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## **STATISTICAL RELEASE**

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# Mid-year population estimates

2019

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The South Africa I know, the home I understand



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## Acronyms and abbreviations

AIDS	acquired immune deficiency syndrome
AIM	AIDS impact model
ANC	antenatal care
ART	antiretroviral therapy
CBR	crude birth rate
CDR	crude death rate
DemProj	Demographic projections
HIV	human immunodeficiency syndrome
IMF	International Monetary Fund
IMR	infant mortality rate
IOM	International Organisation for Migration
NSO	National Statistical Organisation
OECD	The Organisation for Economic Co-operation and Development
PMTCT	prevention of mother-to-child transmission
PLWHIV	People living with HIV
RAPID	Rapid Mortality Surveillance
RNI	rate of natural increase
SDDS	Special Data Dissemination Standards
Stats SA	Statistics South Africa
TFR	total fertility rate
U5MR	under-five mortality rate

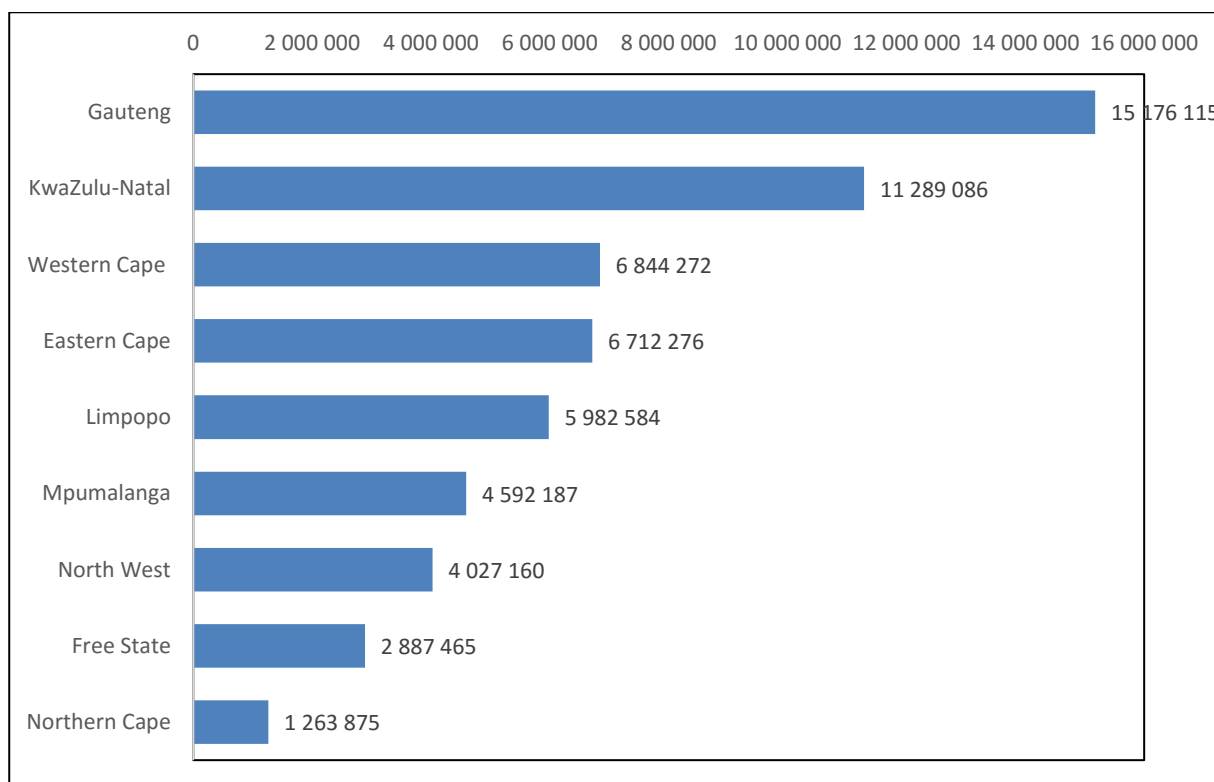
## Summary

- The cohort-component methodology is used to estimate the 2019 mid-year population of South Africa.
- The estimates cover all the residents of South Africa at 2019 mid-year point, and are based on the latest available information. Estimates may change as new data become available. The new estimates are accompanied by an entire series of revised estimates for the period 2002–2019. On this basis, comparisons between this model and previous ones should not be made.
- For 2019, Statistics South Africa (Stats SA) estimates the mid-year population at 58,78 million.
- Approximately 51,2% (approximately 30 million) of the population is female.
- Gauteng comprises the largest share of the South African population, with approximately 15,2 million people (25,8%) living in this province. KwaZulu-Natal is the province with the second largest population, with an estimated 11,3 million people (19,2%) living in this province. With a population of approximately 1,26 million people (2,2%), Northern Cape remains the province with the smallest share of the South African population.
- About 28,8% of the population is aged younger than 15 years and approximately 9,0% (5,3 million) is 60 years or older. Of those younger than 15 years of age, the majority reside in Gauteng (21,5%) and KwaZulu-Natal (21,1%). Of the elderly (those aged 60 years and older), the highest percentage 23,9% (1,27 million) reside in Gauteng. The proportion of elderly persons aged 60 and older is increasing over time.
- Migration is an important demographic process, as it shapes the age structure and distribution of the provincial population. For the period 2016–2021, Gauteng and Western Cape are estimated to experience the largest inflow of migrants of approximately, 1 643 590 and 493 621 respectively (see migration stream Tables 7, 8 and 9 for net migration).
- Life expectancy at birth for 2019 is estimated at 61,5 years for males and 67,7 years for females.
- The infant mortality rate for 2019 is estimated at 22,1 per 1 000 live births.
- The estimated overall HIV prevalence rate is approximately 13,5% among the South African population. The total number of people living with HIV (PLWHIV) is estimated at approximately 7,97 million in 2019. For adults aged 15–49 years, an estimated 19,07% of the population is HIV positive.

**Table 1: Mid-year population estimates for South Africa by population group and sex, 2019**

Population group	Male		Female		Total	
	Number	% distribution of males	Number	% distribution of females	Number	% distribution of total
Black African	23 124 782	80,7	24 318 477	80,8	47 443 259	80,7
Coloured	2 513 221	8,8	2 663 530	8,8	5 176 750	8,8
Indian/Asian	768 594	2,7	734 413	2,4	1 503 007	2,6
White	2 266 151	7,9	2 385 855	7,9	4 652 006	7,9
<b>Total</b>	<b>28 672 747</b>	<b>100,0</b>	<b>30 102 275</b>	<b>100,0</b>	<b>58 775 022</b>	<b>100,0</b>

**Figure 1: Mid-year population estimates for South Africa by province, 2019**



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## 1. Introduction

In a projection, the size and composition of the future population of an entity such as South Africa is estimated. The mid-year population estimates produced by Statistics South Africa (Stats SA) uses the cohort-component method for population estimation. In the cohort-component method, a base population is estimated that is consistent with known demographic characteristics of the country. The cohort base population is projected into the future according to the projected components of change. Selected levels of fertility, mortality and migration are used as input to the cohort-component method. For the 2019 mid-year estimates, the cohort-component method is utilised within the Spectrum Policy Modelling system. Spectrum is a Windows-based system of integrated policy models (version 5.76). The DemProj module within Spectrum is used to develop the demographic projection, whilst the AIDS Impact Model (AIM) is used to incorporate the impacts of HIV and AIDS on fertility and mortality, and ultimately the population estimates.

Stats SA subscribes to the specifications of the Special Data Dissemination Standards (SDDS) of the International Monetary Fund (IMF). This standard is related to the dissemination of this report which dictates that it should be released within one month of the mid-year. The mid-year estimates are an estimate of the population as at 01 July in a given year. The estimates of stock such as population size, number infected with HIV etc. pertain to the middle of the year i.e. 01 July, whilst the estimates of flow e.g. births, deaths, Total Fertility Rates (TFRs), Infant Mortality Rates (IMRs) etc. are for a 12-month period e.g. 01 July 2019 to 30<sup>th</sup> June 2020. A stock variable is measured at a given time, and represents a quantity at each moment in time – e.g. the number of population at a certain moment whilst an estimate of flow is typically measured over a certain interval of time. The mid-year population estimates are published annually. It is misleading to compare values and rankings with those of previously published reports, due to revisions and updates of the underlying data and adjustments. Users are advised to use the complete series published along with this report on the Stats SA website.

## 2. Demographic and other assumptions

A cohort-component projection requires a base population distributed by age and sex. Levels of mortality, fertility and migration are estimated for the base year and projected for future years. The cohort base population is projected into the future according to the projected components of population change. The DemProj module of Spectrum is used to produce a single-year projection, thus the TFR and the life expectancy at birth must be provided in the same format i.e. single years. The time series of TFR estimates for all population groups in South Africa are derived following a detailed review of TFR estimates (1985–2019), published and unpublished, from various authors, methods and data sources. The finalised TFR assumptions can be found in Table 2 (page 5). The estimates of fertility show a fluctuation over the period 2002–2019, giving rise to a population structure indicative of that of Census 2011 population structure. Between the period 2009 and 2019, fertility has declined from an average of 2,62 children per woman to 2,32 children in 2019. Other inputs required in DemProj include the age-specific fertility rate (ASFR) trend, sex ratios at birth and net international migration.

In estimating South Africa's population, international migration is provided as an input into the model (see Table 3). If the net flow is outward, then net migration is reflected as a negative number. If the net flow is inward, then it is reflected as a positive number. Net international migration estimates are derived using not only Census 2011 migration data, but also migration numbers and proportions from various other authors, methods and data sources such as the Organisation for Economic Co-operation and Development (OECD), International Organisation for Migration (IOM), which forms part of the UN network as well as census data from National statistics offices (NSOs) of various countries. Assumptions regarding future migration patterns are based on past and current trends. Compared to other components of change, net migration rate can be volatile, as it is significantly impacted by economic and policy changes. Also current data on emigration levels are limited.

The life expectancy assumption entered into DemProj by sex is the life expectancy in the absence of AIDS (see Table 2). Each population group is also subjected to non-AIDS mortality according to the input non-AIDS life expectancy and the selected model life table. AIM will calculate the number of AIDS deaths and determine a new set of life expectancies that incorporate the impact of AIDS, (see Figure 3, page 8). Stats SA applies the country-specific UN Model Life table for South Africa in Spectrum. The age pattern of mortality is based on various sources, data and methods, these include death date from the RAPID mortality surveillance report, Mortality and causes of death report, and the Demographic and Health Survey among others. Survival rates from the selected life tables were then used to project the population forward.

**Table 2: Assumptions of expectation of life at birth without HIV/AIDS and total fertility rate, 2002–2019**

Year	TFR	Life expectancy at birth without HIV/AIDS	
		Male	Female
2002	2,45	60,8	68,6
2003	2,42	61,0	69,0
2004	2,54	61,3	69,7
2005	2,59	61,5	70,0
2006	2,63	61,6	70,0
2007	2,65	61,5	70,1
2008	2,66	61,8	70,2
2009	2,62	62,0	70,3
2010	2,58	62,5	70,5
2011	2,51	63,2	70,4
2012	2,46	63,5	70,3
2013	2,42	63,8	71,0
2014	2,39	63,9	71,1
2015	2,37	64,6	71,8
2016	2,36	65,0	72,4
2017	2,34	65,3	72,7
2018	2,33	65,4	72,8
2019	2,32	65,6	72,7



**Table 3: International net-migration assumptions for the period 1985–2021**

	<b>Black African</b>	<b>Indian/Asian</b>	<b>White</b>	<b>Net international migration</b>
1985–2000	588 847	36 908	-202 868	422 887
2001–2006	546 993	25 310	-99 574	472 729
2006–2011	809 780	43 222	-106 787	746 215
2011–2016	972 995	54 697	-111 346	916 346
2016–2021	1 094 864	60 791	-115 906	1 039 749

Note: The estimate refers the flow figure from 30th June of the first year in the period to 1<sup>st</sup> July of the last year of the period.

The Spectrum Policy Modelling System (Futures Group) consists of a number of components that result in the estimation of population to costing and planning of, and future health care services. For the purpose of the production of the MYPE, Stats SA uses two of the available components in this projection, namely (a) **Demproj** for population projections and (b) **AIM** in which the consequences of the AIDS epidemic were projected. In the AIM projection, several programmatic and epidemiological data inputs specific to South Africa are required. These include programme coverage of adults and children on antiretroviral treatment (ART) and Prevention of mother-to-child-transmission (PMTCT) treatment (NDoH, 2018). In addition to eligibility for treatment as per national guidelines, the epidemiological inputs include antenatal clinic data (ANC) (NDoH, 2018). The assumptions regarding the HIV epidemic in South Africa are based primarily on the prevalence data collected annually from pregnant women attending public antenatal clinics (ANC) since 1990 to the most recent estimates of 2017 (Woldesenbet, S.A, et al, 2018). However, antenatal surveillance data produce biased prevalence estimates for the general population because only a select group of people (i.e. pregnant women attending public health services) are included in the sample. The South African National HIV prevalence, incidence, behaviour and communication survey data that produces national estimates for the country are used in the model to correct for this bias (Shisana et al., 2014; HSRC, 2017). Other inputs in the AIM model include the following: Median time from HIV infection to death, and Ratio of new infections. Indicators of HIV prevalence, incidence and HIV population numbers over time show the impact of HIV on the population. HIV indicators shown in Figures 5 and 6 are based on the aforementioned assumptions.

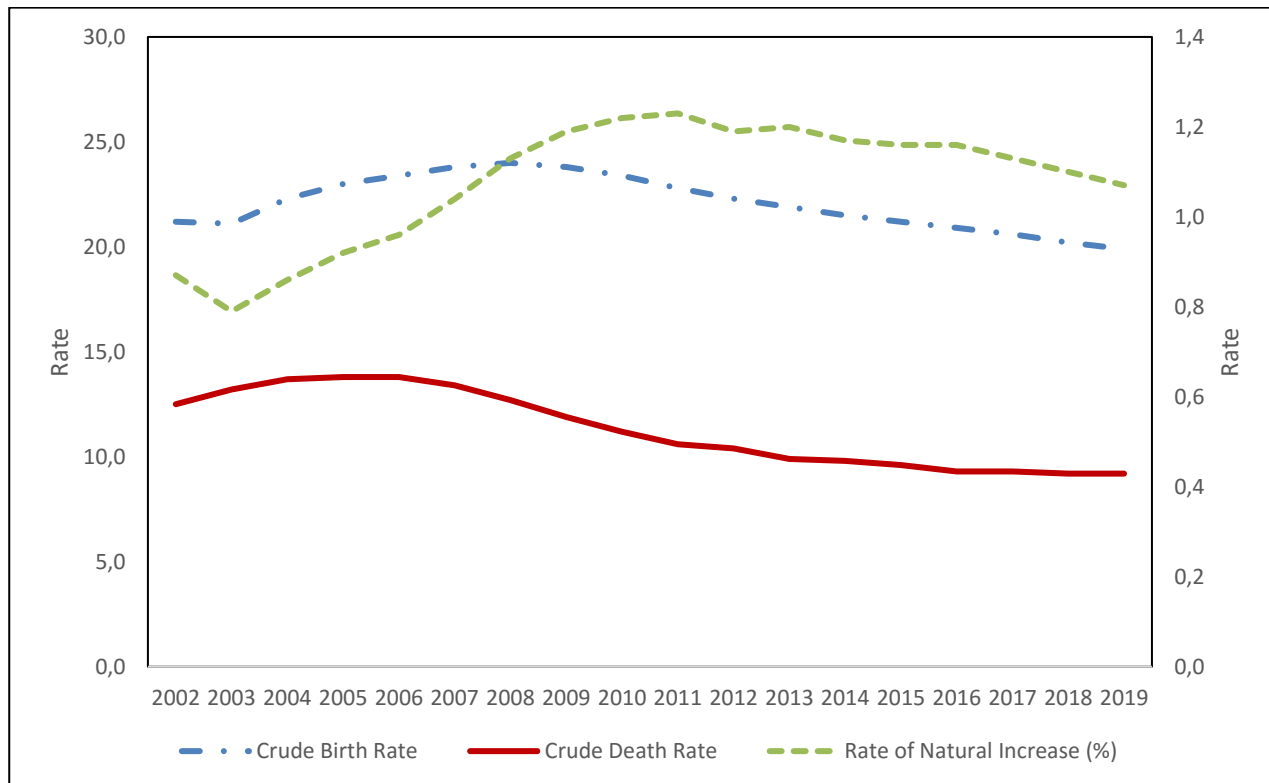
The accuracy of the estimates depends on a number of factors that may be difficult to anticipate, such as economic crisis, wars and natural disasters, all of which can potentially impact the estimates.

### 3. Demographic and other indicators

Figure 2 indicates that the crude birth rate (CBR) has increased between 2003 and 2008, thereafter it declines in the period 2009 to 2019. The CBR is directly related to the fluctuating TFR assumptions (Table 2, page 5). Figure 2 and Table 4 offer a glimpse into the mortality experience of South Africa, which incorporates the impact of HIV and AIDS (using the AIM model). The crude death rate (CDR) has declined from 12,5 deaths per 1 000 people in 2002 to 9,2 deaths per 1 000 people in 2019. However due to the AIDS epidemic experience, the crude death rate in South Africa did increase between 2002–2006 thereafter declining as access to HIV treatment and care became available. The rate of natural increase (RNI) is the rate of population

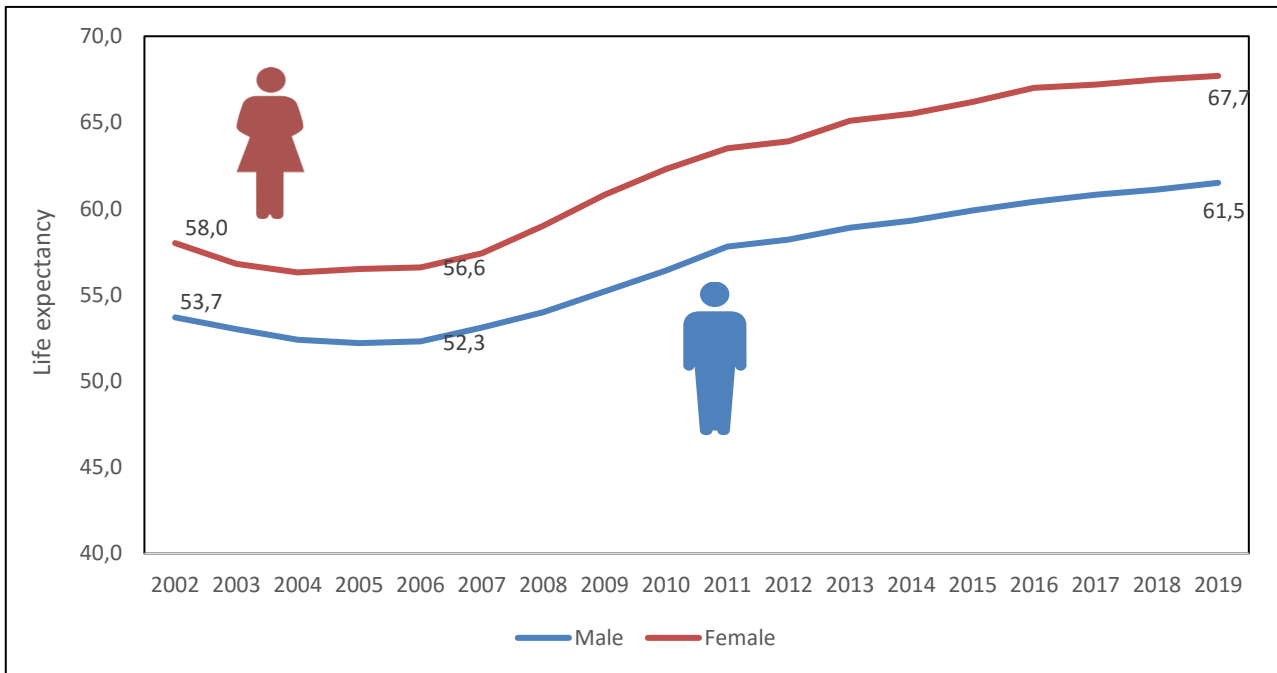
growth in South Africa over time, without including the impact of migration i.e. deaths subtracted from births. The RNI fluctuates over time, mirroring the CBR, indicating the great influence of births in South Africa.

**Figure 2: Crude birth rate, crude death rate, and rate of natural increase over time, 2002–2019**



Life expectancy at birth declined between 2002 and 2006, largely due to the impact of the HIV and AIDS epidemic experienced, but expansion of health programmes to prevent mother-to-child transmission as well as access to antiretroviral treatment has partly led to the increase in life expectancy since 2007. By 2019 life expectancy at birth is estimated at 61,5 years for males and 67,7 years for females. Figure 3 and 4 indicate that life expectancy is increasing, and this may be related to marginal gains in survival rates among infants and children under-5 post HIV interventions in 2005. The infant mortality rate (IMR) has declined from an estimated 56,5 infant deaths per 1 000 live births in 2002 to 22,1 infant deaths per 1 000 live births in 2019. Similarly the under-five mortality rate (U5MR) declined from 79,0 child deaths per 1 000 live births to 28,5 child deaths per 1 000 live births between 2002 and 2019. The IMR and U5MR shown in Figure 4 are based on the selected model life table and may differ to similar indices published elsewhere.

**Figure 3: Life expectancy by sex over time, 2002–2019**



**Figure 4: IMR, U5MR and Total LE over time, 2002–2019**

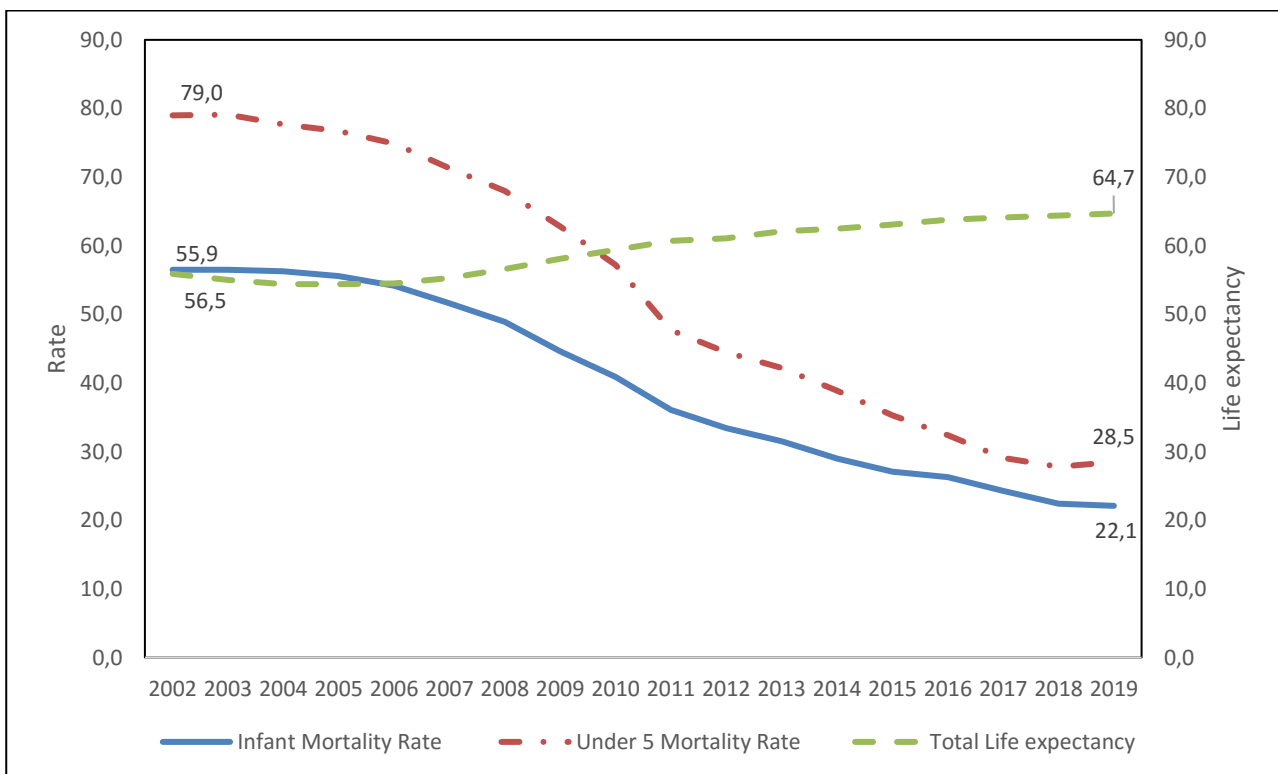


Table 4 below shows estimates for selected indicators. The highest number of deaths was estimated for the period 1 July 2006 to 30 June 2007. The decline in the percentage of AIDS-related deaths since 2007 can be attributed to the increase in the roll-out of ART over time. The national roll-out of ART began in 2005 with a target of one (1) service point in each of the 53 districts of South Africa at the time (later reduced to 52 districts). The estimated number of AIDS-related deaths declined consistently since 2007 from 267 417 to 126 805 AIDS related deaths in 2019. Access to antiretroviral treatment has changed significantly over time, altering the pattern of mortality over time. Access to ART has extended the lifespan of many in South Africa, who would have otherwise died at an earlier age, as evidenced in the decline of AIDS deaths post-2006.

**Table 4: Births and deaths for the period 2002–2019**

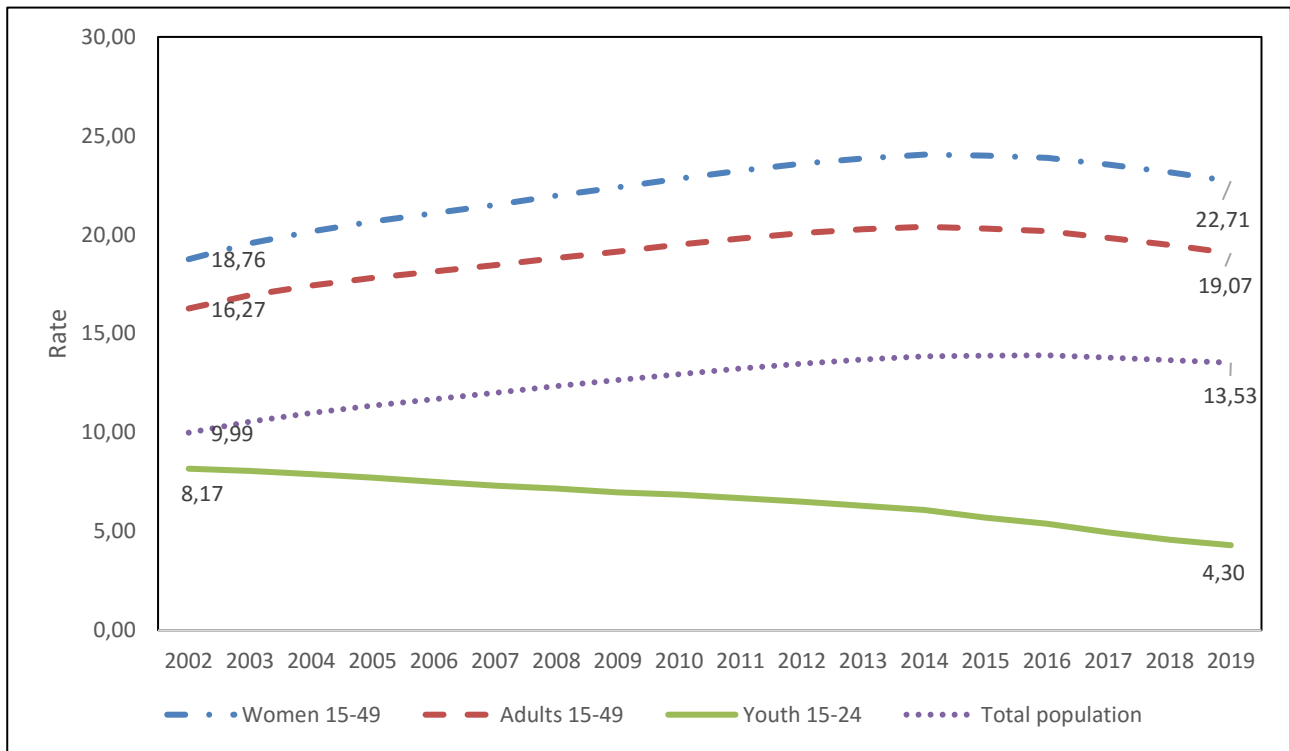
Year	Number of births*	Number of deaths*	Number of AIDS related deaths*	Percentage of AIDS related deaths
2002	985 592	581 147	204 164	35,1
2003	992 466	619 789	241 519	39,0
2004	1 058 035	648 774	273 113	42,1
2005	1 101 649	661 940	283 905	42,9
2006	1 136 560	671 812	286 588	42,7
2007	1 170 768	660 794	267 417	40,5
2008	1 196 587	634 042	238 476	37,6
2009	1 203 938	602 288	204 120	33,9
2010	1 204 340	574 718	176 946	30,8
2011	1 192 472	551 597	153 284	27,8
2012	1 184 855	550 702	148 374	26,9
2013	1 180 634	535 958	137 542	25,7
2014	1 178 657	538 866	131 908	24,5
2015	1 177 000	532 761	133 951	25,1
2016	1 179 465	526 226	130 434	24,8
2017	1 178 754	530 210	132 544	25,0
2018	1 175 282	535 401	129 677	24,2
2019	1 171 219	541 493	126 805	23,4

\*The flow data as shown above are for a 12-month period e.g. 1<sup>st</sup> July 2018 to 30<sup>th</sup> June 2019

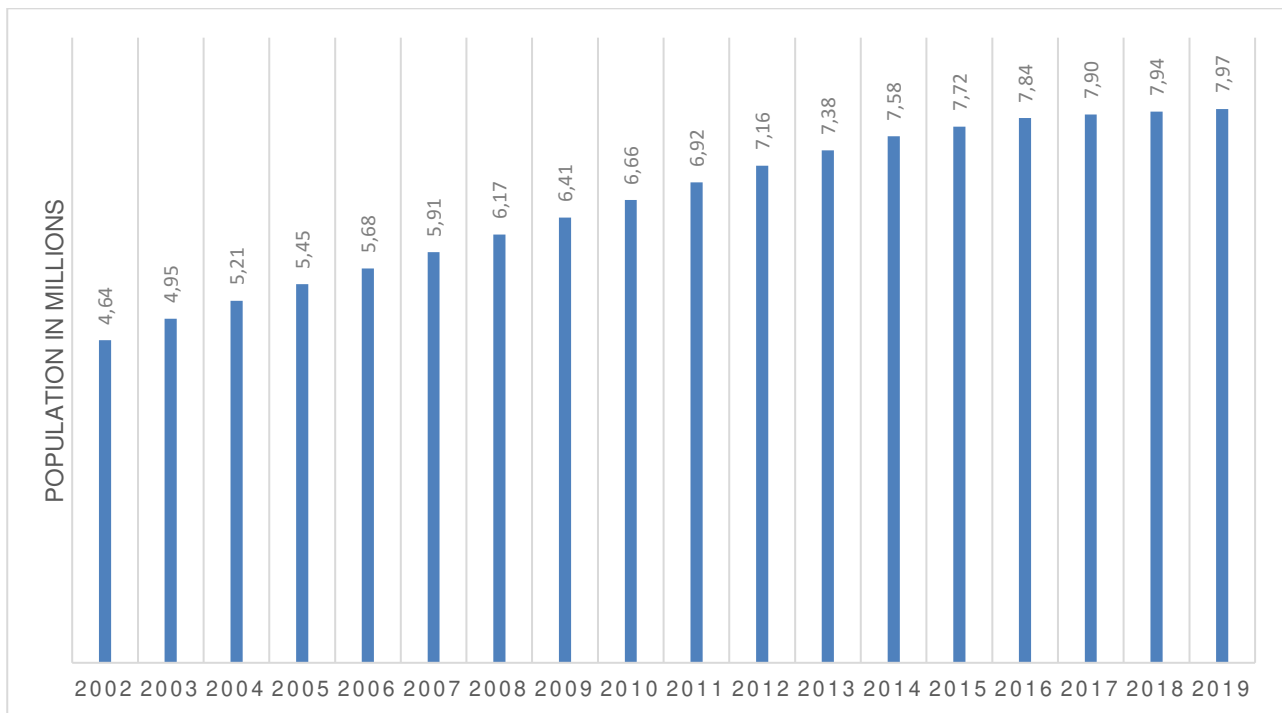
### HIV prevalence

Figures 5 and 6 show the HIV prevalence estimated for the period 2002–2019. For 2019, an estimated 13,5% of the total population is HIV positive. Over a fifth of South African women in their reproductive ages (15–49 years) are HIV positive. HIV prevalence among the youth aged 15–24 has remained fairly stable over time. The total number of persons living with HIV in South Africa increased from an estimated 4,64 million in 2002 to 7,97 million by 2019.

**Figure 5: HIV prevalence by selected age groups, 2002–2019**



**Figure 6: HIV Population over time, 2002–2019**



#### 4. National population estimates

Table 5 shows the mid-year population estimates by population group and sex. The mid-year population is estimated at 58,8 million. The black African population is in the majority (47,4 million) and constitutes approximately 81% of the total South African population. The white population is estimated at 4,7 million, the coloured population at 5,2 million and the Indian/Asian population at 1,5 million. Just over fifty-one per cent (30 million) of the population is female.

**Table 5: Mid-year population estimates by population group and sex, 2019**

Population group	Male		Female		Total	
	Number	% of total male population	Number	% of total female population	Number	% of total population
Black African	23 124 782	80,7	24 318 477	80,8	47 443 259	80,7
Coloured	2 513 221	8,8	2 663 530	8,8	5 176 750	8,8
Indian/Asian	768 594	2,7	734 413	2,4	1 503 007	2,6
White	2 266 151	7,9	2 385 855	7,9	4 652 006	7,9
<b>Total</b>	<b>28 672 747</b>	<b>100,0</b>	<b>30 102 275</b>	<b>100,0</b>	<b>58 775 022</b>	<b>100,0</b>

Figure 7 below shows that the rate of growth for the South African population has increased between 2002 and 2019. The estimated overall growth rate increased from approximately 1,0% for the period 2002–2003 to 1,4% for the period 2018–2019. The proportion of the elderly in South Africa is on the increase and this is indicative of the estimated growth rate over time rising from 1,4% for the period 2002–2003 to 3,0% for the period 2018–2019. Given the fluctuation in fertility over time, the increase in the growth rate among children aged 0–14 between 2002 and 2013 is indicative of the rise in fertility between 2004 and 2008, ageing of children into the next age category, as well as the decline in infant and child mortality post-2006.

**Figure 7: Population growth rates by selected age groups over time, 2002–2019**

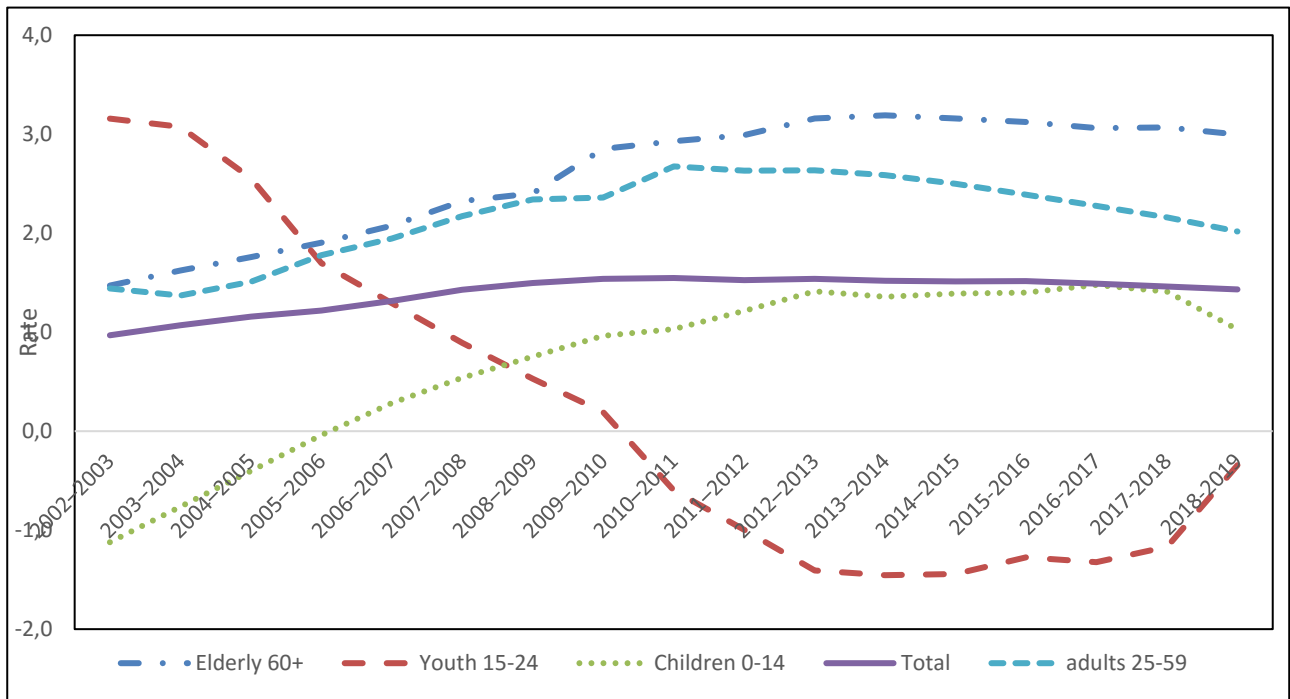


Table 6 shows the 2019 mid-year population estimates by age, sex and population group. About 28,8% of the population is aged 0–14 years and approximately 9,0% is 60 years and older.

**Table 6: Mid-year population estimates by population group, age and sex, 2019**

	Black African			Coloured			Indian/Asian			White			RSA		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	2 493 588	2 433 265	4 926 852	<b>242 060</b>	236 024	<b>478 084</b>	50 094	48 388	<b>98 482</b>	117 715	112 812	<b>230 527</b>	<b>2 903 457</b>	<b>2 830 489</b>	<b>5 733 946</b>
5-9	2 489 446	2 422 169	4 911 615	<b>240 168</b>	234 678	<b>474 845</b>	49 765	47 704	<b>97 469</b>	129 355	124 155	<b>253 510</b>	<b>2 908 734</b>	<b>2 828 705</b>	<b>5 737 439</b>
10-14	2 331 064	2 293 569	4 624 633	<b>226 845</b>	222 704	<b>449 549</b>	47 116	44 719	<b>91 835</b>	133 532	128 354	<b>261 886</b>	<b>2 738 556</b>	<b>2 689 347</b>	<b>5 427 902</b>
15-19	1 968 109	1 949 466	3 917 575	<b>206 805</b>	203 900	<b>410 705</b>	44 959	42 502	<b>87 461</b>	124 102	120 159	<b>244 261</b>	<b>2 343 975</b>	<b>2 316 027</b>	<b>4 660 002</b>
20-24	2 075 048	2 049 234	4 124 282	<b>214 488</b>	212 277	<b>426 765</b>	55 525	48 689	<b>104 214</b>	130 335	128 590	<b>258 925</b>	<b>2 475 396</b>	<b>2 438 790</b>	<b>4 914 186</b>
25-29	2 376 819	2 311 026	4 687 845	<b>219 362</b>	218 181	<b>437 544</b>	72 137	58 336	<b>130 473</b>	137 357	135 353	<b>272 710</b>	<b>2 805 676</b>	<b>2 722 896</b>	<b>5 528 571</b>
30-34	2 383 626	2 286 491	4 670 117	<b>210 804</b>	211 304	<b>422 108</b>	79 467	63 396	<b>142 862</b>	152 726	150 149	<b>302 875</b>	<b>2 826 623</b>	<b>2 711 340</b>	<b>5 537 963</b>
35-39	1 910 753	1 847 716	3 758 469	<b>181 326</b>	188 412	<b>369 739</b>	75 996	62 282	<b>138 277</b>	152 533	152 157	<b>304 690</b>	<b>2 320 608</b>	<b>2 250 567</b>	<b>4 571 175</b>
40-44	1 392 548	1 448 164	2 840 712	<b>155 605</b>	159 124	<b>314 730</b>	63 320	54 375	<b>117 695</b>	153 314	158 957	<b>312 271</b>	<b>1 764 787</b>	<b>1 820 620</b>	<b>3 585 408</b>
45-49	1 074 833	1 197 682	2 272 515	<b>150 348</b>	162 533	<b>312 881</b>	55 804	51 111	<b>106 915</b>	174 298	179 008	<b>353 306</b>	<b>1 455 283</b>	<b>1 590 334</b>	<b>3 045 617</b>
50-54	785 476	1 027 394	1 812 870	<b>136 383</b>	161 398	<b>297 781</b>	46 718	47 242	<b>93 959</b>	161 324	169 114	<b>330 438</b>	<b>1 129 900</b>	<b>1 405 148</b>	<b>2 535 048</b>
55-59	637 128	903 083	1 540 211	<b>118 093</b>	138 586	<b>256 679</b>	39 260	42 958	<b>82 218</b>	150 907	162 497	<b>313 404</b>	<b>945 388</b>	<b>1 247 124</b>	<b>2 192 512</b>
60-64	482 543	735 389	1 217 932	<b>86 702</b>	110 581	<b>197 283</b>	31 728	36 855	<b>68 583</b>	144 098	156 581	<b>300 679</b>	<b>745 071</b>	<b>1 039 405</b>	<b>1 784 476</b>
65-69	339 833	554 771	894 604	<b>59 313</b>	83 499	<b>142 812</b>	24 548	31 110	<b>55 658</b>	129 884	147 162	<b>277 046</b>	<b>553 578</b>	<b>816 542</b>	<b>1 370 121</b>
70-74	198 981	381 497	580 478	<b>34 424</b>	54 926	<b>89 350</b>	16 400	23 687	<b>40 088</b>	111 602	128 294	<b>239 896</b>	<b>361 408</b>	<b>588 404</b>	<b>949 812</b>
75-79	106 936	233 195	340 131	<b>18 524</b>	34 402	<b>52 926</b>	9 371	15 839	<b>25 210</b>	80 115	99 493	<b>179 608</b>	<b>214 946</b>	<b>382 928</b>	<b>597 874</b>
80+	78 052	244 365	322 416	<b>11 971</b>	31 001	<b>42 971</b>	6 385	15 223	<b>21 608</b>	82 954	133 019	<b>215 973</b>	<b>179 361</b>	<b>423 608</b>	<b>602 969</b>
<b>Total</b>	<b>23 124 782</b>	<b>24 318 477</b>	<b>47 443 259</b>	<b>2 513 221</b>	<b>2 663 530</b>	<b>5 176 750</b>	<b>768 594</b>	<b>734 413</b>	<b>1 503 007</b>	<b>2 266 151</b>	<b>2 385 855</b>	<b>4 652 006</b>	<b>28 672 747</b>	<b>30 102 275</b>	<b>58 775 022</b>



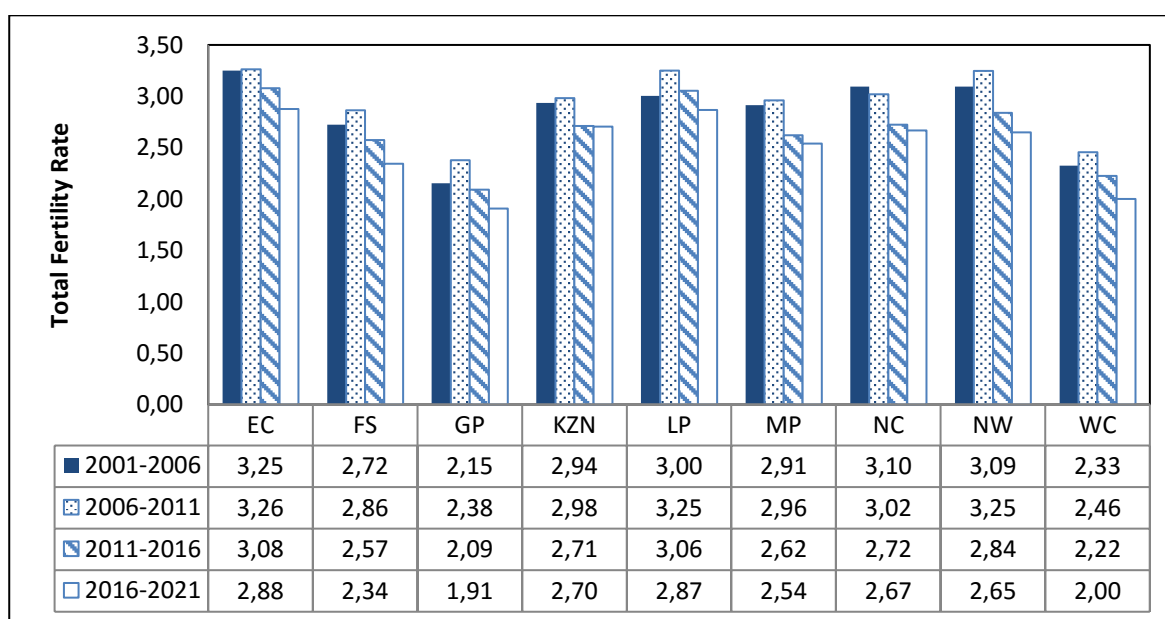
## 5. Provincial population estimates

Provincial estimates are derived using a cohort-component method as suggested by the United Nations (United Nations, 1992), incorporating changes in births, deaths as well as migration over time. When provincial population estimates are desired and the appropriate data are available, a multi-regional approach should be considered as this is the only way to guarantee that the total migration flows between regions will sum to zero (United Nations, 1992). Multi-regional methods require the estimation of separate age-specific migration rates between every region of the country and every other region and such detailed data are rarely available. Although it is possible to estimate some of the missing data (see Willekens et al., 1978) the task of preparing data can become overwhelming if there are many regions. If there are only a few streams however the multi-regional method is the best method to use. In South Africa 2 448 (9x8x17x2) migration streams are derived if the multi-regional model is applied in calculating migration streams by age group (17 in total) and sex for each of the nine provinces.

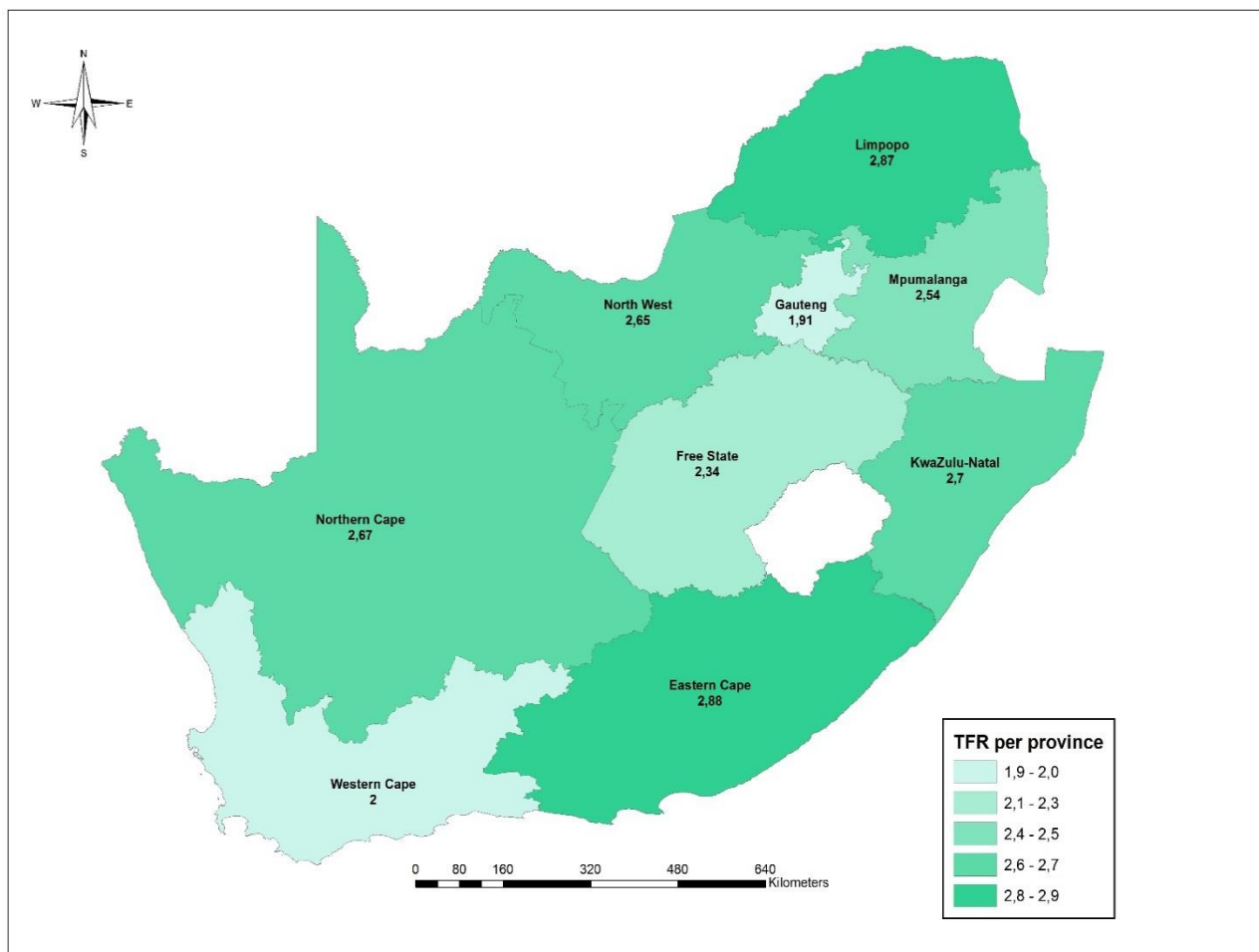
### 5.1 Demographic assumptions

The demographic data from the 2011 Census i.e. fertility, mortality and migration rates are incorporated in the assumptions. The population structure as per Census 2011 as well as the distribution of births and deaths from vital registrations (adjusted for late registration and completeness) are used to determine provincial estimates (Stats SA, 2017). Figure 8 shows the provincial fertility estimates for the periods 2001–2006; 2006–2011; 2011–2016 and 2016–2021. In the period 2006–2011, there is a general rise in TFR, giving shape to the Census 2011 provincial population structure. However for the period 2011–2021 there is an overall decline in TFR over time. Fertility varies from province to province as is depicted in Figure 8. The more rural provinces of the Eastern Cape and Limpopo indicate higher fertility rates whilst more urbanised provinces such as Gauteng and the Western Cape indicate lower levels of fertility.

**Figure 8: Provincial average total fertility rate over time, 2001–2021**

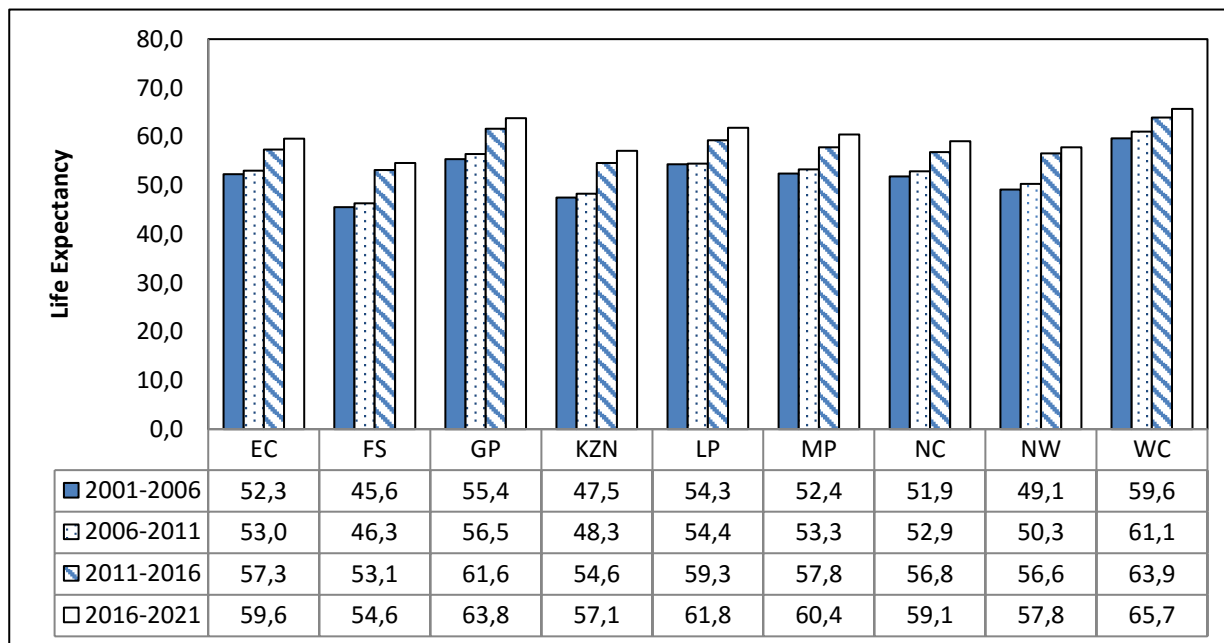


**Figure 9: Provincial average total fertility rate, 2016–2021**

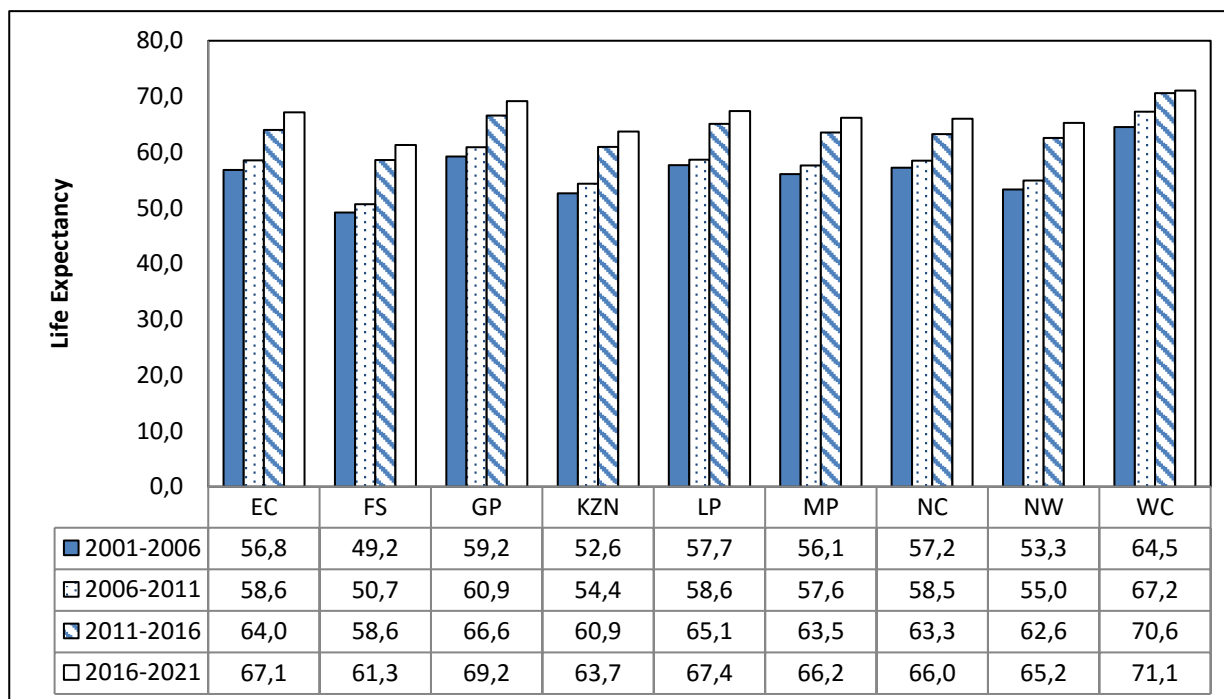


Figures 10 and 11 show the average provincial life expectancies at birth for males and females for the periods 2001–2006; 2006–2011; 2011–2016 and 2016–2021. Life expectancy at birth reflects the overall mortality level of a population. The life expectancy increased incrementally for each period across all provinces but more significantly in the period 2011–2016 due to the uptake of antiretroviral therapy over time in South Africa. Though the life expectancy in the periods 2001–2006 and 2006–2011, depicts marginal improvement, this masks the interaction between the highest number of deaths in 2006 in combination with declining numbers of deaths between 2007 and 2010. Western Cape consistently has the highest life expectancy at birth for both males and females over time whilst the Free State has the lowest life expectancy at birth.

**Figure 10: Provincial average life expectancy at birth (males), 2001–2021**



**Figure 11: Provincial average life expectancy at birth (females), 2001–2021**



## 5.2 Migration patterns

From Census 2011 it was possible to determine out-migration rates for each province. Applying these rates to the age structures of the province it was possible to establish migration streams between the provinces. The result of these analyses is shown in Tables 7, 8 and 9. The assumptions indicate that Gauteng and Western Cape received the highest number of in-migrants for all periods. The Eastern Cape and Gauteng experienced the largest number of outflow of migrants. Due to its relatively larger population size, Gauteng achieved the highest number of in- and out-flows of migration. Gauteng, Mpumalanga, Northern Cape, North West and Western Cape provinces received positive net migration over all 3 periods. For all periods, the number of international migrants entering the provinces was highest in Gauteng, with Western Cape ranking second.

**Table 7: Estimated provincial migration streams 2006–2011**

Province in 2006	Province in 2011									Out-migrants	In-migrants	Net migration
	EC	FS	GP	KZN	LP	MP	NC	NW	WC			
EC	0	12 808	143 539	96 615	13 748	16 532	7 938	37 086	171 941	500 207	161 405	-338 802
FS	8 119	0	78 919	7 565	6 300	10 368	8 721	22 862	11 718	154 573	114 624	-39 948
GP	40 268	31 231	0	54 110	64 147	63 687	9 739	85 606	75 362	424 150	1 382 128	957 978
KZN	23 407	11 329	205 896	0	8 787	33 704	7 290	10 708	30 618	331 737	255 187	-76 551
LP	4 274	5 552	316 191	7 847	0	45 334	2 468	30 891	10 829	423 387	220 311	-203 075
MP	4 539	4 703	120 888	11 393	21 161	0	2 086	12 088	8 828	185 685	243 960	58 274
NC	4 045	8 101	15 222	5 182	2 420	3 965	0	11 613	16 645	67 193	75 386	8 192
NW	4 537	10 334	94 832	5 349	17 474	10 436	20 645	0	7 963	171 570	275 490	103 920
WC	43 954	6 851	53 048	11 180	4 951	6 200	10 947	7 121	0	144 253	420 480	276 227
<b>Outside SA (net migration)</b>	<b>28 261</b>	<b>23 716</b>	<b>353 592</b>	<b>55 946</b>	<b>81 323</b>	<b>53 734</b>	<b>5 551</b>	<b>57 515</b>	<b>86 577</b>			

**Table 8: Estimated provincial migration streams, 2011–2016**

Province in 2011	Province in 2016									Out-migrants	In-migrants	Net migration
	EC	FS	GP	KZN	LP	MP	NC	NW	WC			
EC	0	12 955	145 191	97 667	13 915	16 726	8 041	37 476	173 832	505 803	181 242	-324 561
FS	8 331	0	80 931	7 765	6 471	10 645	8 951	23 467	12 041	158 603	128 327	-30 276
GP	46 172	35 833	0	62 216	91 749	73 188	11 182	98 385	86 848	505 574	1 519 244	1 013 670
KZN	24 743	11 972	217 596	0	9 314	35 649	7 714	11 344	32 433	350 766	280 614	-70 152
LP	4 467	5 794	329 721	8 206	0	47 333	2 584	32 237	11 304	441 645	271 305	-170 340
MP	4 942	5 112	131 621	12 382	22 977	0	2 273	13 146	9 596	202 050	271 962	69 913
NC	4 289	8 620	16 212	5 501	2 575	4 213	0	12 345	17 705	71 460	82 321	10 861
NW	4 975	11 306	103 754	5 856	19 102	11 413	22 611	0	8 736	187 753	306 934	119 182
WC	48 710	7 639	59 224	12 490	5 523	6 927	12 197	7 962	0	160 673	458 720	298 047
<b>Outside SA (net migration)</b>	<b>34 613</b>	<b>29 095</b>	<b>434 994</b>	<b>68 530</b>	<b>99 678</b>	<b>65 869</b>	<b>6 768</b>	<b>70 572</b>	<b>106 227</b>			

**Table 9: Estimated provincial migration streams 2016–2021**

Province in 2016	Province in 2021									Out-migrants	In-migrants	Net migration
	EC	FS	GP	KZN	LP	MP	NC	NW	WC			
EC	0	13 178	147 729	99 306	14 149	16 974	8 168	38 019	176 784	514 308	199 855	-314 453
FS	8 538	0	83 285	7 964	6 634	10 924	9 200	24 076	12 361	162 982	141 185	-21 797
GP	52 381	40 711	0	70 764	104 073	83 250	12 709	111 893	98 925	574 705	1 643 590	1 068 885
KZN	26 277	12 717	231 241	0	9 864	37 877	8 191	12 066	34 448	372 681	303 732	-68 949
LP	4 702	6 092	347 269	8 640	0	49 723	2 718	33 848	11 857	464 848	302 226	-162 622
MP	5 371	5 552	143 213	13 440	24 957	0	2 473	14 286	10 420	219 711	297 949	78 238
NC	4 567	9 187	17 309	5 862	2 746	4 491	0	13 162	18 869	76 193	89 252	13 059
NW	5 427	12 336	113 419	6 388	20 832	12 449	24 712	0	9 537	205 099	336 180	131 081
WC	53 435	8 435	65 554	13 826	6 105	7 669	13 464	8 824	0	177 313	493 621	316 308
<b>Outside SA (net migration)</b>	<b>39 158</b>	<b>32 978</b>	<b>494 571</b>	<b>77 542</b>	<b>112 866</b>	<b>74 593</b>	<b>7 616</b>	<b>80 005</b>	<b>120 420</b>			

### 5.3 Provincial distributions

Table 10 below shows the estimated percentage of the total population residing in each of the provinces from 2002 to 2019. The provincial estimates show that Gauteng has the largest share of the population followed by KwaZulu-Natal, Western Cape and Eastern Cape. Inter-provincial as well as international migration patterns significantly influence the provincial population numbers and structures in South Africa. By 2019 approximately 11,4% of South Africa's population live in Western Cape. Northern Cape has the smallest share of the population (2,2%). Free State has the second smallest share of the South African population constituting 4,9 % of the population. Figures 12 and 13 indicate that Limpopo and Eastern Cape (both 33,3% respectively) have the highest proportions of persons younger than 15 years. The highest proportions of elderly persons aged 60 years and above are found in Eastern Cape (11,3%), Northern Cape (10,2%) and Western Cape (10,0%).

**Table 10: Percentage distribution of the projected provincial share of the total population, 2002–2019**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EC	14,1	13,9	13,8	13,7	13,5	13,4	13,2	13,0	12,8	12,6	12,5	12,3	12,2	12,0	11,9	11,7	11,6	11,4
FS	5,9	5,8	5,8	5,7	5,6	5,6	5,5	5,4	5,4	5,3	5,3	5,2	5,2	5,1	5,1	5,0	5,0	4,9
GP	21,0	21,3	21,6	21,8	22,1	22,4	22,7	23,0	23,3	23,7	24,0	24,2	24,5	24,8	25,0	25,3	25,6	25,8
KZN	20,8	20,7	20,6	20,5	20,4	20,3	20,2	20,1	20,0	19,8	19,8	19,7	19,6	19,5	19,4	19,3	19,3	19,2
LP	11,4	11,3	11,2	11,1	11,0	11,0	10,9	10,8	10,7	10,7	10,6	10,5	10,5	10,4	10,4	10,3	10,2	10,2
MP	7,6	7,6	7,6	7,7	7,7	7,7	7,7	7,7	7,7	7,8	7,8	7,8	7,8	7,8	7,8	7,8	7,8	7,8
NC	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2
NW	6,6	6,6	6,6	6,6	6,7	6,7	6,7	6,7	6,7	6,7	6,7	6,8	6,8	6,8	6,8	6,8	6,8	6,9
WC	10,4	10,5	10,6	10,7	10,7	10,8	10,9	11,0	11,1	11,2	11,2	11,3	11,4	11,4	11,5	11,6	11,6	11,6
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

**Table 11 (a): Provincial mid-year population estimates by age and sex, 2019**

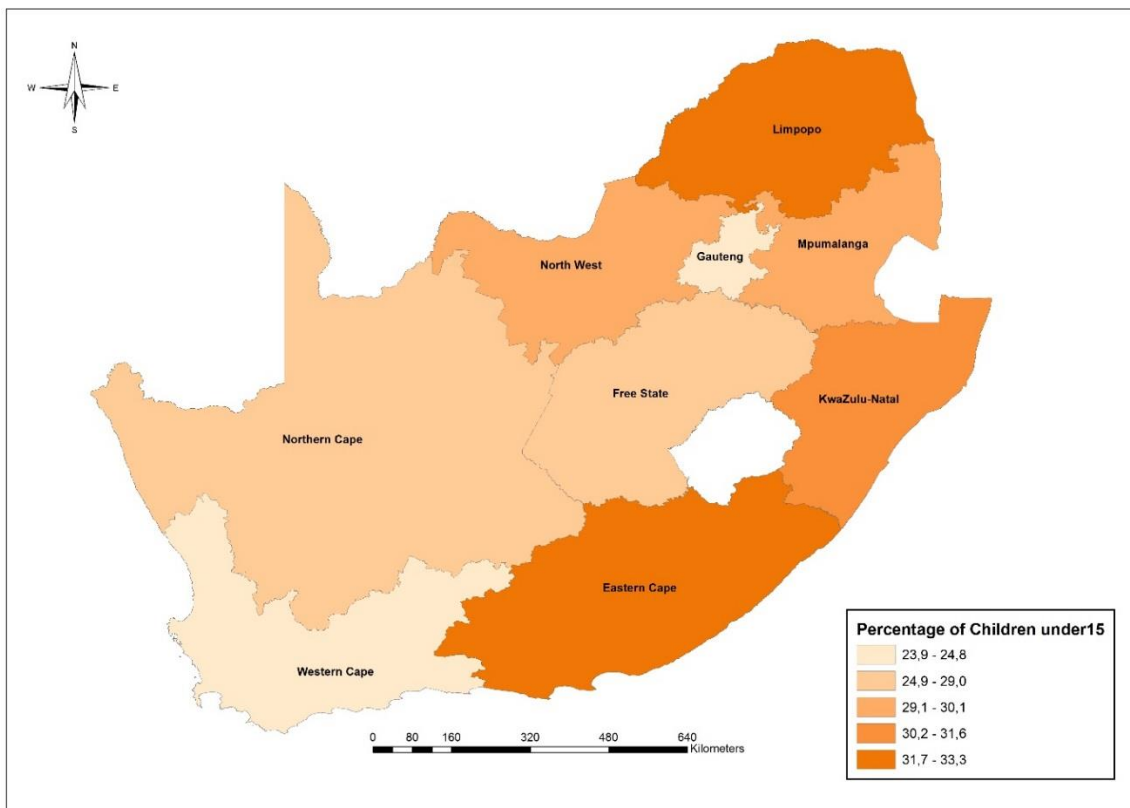
Age	Eastern Cape			Free State			Gauteng			KwaZulu-Natal			Limpopo		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0–4	366 330	358 650	<b>724 979</b>	136 294	133 271	<b>269 566</b>	646 704	631 382	<b>1 278 086</b>	624 531	606 570	<b>1 231 101</b>	340 626	330 518	<b>671 145</b>
5–9	386 340	375 040	<b>761 380</b>	144 196	141 022	<b>285 218</b>	625 578	609 549	<b>1 235 127</b>	607 157	589 752	<b>1 196 909</b>	349 044	336 445	<b>685 489</b>
10–14	376 879	368 010	<b>744 889</b>	141 172	140 166	<b>281 338</b>	560 699	554 552	<b>1 115 251</b>	573 074	563 089	<b>1 136 163</b>	326 621	311 593	<b>638 214</b>
15–19	299 385	291 583	<b>590 967</b>	121 277	120 753	<b>242 030</b>	513 427	514 346	<b>1 027 773</b>	492 961	487 612	<b>980 573</b>	267 079	254 592	<b>521 671</b>
20–24	252 572	246 936	<b>499 509</b>	118 601	117 186	<b>235 788</b>	666 410	669 194	<b>1 335 604</b>	505 198	500 833	<b>1 006 031</b>	249 874	241 430	<b>491 304</b>
25–29	263 271	258 119	<b>521 391</b>	128 282	124 777	<b>253 059</b>	830 800	826 453	<b>1 657 254</b>	534 838	526 234	<b>1 061 072</b>	255 603	250 862	<b>506 465</b>
30–34	257 568	255 791	<b>513 360</b>	130 754	126 043	<b>256 796</b>	851 972	822 418	<b>1 674 390</b>	505 101	503 472	<b>1 008 574</b>	245 229	249 486	<b>494 715</b>
35–39	210 454	217 419	<b>427 873</b>	107 408	106 692	<b>214 099</b>	699 448	658 453	<b>1 357 901</b>	392 259	413 146	<b>805 406</b>	201 109	213 356	<b>414 464</b>
40–44	159 263	183 106	<b>342 369</b>	81 233	89 539	<b>170 772</b>	549 909	507 925	<b>1 057 834</b>	282 544	330 508	<b>613 052</b>	148 071	182 798	<b>330 869</b>
45–49	131 071	173 519	<b>304 590</b>	69 390	82 226	<b>151 616</b>	458 148	412 888	<b>871 036</b>	226 914	290 118	<b>517 033</b>	115 433	159 655	<b>275 088</b>
50–54	103 770	163 695	<b>267 466</b>	56 816	74 335	<b>131 151</b>	348 006	354 634	<b>702 640</b>	168 558	255 374	<b>423 932</b>	88 615	137 373	<b>225 989</b>
55–59	92 438	159 309	<b>251 747</b>	48 714	64 995	<b>113 709</b>	287 064	306 248	<b>593 312</b>	143 386	233 152	<b>376 538</b>	71 632	123 746	<b>195 379</b>
60–64	79 775	144 091	<b>223 865</b>	39 702	55 203	<b>94 905</b>	222 590	251 579	<b>474 169</b>	114 078	192 451	<b>306 529</b>	56 346	103 935	<b>160 280</b>
65–69	62 422	114 096	<b>176 518</b>	29 954	45 139	<b>75 093</b>	159 521	189 530	<b>349 051</b>	89 431	155 433	<b>244 864</b>	44 051	86 532	<b>130 583</b>
70–74	43 229	85 121	<b>128 350</b>	19 052	32 183	<b>51 235</b>	100 605	129 565	<b>230 171</b>	60 742	118 042	<b>178 784</b>	29 147	61 701	<b>90 848</b>
75–79	33 110	67 360	<b>100 470</b>	11 560	20 602	<b>32 162</b>	52 244	74 290	<b>126 533</b>	34 596	71 508	<b>106 104</b>	18 145	43 738	<b>61 883</b>
80+	40 376	92 179	<b>132 555</b>	8 158	20 771	<b>28 929</b>	29 477	60 507	<b>89 983</b>	26 755	69 666	<b>96 422</b>	22 246	65 952	<b>88 198</b>
<b>Total</b>	<b>3 158 253</b>	<b>3 554 023</b>	<b>6 712 276</b>	<b>1 392 563</b>	<b>1 494 903</b>	<b>2 887 465</b>	<b>7 602 602</b>	<b>7 573 514</b>	<b>15 176 116</b>	<b>5 382 124</b>	<b>5 906 962</b>	<b>11 289 086</b>	<b>2 828 873</b>	<b>3 153 712</b>	<b>5 982 584</b>

**Table 11 (b): Provincial mid-year population estimates by age and sex, 2019 (concluded)**

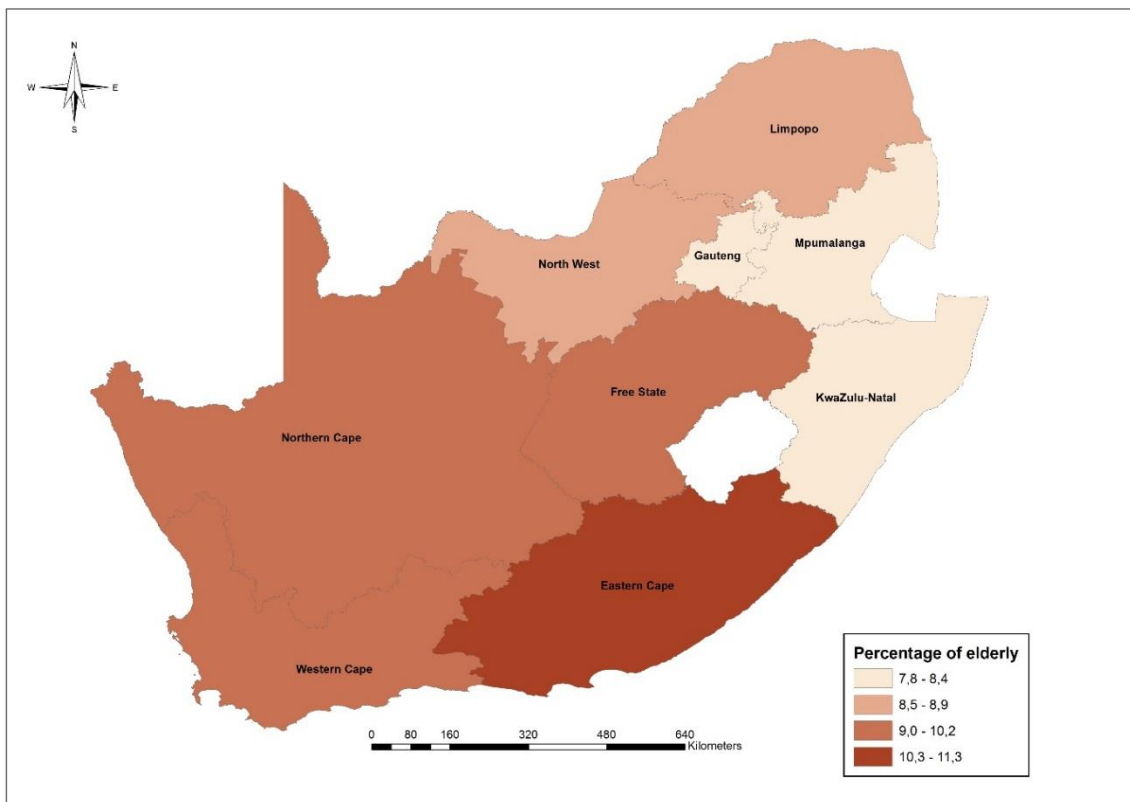
Age	Mpumalanga			Northern Cape			North West			Western Cape			All provinces		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0–4	235 459	231 177	<b>466 635</b>	63 157	61 733	<b>124 890</b>	201 889	198 721	<b>400 609</b>	288 467	278 467	<b>566 934</b>	2 903 457	2 830 489	<b>5 733 946</b>
5–9	234 815	230 987	<b>465 802</b>	61 735	59 810	<b>121 544</b>	204 883	200 706	<b>405 590</b>	294 986	285 394	<b>580 381</b>	2 908 734	2 828 705	<b>5 737 439</b>
10–14	225 726	224 004	<b>449 730</b>	60 117	60 075	<b>120 192</b>	195 368	193 895	<b>389 264</b>	278 900	273 962	<b>552 862</b>	2 738 556	2 689 347	<b>5 427 902</b>
15–19	193 457	193 178	<b>386 635</b>	50 993	52 175	<b>103 167</b>	159 675	157 553	<b>317 228</b>	245 721	244 235	<b>489 956</b>	2 343 975	2 316 027	<b>4 660 002</b>
20–24	199 715	194 788	<b>394 503</b>	48 351	48 927	<b>97 278</b>	159 700	149 445	<b>309 145</b>	274 974	270 050	<b>545 024</b>	2 475 396	2 438 790	<b>4 914 186</b>
25–29	224 775	206 550	<b>431 325</b>	55 188	52 499	<b>107 688</b>	188 426	165 434	<b>353 859</b>	324 491	311 967	<b>636 458</b>	2 805 676	2 722 896	<b>5 528 571</b>
30–34	231 703	206 382	<b>438 085</b>	60 367	53 395	<b>113 762</b>	200 937	170 184	<b>371 120</b>	342 992	324 170	<b>667 162</b>	2 826 623	2 711 340	<b>5 537 963</b>
35–39	189 463	171 911	<b>361 374</b>	52 552	44 619	<b>97 171</b>	172 898	144 740	<b>317 638</b>	295 017	280 232	<b>575 249</b>	2 320 608	2 250 567	<b>4 571 175</b>
40–44	135 504	139 761	<b>275 265</b>	40 087	36 630	<b>76 718</b>	134 756	121 177	<b>255 934</b>	233 420	229 175	<b>462 595</b>	1 764 787	1 820 620	<b>3 585 408</b>
45–49	105 043	122 378	<b>227 421</b>	33 314	33 615	<b>66 928</b>	110 037	107 093	<b>217 130</b>	205 932	208 843	<b>414 775</b>	1 455 283	1 590 334	<b>3 045 617</b>
50–54	80 460	104 665	<b>185 125</b>	26 380	30 475	<b>56 856</b>	89 246	91 479	<b>180 725</b>	168 049	193 117	<b>361 166</b>	1 129 900	1 405 148	<b>2 535 048</b>
55–59	66 384	87 153	<b>153 537</b>	21 745	26 763	<b>48 509</b>	77 189	78 282	<b>155 471</b>	136 835	167 476	<b>304 311</b>	945 388	1 247 124	<b>2 192 512</b>
60–64	51 077	68 176	<b>119 252</b>	17 989	23 297	<b>41 286</b>	59 534	64 541	<b>124 075</b>	103 981	136 133	<b>240 114</b>	745 071	1 039 405	<b>1 784 476</b>
65–69	38 232	53 960	<b>92 193</b>	13 703	19 155	<b>32 858</b>	39 663	49 854	<b>89 517</b>	76 600	102 844	<b>179 444</b>	553 578	816 542	<b>1 370 121</b>
70–74	23 525	36 180	<b>59 706</b>	8 936	14 208	<b>23 144</b>	24 612	35 850	<b>60 462</b>	51 560	75 554	<b>127 114</b>	361 408	588 404	<b>949 812</b>
75–79	14 077	24 528	<b>38 606</b>	5 670	9 768	<b>15 439</b>	14 722	25 777	<b>40 499</b>	30 822	45 356	<b>76 179</b>	214 946	382 928	<b>597 874</b>
80+	14 212	32 780	<b>46 992</b>	4 764	11 682	<b>16 446</b>	9 617	29 277	<b>38 895</b>	23 756	40 794	<b>64 550</b>	179 361	423 608	<b>602 969</b>
<b>Total</b>	<b>2 263 628</b>	<b>2 328 559</b>	<b>4 592 187</b>	<b>625 049</b>	<b>638 826</b>	<b>1 263 875</b>	<b>2 043 152</b>	<b>1 984 008</b>	<b>4 027 160</b>	<b>3 376 504</b>	<b>3 467 769</b>	<b>6 844 272</b>	<b>28 672 747</b>	<b>30 102 275</b>	<b>58 775 022</b>



**Figure 12: Population under 15 years of age**



**Figure 13: Proportion of elderly aged 60+**



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## Appendices

### Appendix 1: Mid-year population estimates by province, 2019

	Population estimate	% of total population
Eastern Cape	6 712 276	11,4
Free State	2 887 465	4,9
Gauteng	15 176 116	25,8
KwaZulu-Natal	11 289 086	19,2
Limpopo	5 982 584	10,2
Mpumalanga	4 592 187	7,8
Northern Cape	1 263 875	2,2
North West	4 027 160	6,9
Western Cape	6 844 272	11,6
<b>Total</b>	<b>58 775 022</b>	<b>100,0</b>

### Appendix 2: Demographic indicators, 2002–2019

Year	Crude birth rate	Life expectancy			Infant mortality rate	Under-5 mortality rate	Crude death rate	Rate of natural increase (%)
		Male	Female	Total				
2002	21,2	53,7	58,0	55,9	56,5	79,0	12,5	0,9
2003	21,1	53,0	56,8	55,0	56,5	79,1	13,2	0,8
2004	22,3	52,4	56,3	54,4	56,3	77,7	13,7	0,9
2005	23,0	52,2	56,5	54,4	55,6	76,7	13,8	0,9
2006	23,4	52,3	56,6	54,5	54,2	74,9	13,8	1,0
2007	23,8	53,1	57,4	55,3	51,6	71,3	13,4	1,0
2008	24,0	54,0	59,0	56,6	48,9	68,0	12,7	1,1
2009	23,8	55,2	60,8	58,1	44,6	62,8	11,9	1,2
2010	23,4	56,4	62,3	59,4	40,9	57,2	11,2	1,2
2011	22,8	57,8	63,5	60,7	36,1	47,7	10,6	1,2
2012	22,3	58,2	63,9	61,1	33,4	44,5	10,4	1,2
2013	21,9	58,9	65,1	62,1	31,5	42,2	9,9	1,2
2014	21,5	59,3	65,5	62,5	29,0	38,9	9,8	1,2
2015	21,2	59,9	66,2	63,1	27,1	35,3	9,6	1,2
2016	20,9	60,4	67,0	63,8	26,3	32,4	9,3	1,2
2017	20,6	60,8	67,2	64,1	24,3	29,1	9,3	1,1
2018	20,2	61,1	67,5	64,4	22,4	27,8	9,2	1,1
2019	19,9	61,5	67,7	64,7	22,1	28,5	9,2	1,1

**Appendix 3: HIV prevalence estimates and number of people living with HIV, 2002–2019**

	Prevalence (%)				Incidence (%)	HIV population (in millions)
	Women 15–49	Adults 15–49	Youth 15–24	Total population	15–49	
2002	18,76	16,27	8,17	9,99	2,40	4,64
2003	19,57	16,95	8,06	10,55	2,25	4,95
2004	20,16	17,43	7,90	10,99	2,12	5,21
2005	20,66	17,81	7,71	11,36	2,03	5,45
2006	21,09	18,14	7,50	11,69	1,95	5,68
2007	21,51	18,46	7,31	12,01	1,90	5,91
2008	21,97	18,82	7,16	12,35	1,85	6,17
2009	22,39	19,15	6,98	12,65	1,72	6,41
2010	22,84	19,50	6,86	12,94	1,69	6,66
2011	23,24	19,81	6,68	13,23	1,60	6,92
2012	23,60	20,08	6,51	13,48	1,50	7,16
2013	23,86	20,27	6,30	13,69	1,39	7,38
2014	24,05	20,40	6,08	13,86	1,31	7,58
2015	24,00	20,31	5,70	13,89	1,04	7,72
2016	23,88	20,18	5,38	13,90	0,98	7,84
2017	23,54	19,84	4,95	13,79	0,73	7,90
2018	23,15	19,48	4,58	13,66	0,68	7,94
2019	22,71	19,07	4,30	13,53	0,68	7,97

**Appendix 4: Estimates of annual growth rates, 2002–2019**

<b>Period</b>	<b>Children 0–14</b>	<b>Youth 15–24</b>	<b>Elderly 60+</b>	<b>adults 25–59</b>	<b>Total</b>
2002–2003	-1,12	3,16	1,47	1,44	<b>0,97</b>
2003–2004	-0,76	3,08	1,62	1,37	<b>1,07</b>
2004–2005	-0,40	2,55	1,76	1,51	<b>1,16</b>
2005–2006	-0,04	1,70	1,90	1,78	<b>1,22</b>
2006–2007	0,28	1,29	2,08	1,95	<b>1,32</b>
2007–2008	0,54	0,89	2,32	2,17	<b>1,43</b>
2008–2009	0,75	0,53	2,40	2,34	<b>1,50</b>
2009–2010	0,96	0,19	2,85	2,36	<b>1,54</b>
2010–2011	1,03	-0,60	2,93	2,67	<b>1,55</b>
2011–2012	1,22	-1,00	2,99	2,63	<b>1,53</b>
2012–2013	1,41	-1,41	3,16	2,63	<b>1,54</b>
2013–2014	1,36	-1,45	3,19	2,59	<b>1,52</b>
2014–2015	1,39	-1,44	3,16	2,50	<b>1,51</b>
2015–2016	1,40	-1,28	3,12	2,39	<b>1,51</b>
2016–2017	1,48	-1,32	3,06	2,28	<b>1,49</b>
2017–2018	1,41	-1,17	3,07	2,16	<b>1,46</b>
2018–2019	1,03	-0,34	3,00	2,02	<b>1,43</b>

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