

**United Nations Statistics Division: Demographic Yearbook
Questionnaire on Population Estimates
Part 2: Metadata**

Reporting country: **South Africa**
Reporting year: 2023

1. Author organization

Author organization function: National Statistical office (Statistics South Africa)

2. Timeliness

Date when the provided population estimates were produced: 28th July 2022

Reference dates of the sources of the latest data used to derive these estimates:

Mortality and Causes of Death data: 2018
Recorded births : 2020
Census : 2001 & 2011

3. Periodicity

Calendar of the production of population estimates:

- produced annually
- after each census
- at the midpoint of intercensal period
- other, please specify:

4. Status of data

4.1 Type of estimation: intercensal, postcensal, other; please specify: **intercensal and postcensal.**

4.2 Data revision status: provisional, provisional revised, final, final revised, other; please specify: **Final**

5. Coverage

5.1 Please specify the time period covered by time series of the reported population estimates: **2002-2022**

5.2 Please specify the territorial coverage of the time series of the reported population estimates:

5.2.1 In case any areas of the country were not enumerated during the latest population census, are they considered in reported population estimates? Please describe as necessary:

The population estimates cover all residents in South Africa as it is based on all estimated births, deaths and migrants in South Africa. There are no adjustments for missing census count.

5.3 Type of population count employed for the reported population estimates:

- present population (de-facto)
- usually resident population
- registered population
- other; please specify:

5.4 Included or excluded population groups; please fill out the below tabulation:

In order to clarify the exact composition of the population for which estimates were given in this questionnaire, please indicate below the disposition of each group listed.

Population group	Included	Excluded	Not applicable
(a) Nomads and persons living in areas to which access is difficult	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Civilian residents temporarily absent from the country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Civilian foreigners who do not cross a border daily and are in the country temporarily	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Refugees, asylum seekers and internally displaced persons	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Military, naval and diplomatic personnel and their families located outside the country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Foreign military, naval and diplomatic personnel and their families located in the country	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(g) Civilian foreigners who cross a border daily to work in the country	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(h) Civilian residents who cross a border daily to work in another country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(i) Merchant seafarers and fishers resident in the country but at sea at the time of the latest census	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) Homeless or roofless persons, and persons with no concept of usual residence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(k) Persons living in buildings with restricted access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(l) Stateless persons	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(m) Other; please specify: <i>the tabulation above has been based on the MYPE assumptions regarding birth registration</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Primary data source (base data)

6.1 Type of base data:

- (1) Continuous population register
- (2) Complete census taken [] (date)
- i) population actually enumerated
- ii) population adjusted to take account of [] % underenumeration
- (3) Sample survey taken [] (date)
- (4) Partial census taken or partial registration 1985 (date)

Please describe method: The base population (1985) for South Africa is difficult to ascertain, given SA's tumultuous past of failing to counting all people in SA. Though census counts were done as early as 1970, there was a vast undercount of the black population due to SA's tumultuous past of failing to counting all people in SA (Pass laws and segregation). Though census counts were done as early as 1970, there was a vast undercount of the black population. In 1980 a census of SA (white, col, Indian, African) and Bophuthatswana (African) was done, here too was an underestimation of the black population. 1991 census was a similar experience, as the Urban population (predominantly white) was counted separate to that of the TBVC (Transvaal, Bophuthatswana, Vaal, Ciskei) who were tasked with sending their own counts to the national govt. In 1980 a census of SA (White, Coloured, Indian, African) and Bophuthatswana (African) was done, here too was an underestimation of the black population, and various adjustments are made to compensate for this).

- (5) Non-censal count of [] (date)

Please describe method:

- (6) Conjectural estimate derived by means other than counting

Please describe method:

6.2 Territorial coverage of base data, please specify: South Africa

6.3 Type of population count employed in base data:

- present population (de facto)
- usually resident population
- registered population
- other, please specify: Other

The base population (1985) for South Africa is difficult to ascertain, given SAs tumultuous past of failing to counting all people in SA. Prior to 1994, the geographical distribution of the population was governed by pass laws and segregation. Though census counts were done as early as 1970, there was a vast undercount of the black population. In 1980 a census of SA (White, Coloured, Indian, Black African) and Bophuthatswana (African) was done, here too was an underestimation of the black population. 1991 census was a similar experience, as the Urban population (predominantly white) was counted separate to that of the TBVC (Transvaal, Bophuthatswana, Vaal, Ciskei) who were tasked with sending their own counts to the national govt. The 1996 census was the first census with a far better count of the entire population. Using all census points with a bias towards the more complete census 1996, the 1985 base population was developed. At subnational level, the 2001 Census (de facto) is used as the base year.

7. Method of producing the reported population estimates

7.1 Total population

Estimates of total population of a country may be constructed using several methods. Please indicate by a check mark the method used in constructing the reported population estimates.

7.1.1 Method of time adjustment

- (1) Population estimates are sourced annually from a population register
- (2) Applying statistics of births and deaths (natural increase), and migration
- (i) Registered vital statistics
- (ii) Vital statistics adjusted for incompleteness

(3) Applying statistics of births and deaths (natural increase), but no account taken of migration

(i) Registered vital statistics

(ii) Vital statistics adjusted for incompleteness

(4) Applying an assumed rate of increase, based on:

(i) Assumption with respect to mortality, fertility, migration

(ii) Assumption with respect to mortality, fertility, but no account taken of migration

(iii) Other assumed rate

Please provide the rate used, and describe how it was obtained:

(5) No time adjustment (base figure held constant)

(6) Other; please explain: 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 OECD, International Organisation for Migration (IOM), which forms part of the UN network. Census data from National statistics offices (NSOs) of various countries as well as migration data is also sourced.

7.2 Population by age and sex

Estimates of population by age and sex are assumed to be constructed on the same base data as are the total population estimates. However, certain additional factors may affect age distributions estimated from census enumerations or from sample surveys. Please indicate below the adjustment(s) made in the basic age distribution used to construct the reported population estimates by age and sex.

7.2.1 Adjustments in base data

(1) No adjustments – the calculations are based on population actually enumerated at various ages or estimated from survey results.

(2) Enumerated population or population estimated from survey results adjusted to take account of under enumeration at various ages. Please describe as necessary the methods of adjustment.

(3) Base age distribution is "smoothed", i.e., adjusted to remove effects of digit preference in age reporting. Please describe as necessary the methods of smoothing.

7.2.2 Method of time adjustment

Please indicate below the method used in constructing the age-sex distribution of the reported population estimates by age and sex.

- (1) Population estimates by age and sex are sourced annually from a population register
- (2) Applying actual or assumed natural increase and migration
- (3) Applying actual or assumed natural increase alone
- (4) Distributing the total estimate according to percentage of population in each age-sex group at time of census or sample survey
- (5) Use of the cohort-components method to produce population estimates by age and sex
- (6) Innovative methods that use registers and administrative data. Please describe as necessary:
- (7) By other means, please describe:

7.2.3 Disposition of unknown age

Please indicate below whether, in the preparation of the population estimates by age and sex:

- (1) An age has been assigned to persons for whom age did not appear in the census or sample survey.
- (2) Frequency in unknown age category has been distributed proportionately among known ages.
- (3) The frequency of unknown age appearing in the census or survey was zero.
- (4) Other treatment for unknown age category.

7.3 Urban and rural population, and the population of cities

Please indicate below the method used in making intercensal or postcensal estimates of urban, rural, and of city population.

	Urban/rural population	City population
(1) Continuous population registers	<input type="checkbox"/>	<input type="checkbox"/>
(2) Surveys, other than a census	<input type="checkbox"/>	<input type="checkbox"/>

(3) Extrapolation of percentage	<input type="checkbox"/>	<input type="checkbox"/>
(4) Observed rate of growth, assumed to continue	<input type="checkbox"/>	<input type="checkbox"/>
<p data-bbox="250 323 873 688">(5) By other means; please describe: The cohort-component method is used to project the district Councils and Metros which include various cities but not all (only those cities classified as Districts as well). The cohort components method was used as follows:</p> <p data-bbox="250 737 873 1371">-Calculate the number of out-migrants (5 years and older)- Whereas a projection for a single region involves multiplying the population at the first time-point in each five-year age group by a survival rate to obtain the survivors to the next five-year age group at the second time point, a multi-regional projection involves a compound survival rate which specifies the probability of surviving and being in a particular region at the second time-point. A compound survival rate is the product of the survival rate and the out-migration rate(s) to each of the other districts.</p> <p data-bbox="250 1436 873 1520">-Calculate the number of survivors by district (5 years and older)</p> <p data-bbox="250 1577 873 1856">For survival in the same district, the compound rate is the survival rate times one minus the sum of the out-migration to the other districts. That is, the survivors (those that have not died or migrated) for people in age group $x+5$ and period $t+5$ of district A are obtained by using</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

the following formula:

$$SUR_{t+5,x+5}^A = P_{t,x}^A * S_{t,x}^A * (1 - MR_{t,x}^{AB} - MR_{t,x}^{AC} - MR_{t,x}^{AD} - \dots MR_{t,x}^{AI})$$

-Calculate the number of in-migrants (5 years and older)

The number of in-migrants to district A is obtained by adding the out-migrants from the other districts to district A.

-Projected population (5 years and older)

The projected provincial population of A in each age group aged 5 years and older is simply the sum of the survivors in district A and the number of in-migrants to district A, namely:

$$P_{t+5,x+5}^A = SUR_{t+5,x+5}^A + IN_{t+5,x+5}^A$$

-Calculate the number of births and survivors aged 0–4 years

Annual births are estimated by applying the age-specific birth rates assumed for each district to the number of women in each of the reproductive age groups. This step is done separately for the present and the date 5 year previous.

This projection process can be repeated for further time intervals and the assumed levels of

mortality, fertility and migration can be altered for each projection period, if desired. Cohort Component Method)		
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8. Bibliography of Demographic Statistics

Please list publications that contain results of your latest population census or survey, and current statistics on population estimates:

- Bradshaw, D., Laubscher R., Dorrington R.E., Groenewald, P. and Moultrie, T., (2021). *Report on Weekly deaths in South Africa: 27th June to 3rd July 2021 (Week26)*. Burden of Disease Research Institute. South African Medical Research Council. Cape Town:
- OECD. (2020). *International Migration Outlook 2020*. OECD Publishing. <https://doi.org/10.1787/ec98f531-en>.
- StatsSA (2015) Report-03-01-63 - Census 2011: Fertility in South Africa. StatsSA. December 2015
- StatsSA (2015). Report-03-01-79 - Census 2011: Migration Dynamics in South Africa StatsSA. December 2015
- StatsSA (2015) Report-03-01-67 - Census 2011: Population Dynamics in South Africa. StatsSA. December 2015
- StatsSA (2015) Report-03-01-62 - Census 2011: Estimation of Mortality in South Africa. StatsSA. December 2015
- StatSA (2016) Community Survey 2016. StatsSA. PO301.
- StatsSA (2021) Report P0302 Mid-year estimates, 2021. StatsSa.
- Statistics South Africa (2021(a), "Recorded live birth 2020", Statistical Release P0305, Statistics South Africa, Pretoria.
- Statistics South Africa (2021(b), "Mortality and causes of death in South Africa, 2018: Findings from death notification", Statistical Release PO309.3, Statistics South Africa, Pretoria.
- Statistics South Africa (2021(d)), "Tourism and migration February 2021", Statistical Release P0351, Statistics South Africa, Pretoria.
- Statistics South Africa (2021(e)), "Tourism and migration March 2021", Statistical Release P0351, Statistics South Africa, Pretoria.
- Statistics South Africa (2021(f)), "Tourism and migration June 2021", Statistical Release P0351, Statistics South Africa, Pretoria.
- Statistics South Africa (2022(b)), "Tourism and migration March 2022", Statistical Release P0351, Statistics South Africa, Pretoria.

- Statistics South Africa (2022(c)), "Tourism and migration April 2022", Statistical Release P0351, Statistics South Africa, Pretoria.