
	2002–03	2003–04	2002–03	2003–04	2002–03	2003–04	
Category A (Metros)	3 400,6	3 033,9	708,0	819,6	4 108,6	3 853,4	-6,2%
Category B (Locals)	1 309,1	1 177,7	1 024,3	904,7	2 333,4	2 082,4	-10,8%
Category C (Districts)	50,2	111,6	246,6	801,0	296,8	912,7	207,5%
Total	4 759,8	4 323,2	1 979,0	2 525,3	6 738,8	6 848,5	1,6%
<i>Percentage growth</i>		-9,2%		27,6%		1,6%	

Source: National Treasury local government database

The new division of the water and sanitation powers and functions between local and district municipalities took effect from 1 July 2003. It is not clear what impact this has had on service delivery. Budgeted expenditure by district municipalities increased by R615,9 million, whereas that of local municipalities decreased by R251 million from 2002–03, which can be attributed to the new division of powers and functions. The combined budgets for local and district municipalities showed a net increase of R364,9 million (or 13,9 cent) from 2002–03.

The budgets of local and district municipalities have shifted substantially

Water boards

Table 10.6 provides a summary of the budgets for the water boards for the 2002/03 and 2003/04 financial years.

Table 10.6 Income and expenditure of water boards, 2002/03 and 2003/04

R million	Revenue		Capital expenditure		Operating expenditure	
	2002/03 Outcome	2003/04 Preliminary outcome	2002/03 Outcome	2003/04 Preliminary outcome	2002/03 Outcome	2003/04 Preliminary outcome
Albany Coast	2,3	2,5	2,2	2,2	1,5	1,7
Amatola	65,4	73,0	12,6	12,7	2,8	38,3
Bloem	123,6	133,1	16,2	16,2	65,5	76,4
Botshelo	58,5	93,0	–	–	78,7	89,0
Bushbuckridge	2,1	15,7	10,5	10,5	22,6	37,6
Ikangala	–	–	–	–	3,4	5,4
Lepelle	154,5	151,1	4,7	6,2	68,2	87,5
Magalies	102,8	101,4	12,9	12,9	51,4	67,2
Mhlathuze	124,0	146,9	74,3	42,2	103,7	128,6
Namakwa	7,7	8,5	–	–	6,6	7,3
Overberg	16,0	17,5	2,6	6,3	15,0	12,9
Pelladrift	5,2	5,4	–	–	5,7	5,4
Rand Water	2 931,3	3 056,8	342,8	345,1	1 192,0	1 223,1
Sedibeng	236,6	297,5	2,6	10,0	135,5	153,9
Umgeni	826,5	822,4	158,4	158,4	439,1	415,6
Total	4 656,5	4 924,8	639,9	622,7	2 191,8	2 349,7

Source: Department of Water Affairs and Forestry

The combined revenue for water boards was R4,9 billion in 2003/04 The water boards' combined revenue grew by R268,3 million (or 5,8 per cent) from R4,7 billion in 2002/03 to R4,9 billion in 2003/04. Combined operating expenditure increased by R157,9 million (or 7,2 per cent) from R2,2 billion to R2,4 billion over the same period.

Combined capital expenditure decreased Combined capital expenditure decreased by R17,2 million (or 2,7 per cent). Some of the smaller water boards, such as Botshelo, Ikangala, Namakwa and Pelladrift, reflect no capital spending.

Rand Water accounts for the bulk of revenue and operating expenditure Rand Water accounts for 62 per cent of the total revenue and 52 per cent of the total operating expenditure. The next biggest water board, Umgeni Water, accounts for 16,7 per cent of the total revenue and 17,7 per cent of the total operating expenditure.

Personnel

30 000 staff are employed in the water services sector The water services sector employs approximately 30 000 employees between the national department (4 200), the water boards (6 700) and municipalities (19 100). In 2003/04, the average staff cost per employee ranges from R67 000 for DWAF, R102 000 for municipalities and R123 000 for the water boards.

Table 10.7 shows personnel numbers for the national department. The bulk of the department's water sector staff is employed in the water resources management programme.

Table 10.7 Department of Water Affairs and Forestry personnel numbers and costs by programme, 2000/01 to 2004/05

Number	2000/01	2001/02	2002/03	2003/04	2004/05
Administration	730	772	772	772	772
Water resources management	3 866	4 023	4 104	4 104	4 104
Water services	76	74	74	74	74
Forestry	1 978	1 843	4 893	4 893	4 893
Total personnel numbers	6 650	6 712	9 843	9 843	9 843
R thousand					
Total compensation of employees	373 294	406 708	646 661	660 070	606 705
Unit cost	56,1	60,6	65,7	67,1	61,6

Source: 2004 Estimates of National Expenditure

About 80 per cent of DWAF staff are to be transferred to municipalities Approximately 80 per cent of DWAF's staff, mainly those involved in the water resources management programme, is expected to be transferred to municipalities over the next three years, as the transfer of water schemes owned and operated by DWAF to municipalities takes place.

Rand Water is the biggest employer Table 10.8 shows that the water boards employ 6 651 staff at an average cost of R123 000 per employee a year. Rand Water is the biggest employer with 3 108 staff, followed by Umgeni Water with 1 050.

Staff costs vary across Water Boards Umgeni Water recorded the highest average cost per employee at R157 000 a year. Sedibeng Water had the lowest average cost per employee at R26 000 a year.

Table 10.8 Water boards personnel numbers and costs, 2002–03

Water board	Population served (thousands)	Service area (km ²)	Staff	Personnel costs (R thousand)	Average costs per employee (R thousand)
Rand Water	10 000	18 001	3 108	469 700	151
Umgeni Water	4 302	32 000	1 050	165 215	157
Sedibeng Water	1 600	86 000	595	15 755	26
Lepelle Northern	1 000	82 000	261	22 088	85
Mhlathuze Water	380	37 000	147	28 895	197
Bloem Water	800	35 150	223	24 731	111
Ikangala Water	1 530	4 008	6	1 080	180
Botshelo Water	821	49 858	388	32 892	85
Amatola Water	1 200	43 400	231	25 832	112
Bushbuckridge	1 200	12 320	262	9 022	34
Magalies Water	800	35 000	281	14 504	52
Overberg Water	62	6 700	67	6 093	91
Pelladrift Water	7	9 531	–	–	–
Namakwa Water	45	1 487	26	2 106	81
Albany Coast Water	10	–	6	447	75
Total	23 757	452 455	6 651	818 360	123

Source: Department of Water Affairs and Forestry

Table 10.9 Water and sanitation personnel numbers and costs by metropolitan area, 2002–03 and 2003–04

Municipality	Budgeted number of employees ¹		Total cost of employees (R thousand)		Average cost per employee (R thousand)	
	2002–03	2003–04	2002–03	2003–04	2002–03	2003–04
City of Johannesburg	2 533	2 557	283 864	345 000	112	135
eThekweni (Durban)	2 654	2 756	228 930	250 060	86	91
Ekurhuleni (East Rand)	1 270	1 008	112 088	112 153	88	111
Tshwane (Pretoria)	967	974	110 101	127 426	114	131
Nelson Mandela (Port Elizabeth)	981	878	74 119	81 750	76	93
Total metros	8 405	8 173	809 102	916 389	96	112
Buffalo City (East London)	570	649	28 274	47 254	50	73
Mangaung (Bloemfontein)	298	421	35 219	35 939	118	85
Msunduzi (Pietermaritzburg)	316	304	6 848	6 276	22	21
Polokwane (Pietersburg)	103	147	5 446	10 622	53	72
Rustenburg	153	122	8 798	10 709	58	88
Umlhathuze (Richards bay)	230	215	16 968	20 066	74	93
Drakenstein (Paarl)	187	187	13 114	12 903	70	69
Sol Plaatje (Kimberley)	244	189	12 526	13 939	51	74
Mbombela (Nelspruit)	64	77	4 696	6 011	73	78
Govan Mbeki (Highveld East)	230	228	14 772	16 438	64	72
Stellenbosch	142	142	11 108	15 550	78	110
Mafikeng	76	76	5 554	5 976	73	79
Total largest 12 municipalities	2 613	2 757	163 323	201 683	63	73
Total largest 17 municipalities²	11 018	10 930	972 425	1 118 072	88	102

1. Water and sanitation services are not truly stand-alone and ring-fenced activities except for the City of Johannesburg.

2. Data for Cape Town not available.

Source: National Treasury local government database

The average cost per employee in metropolitan municipalities increased by 16,7 per cent

Table 10.9 shows the average cost per employee in water and sanitation functions in the metropolitan areas were R112 000 in 2003–04, up from R96 000 the previous year. The number of employees decreased from 8 405 to 8 173. The average cost per employee increased by R16 000 (or 16,7 per cent).

Staff costs vary significantly between non-metropolitan municipalities

Buffalo City has the biggest staff complement of the non-metropolitan municipalities, at 649, and an annual budget of R47,3 million in the 2003–04 financial year. The annual average cost per employee of Buffalo City is about R37 000, less than at Stellenbosch, which has a far smaller operation of 142 staff and an annual budget of R15,6 million.

Conclusion

The water services sector is undergoing reform. However, it will take some time to see results.

The different staffing costs structures will pose a huge challenge for the national department when it transfers staff and water schemes to municipalities.

Service delivery in the sector will have to be speeded up significantly to meet the President's targets. The new MIG will facilitate the speedy rollout of services to the poor.