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

Reporting country: South Africa
Reporting year: 20

1. Coverage of data

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. Please also specify the years to which description refers to.

Population group	Estimated total population for the following years 2002-2019		
	Included	Excluded	Not applicable
(a) Nomads	☐	☐	☒
(b) Persons living in remote areas	☒	☐	☐
(c) Military, naval and diplomatic personnel and their families located outside the country	☐	☐	☒
(d) Merchant seamen and fishermen resident in the country but at sea at the time of the census (including those who have no place of residence other than their quarters aboard ship)	☐	☐	☒
(e) Civilian residents temporarily in another country as seasonal workers	☐	☒	☐
(f) Civilian residents who cross a frontier daily to work in another country	☒	☐	☐
(g) Civilian residents other than those in (c), (e), and (f) working in another country	☐	☒	☐
(h) Civilian residents other than those in (c)-(g), temporarily absent from the country	☐	☒	☐
(i) Foreign military, naval and diplomatic personnel and their families located in the country	☒	☐	☐
(j) Civilian aliens temporarily in the country as seasonal workers	☒	☐	☐
(k) Civilian aliens who cross a frontier daily to work in another country	☐	☒	☐
(l) Civilian aliens other than those in (i), (j), and (k) working in another country	☐	☒	☐
(m) Civilian aliens other than those in (i)-(l), temporarily in country	☒	☐	☐
(n) Transients on ships in harbour at the time of the census	☒	☐	☐

2. Method of estimation

2.1 Total population

Estimates of total population for a country as a whole may be constructed by a variety of means. Please indicate by a check mark the method used in constructing the latest population estimate for 2019 (date) indicating the source of "base data" and the "method of time adjustment".
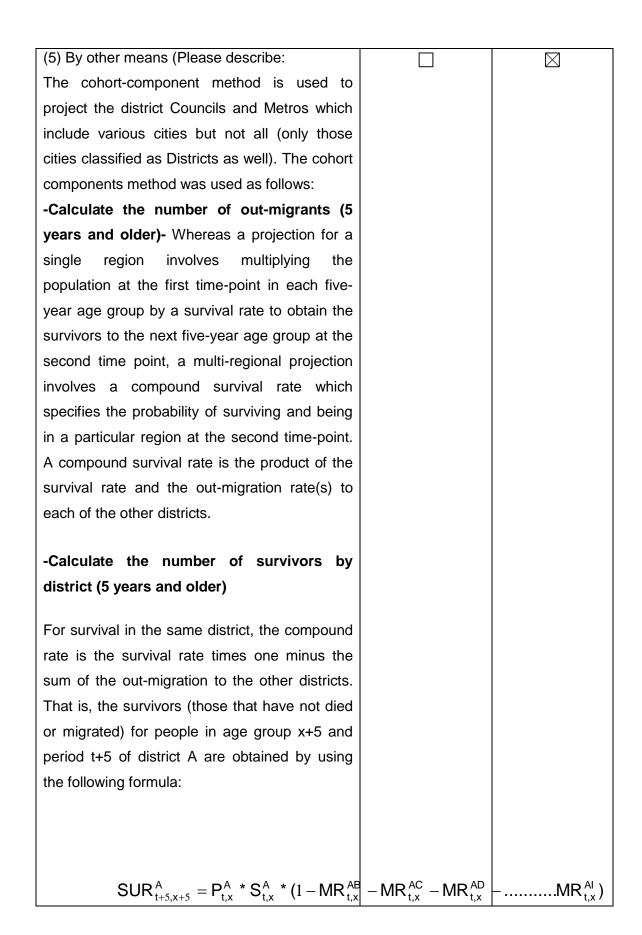
2.1.1 Base Data

☐ (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: The base population (1985) for South Africa is difficult to ascertain, given SAs 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 Bophutswawana (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, Bophutswana, 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 Bophutswawana (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: ▢)

2.1.2 Method of time adjustment

☐ (1) Base data secured annually through 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) Extrapolating mathematically from censuses taken ▢▢ (date 1), ▢▢ (date 2) and ▢▢ (date 3). Please give formula: ▢▢

☐ (5) Applying an assumed rate of increase, not derived by mathematical extrapolation or interpolation but based on: Census data, Vital registration data adjusted for completeness

    ☒ (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: ▢▢

☐ (6) No time adjustment (base figure held constant)

☐ (7) Other (Please explain: ▢▢)

2.2 Population by age and sex

Estimates of population according to age and sex are assumed to be constructed on the same base data as are the total 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 estimates shown in Tables 2 and 4.

2.2.1 Adjustments in base

☐ (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.

☒ (3) Base age distribution is "smoothed", i.e., adjusted to remove effects of digit preference in age reporting.

2.2.2 Method of time adjustment

Distribution of estimated population according to age and sex may also be made by same methods as used to obtain the projection of the total figure, or it may be derived by distributing the estimate according to the percentage of population in each age-sex group at time of census.

Please indicate below the method used in constructing the age-sex distribution of the latest estimate shown in Table 2.

☒ (1) Applying actual or assumed natural increase and migration
☐ (2) Applying actual or assumed natural increase alone
☐ (3) Distributing the total estimate according to percentage of population in each age-sex group at time of census of sample survey
☐ (4) By other means (Please describe: ⬚)

2.2.3 Disposition of unknown age

If frequency in unknown age category of tables 2 and 4 is zero, please indicate below whether, in the preparation of the estimates:

☐ (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.

2.3 Urban and rural population, and the population of cities

Please indicate below the method used in making post-censal estimates of urban and rural, and of city population.

	Urban/rural population	City population
(1) Continuous population registers	☐	☐
(2) Surveys, other than a census	☐	☐
(3) Extrapolation of percentage	☐	☐
(4) Observed rate of growth, assumed to continue	☐	☐

(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: **-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. **-Calculate the number of survivors by district (5 years and older)** 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 the following formula: $$SUR_{t+5,x+5}^{A} = P_{t,x}^{A} * S_{t,x}^{A} * (1 - MR_{t,x}^{AB} - MR_{t,x}^{AC} - MR_{t,x}^{AD} - .... MR_{t,x}^{AI})$$	☐	☒

-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)

3. Bibliography of Demographic Statistics

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

- 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 (2019) Report P0302 Mid-year estimates, 2019. StatsSa.