GOAL 2: Achieve Universal Primary Education

Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Education: Status and Trends

South Africa has made significant progress since 1994 towards ensuring access to education for the almost all children aged 7 to 15 years (compulsory school-going age of the country). Improvements have also been made in primary enrolment by promoting the enrolment of age- appropriate learners.

Enrolment rates

Although education in South Africa is compulsory for all those aged between 7 – 15 years, age-appropriate primary school attendance involves examining the school attendance of those aged 7 – 13 years.

Since 1996, the primary net enrolment ratio (NER) for children aged 7 – 13 (grades 1 to 7) has increased, from 88% in 1996 (Census 1996) to 96% in 2004 (Labour Force Survey, March 2004), as indicated in Table 4.

Table 4
Summary of education statistics: based on Census 1996, Census 2001 and various household surveys

INDICATORS	Data base1	Data base2	Data base3	2015 MDG target	Progress towards target
Primary net enrolment ratio (%)	88 (Census 1996)	94 (Census 2001)	96 (LFS 2004)	100	Improving
People aged 17 years who have successfully completed a minimum of primary education (%)	81 (Census 1996)	84 Census 2001)	-	100	Improving
Literacy rate of 15-24 year olds (%)	95 (OHS 1996)	96 (GHS 2003)	98 (LFS 2004)	100	Improving

Sources: *Stats SA. Census 1996 and Census 2001; October Household Surveys 1996, and199, General Household Survey 2003; and Labour Force Survey March 2004.*

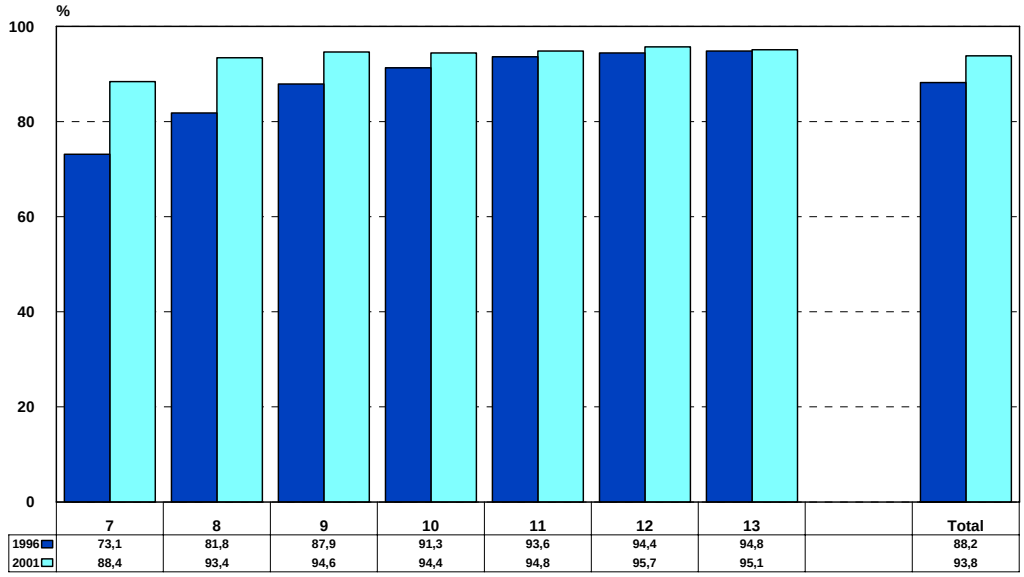
Notes:
Primary education net enrolment ratio (NER) is the number of primary school students aged 7-13, divided by the total number of children in the population aged 7-13.

Literacy rates: The proportion of people who say they can read and/or write in at least one language

Primary school in South Africa includes Grades 1 through 7, or seven years.

There are, however, variations in primary net enrolment by single-year age category, as indicated in Figure 1. But there has been an overall improvement in school attendance between 1996 and 2001 among 7 – 13 year olds in all single-year age categories.

Figure 1
The percentage of children aged 7 - 13 years who were attending school October 1996 and 2001



	7	8	9	10	11	12	13		Total
1996	73,1	81,8	87,9	91,3	93,6	94,4	94,8		88,2
2001	88,4	93,4	94,6	94,4	94,8	95,7	95,1		93,8

Source: Census 1996 and 2001

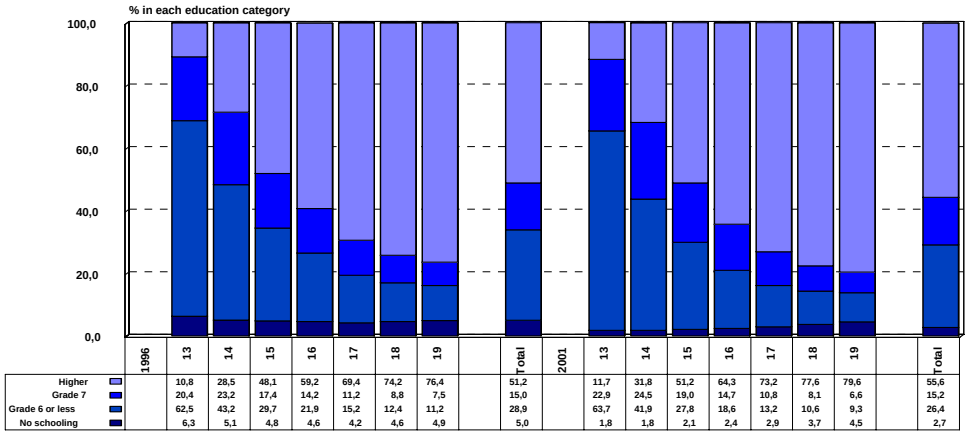
Completion of Primary Education

While we do not have the exact cohort figures of school attendance by highest level of education, as a proxy for this indicator, data from Census 1996 and 2001 will be used to show the proportion of children aged 13 – 19 years that have completed primary school, as indicated in Figure 2. The graph also indicates the percentage of children between the ages of 13 – 19 years that have attained a higher level of education than complete primary school. There are clear improvements between 1996 and 2001, as indicated in the graph.

For example, Figure 2 shows that, in 1996, 81% of those aged 17 years had successfully completed Grade 7 (complete primary) or higher levels of education, increasing to 84% in 2001.

Figure 2

The percentage of persons aged 13 - 19 years in each educational category as their highest education level October 1996 and 2001



	1996	13	14	15	16	17	18	19	Total	2001	13	14	15	16	17	18	19	Total
Higher		10,8	28,5	48,1	59,2	69,4	74,2	76,4	51,2		11,7	31,8	51,2	64,3	73,2	77,6	79,6	55,6
Grade 7		20,4	23,2	17,4	14,2	11,2	8,8	7,5	15,0		22,9	24,5	19,0	14,7	10,8	8,1	6,6	15,2
Grade 6 or less		62,5	43,2	29,7	21,9	15,2	12,4	11,2	28,9		63,7	41,9	27,8	18,6	13,2	10,6	9,3	26,4
No schooling		6,3	5,1	4,8	4,6	4,2	4,6	4,9	5,0		1,8	1,8	2,1	2,4	2,9	3,7	4,5	2,7

Literacy rates of 15 – 24 year olds

Literacy rate measurement is based here on the *subjective* opinion of people, regarding whether they are able to read or write in at least one language. Using this opinion, the literacy rate among 15 – 24 year olds has exhibited an upward trend since 1996. Literacy in this age group increased from 95% in 1996 to 98% in 2004. Figure 3 shows that these rates have remained steady between 2000 and 2004, as indicated by successive labour force surveys between 2000 and 2004.

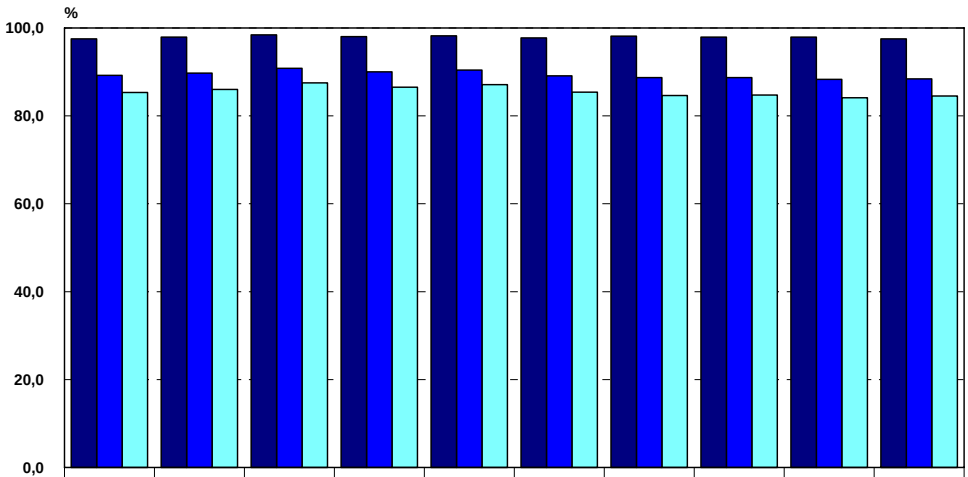
The literacy levels for female and male youths aged 15 – 24 years are similar, and may be related to the equal probability of enrolment of females and males in the school system (Department of Education, 2003).

Literacy rates of those aged 15 years or more

As would be expected, subjective measures of literacy are lower for the overall population of South Africans aged 15 years and above than they are for those aged 15 – 25 years, as indicated in Figure 3. They have remained steady over time.

Figure 3

Percentage of people in three age categories (15 - 24 years, 25 years or more, and 15 years or more) who said they could read or write in at least one language March 2000 - September 2004)



	Mar 2000	Sep 2000	Mar 2001	Sep 2001	Mar 2002	Sep 2002	Mar 2003	Sep 2003	Mar 2004	Sep 2004
15 - 24	97,5	97,9	98,4	98,0	98,2	97,7	98,1	97,9	97,9	97,5
15+	89,2	89,7	90,8	90,0	90,4	89,1	88,7	88,7	88,3	88,4
25 +	85,3	86,0	87,5	86,5	87,1	85,4	84,6	84,7	84,1	84,5

Source: Stats SA, Labour Force Surveys, March 2000 - September 2004

Major challenges for education

Efficiency

In assessing progress toward the attainment of basic primary education for all, it is important to highlight that high enrolments are only the first step in attaining this goal. Measuring the internal efficiency and quality of outputs of the system is becoming increasingly important. The extent to which learners are advancing effectively through the system and exiting with appropriate learning achievements is thus also important.

Repetition and dropout rates

The country requires better measurement of the extent of repeaters and dropouts in the country to inform future policy.

Out-of-school children

According to the South African Schools Act of 1996, school attendance is compulsory for all children from ages 7 – 15 years (Grades 1 – 9). The earlier section of this goal referred to children aged 7 – 13 years, as an appropriate age for primary school attendance. Here we broaden the scope to examine school attendance of those aged 7 – 15 years, since education beyond primary school is becoming essential in a modern economy.

Although school attendance has been significantly improving, the number of eligible children aged 7 – 15 years not attending school was estimated to be 582 000 or 6,5% of a total of 9 million children in this age group counted in Census 2001. (There were also approximately 49 000 or 0,5% of children attending an educational institution, such as a pre-school organisation, that was not at school).

Reasons for school non-attendance include issues related to affordability, age (too old to start school), far distances to the nearest school and illness (Stats SA, 2003).

Child Labour (children involved in economic activities)

Child labour may be one of the factors contributing to school non-attendance. The *Survey of Activities of Young People in South Africa* (SAYP), conducted by Stats SA, showed that, when factoring out the activity of fetching fuel and water, 3% or 0.4 million of 13.4 million children aged 5 –17 years in 1999 worked for 12 or more hours per week. While this is a relatively small proportion of the total population of those aged 5 – 17 years, engagement in work activities may have an impact on the attendance and completion of primary school. For example, SAYP revealed that among non-school attendees, 6% of boys and 1% of girls aged between 5 and 17 years did not attend because of the work they do during school hours.

Equity

While education was highly inequitable in respect of provision of funding allocations by race prior to 1994, over the last decade the democratic government has been increasing and improving the targeting of education funding allocations (DoE, 2002). Education remains the country's largest single budgetary item. Some progress has been made in addressing historical inequities. For instance, between 1996 and 2000, schools became less overcrowded, with the average number of learners to a classroom decreasing from 43 to 38. Access to key physical infrastructure such as water, sanitation and electricity also improved over the period. However, South Africa continues to have a differentiated public schooling system with poor learning conditions in schools in previously disadvantaged parts of the country, especially in terms of infrastructure and resources.

Quality of education

As increasing proportions of children enter the school system, attention is shifting away from actual attendance, towards the quality of learning at schools. In the 1999 Monitoring Learning Achievement (MLA) Survey, Grade 4 learners (9-year-old cohort) generally performed relatively poorly in functional literacy, numeracy and life skills, with average scores in these areas being below 50 per cent. Government is paying attention to improving this.

GOAL 3: Promote Gender Equality and Empower Women

Target 4: Eliminate gender disparity in primary and secondary education by 2005, and in all levels of education no later than 2015

Status and trends

Ratio of girls to boys in primary, secondary and tertiary education

For South Africa, as we have seen in the discussion of the previous goal, the gross enrolment ratios (GERs) suggest that a relatively small percentage of primary school aged children are not at school.

Data from the General Household Survey of 2003 confirm that over 95% of both boys and girls aged 7 – 13 years were reported to be attending school. The ratio of girls and boys enrolled in primary school in the period 1990 – 2001 was fairly equal throughout, with slightly lower percentage of girls than boys in each of the years, in accordance with the demographic picture in the country. Table 5 indicates enrolment ratios for 1994 and 2001 at primary school level. Gross enrolment ratio (GER) and gender parity index (GPI) estimates confirm these trends at primary level.

On the other hand, girls tend to outnumber boys in secondary school enrolment. A larger proportion of females than males, therefore, benefit from secondary education. Table 5 also indicates enrolment ratios for 1994 and 2001 at secondary school level.

Table 5
Summary of gender statistics

INDICATORS	Year	Year	2015 MDG target	Progress towards target
Ratio of girls to boys in:				
Primary education (girls per 100 boys)	98:100 (1994)	96:100 (2001)	Equal access to primary education for girls and boys	Have already attained target
Secondary education (girls per 100 boys)	118:100 (1994)	112:100 (2001)		
Tertiary education (girls per 100 boys)	92:100 (1996)	116:100 (2003)	Equal access to secondary education for girls and boys	Have already attained target
Ratio of literate females to males (15-24 years)	111:100 (1996)	109:100 (2003)	Equal female to male ratios	Have already attained target
Share of women in wage employment in the non-agricultural sector	41 % (1996)	43 % (2001)	Equal access to employment	Slow
Proportion of seats held by women in national parliament	25% (1994)	33% (2004)	Equal access to public office	Potentially should reach target

Sources: *Education Foundation of South Africa; Stats SA; Census 1996 and 2001*

Table 6 shows that, at a tertiary level, women accounted for 48% of total university enrolment in South Africa by 1990. At the honours level 46% of all students were women, at masters level 32%, and at the doctoral level 24% were women.

In 1990, the majority of enrolments in the former technikons were among males. By 1996, women outnumbered men in the universities, while the opposite pattern still held in the previous so-called technikons, but now part of university education. Overall in tertiary education, the female to male ratio was 92:100 in 1996. By 2001, the female to male ratio for higher education had risen to 115:100.

Overall, in 2003, 49% of those enrolled at technikons were female, compared to 56% at universities, with a female to male ratio of 116:100. GERs and the GPI for tertiary level education (using the age group 19 – 25) show that the gender ratio has shifted in favour of females.

Table 6
Ratio of Girls to Boys by level of education, 1990-2001

Year	Primary	Secondary	Tertiary
1990	99:100	118:100	-
1991	98:100	119:100	-
1992	98:100	119:100	-
1993	98:100	119:100	-
1994	98:100	118:100	-
1995	98:100	119:100	-
1996	98:100	117:100	92:100
1997	96:100	116:100	-
1998	-	-	-
1999	97:100	115:100	-
2000	96:100	113:100	-
2001	96:100	112:100	115:100
2002	-	-	-
2003	-	-	116:100
Census 2001	94:100	108:100	114:100

- Data not available
Sources: Data provided by Education Foundation of South Africa, with original sources from Nated 02-215 (1990, 1991); RIEP (1992-1997); EMIS Department (1998); DoE Education Statistics (1999-2001); Stats SA; Census 2001

Table 7, which indicates the gross enrolment ratios and the gender parity index by level of education between 1990 and 2001, shows that the country has achieved, or even exceeded the targets of gender parity in education.

Table 7
Gross enrolment ratios and gender parity index by level of education, 1990 – 2001

	Primary				Secondary				Tertiary			
Year	**Female**	**Male**	**All**	**GPI**	**Female**	**Male**	**All**	**GPI**	**Female**	**Male**	**All**	**GPI**
1990	110	115	112	0.96	74	66	70	1.12	-	-	-	-
1991	111	117	114	0.95	78	69	74	1.13	-	-	-	-
1992	113	118	116	0.96	83	73	78	1.13	-	-	-	-
1993	117	123	120	0.95	86	76	81	1.13	-	-	-	-
1994	121	125	123	0.97	89	79	84	1.13	-	-	-	-
1995	125	129	127	0.97	92	81	86	1.14	-	-	-	-
1996	127	131	129	0.97	94	83	89	1.13	9	11	10	0.86
1997	126	131	129	0.96	92	82	87	1.12	-	-	-	-
1998	-	-	131		-	-	87	-	-	-	-	-
1999	126	129	128	0.98	92	82	87	1.12	-	-	-	-
2000	116	121	119	0.96	92	84	88	1.11	-	-	-	-
2001	112	116	114	0.97	93	84	89	1.10	11	10	11	1.10
2002	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	12	11	12	1.13

- *Data not available*

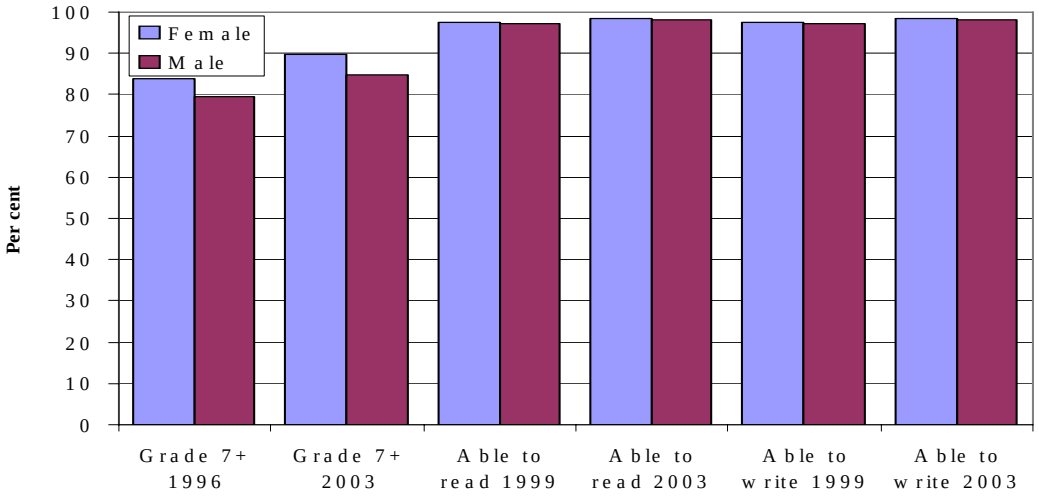
Sources: Data provided by Education Foundation of South Africa, with original sources from Nated 02-215 (1990, 1991); RIEP (1992-1997); EMIS Department (1998); DoE Education Statistics (1999-2001)

Ratio of literate females to males aged 15 – 24 years:

In 1996, Figure 4 shows that the ratio of women to men aged 15 – 24 years who had completed Grade 7 (primary school), as a measure of literacy, was 111: 100. It also shows the proportion of women to men who said they could read and/or write in at least one language, as an alternative measure of literacy. This graph suggests that women aged 15 – 24 years fared better than men in terms of literacy. In 2003, the female to male ratio among those who had completed primary school was 109: 100, indicating that the advantage in favour of women had remained.

Figure 4

The percentage of those who completed Grade 7 at school, and the percentage of those who were able to read and/or write in at least one language, among 15 – 24 year olds



Source: Stats SA; OHS, 1996 and 1999, and GHS 2003

In Stats SA's twice-yearly Labour Force Survey (LFS), in each successive survey from March 2000 to September 2004, Table 8 shows that among those aged 15 – 24 years, a smaller proportion of women than men had not completed Grade 7, and a larger proportion of women than men had completed Grade 8. More young women of this country have, on average, thus attained higher levels of education than the young men.

Table 8

The percentage of those aged 15 – 25 who had not completed primary school (Grade 7) and who had completed Grade 8 or higher, who were women

Year	Month	Percentage of those with less than Grade 7 who are females	Percentage of those with Grade 8 or higher who are females
2000	**Mar**	42,4	50,5
	Sep	41,5	52,4
2001	**Mar**	39,9	51,9
	Sep	40,2	52,2
2002	**Mar**	40,5	51,9
	Sep	38,6	51,6
2003	**Mar**	42,1	51,9
	Sep	41,3	52,4
2004	**Mar**	40,5	52,6
	Sep	37,3	51,5

Share of women in wage employment in the non-agricultural sector
Between 2000 and 2004, Table 9 shows that, on the basis of the LFS, the female share of total and agricultural wage employment was lower than the share for males.

Table 9
The share of women in total wage employment and in wage employment in the non-agricultural sector

Year	Month	Total Employment Percentage who are female	Non-agricultural Employment Percentage who are female
2000	**Mar**	47,0	46,1
	Sep	45,5	45,4
2001	**Mar**	46,6	47,4
	Sep	44,2	45,6
2002	**Mar**	45,4	45,9
	Sep	43,9	45,0
2003	**Mar**	44,3	45,3
	Sep	44,6	46,0
2004	**Mar**	43,7	44,7
	Sep	41,8	42,6

Proportion of seats held by women in the national parliament.
During the apartheid era, there were very few female members of parliament. Since 1994, national elections have been held on a five-year basis – in 1994, 1999 and 2004.

The April 1994 elections were governed by the interim constitution of 1993, which established a two-house parliament. The National Assembly was to be elected according to a system of proportional representation, while the Senate consisted of 10 delegates from each of the nine provinces nominated in accordance with the principle of proportional representation.

In keeping with the SADC Declaration on Gender and Development, which refers to a minimum of 30% representation of women in decision-making structures, there was a 30% quota of women on the party lists of the ANC for the first democratic elections, and there were 101 women out of 400 in the first post-apartheid National Assembly. There were, however, only 16 women among the 90 Senate members. The 1996 Constitution also provided for two houses - a National Assembly and National Council of Provinces (NCOP), which replaced the Senate. The National Assembly was to be elected as before. The National Council of Provinces consists of 54 permanent representatives and 36 special delegates nominated from time to time by the provincial legislatures.

Table 10 shows that by 1997, 111 of the 400 members of the National Assembly were women, but the first NCOP had only eight women representatives (15% of the total). In mid-2003, 32% of National Assembly members were women, which increased to 33% in late 2004. Of the permanent members of the NCOP, 34% were women by late 2004.

Table 10
Women and men in the national legislature and the national council of the provinces, 1994, 1997, 2003 and 2004

	Women	Men	Total	% Female
National Assembly				
1994	101	299	400	25%
1997	111	289	400	28%
2003	125	271	*396	32%
2004	132	268	400	33%
NCOP*				
1994 (Senate)	16	74	90	18%
1997	8	46	54	15%
2003	20	34	54	37%
2004	19	35	54	35%

** = National Council of the Provinces*

In a more detailed breakdown of positions in national and provincial government, including cabinet positions and premierships for 2002 – 2004, Table 11 shows an increase in the proportion of women in all government high-level decision-making bodies.

Table 11
Women and men in decision-making positions in national and provincial government: 2002 – 2004

Decision-making position	Number of women			Number of men			Percentage of women		
Year	**2002**	**2003**	**2004**	**2002**	**2003**	**2004**	**2002**	**2003**	**2004**
Cabinet									
Ministers	9	9	12	18	18	16	33	33	43
Deputy Ministers	8	8	10	6	6	11	57	50	48
National Parliament									
National Assembly	125	125	131	275	275	269	31	31	33
NCOP*	18	20	19	36	36	35	33	38	35
Provincial Parliament									
Legislatures	119	119	139	311	311	291	28	24	32
Women Premiers	1	1	4	8	8	5	11	11	44

Source: *The Presidency; Office of the Status of Women, Pretoria*

** National Council of the Provinces*

GOAL 4: Reduce Child Mortality

Target 5: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

Available data (see Table 12) suggest that infant and under-five mortality rates have remained relatively constant since estimates made in 1998, with slight decreases of 0,5% and 0,3% for infant and under five mortality respectively. The infant mortality rate (IMR) was 45 per 1 000 live births, while under-five mortality rate (U5MR) was 59 per 1 000 births and neonatal mortality was 20 deaths per 1 000 live births in the 1993 – 1998 period (South African Demographic and Health Survey, 2004).

Table 12
Summary of indicators related to child mortality

INDICATORS	1998	2002 (Preliminary)	2015 MDG Target	Progress towards target
Neonatal mortality rate (per 1 000 live births)	20	-	-	The targets are potentially attainable taking into account free primary health care access.
Infant mortality rate (per 1 000 live births)	45	44	15	
Under-five mortality rate (per 1 000 live births)	59	60	20	
Proportion of 1 year-old children immunized against measles	72	(2003 estimates) 78	90	

Sources: South African Demographic and Health Survey (DOH - SADHS), 1998; Department of Health, 2001, Stats SA, Causes of death 1997 – 2003, 2004.

Note: Neonatal mortality is the probability of dying within the first month of life, infant mortality is the probability of dying in the first year of life, and under-five mortality is the probability of dying between birth and age five

Status and trends

Child mortality indicators

The National Department of Health (NDoH) goals for child health (2001-2005) are guided by international child health goals, including the reduction of infant and child mortality and morbidity. Explicit 2005 objectives include reducing the neo-natal mortality rate (NNMR) from 20 to 14 per 1 000 live births, retaining the national IMR at 45 per 1000 live births and reducing the national U5MR to 59 per 1000 live births.

Causes of death among infants and under-fives

Recorded causes of death for the period 1997 – 2002 are shown in Table 13. According to the data, the number of infant deaths in South Africa makes up an approximate 7 percent of total registered deaths.

Table 13
Number of registered infant deaths, South Africa, 1997 – 2002

Year	Infant deaths under age one year				Total deaths	Infant deaths as percent of total deaths
	Males	Females	Unspecified	Total		
1997	14 249	12 563	232	27 044	318 287	8,5
1998	16 639	14 723	376	31 738	367 689	8,6
1999	15 653	14 242	464	30 359	381 902	7,9
2000	15 807	14 256	369	30 432	413 969	7,4
2001	15 955	14 481	314	30 750	451 936	6,8
2002	19 070	17 151	382	36 603	499 268	7,3
Total	97 373	87 416	2 137	186 926	2 887 654	6,5

Source: Stats SA: Mortality and causes of death in South Africa, 1997 – 2003. Findings from death notification

The data show that, among children aged under five years, deaths due to intestinal infections, respiratory tuberculosis, influenza and pneumonia, and HIV and AIDS, accounted for under 10% of deaths in this age group. This group of causes however has been steadily increasing, from 8.1% of under-five deaths in 1997, to 8.8% in 1999 to 9.6% in 2001.

Child Immunisation

As a means of reducing childhood mortality and illness from vaccine-preventable diseases, South Africa has an Expanded Programme on Immunisation (EPISA). The country's primary national objectives for 2005 in relation to child immunisation are to:

- Attain 90% full immunisation coverage amongst children at 1 year of age by 2004.
- Vaccinate 90% of children against measles.
- Achieve a less than 10% drop out rate between measles 1 and 2 doses.
- Eradicate polio

The proportion of one-year old children immunised against measles in 1998 was 72% for South Africa as a whole. In 2002, it is estimated that this had increased to 82% (SADHS 1998; DOH 2005)

GOAL 5: Improve Maternal Health

Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio

Maternal mortality ratios measured by surveys and monitoring systems

The 1998 SADHS estimated that the maternal mortality *ratio* was 150 maternal deaths per 100 000 live births for the approximate period 1992 – 1998, as shown in Table 14. The 2005 goal set by the National Department of Health (NDoH) was to reduce maternal mortality by 25% from 150 to 100 per 100 000 live births, and by 50% to 75 per 100 000 by 2015 when excluding deaths due to HIV/AIDS. The most recent estimate for Maternal Mortality (MMR) in 2003 is 123.7 per 100 000.

Whilst the estimate is lower than the previous estimate of 2003, it needs to be borne in mind that the estimation method is not the same. Whilst the SADHS was the only data available in 2003, the vital registration system is now able to provide estimates of mortality. Survey methods such as the SADHS are known to overestimate deaths, especially when the incidence of deaths is relatively low. With the availability of vital statistics through Statistics South Africa, maternal deaths have been re-estimated. The estimates show that the 1998 survey estimates were probably overestimates showing a MMR of 150 instead of approximately 84 per 100 000 live births.

Table 14
Summary of indicators of maternal health

INDICATORS	1998 SADHS (NDoH)	2004 NDoH /Stats SA	2005 National target	2015 MDG target	Progress towards target
Maternal mortality ratio (per 100 000 live births)	150 (1998) 84 (revision)	124 (2002)	100	38	Slow
Proportion of deliveries that are supervised by trained birth attendants	84 (1992-98)	Not available	90	-	Insufficient data

Sources: South African Demographic and Health Survey (SADHS), 1998, NdoH/Stats SA
Note: Maternal mortality ratio (MMR) refers to the number of maternal deaths (women who die as a result of childbearing, during the pregnancy or within 42 days of delivery or termination of pregnancy in one year) per 100 000 live births during that year.

Confidential Enquiry into Maternal Deaths

The Confidential Enquiry into Maternal Deaths was initiated in October 1997. This has been an important tool and source of information on the causes of maternal deaths. It has in addition served as an important mechanism for correcting factors in the care environment, which contribute, to maternal deaths. The '*Saving Mothers'* Report has shown the importance of the confidential enquiry. As coverage increases the data will become another source of information on maternal mortality rates

Maternal mortality measured by death certificates

In 1995 South Africa embarked on a programme to strengthen and improve vital registration, in particular improving death notification. Using these death notification forms, Stats SA recently published mortality and causes of deaths statistics. This report was based on the International Classification of Diseases, 10th revision (ICD10). This Stats SA report on causes of deaths covers the time period from 1997 to 2003. The data sets issued by Stats SA to users at the time of publication, allows maternal mortality to be analysed from two perspectives, i.e. underlying cause of death and multiple cause of death.

Table 15 shows the number of deaths for the period, 1997 – 2002, in which a maternal cause is classified as the underlying cause of death. The total number of these deaths for the whole time-period was 4 402. When broken down by year of death, these underlying maternal causes of death exhibit a gradual rise from 635 in 1997 to 855 in 2001, as shown in Table 15.

Table 15
Number of recorded deaths having a maternal cause as the underlying cause of death, South Africa, 1997 – 2002

	Year of death						
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**1997-2002**
Total underlying maternal causes of death	635	645	717	751	855	799	4 402

Source: Stats SA, mortality and causes of death in South Africa, 1997 – 2003. Findings from death notification

Utilizing the Statistics South Africa report on the Causes of Death in South Africa for the period 1997 to 2003, and the Statistics South Africa birth registration data, maternal mortality ratio estimates are shown in Table 16. There appears, from this table, to be a gradual increase over time in the maternal mortality ratio. Bearing in mind that births in South Africa are not always registered in the year in which they occur, for example, a birth may be registered in the year prior to school registration, there may consequently be an underestimation in the number of births, particularly for 2001 and 2002, and subsequently an overestimation of the maternal mortality ratio.

Table 16
Maternal Mortality Ratio
Using Stats SA birth registration figures and causes of death

	Year					
	1997	**1998**	**1999**	**2000**	**2001**	**2002**
Total: maternal causes of death	635	645	720	751	855	799
Births: Stats SA	786 956	765 564	772 600	769 119	735 944	645 882
MMR	**80.69**	**84.25**	**93.19**	**97.64**	**116.18**	**123.71**

Source: Stats SA

Using estimated births derived by Moultrie (2004), by taking possible under-registration of births into account, maternal mortality *ratios* are obtained, ranging from 55,2 per 100 000 births occurring in 1997 to 78,0 per 100 000 births occurring in 2001 and 73,1 per 100 000 births occurring in 2002, as shown in Table 17.

Table 17
Estimates of maternal mortality ratios based on recorded deaths and estimated number of births, South Africa, 1997-2002.

	Year of death					
	1997	**1998**	**1999**	**2000**	**2001**	**2002**
Maternal mortality ratio (MMR)	55.2	56.5	63.4	67.2	78.0	73.1

Source: Stats SA, mortality and causes of death in South Africa, 1997 – 2003. Findings from death notification

In terms of the breakdown of maternal deaths into specific causes of death, Table 18 shows that for each year in the publication period, the highest number of deaths (about a quarter) belong to the category of causes grouped under 'Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and puerperium' (O10-O16).

Table 18
Number of recorded deaths with a maternal cause as the underlying cause of death; South Africa, 1997-2002

Underlying causes of maternal death	Year of death						
	1997	1998	1999	2000	2001	2002	1997-2002
Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and puerperium (O10-O16)	168	175	185	211	215	215	1 169
Complication of labour (O60-O75)	107	100	139	115	148	146	755
Pregnancy with abortive outcome (O00-O08)	106	117	132	134	141	134	764
Complication predominantly related to the puerperium (O85-O92)	105	104	112	129	168	138	756
Other obstetric conditions not elsewhere classified (O95-O99)	70	68	68	70	105	79	460
Maternal care related to the foetus and amniotic cavity and possibly delivery problems (O30-O48)	52	52	56	54	47	56	317
Other maternal disorders predominantly related to pregnancy (O20-O29)	27	29	25	38	31	31	181
Delivery (O80-O84)	0	0	0	0	0	0	0
Total underlying maternal causes of death	635	645	717	751	855	799	4 402

Source: Stats SA, mortality and causes of death in South Africa, 1997 – 2002 data sets

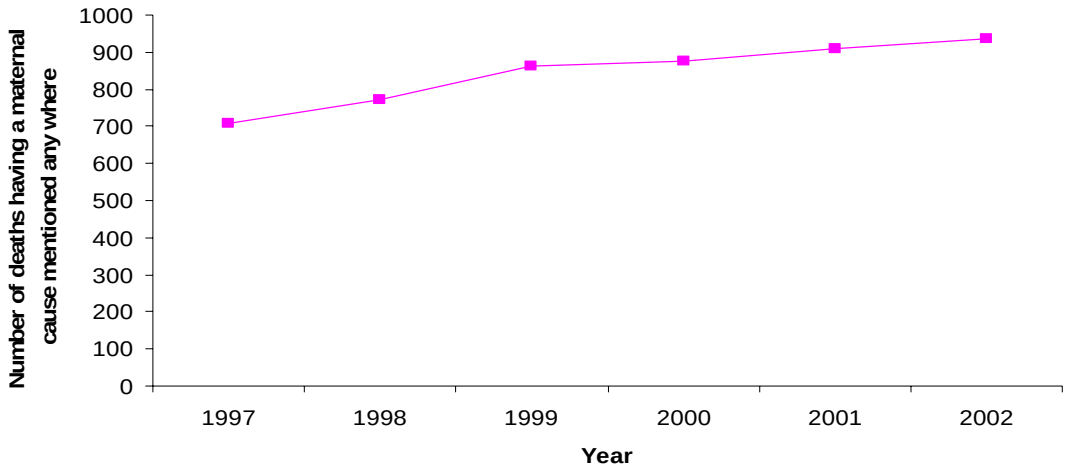
When the recorded deaths are searched for any mention of maternal cause anywhere on the death notification form (i.e. as a multiple cause of death), the numbers of deaths obtained are shown in Table 19 and Figure 5. The statistics show a gradual but clear increase over the time period 1997 – 2002.

Table 19
Number of recorded deaths having a maternal cause mentioned any where on the death notification form, South Africa, 1997-2002.

	Year of death						
	1997	1998	1999	2000	2001	2002	1997-2002
Number of deaths having a maternal cause as mentioned anywhere on the death notification form	708	773	863	876	908	936	5 064

Source: Stats SA, mortality and causes of death in South Africa, 1997 – 2002 data sets

Figure 5
Number of recorded deaths, which have a maternal cause of death, and which are mentioned on the death notification form, South Africa, 1997-2002.



Source: Stats SA, mortality and causes of death in South Africa, 1997 – 2002 data sets

The causes of death data allow one to estimate the possible contribution of HIV to maternal mortality. The number of deaths having HIV as the underlying cause of death and a maternal cause as an associated cause of death totalled 110 for the five-year period under discussion. The number of deaths having a maternal cause as the underlying cause and HIV as an associated cause totalled 11 for the same period. These deaths account for less than five percent of maternal deaths during the study period.

Deliveries supervised by trained birth attendants

Process indicators relevant to maternal health discussed below are: the place where the delivery takes place, the person delivering the child, and receiving antenatal care. Regarding place of delivery, in Table 20, based on 1998 SADHS, percentages are shown for the births in the five years preceding the survey. In South Africa as a whole over 80% of deliveries took place in health facilities.

Table 20
Percentage distribution of births that took place between 1992 and 1998 by place of delivery

	At health facility	At home	Don't know/missing	Total	Number of births reported in survey
All deliveries	83,4	14,3	2,3	100,0	4 992

Source: South African Demographic and Health Survey, 1998

Regarding the person who delivered the baby, in Table 21, according to the 1998 SADHS data, doctors provided 30.0% of assistance during delivery and nurses/midwives provided assistance at 54.4% of deliveries.

Table 21
Percentage distribution of births that took place between 1992 and 1998 by person who attended the delivery

	Assistance at delivery from a doctor	Assistance at delivery from nurse/midwife	Assistance at delivery from a traditional birth assistant	Assistance at delivery from a relative/other person	No one assisting at delivery	Don't know/ missing	Total	Number of births reported in survey
All	30.0	54.4	1.4	10.5	2.1	1.7	100.0	4992

Source: South African Demographic and Health Survey, 1998

Table 22 shows that for South Africa as a whole, according to the 1998 SADHS data, doctors provided 28.7% of antenatal care and nurses/midwives provided 65.5%.

Table 22
Percentage distribution of antenatal care between 1992 and 1998

	Antenatal care from doctor	Antenatal care from nurse/midwife	Antenatal care from traditional birth attendant	No Antenatal care	Missing information	Total	Number of births reported in survey
SA	28.9	65.5	0.8	3.1	1.8	100.0	4992

Source: South African Demographic and Health Survey, 1998

GOAL 6: Combat HIV/AIDS, malaria and other diseases

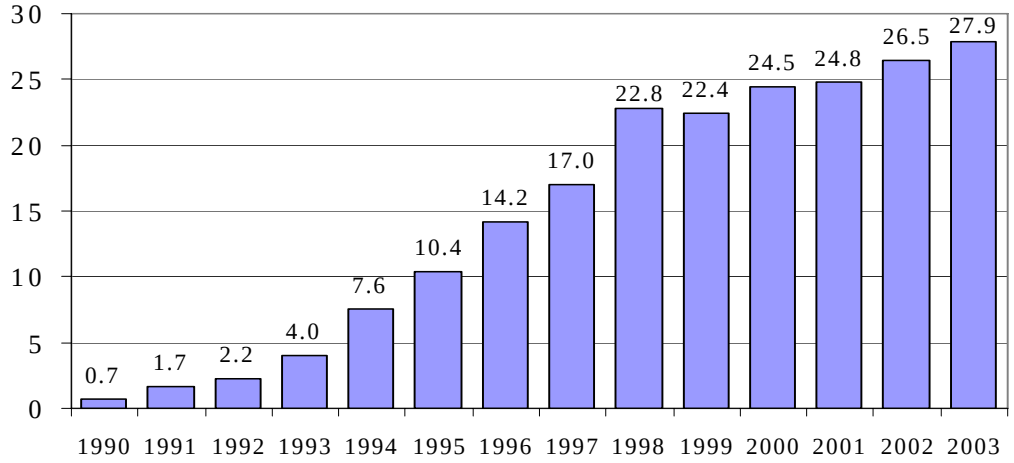
Target 7: Have halted by 2015, and begin to reverse the spread of HIV and AIDS
Target 8: Have halted by 2015, and begin to reverse the incidence of malaria and other major diseases

HIV and AIDS

Status and trends

The Department of Health instituted an HIV surveillance system in 1990. This system was based on the WHO protocol for prevalence estimation in antenatal clinics. The survey shows that although there was an almost exponential increase in HIV prevalence levels between 1990 and 1998 there is a gradual stabilization and slowing down of HIV prevalence increases with statistically significant growth approximately every second year. Figure 6 shows that the sero-prevalence rate in 2003 was 27,9%, compared with one of 26.5% for 2002 (Department of Health, 2004).

Figure 6
Prevalence of HIV among antenatal care attendees aged 15 – 49 in South Africa, 1990 – 2003 (%)



Source: Department of Health, 2004

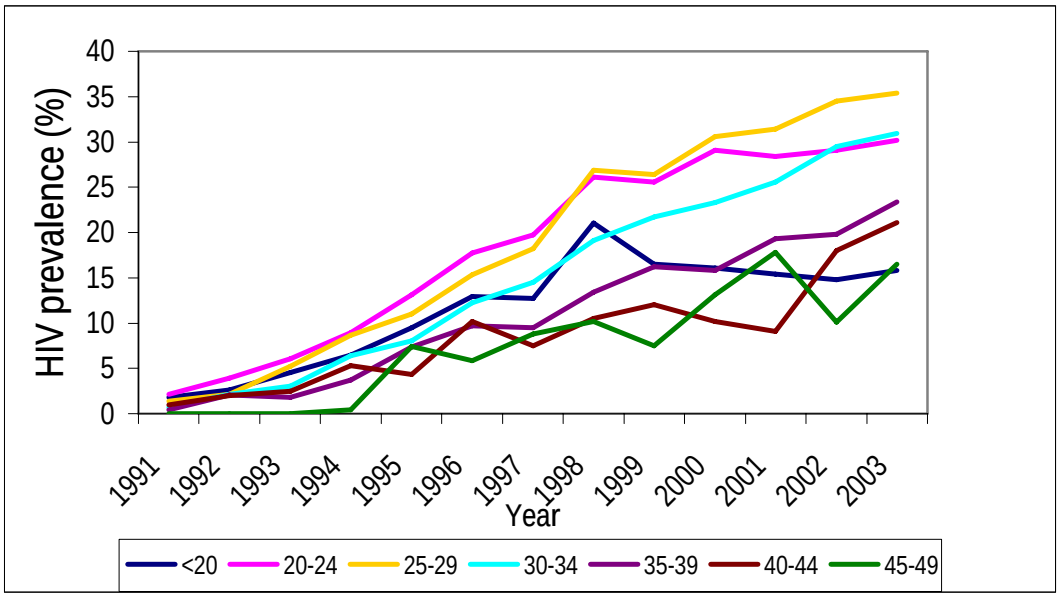
The 2003 estimates show that HIV sero-prevalence rates among pregnant women aged 15 to 24 years attending antenatal care in the public sector at the end of 2003 was 24,8%, compared with 23,5% for 2002 (this increase is not statistically significant). An important indicator of an epidemic slowing down or reversing are the HIV incidence (new infection) estimates. Longitudinal estimates are being conducted in collaboration with the Centres for Disease

Control (CDC) using the most recent technology. Meanwhile HIV prevalence estimates are considered to be a good indicator of HIV incidence.

Figure 7 below shows trends in HIV prevalence by age group since 1991. These data suggest that there has not been an increase in HIV prevalence in the teenage cohort since 1999. What appears as a marginal increase between 2002 and 2003 was found not to be a statistically significant increase (p=0.344). Other age groups have shown increases in prevalence, with the 25 to 29 year age group in comparison consistently recording higher rates compared to others.

Figure 7

Antenatal survey prevalence of HIV among antenatal attendees aged 15 – 19 yrs: 1991 – 2003

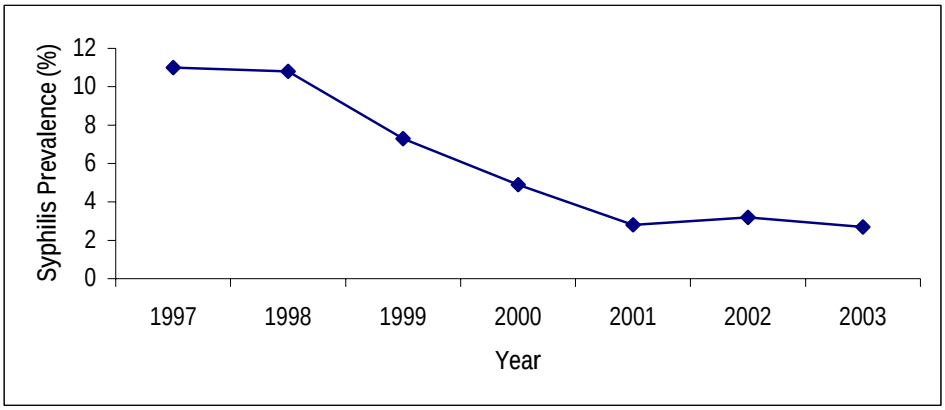


Source: National HIV and Syphilis antenatal sero-prevalence survey in South Africa, Department of Health, 2004

Syphilis prevalence in antenatal clinics

Sexually transmitted diseases are another important risk factor associated with HIV infection. South African clinics routinely test pregnant women as part of the package of care provided to pregnant women. Syphilis prevalence has been tested during the Ante Natal Clinic (ANC) survey since 1990. The findings show a steady decline in syphilis prevalence amongst women included in the ANC survey, as indicated in Figure 8.

Figure 8
Syphilis prevalence trends among antenatal clinic attendees for prevalence surveys: 1997- 2003



People living with HIV in the general population

Based on extrapolations from the antenatal survey to the total population, as indicated in Table 23, it is possible that at least four million South Africans were estimated to be HIV-positive by the end of 2003. This represents an increase of 300 000 compared to 2002 estimates (Department of Health, 2003 and 2004). HIV prevalence among women aged 15 – 49 is slightly higher than among men.

Such extrapolations are based on various assumptions, and should be viewed as possible indications, rather than precise estimates.

An assessment of mortality and causes of death based on death notification by Statistics South Africa (2005) was unable to ascertain the exact number of people living with full blown HIV and AIDS in the country. This is due to the fact that HIV and AIDS are not yet non-notifiable. Nonetheless, human immunodeficiency virus diseases and certain disorders involving the immune mechanism were among the ten leading underlying natural causes of death among individuals aged 15 – 49 years between 1997 and 2002.

Table 23
HIV prevalence and the estimated number of HIV/Infected women and men aged 15 – 49 years

	2002				2003			
	Best	**Low**	**High**	**Population**	**Best**	**Low**	**High**	**Population**
Female	2 950 711	2 682 571	3 218 677	12 429 760	3 100 864	2 831 658	3 369 822	12 641 970
Male	2 307 952	2 099 467	2 514 247	11 462 189	2 441 485	2 233 442	2 650 178	11 688 727
Total pop including babies	5 349 935	4 866 952	5 830 536	-	5 638 577	5 154 997	6 122 552	-
Female prevalence rate	23,7%	21,6%	25,9%	-	24,5%	22,4%	26,7%	-
Male prevalence rate	20,1%	18,3%	21,9%	-	20,9%	19,1%	22,7%	-

Sources: Adapted from Department of Health, 2004. National HIV and Syphilis antenatal sero-prevalence survey in South Africa, 2003

Behaviours Associated with HIV infection

Numerous studies have been conducted and are routinely conducted to monitor behaviour associated with HIV prevalence in South Africa. The Nelson Mandela/HSRC Study of HIV and AIDS (2002), a national community-based survey of HIV prevalence, confirms that, among adults aged 15 – 49 years, women are more at risk than men of acquiring HIV infections for a range of biological social and circumstantial factors.

Condom use

Consistent use of condoms is an important means of preventing unwanted pregnancy, sexually transmitted infections and HIV infection. During their last sexual intercourse, almost a quarter (24,7%) of females and a third (30,3%) of males said that they had used a condom, according to the preliminary results of the 2002 SADHS. Younger respondents and those with multiple partners were more likely to use a condom in the past 12 months than others. Youth aged 15 – 24 had significantly higher rates of condom use (57,1% for males and 46,1% for females) than older people. These finding suggests possible changes in sexual behaviour amongst comparative groups of women between 1998 and 2002 in South Africa.

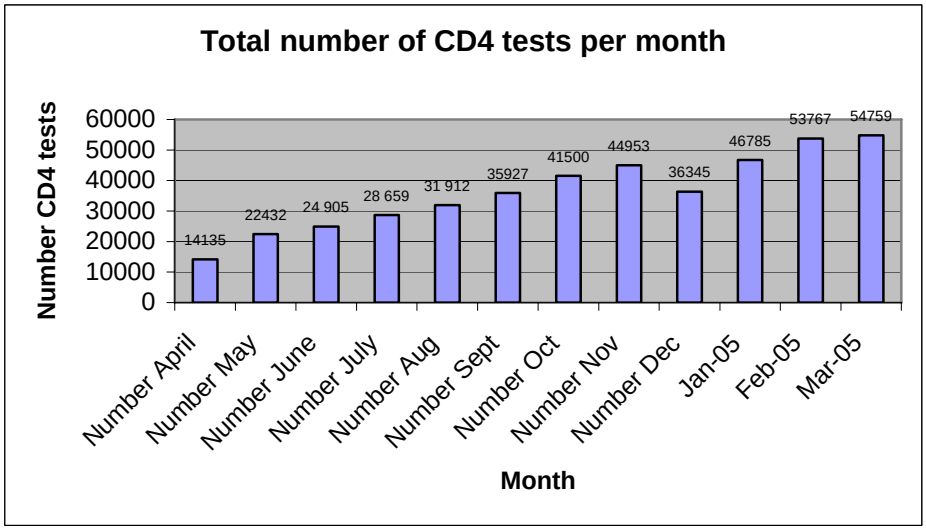
Comprehensive HIV and AIDS Management Care and Treatment (ARV) Plan

South Africa has possibly the largest Comprehensive programme for the management care and treatment of HIV and AIDS in the world. The programme is comprehensive as it sits on a number of pillars, which are fundamentals for an effective programme. These include strengthening the health system, and providing a full package of care for opportunistic infections, assisting with food

security food packages and multi-nutrient supplementation for those requiring these interventions and provision of antiretroviral drugs. Implementations started on the first quarter of 2004 and by March 2005 a total of 139 health facilities in all 53-health districts were providing antiretroviral therapy. The numbers of patients assessed and on antiretroviral therapy are increasing gradually from 10072 in July 2004 to 49 500 in April 2005.

Approximately four hundred and fifty (450 000) patients have had their CD4 T cell count taken, and have been assessed by a physician for possible inclusion in the ARV component of the programme. Those who do not yet quality according to treatment guideline requirements are receiving a treatment for opportunistic infections and other components of the comprehensive package of treatment and care, as shown in Figure 9. Of the 450 000, 49 500 patients have gone on to receiving antiretroviral treatment by the end of April.

Figure 9



Source NHLS/ DOH 2005

Health systems strengthening for HIV Comprehensive care & Treatment

To emphasize the importance of strengthening the health system to cope fully with patient loads in a way that does not put the other services at risk of collapse, numerous in-puts are continuously being made. For a start treatment site was evaluated with an accreditation tool prior to commencing the programme. Strengthening plans were immediately drawn up and facilities strengthened accordingly.

At last count 510 additional professional nurses, 97 pharmacists, 45 dieticians, 67 social workers, 350 administrative support staff, 600 community health workers and 160 additional doctors have been employed. Three pharmacy-vigilance centres are being established at universities. Guidelines have been produced; hundreds of health workers have undergone training in their

competency areas. Approximately 40 million condoms are distributed each month. There is a campaign in favour of health lifestyles and good nutrition. In addition over 200 000 patients are on micronutrient supplementation in the form of vitamins and maize meal. Laboratory capacity has been strengthened significantly.

Tuberculosis

Status and trends

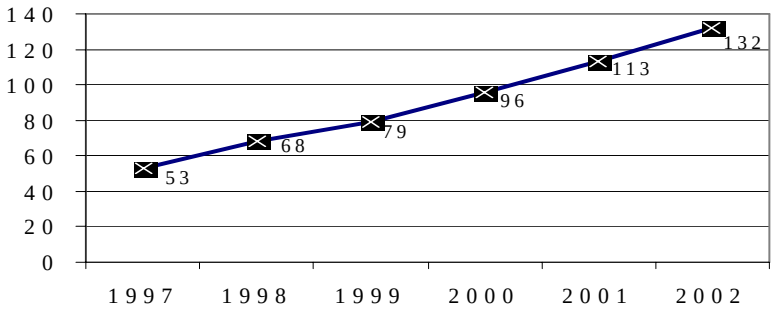
Statistics South Africa (2005) found that the most dominant contributor to the growth in mortality between 1997 and 2002 was deaths associated with tuberculosis generally, and specifically respiratory tuberculosis, as indicated in Table 24, and Figure 10. The number of reported cases of TB has consistently risen since the inception of the National TB Control Programme (NTCP) in 1996. A total of 224 420 cases of TB were registered during 2002, an increase of 16% from 2001. This represents an incidence of 494 cases per 100 000 people.

Table 24
Deaths associated with tuberculosis, 1997 – 2002

	1997	**1998**	**1999**	**2000**	**2001**	**2002**
Respiratory tuberculosis; not confirmed bacteriologically or histologically	20 364	26 341	31 513	38 696	46 368	54 364
Tuberculosis of nervous system	645	824	1 006	1 262	1 740	2 092
Tuberculosis of other organs	377	390	538	554	892	1 058
Miliary tuberculosis	635	932	1 116	1 590	1 872	2 437
Total deaths associated with Tuberculosis	**22 021**	**28 487**	**34 173**	**42 102**	**50 872**	**59 951**
All deaths	318 287	367 689	381 902	413 969	451 936	499 268
Tuberculosis death rate per 100 000	53,4	67,6	79,4	96,4	113,0	131,7

Source: Statistics South Africa, 2005 (mortality and causes of death), 1998, 1999, 2000, 2004 (mid year estimates)

Figure 10
Tuberculosis death rate per 100 000



Source: Statistics South Africa, 2005 (mortality and causes of death), 1998, 1999, 2000, 2004 (mid year estimates)

Table 25 indicates that the total number of notified TB cases increased from 151 000 in 2000 to 224 000 in 2002.

- For all three years, of those registered for treatment, approximately 54% were successfully treated, with sputum-negative results after treatment.
- A further group referred for treatment completed the course of medication but were not tested for sputum-negative status. This group consisted of 9,2% referred for treatment in 2000, increasing to 13,9% in 2002.
- Of those registered for treatment, 6,5% died in 2000, increasing to 8,5% in 2002.

Table 25
Indicators of tuberculosis prevalence and prevention, 2000-2002

New cases registered for treatment	**2000**	**2001**	**2002**
% Registered, smear positive cases successfully treated	53,8	53,7	53,9
% Completed treatment, smear test not conducted	9,2	11,7	13,9
% Died	6,5	7,2	8,5
% Failed treatment	1,3	1,6	1,3
% Defaulted	12,7	12,0	13,2
% Transferred	13,5	13,7	9,3
% Unknown outcome	3,0	0,1	0,0
% Total	**100,0**	**100,0**	**100,0**
Number registered for treatment	**86 276**	**93 033**	**99 259**
Other information			
Number of notified TB cases	151 239	188 695	224 420
Number of Pulmonary TB smear positive tests	75 967	83 808	98 800

Source: Department of Health Annual Report 2003/2004

Table 26 indicates treatment outcomes (NTCP). The NTCP achieved an average successful treatment rate of 72% (those who completed treatment, whether or not smear test was conducted afterwards) of new smear-positive cases (those responsible for most transmission) between 1995 and 1999, but this dropped to 65% during the 2000 – 2002 period. Cure rates for TB patients over the 1995 to 2002 period have remained below the NTCP target of 85%, averaging 56% and 54% during the periods 1995-99 and 2000-02 respectively.

Table 26
TB treatment outcomes for new smear positive cases per year (%): 1995 – 2002

Year	Successful treatment	Cured	Interrupted
1995	72	50	18
1996	73	54	18
1997	73	57	19
1998	73	60	19
1999	72	60	17
2000	63	54	13
2001	65	54	12
2002	68	54	13

Sources: Bamford et al (2004) based on NTCP, NDoH; Department of Health Annual Report 2003/2004

Note: To be classified as 'cured', patients must be smear-negative at the end of treatment. 'Successful treatment' rates include those cured plus those patients who completed their course of treatment, but whose sputum was not examined.

Malaria

Status and trends

Malaria transmission in South Africa is seasonal, with malaria cases starting to rise in October, peaking in January to February, and subsequently declining until May. The main malarial regions in the country are the Eastern parts of Limpopo and Mpumalanga provinces and the North East parts of KwaZulu-Natal. Occasionally small malaria outbreaks develop in the Northern Cape and North West provinces.

Annual reported malaria cases varied between 2 000 and 13 000 during the 1975 to 1995 period. However, in the late 1990s, reported infections increased significantly to a peak of 64 222 cases and 458 deaths in 2000. These increases have been attributed to climatic conditions, parasite drug resistance and insecticide resistance (Moonasar et al. 2004). However, as Table 27

shows, from 2001 to 2004 there has been a sustained decrease in the number of nationally reported malaria cases and deaths.

This is largely the result of a number of interventions, including the use of combination drug therapy in KwaZulu-Natal and Mpumalanga, the reintroduction of DDT as an effective insecticide for indoor residual house spraying (its use had been suspended in 1996), and collaborative malaria control efforts with Swaziland and Mozambique (Department of Health 2003). The national target for malaria case fatality is to maintain a rate of below 0.5%. Although case fatality has mostly remained above this target over the last decade (exceptional years being 1997 and 2001), the Department of Health has set this as a strategic priority for the 2004 – 2009 period.

Table 27
Annual malaria cases in South Africa, 1999-2004

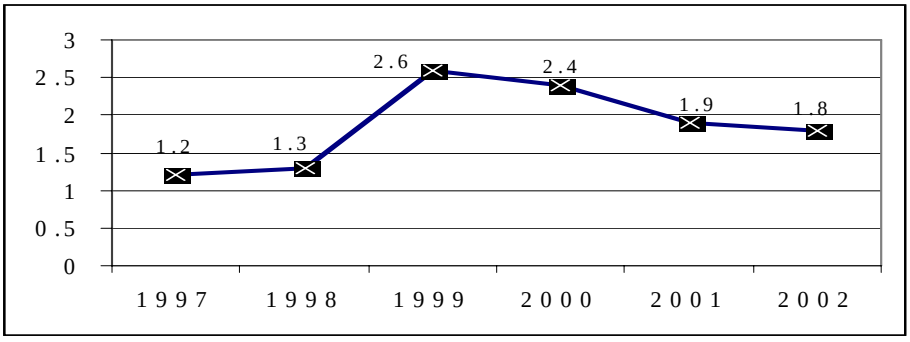
Year	Total cases
1991	4 693
1996	27 035
1997	23 121
1998	26 445
1999	51 444
2000	64 622
2001	26 506
2002	15 649
2003	13 459
2004	13 232

Source: National Department of Health-Malaria update

Malaria death rates

Figure 11 shows a peak in death rates per 100 000 deaths in 1999, but then reducing from 2000 to 2002.

Figure 11
Malaria death rates per 100 000 deaths, 1997 – 2002



Source: Statistics South Africa, 2005 (mortality and causes of death), 1998, 1999, 2000, 2004 (mid year estimates)

GOAL 7: Ensure Environmental Sustainability

Target 9: Integrate the principles of sustainable development into country policies and programmes, and reverse the loss of environmental resources

Table 28 summarises the main indicators related to Target 9.

Table 28
Summary indicators of environmental sustainability

INDICATORS	1994/5	2003	2015 MDG target	Progress towards target
Proportion of land area covered by forest (%)	11,0			
Ratio (Percentage) of area protected to maintain biological diversity to surface area (%)	5,4 (1995)	n.a.	10,0	Potentially attainable
Energy use (kg oil equivalent) per US$ 1 000 GDP	296 (1995)	283 (2001)		
Carbon dioxide emissions (per capita)	n.a.	n.a.		Insufficient data. South Africa has developed a Climate Change Response Strategy and National Air Quality Act aimed at dealing with air pollution.

Sources: Department of Water Affairs and Forestry, Department of Environmental Affairs and Tourism, Stats SA; Environmental Accounts

Status and trends

Historical perspective

The apartheid era took a particularly heavy toll on South Africa's communities, biodiversity and ecosystems. In addition to widespread impoverishment and social dislocation, such policies caused significant ecological damage. The majority of the population was squeezed into 13% of the land in overcrowded homelands. These areas suffered massive deforestation, soil erosion and loss of biodiversity. Subsidies on water, energy and agricultural inputs (available to white industrial, agricultural and domestic users) led to wasteful practices and long-term damage were caused to the soil, rivers and wetlands of the country.

The establishment and expansion of national and provincial parks in many parts of the country was accompanied by severe hardships for the people and conservation policies typically mirrored the apartheid policies of the day and aimed at restricting access to protected areas. As a result, the perception grew that conservation was elitist and of no benefit to ordinary people.

Forced removals, overcrowding of the vast majority of the population into the 'homelands', discriminatory urban policies that distorted resource flows, inequitable access to environmental services, unjust land use practices, the

migratory labour system, and a protectionist approach to nature conservation produced not only widespread impoverishment and social dislocation but also contributed to significant environmental degradation (UNDP 2003:124-5).

The peaceful transition in South Africa presented a unique opportunity for redress and recovery. Starting with the constitution, new policies and legislation have been developed across all sectors, with full public consultation and participation. The fundamental objectives of the policies and legislation are to secure sustainability and equitable access to resources.

Much has been transformed in South Africa's first decade of democracy. Among the most remarkable turnarounds has been the attitude of South Africans towards their environment.

Since 1994, environmental issues have moved into the socio-political arena. They bring together human rights, access to natural resources, social justice and equity and sustainability. In the last ten years, Government has focused on prioritising people's needs while safeguarding the country's natural assets. The range of legislative, policy and institutional developments that have occurred over this period have served to bring about a new environmental management approach (SA Yearbook. 2004/05, p. 226).

Protected areas

South Africa has a century-long history of conservation, with a well-developed protected area network managed by a range of institutions at national, provincial and local level. However, the establishment of protected areas has been ad hoc in the past. Protected areas were often proclaimed on land marginal for agriculture or other use, and the current system of protected areas does not adequately include a representative sample of all ecosystems. Rivers in particular are poorly conserved, and where they are included in a protected area, this is often on the boundary. Coastal and marine bio-zones, particularly on the west coast, had previously been poorly protected. Currently, about 6% of the land surface of South Africa is formally conserved through the system of national and provincial protected areas and 17% of the shoreline is formerly conserved through proclamation as Marine Protected Areas. The target is to expand the terrestrial to 8% and marine to 20% by 2010.

However, a major gap that has existed was the general lack of attention given to bio-diversity conservation outside of protected areas, with specific references to landscapes and ecosystems. Given the widespread challenges to biodiversity across the landscape, there is a clear need to move away from ad hoc protected area establishment towards a more systematic approach. This has led to a shift to bioregional approach to conservation planning, which in its early implementation phase is being driven as much by pragmatism as by conservation concerns

The basis of the bioregional approach to protected areas in South Africa is to build on the existing protected area network, and wherever possible link these areas along mountains, rivers, wetlands, the coastline and other areas of natural vegetation.

Conservation efforts are currently focused on consolidating and expanding protected areas in the country's eight hotspots, known as Wolkberg, Wakkerstroom, Drakensberg Alpine, Maputaland, Pondoland, Albany, Cape Floristic and Gariep centres of endemism. These are centres of plant diversity with high levels of species diversity as well as high levels of endemism, which are under threat from large-scale habitat modification. Many of these initiatives aim to link national parks, marine protected areas, Ramsar sites and World Heritage sites with provincial nature reserves, state forests and private land. In addition, national parks located on the borders with neighbouring countries are now nested within actual or planned Transfronteir Conservation Areas.

With the realization that conservation through protected areas alone is inadequate, a set of planning programmes has been initiated in South Africa. These aim to set up achievable targets and provide planning tools to decision makers to ensure that biodiversity considerations are factored into development plans. Three such initiatives have received wide acclaim for the combination of cutting-edge science, participatory research and decision-making and integration across sectors. The Cape Action for People and the Environment (C.A.P.E), the Succulent Karoo Ecosystem Programme (SKEP) and the Subtropical Thicket Ecosystem Planning (STEP), are overarching long-term strategies for biodiversity conservation.

A number of large, cross-sectoral programmes have been initiated in South Africa during the past decade, focusing on development and poverty alleviation. Examples include the Working for Water, Working for Wetlands, LandCare, Coast Care and Integrated Sustainable Rural Development programmes. Bioregional planning and integrated programmes have been effectively implemented in a number of internationally recognised hotpots in South Africa.

According to the national register of formally protected areas, 5.4% of the land surface of South Africa was under formal protection in 1995, comprising a total of 422 different sites or areas. These included wilderness areas, national parks and provincial reserves, covering a total of 6.6 million hectares. The numbers of protected areas have since dropped to 403, reflecting the programme of consolidation and expansion, rather than de-proclamation. Although almost 6% of the country is under formal conservation protection, the goal was set in 2003 to progressively increase this to 8% by 2010, and later to 10%, to ensure that all significant vegetation types are included. This means that, ultimately, just over four million more hectares will eventually be protected.

Forestry
Stats SA are currently developing natural resources accounts for the forestry industry as part of the system of environmental accounts.

Energy Use
South Africa is a country endowed with abundant energy resources. Fossil fuels, such as coal, uranium, liquid fuels, and gas, play a central role in the socio-economic development of our country, while simultaneously providing the necessary infra-structural economic base for the country to become an attractive host for foreign investments in the energy sector. Biomass forms the main energy source in the rural domestic sector, while other renewable energy development opportunities are already being explored in the fields of solar power, wind power, pumped storage and in hydropower schemes.

Successful tapping of all possible energy carriers in our country is vital for sustainable economic growth and development. We are fortunate in South Africa to be in a position to utilise such a broad spectrum of energy carriers. Various economic sectors that contribute to the GDP of our country are practically driven by these energy carriers. For instance, the manufacturing sector, which accounts for about 25% of GDP, and the mining industry, which accounts for about 10%, are both heavily reliant upon electricity. In fact, industry as a whole consumes approximately 40% of the total electricity generated. This means that electricity is one energy carrier that makes a significant contribution to our economic growth and development.

The South African government last published a white paper on energy policy in 1986. With the end of apartheid South Africa experienced fundamental shifts resulting in significant changes in the energy policy context

Eleven years ago it was not easy to provide a coherent and comprehensive overview of the energy sector. Perhaps even more difficult to understand are its linkages to, and impact on, the rest of the economy and development. The 1998 white paper gives an overview of the South African energy sector's contribution to GDP, employment, taxes and the balance of payments. It concludes that the sector can greatly contribute to a successful and sustainable national growth and development strategy.

In a report released in May 1996 commenting on South Africa energy policies, the Organisation for Economic Co-operation and Development's (OECD's) International Energy Agency stated that 'the lack of good data is a major weakness in the energy policy making process in South Africa. It also hinders transparency in the energy sector.'

Not only is good data required for the energy policy process but also it is fundamental to the implementation of integrated energy planning.

Carbon dioxide emissions
South Africa ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 and became a signatory of the Kyoto Protocol in 2002. According to South Africa's Initial National Communication (RSA 2003), carbon dioxide is the most significant greenhouse gas for South Africa, accounting for more than 80% of total emissions in both 1990 and 1994.

The energy sector is the largest contributor of total carbon dioxide emissions, constituting 90% in 1990 and 91% in 1994. This is largely attributable to the high-energy intensity of the South African economy, which depends on large-scale primary extraction and processing, particularly in the mining and minerals beneficiation industries. Unfortunately, recent official estimates of CO^2 emission per capita for South Africa are not available at the time of writing this report.

Water and Sanitation

Target 10: **Halve, by 2015, the proportion of people without sustainable access to safe drinking water (in 1994)**

The definitions of urban and rural areas
The concepts 'urban' and 'rural' are both ambiguous in this country. Due to forced removals in the apartheid era, remote, under-serviced areas tended to have relatively high population densities. Urban areas not affected by these removals tended in general to have more access to services, infrastructure and facilities than areas affected by removals.

Prior to the first democratic local government elections in South Africa, there was an attempt to include both under-serviced areas and well-serviced areas into the same local government by the Demarcation Board to improve access to services for all, and consequently the Board took a decision to avoid having an official definition of what constitutes urban and rural areas.

In view of the practical need for such definitions for reports such as this one, in this section of the report, the term 'urban' refers to those areas that were legally proclaimed as urban prior to 1994, since these areas had better access to services and infrastructure than those areas that were not so proclaimed. All areas that were not proclaimed urban in the apartheid era are defined here as rural areas. Table 29 gives a summary of indicators related to water and sanitation.

Table 29
Summary of indicators of access to safe drinking water and sanitation

INDICATORS	1994	2004	2009 Target	2015 Target	Progress towards target
Proportion of ***total*** population with access to an improved water source (%)	60,1	78,7		80,1	Good
Proportion of ***rural*** population with access to an improved water source (%)	44,4	63,6		72,2	Good
Proportion of ***urban*** population with access to an improved water source (%)	70,3	87,7		85,2	Achieved
Proportion of ***total*** population with access to basic sanitation (%)	48,7	63,7		74,4	Good
Proportion of ***rural*** population with access to basic sanitation (%)	32,5	44,5		66,3	Slow
Proportion of ***urban*** population with access to basic sanitation (%)	58,8	76,9		79,4	Good

Source: Department of Water Affairs and Forestry

Note: In South Africa, basic service levels for water are defined as a minimum quantity of 25 litres of potable water per person per day within 200 metres of a household not interrupted for more than 7 days in any year and a minimum flow of 10 litres per minute for communal water points. This is a substantially higher standard than the basic services defined by the Millennium Development Goals as 20 litres of potable water per person per day within 1 000 metres of a household.

Status and Trends

Average annual rainfall

South Africa is a semi-arid country, with an average rainfall of about 450 mm per year, which is well below the world average of about 860 mm per year. The total surface water (natural mean annual runoff) available averages 49 200 million m^3 per year (DWAF 2002), which equates to just more than 1 000 kilolitres of fresh water per person per year at 2004 population levels (44,8 million people). This places the country on the threshold of the internationally used definition of water scarcity (a water-scarce country is generally defined as having less than 1 000 kilolitres of fresh water per person per year).

Groundwater

The total groundwater potential of South Africa is estimated at 19 000 million m^3 per year of which 6 000 million m^3 per year can be abstracted without impacting on surface water. Presently about 1 100 million m^3 of groundwater is extracted annually, mainly in rural areas.

Access of the population to an improved water source

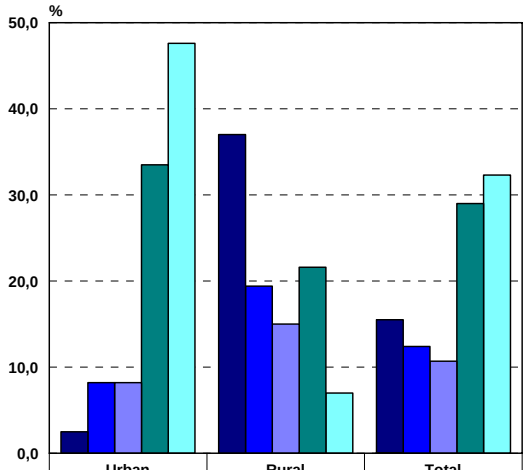
The backlog of the provision of basic services to the population of South Africa started to receive priority in 1994, after the advent of democracy in the country. From the supply side, The Department of Water Affairs and Forestry (DWAF) says that by 2005:

- A total of 21.1 million people had been provided access to an improved water source since 1994. Of these people:
    - Approximately 15.5 million people had been provided with access to basic level water supply since the inception of the programme in 1994.
    - An additional 5.6 million people had been provided with access to infrastructure, but below basic-service levels.
- The percentage of people without access to basic services has been halved since 1994 (from 39.9% to 21,3%) and the percentage of people without any access to an improved water source has been reduced even further (from 39.9% to 7.7%).

From the demand side, but focusing on households rather than individuals, Figure 12 shows that during Census 2001:

- 16% of households did not have access to piped water for domestic use from a purified source.
- An additional 12% had access to piped water at a source further than 200 metres from the dwelling in which the household lived.
- There were clear rural/urban differences in this regard. For example, in rural areas, 37% of households did not have access to piped water from a purified source, while in urban areas only 3% did not have access.

Figure 12
Access to piped water among households October 2001



	Urban	Rural	Total
No access to piped (tap) water	2,5	37,0	15,5
Piped (tap) water to community stand: greater than 200m from dwelling	8,2	19,4	12,4
Piped (tap) water to community stand: less than 200m from dwelling	8,2	15,0	10,7
Piped (tap) water inside yard	33,5	21,6	29,0
Piped (tap) water inside dwelling	47,6	7,0	32,3

Source: Census 2001

Sanitation

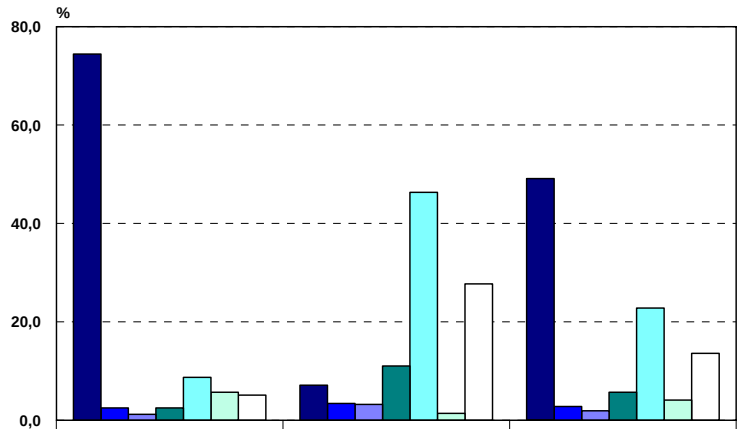
Access to improved sanitation has lagged significantly behind access to an improved water source. Nonetheless, the pace of delivery of access to improved sanitation has increased substantially during the last two years. From the supply side, The Department of Water Affairs and Forestry (DWAF) says that:

- By January 2005, 16.6 million people out of an estimated 47.8 million people had no access to improved sanitation.
- Only 65.3% of the population had access to improved sanitation as compared to 92.3% of the population that had access to an improved water source.
- Implementation in the rural areas is lagging behind urban areas.

From the demand side, but focusing on households rather than individuals, Figure 13 shows that during Census 2001:

- 14% of households did not have access to a toilet facility.
- An additional 23% of households were using a pit latrine without ventilation.
- There were clear rural/urban differences in this regard. For example, in rural areas, 28% of households did not have access to any type of toilet facility, while in urban areas 5% did not have access.

Figure 13
Access to sanitation among households October 2001



	Urban	Rural	Total
Flush toilet (connected to sewerage system)	74,4	7,1	49,1
Flush toilet (with septic tank)	2,5	3,4	2,8
Chemical toilet	1,2	3,2	1,9
Pit latrine with ventilation (VIP)	2,5	11,0	5,7
Pit latrine without ventilation	8,7	46,3	22,8
Bucket latrine	5,7	1,4	4,1
None	5,1	27,7	13,6

Source: Census 2001

Impacting Positively on the Lives of Slum Dwellers

Target 11: Have achieved, by 2020, a significant improvement in the lives of slum dwellers

Status and Trends

Defining Urban Slums in South Africa

As previously noted, the concepts 'urban' and 'rural' are both ambiguous in South Africa, and so is the concept of a 'slum'.

In South Africa the term slum has not been used for decades, and tends to be associated with the pre-World War Two period. Poor neighbourhoods are more likely to be referred to as 'townships' or 'informal settlements' rather than slums, and they are not necessarily found in the inner city. Indeed, as a consequence of group areas legislation in the apartheid era, they are more likely to be found on the outskirts of a city, with the possible exception of Johannesburg, where some people live in inner city apartments, some of them run down, slums with insecure tenure.

So in this country it cannot be assumed that slums are easily equated with poor inner city neighbourhoods. The types of housing in South Africa that conform to the United Nations' definition of a slum in relation to secure tenure, range from

sub-let inner city tenements, which are difficult to isolate from non-sublet dwelling units, to informal dwellings in shack settlements, backyard shacks, hostels and domestic workers' rooms. Because they would be difficult to isolate inner city dwellings with insecure tenure, we have not included the inner city in our discussion of slums.

The lack of legal tenure not only affects the quality of the accommodation and the level of service, but it is associated with other important forms of institutional exclusion. What hostel dwellers, domestic workers, backyard residents and informal settlement households have in common is that they are marginalized from the institutions of capital – in other words they cannot use their property to raise a loan, or to pass on to their children as inheritance.

Accommodation in informal dwellings in shack settlements, backyard shacks, hostels and domestic workers' rooms all fulfil one of the UN's criteria of a slum because they do not offer their inhabitants secure tenure.[3] They also, variously, fulfil other criteria of a slum.

Informal shack settlements and backyard shacks are usefully discussed together because both these forms of accommodation essentially comprise owner-built or petty landlord-built shacks. They differ with respect to their access to services and legal status.

- The term 'informal settlements' is applied to shack settlements that are built on unoccupied sites. These settlements can sometimes be likened to the 'land invasions' of Latin America.
- The term 'backyard shack' refers to shacks that are erected in the backyards of stands within formal residential areas.
- The main tenure difference between these two forms of accommodation is that the residents of backyard shacks have an informal rental arrangement with the owner of the formal house on the stand. Both shack-dwellers in informal settlements and backyard tenants have no secure tenure.

Hostels and domestic servants' rooms are best discussed together because they are both designed to house workers under non-family conditions.

- Hostels are a communal form of accommodation that takes the form of dormitories with shared ablution and kitchen facilities.
- They can be owned and managed by private sector companies, para-statals or local municipalities but they almost always serve the function of providing accommodation for the employees of these institutions. Accommodation in hostels is therefore restricted to the employees of specified institutions. Should a hostel resident terminate his or her employment with their employee, they immediately forfeit their right of tenure.

[3] Secure tenure being defined as 'evidence of documentation that can be used as proof of secure tenure status' and 'no *de facto or perceived* protection from forced evictions'.

- Domestic workers' rooms are rooms that are built in the backyards of private households to provide accommodation for domestic workers such as cleaners, cooks and gardeners. As with hostels, the resident's right to such accommodation is conditional upon their employment.

Table 30 gives a summary of indicators related to those living in slum dwellings.

Table 30
Summary of indicators regarding slum dwellings

INDICATORS	1996	2001	2015 Target	Progress towards target
Percentage of urban households with an adequate water supply	98,5	97,5		
Percentage of urban population with an adequate water supply	98,7	97,7		
Percentage of urban households with adequate sanitation disposal systems	78,5	79,4		
Percentage of urban population with adequate sanitation disposal systems	78,8	80,4		
Percentage of slum households	32,0	28,0	0,0	
Percentage of population living in slums	27,0	25,0	0,0	
Number of slum households (millions)	1,75	2,11	0,0	
Number of people living in slums (millions)	6,03	6,42	0,0	

Note 1: *Indicators related to the issue of slum conditions tend to differ, depending on whether population or household data are used for analysis. The table gives both sets of data. From 1996 to 2001, the annual average growth rate of urban households was 6.2%, compared to a 2.9% growth rate for the urban population. This disparity would suggest that, in addition to the migration of single young adults into urban areas, existing households might be breaking up into smaller units.*

Note 2: *Sanitation in 2001 includes ventilated pit latrines, but this distinction cannot be made for 1996*

Urban access to clean water and sanitation

Table 31 indicates changes over the time period between Census 1996 and Census 2001, among urban households and people living in urban areas, regarding percentages having access to adequate water supply and sanitation.

Status of 'slum-dwellers'

Table 31 also indicates changes over time in the proportion of people and households living in slums, as defined above. A distinction between people and households is kept throughout the table. The percentage of urban slum *households* declined from 32% in 1996 to 28% in 2001. Similarly, the percentage of the urban *population* living in slums declined from 27% to 25%. The percentages of slum *households* are larger than the percentages of the slum *population* because slum households are generally smaller than other households.

In absolute terms, however, the numbers of slum *households* actually increased by 361 000 and the size of the slum *population* increased by 395 000.

Table 31
Slum-housing: Census 1996 and Census 2001

Slum-housing 1996 and 2001: Frequency and percentage distributions					
	1996	2001	Change from 1996-2001	1996 %	2001 %
Households					
Slum Housing	1 752 803	2 114 556	361 753	32	28
Adequate Housing	3 728 820	5 391 339	1 662 519	67	72
Other or Unspecified	67 477	-	-67 477	1	-
Total	**5 549 100**	**7 505 895**	**1 956 795**	**100**	**100**
Population					
Slum Housing	6 030 334	6 424 856	394 522	27	25
Adequate Housing	16 055 674	19 366 912	3 311 238	72	75
Other or Unspecified	236 039	-	-236 039	1	-
Total	**22 322 047**	**25 791 768**	**3 469 721**	**100**	**100**

From the supply side of providing dwellings with secure tenure for the poor, the Department of Housing indicates that approximately 1,8 million new houses were built with the assistance of a state subsidy, often on state-provided land, to house those without adequate housing between 1994 and 2005, as shown in Table 32. An additional 413 006 units were transferred from the state to low-income occupants on a discounted basis. Overall, over 2 million households have received substantial state subsidies to enhance the quality and security of their housing over the 1994 – 2005 period.

Table 32
Subsidised houses completed or under construction per province per financial year

	1994 / 95 to 1998 / 99	99 / 00	00/01	01 / 02	02 / 03	03 / 04	04 / 05	Total
Completed dwellings or those under construction	712 813	161 572	190 643	143 281	203 588	193 615	178 612	1 793 124