STATS SA
STATISTICS SOUTH AFRICA

STATISTICAL RELEASE

P0318.2

General Household Survey,
Selected development indicators, 2017

Embargoed until:
21 June 2018
11:30

A complete set of Stats SA publications is available at Stats SA Library and the following libraries:

      National Library of South Africa, Pretoria Division
      National Library of South Africa, Cape Town Division
      Library of Parliament, Cape Town
      Bloemfontein Public Library
      Natal Society Library, Pietermaritzburg
      Johannesburg Public Library
      Eastern Cape Library Services, King William's Town
      Central Regional Library, Polokwane
      Central Reference Library, Nelspruit
      Central Reference Collection, Kimberley
      Central Reference Library, Mmabatho

This publication is available both in hard copy and on the Stats SA website www.statssa.gov.za.

In addition, the data and metadata set from the *General Household Survey, 2017* will be available on CD-ROM. A charge may be made according to the pricing policy, which can be seen on the website.

For technical enquiries please contact:
Niel Roux
Email: NielR@statssa.gov.za

Contents

List of abbreviations

EC	Eastern Cape
FS	Free State
GP	Gauteng
KZN	KwaZulu-Natal
LP	Limpopo
MP	Mpumalanga
NC	Northern Cape
NW	North West
WC	Western Cape
RSA	South Africa

1. Introduction and methodology

1.1 Background

The execution of the General Household Survey (GHS) in 2009 was preceded by extensive stakeholder consultation. The main objective of the consultation was to align the questionnaire and survey process more with user needs and adjust the questionnaire accordingly. The process yielded the following results:

- Specific linkages were established between the monitoring and evaluation indicators of each government department and the GHS questionnaire.
- It was found that in some instances the GHS was the only or main source of this information, but in other cases the various departments use the GHS information to verify their information from administrative records and/or other sources.
- Questions were modified and/or added where necessary.
- The users expressed a need for an earlier release of the indicator information to enable them to more effectively report on their activities.
- Several departments indicated that they did not have staff capable of analysing the GHS data and engaging consultants for this purpose was not always possible as a result of funding constraints.

It was therefore decided to develop a new GHS release specifically aimed at reporting on the various development indicators measured and/or verified by means of this particular survey instrument. The first report was released in early May 2010 as a discussion document. The current report is the seventh in the series and summarises the data for each province and the country as a whole as measured by GHS 2017.

1.2 Methodology and fieldwork

A multi-stage design was used in this survey, which is based on a stratified design with probability proportional to size selection of primary sampling units (PSUs) at the first stage and sampling of dwelling units (DUs) with systematic sampling at the second stage. After allocating the sample to the provinces, the sample was further stratified by geography (primary stratification), and by population attributes using Census 2011 data (secondary stratification).Survey officers employed and trained by Stats SA visited all the sampled dwelling units in each of the nine provinces. During the first phase of the survey, sampled dwelling units were visited and informed about the coming survey as part of the publicity campaign. The actual interviews took place four weeks later. A total of 21 225 households (including multiple households) were successfully interviewed during face-to-face interviews.

Two hundred and thirty-three enumerators (233) and 62 provincial and district coordinators participated in the survey across all nine provinces. An additional 27 quality assurors were responsible for monitoring and ensuring questionnaire quality. National refresher training took place over a period of two days. The national trainers then trained provincial trainers for two days at provincial level.

For a more detailed discussion on sampling and fieldwork please refer to the Technical notes as described in Section 3.

1.3 Data revisions

The questionnaires were scanned and processed. Editing and imputation was done using a combination of manual and automated editing procedures. Details about this process can be found in the GHS 2017 report (P0318). Section 4 describes the methods used to calculate each indicator value. When calculating percentages, missing and do not know values were discarded from the denominator unless otherwise stated.

Risenga Mululeke
Statistician-General

2. Indicator tables

2.1 Agriculture

Table 2.1: Agriculture indicators by province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
% of households who engaged in agricultural activities during the past 12 months	2,8	30,2	10,1	16,9	18,2	8,7	4,5	25,4	41,2	15,6
Livestock production	0,3	23,9	6,4	3,1	12,1	6,6	0,2	7,9	13,3	7,3
Poultry production	0,1	19,7	2,7	2,5	9,3	4,9	0,2	5,8	7,9	5,5
Grains and food crops	0,1	17,1	0,6	2,6	10,9	0,8	0,3	15,5	30,3	8,1
Industrial crops	0,0	0,1	0,1	0,0	0,1	0,1	0,0	0,1	0,2	0,1
Fruit and vegetable production	2,5	13,9	4,0	14,8	4,5	2,2	4,1	16,9	23,7	8,3
Fodder, grazing/pasture or grass for animals	0,1	0,2	0,0	0,3	0,1	0,1	0,1	0,2	0,7	0,2
Fish farming/aquaculture	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0
Forestry	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Other	0,1	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0

General Household Survey, Selected development indicators, 2017

Table 2.1: Agriculture indicators by province (concluded)

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
% of households involved in different crop planting activities:										
Farm land (communal or private)	0,2	1,3	0,6	0,9	2,6	0,4	0,2	2,5	2,8	1,22
Backyard garden	2,3	21,4	3,7	14,6	10,0	2,5	3,9	20,7	34,4	11,3
School garden	0,0	0,1	0,0	0,1	0,1	0,0	0,1	0,1	0,2	0,1
Communal garden	0,0	0,1	0,0	0,0	0,4	0,0	0,1	0,5	0,1	0,2
On verges of roads and unused public/ municipal land	0,0	0,0	0,0	0,1	0,0	0,0	0,1	0,1	0,3	0,1
Other	0,1	0,1	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,0
% of households who produce crops on 1 or more hectares	0,1	0,8	0,4	0,3	0,6	0,4	0,1	0,8	1,3	0,5
% of households who own the land on which they produce crops	80,2	31,7	91,7	83,6	52,4	92,1	87,0	96,3	70,2	66,8
% of households who sell most of the agricultural produce they produce	12,1	7,3	30,3	10,6	8,0	25,3	6,4	10,7	7,1	9,0
% of households involved in agriculture who received support from DOA during the past 12 months	1,4	20,3	22,5	3,8	13,6	12,2	5,2	6,8	3,1	10,0
% of households classified as:										
Food access adequate	77,2	75,4	66,5	78,3	76,6	64,0	84,0	69,1	93,6	78,7
Food access inadequate	15,5	20,1	20,5	15,7	18,6	24,5	12,9	18,6	5,3	15,8
Food access severely inadequate	7,3	4,5	13,0	6,0	4,8	11,6	3,1	12,3	1,1	5,5

General Household Survey, Selected development indicators, 2017

2.2 Education

Table 2.2: Education indicators by Province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Age-specific Enrolment Ratio (ASER) expressed as a percentage										
Primary School	99,0	98,7	98,3	99,4	99,3	98,9	99,7	99,5	99,9	99,3
All	93,2	95,3	92,2	96,6	96,7	94,4	96,1	96,3	98,8	96,0
Repetition rate (RR) Grd 10	19,9	17,1	19,1	31,4	16,1	32,1	18,7	19,1	35,5	22,2
Repetition rate (RR) Grd 11	13,7	22,7	25,3	18,9	20,4	24,4	15,4	21,7	26,5	20,5
Repetition rate (RR) Grd 12	8,4	10,3	0,0	6,5	8,3	14,0	7,2	11,8	16,9	10,2
% of 16-18-year-olds who attend any institution	77,8	85,3	74,1	87,1	88,2	79,9	85,4	88,0	95,0	86,0
% of children with special needs aged 7–15 NOT enrolled in educational institutions	4,8	16,2	11,2	8,2	18,4	2,8	2,2	7,7	0,6	7,7
% of learners in public schools that do not pay school fees	50,6	79,4	62,4	76,5	68,1	69,8	55,9	65,1	94,7	69,7
% of learners in schools receiving social grants	51,0	73,4	67,2	68,4	70,3	66,6	46,6	63,0	67,3	62,9
Numbers of learners enrolled (16–18) in any institution N ('000)	232	298	49	123	536	137	531	225	327	2459

General Household Survey, Selected development indicators, 2017

Table 2.2: Education indicators by Province (concluded)

Indicators	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
% of learners in schools who walk for more than 30 minutes to the nearest school of its kind	1,2	12,2	5,5	6,3	22,2	10,4	4,1	10,4	9,7	11,4
% of learners in public schools benefiting from free scholar transport	5,2	4,5	4,4	1,3	1,3	1,8	3,0	3,8	1,6	2,8
% of learners in public schools benefiting from the nutrition programme	55,9	90,2	86,0	80,3	80,5	80,5	54,8	87,7	92,2	77,3
% of learners attending school who reported incidents of corporal punishment	1,1	12,7	8,6	12,6	10,1	7,4	1,3	6,7	4,5	6,8
Adult literacy rates (persons 20 years and older with less than Grade 7 as highest level of education)	8,4	20,5	19,1	15,3	16,4	17,5	7,4	17,2	19,7	13,8

General Household Survey, Selected development indicators, 2017

2.3 Environmental indicators

Table 2.3: Environmental related indicators by Province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Number of households using borehole water N ('000)	10	58	9	24	81	76	45	67	222	590
Number of households using wood/coal for cooking N ('000)	13	156	14	28	353	68	42	240	509	1 422
% of households whose refuse is removed by a local authority or co,	88,6	44,7	73,2	81,1	54,2	61,8	91,7	43,3	25,0	67,1
% of households who feel that they are experiencing problem with:										
Littering	26,4	31,3	45,9	48,5	41,9	26,3	31,5	56,3	31,7	**35,5**
Water pollution	9,6	18,3	20,1	20,4	26,6	12,2	13,9	16,3	11,3	**16,4**
Air pollution	9,7	13,8	26,8	25,3	22,2	25,4	19,1	35,0	15,7	**19,9**
Land degradation	11,2	39,5	34,0	48,0	28,2	52,6	22,0	71,8	36,9	**32,8**
Excessive noise pollution	11,4	15,6	20,0	19,5	14,1	15,1	18,3	14,1	19,4	**16,2**
% of households who have used during past 12 months:										
Pesticides in dwelling	32,8	52,5	48,1	31,6	46,7	56,1	57,1	48,5	48,5	**48,9**
Pesticides in garden	11,6	14,0	10,0	6,7	6,2	8,8	19,0	10,8	8,7	**11,8**
Herbicides/weed killers	9,0	6,8	5,2	3,4	3,2	5,3	13,1	9,4	3,7	**7,5**

General Household Survey, Selected development indicators, 2017

2.4 Health

Table 2.4: Health Indicators by Province

Indicators	Province									
	WC	**EC**	**NC**	**FS**	**KZN**	**NW**	**GP**	**MP**	**LP**	**RSA**
% of orphans aged 7–18 years attending educational institutions	84,9	93,1	89,7	92,0	94,8	88,7	90,7	93,3	97,9	92,9
% of people 20 years and older with no schooling	2,2	6,0	6,7	3,7	5,5	6,6	2,1	7,8	9,0	4,7
% of persons with medical aid coverage	24,8	9,9	16,3	14,9	12,6	15,6	25,0	13,9	8,3	16,9
% of households for which the usual place of consultation is a public facility	55,5	80,3	71,7	64,6	79,1	75,1	63,5	75,8	85,7	**71,2**

2.5 Human settlement

Table 2.5: Human Settlement indicators by Province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
% of households who live in an RDP or state-subsidised house	19,2	14,8	19,5	25,6	15,3	22,2	14,6	14,1	16,0	**16,6**
% of households receiving a housing subsidy from the state	14,6	11,4	16,1	21,9	13,2	19,7	11,3	12,8	13,4	**13,6**
% of households living in informal dwellings/tents/caravans	19,1	7,1	12,7	16,0	7,0	19,9	20,0	9,0	5,6	13,7
% of households who state that the condition of the walls of their state provided/subsidised housing is weak/very weak	19,1	12,3	18,0	15,1	8,9	7,0	7,1	8,6	4,2	**10,2**
% of households who state that the condition of the roof of their state provided/subsidised housing is weak/very weak	20,1	11,4	15,8	11,7	10,4	5,0	6,4	9,5	5,2	9,9
% of households who pay rent for a state provided/RDP house	12,2	11,5	4,7	8,1	9,7	5,9	9,0	7,1	11,8	**9,4**
% of households who fully own their dwellings	44,4	63,3	65,4	50,7	56,4	62,4	35,1	65,8	72,3	**52,2**

2.6 Social development

Table 2.6: Social development indicators by Province

Indicators	Province									
	WC	**EC**	**NC**	**FS**	**KZN**	**NW**	**GP**	**MP**	**LP**	**RSA**
Number of persons 60 years and older N('000)	626	655	116	249	829	336	1 064	300	421	4 596
Number of households with at least one person 60 years and older N ('000)	402	497	90	195	643	251	774	242	342	3 437
% of persons 60 years and older who are disabled (UN definition)	15,1	14,2	22,3	18,6	17,2	22,6	14,1	19,2	10,1	15,8
% of persons 60 years and older who are severely disabled	11,1	8,6	12,5	10,8	10,0	15,2	8,1	11,2	7,3	9,8
% of people 60 years and older who received old-age grant	48,3	80,4	81,0	71,0	77,3	74,0	53,5	74,3	88,8	68,6
% of people 60 years and older who received social grants	48,8	80,2	81,6	70,8	77,9	73,6	53,3	73,9	87,9	68,6
% of households with persons 60 years and older and classified as:										
Food access adequate	84,3	78,8	70,9	80,9	76,9	67,4	85,3	68,2	96,1	80,6
Food access inadequate	10,3	19,2	21,7	13,6	20,4	23,7	12,7	20,8	3,2	15,5
Food access severely inadequate	5,4	2,0	7,4	5,5	2,7	8,9	2,1	11,0	0,8	3,9
Number of households classified as N ('000):										
Food access adequate	1 407	1 257	222	690	2 165	750	3 957	862	1 439	12 749
Food access inadequate	283	336	68	138	527	287	608	233	81	2 560
Food access severely inadequate	133	74	43	53	136	136	144	153	17	890
% of poor households with children aged 7–18 who do not spend money on school fees	71,6	83,4	70,2	85,8	76,7	75,8	70,2	73,5	96,1	80,0
Number of households classified as poor using household monthly expenditure of below R2 500 as the cut-off N ('000)	381	891	152	453	1426	574	1584	652	1097	7210
Number of households classified as poor using household monthly expenditure of below R2 500 as the cut-off and who have children aged 7–18 N ('000)	128	385	65	217	661	209	461	294	537	2956

General Household Survey, Selected development indicators, 2017

2.7 Transport

Table 2.7: Transport indicators by Province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
# of passenger trips made per month with each public transport mode N ('000):										
Minibus/taxi	4 840	4 426	680	2 386	9 623	3 117	22 350	3 220	3 567	54 209
Bus	1 882	590	120	550	1 627	759	2 366	2 374	736	11 004
Train	1 767	302	16	88	872	168	2 630	87	145	6 075
% of the household's income spent on transport per month:										
1–10%	60,0	50,0	71,3	53,7	33,1	54,1	43,6	52,3	47,7	47,0
11–20%	20,6	27,6	15,9	21,1	27,7	18,4	23,5	21,8	23,2	23,5
21–30%	8,2	9,8	5,7	9,9	10,3	9,3	10,5	9,3	9,1	9,7
30% or more	11,2	12,7	7,1	15,3	28,9	18,2	22,4	16,7	20,0	19,8
% of learners travelling for longer than 30 minutes to an education institution	11,5	15,8	8,9	12,4	24,3	12,9	18,2	15,7	14,2	17,0
% of workers travelling for longer than 30 minutes to their place of work	34,9	16,9	12,8	22,2	32,7	25,4	46,4	34,6	29,0	34,6

General Household Survey, Selected development indicators, 2017

2.8 Water and sanitation

Table 2.8: Water and sanitation variables by Province

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Number of households with water supply infrastructure of RDP standard or higher N ('000)	1 745	1 127	311	828	2 157	961	4 522	1 064	1 107	13 822
Number of households with water supply infrastructure less than RDP standard N ('000)	78	541	23	54	670	211	186	184	430	2 377
Number of households with no water supply infrastructure N ('000)	24	429	13	61	403	163	131	170	363	1 755
Consumer perception index of water quality N ('000)										
Safe to drink	1 739	1 389	294	751	2 504	1 032	4 390	1 027	1 447	14 574
Clear	1 722	1 442	289	718	2 502	1 010	4 399	1 036	1 435	14 554
Good in taste	1 715	1 371	288	751	2 495	1 003	4 383	1 015	1 375	14 398
Free from bad smells	1 714	1 491	293	727	2 502	1 027	4 380	1 062	1 397	14 592
Number of consumers who experienced interruptions of 48 hours or more at a time N ('000)	22	418	60	163	674	319	345	471	491	2963
Number of WSAs whose consumers have experienced a cumulative interruption of more than 15 days for the financial year N ('000)	11	351	40	142	463	254	200	403	379	2243

Table 2.8: Water and sanitation variables by province (concluded)

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Number of households with access to a functioning basic sanitation facility (strategic framework) N ('000)	1 715	1 418	292	746	2 279	834	4 249	842	905	13 281
% households with access to improved sanitation facilities	94,1	85,3	87,8	85,1	80,8	71,3	90,5	67,6	58,9	82,2
Number of households using bucket toilets N ('000)	88	18	5	16	11	3	93	3	2	238
Number of households with substandard toilet facility N ('000)	95	177	28	108	437	299	414	369	558	2 484
% of households with substandard toilet facility	5,3	11,1	8,7	12,7	16,1	26,4	8,9	30,5	38,1	**15,8**
Number of households with no sanitation facility N ('000)	8	56	10	13	76	27	7	26	57	281
Number of poor households receiving free basic sewerage and sanitation N ('000)	156	162	53	202	199	112	736	65	74	1 758
% of poor households receiving free basic sewerage and sanitation	55,0	67,4	63,8	69,1	62,2	59,5	65,5	50,2	51,7	62,7

Table 2.9: Basic household and population data used for benchmarking the GHS 2017

Indicators	Province									
	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
# of persons N ('000)	6 510	6 499	1 214	2 867	11 075	3 856	14 278	4 444	5 779	56 522
# of households N ('000)	1 823	1 667	333	882	2 827	1 172	4 709	1 248	1 537	16 199

General Household Survey, Selected development indicators, 2017

3. Technical notes

3.1 Target population

The target population of the survey consists of all private households in all nine provinces of South Africa and residents in workers' hostels. The survey does not cover other collective living quarters such as students' hostels, old-age homes, hospitals, prisons and military barracks, and is therefore only representative of non-institutionalised and non-military persons or households in South Africa.

3.2 Sample design

The General Household Survey (GHS) uses the Master Sample frame which has been developed as a general-purpose household survey frame that can be used by all other Stats SA household surveys having design requirements that are reasonably compatible with the GHS. The GHS 2017 collection was based on the 2013 Master Sample. This Master Sample is based on information collected during the 2011 Census conducted by Stats SA. In preparation for Census 2011, the country was divided into 103 576 enumeration areas (EAs). The census EAs, together with the auxiliary information for the EAs, were used as the frame units or building blocks for the formation of primary sampling units (PSUs) for the Master Sample, since they covered the entire country and had other information that is crucial for stratification and creation of PSUs. There are 3 324 primary sampling units (PSUs) in the Master Sample with an expected sample of approximately 33 000 dwelling units (DUs). The number of PSUs in the current Master Sample (3 324) reflect an 8,0% increase in the size of the Master Sample compared to the previous (2008) Master Sample (which had 3 080 PSUs). The larger Master Sample of PSUs was selected to improve the precision (smaller coefficients of variation, known as CVs) of the GHS estimates.

The Master Sample is designed to be representative at provincial level and within provinces at metro/non-metro levels. Within the metros, the sample is further distributed by geographical type. The three geography types are Urban, Tribal and Farms. This implies, for example, that within a metropolitan area, the sample is representative of the different geography types that may exist within that metro.

The sample for the GHS is based on a stratified two-stage design with probability proportional to size (PPS) sampling of PSUs in the first stage, and sampling of dwelling units (DUs) with systematic sampling in the second stage.

3.3 Allocating sample sizes to strata[1]

The randomised PPS systematic sampling method is described below, This procedure was applied independently within each design stratum.

Let N be the total # of PSUs in the stratum, and the # of PSUs to be selected from the stratum is denoted by n, Also, let x_i denote the size measure of the PSU i within the stratum, where $i = 1, 2, 3, ..., N$. Then, the method for selecting the sample of n PSUs with the Randomised PPS systematic sampling method can be described as follows:

Step 1: Randomise the PSUs within the stratum

The list of N PSUs within the stratum can be randomised by generating uniform random between 0 and 1, and then by sorting the N PSUs in ascending or descending order of these random numbers. Once the PSUs have been randomised, we can generate permanent sequence #s for the PSUs.

---

[1] Source: Sample Selection and Rotation for the Redesigned South African Labour Force Survey by G. Hussain Choudhry, 2007.

Step 2: Define normalised measures of size for the PSUs

We denote by x_i the measure of size (MOS) of PSU i within the design stratum. Then, the measure of size for the stratum is given by $X = \sum_{i=1}^{N} x_i$. We define the normalised size measure p_i of PSU i as $p_i = x_i/X$; $i = 1, 2, 3, --- N,$ where N is the total # of PSUs in the design stratum. Then, p_i is the relative size of the PSU i in the stratum, and $\sum_{i=1}^{N} p_i = 1$ for all strata. It should be noted that the value of $n \times p_i$, which is the selection probability of PSU i must be less than one.

Step 3: Obtain inverse sampling rates (ISRs)

Let R be the stratum inverse sampling rate (ISR). The stratum ISR is the same as the corresponding provincial ISR because of the proportional allocation within the province. It should also be noted that the proportional allocation within the province also results in a self-weighting design.

Then, the PSU inverse sampling rates (ISRs) are obtained as follows:

First, define N real #s $Z_i = n \times p_i \times R; i = 1, 2, 3, ---, N$. It is easy to verify that $\sum_{i=1}^{N} Z_i = n \times R$. Next, round the N real #s $Z_i; i = 1, 2, 3, ..., N$ to integer values $R_i; i = 1, 2, 3, ..., N$ such that each R_i is as close as possible to the corresponding Z_i value and the R_i values add up to $n \times R$ within the stratum. In other words, the sum of the absolute differences between the R_i and the corresponding Z_i values is minimised subject to the constraint that the R_i values add up to $n \times R$ within the stratum. Drew, Choudhry and Gray (1978) provide a simple algorithm to obtain the integer R_i values as follows:

Let $"d"$ be the difference between the value $n \times R$ and the sum $S = \sum_{i=1}^{N} [Z_i]$, where $[.]$ is the integer function, then R_i values can be obtained by rounding up the $"d"$ Z_i values with the largest fraction parts, and by rounding down the remaining $(N - d)$ of them. It should be noted that the integer sizes $R_i; i = 1, 2, 3, ..., N$ are also the PSU inverse sampling rates (ISRs) for systematic sampling of dwelling units.

Step 4: Obtain cumulative ISR values

We denote by $C_i; i = 1, 2, 3, ..., N$ the cumulative ISRs of the PSUs within the stratum. It should be noted that the PSUs within the stratum have been sorted according to the sequence numbers that were assigned after the randomisation. Then, the cumulative ISRs are defined as follows:

$$C_1 = R_1,$$
$$C_j = C_{(j-1)} + R_j; \quad j = 2, 3, ---, N.$$

It should be noted that the value C_N will be equal to $n \times R$, which is also the total # of systematic samples of dwelling units that can be selected from the stratum.

Step 5: Generate an integer random # r **between** 1 **and** R **, and compute** n **integers** $r_1, r_2, ---, r_n$ **as follows:**

$$r_1 = r$$
$$r_2 = r_1 + R$$
$$r_3 = r_2 + R$$
$$.$$
$$.$$
$$r_i = r_{(i-1)} + R$$
$$.$$
$$.$$
$$r_n = r_{(n-1)} + R.$$

Step 6: Select n **PSUs out of the** N **PSUs in the stratum with the labels (sequence numbers) number** $i_1, i_2, ..., i_n$ **such that:**

$$C_{i_1-1} < r_1 \leq C_{i_1}$$
$$C_{i_2-1} < r_2 \leq C_{i_2}$$
$$.$$
$$.$$
$$C_{i_n-1} < r_n \leq C_{i_n}.$$

Then, the n PSUs with the labels $i_1, i_2, ..., i_n$ would get selected with probabilities proportional to size, and the selection probability of the PSU i will be given by R_i / R.

3.4   Weighting [2]

The sampling weights for the data collected from the sampled households were constructed so that the responses could be properly expanded to represent the entire civilian population of South Africa. The design weights, which are the inverse sampling rate (ISR) for the province, are assigned to each of the households in a province. These were adjusted for four factors: Informal PSUs, Growth PSUs, Sample Stabilisation, and Non-responding Units.

Mid-year population estimates produced by the Demographic Analysis division were used for benchmarking. The final survey weights were constructed using regression estimation to calibrate to national level population estimates cross-classified by 5-year age groups, gender and race, and provincial population estimates by broad age groups, The 5-year age groups are: 0–4, 5–9, 10–14, 55–59, 60–64, and 65 and over. The provincial level age groups are 0–14, 15–34, 35–64, and 65 years and over. The calibrated weights were constructed such that all persons in a household would have the same final weight.

The Statistics Canada software StatMx was used for constructing calibration weight. The population controls at national and provincial level were used for the cells defined by cross-classification of Age by Gender by Race. Records for which the age, population group or sex had item non-response could not be weighted and were therefore excluded from the dataset. No imputation was done to retain these records.

3.5   Sampling and the interpretation of the data

Caution must be exercised when interpreting the results of the GHS at low levels of disaggregation. The sample and reporting are based on the provincial boundaries as defined in census 2011. These new boundaries resulted in minor changes to the boundaries of some provinces, especially Gauteng, North West, Mpumalanga/Limpopo and Eastern and Western Cape. In previous reports the sample was based on the provincial boundaries as defined in 2001, and there will therefore be slight comparative differences in terms of provincial boundary definitions.

3.6   Definitions of terms

Household

A household is defined as a person, or group of persons, who occupy a common dwelling unit (or part of it) for **at least four nights in a week** on average during the past four weeks prior to the survey interview. Basically, **they live together and share resources as a unit.** Other explanatory phrases can be 'eating from the same pot' and 'cook and eat together'.

Persons who occupy the same dwelling unit but do not share food or other essentials, are regarded as separate households. For example, people who share a dwelling unit, but buy food separately, and generally provide for themselves separately, are regarded as separate households within the same dwelling unit.

Conversely, a household may occupy more than one structure, If persons on a plot, stand or yard eat together, but sleep in separate structures (e.g., a room at the back of the house for single young male members of a family), all these persons should be regarded as one household.

Multiple households

Multiple households occur when two or more households live in one sampled dwelling unit. If there are two or more households in the selected dwelling unit and they do not share resources, all households are to be interviewed. The whole dwelling unit has been given one chance of selection and all households located there were interviewed using separate questionnaires.

Household head/Acting household head

---

[2] Source: Sampling and Weighting System for the Redesigned South African Labour Force Survey, by G. Hussain Choudhry, 2007

The head of the household is the person identified by the household as the head of that household and must (by definition of 'household') be a member of the household. If there is difficulty in identifying the head, the head must be selected in order of precedence as the person who:

- Owns the household accommodation,
- Is responsible for the rent of the household accommodation,
- Has the household accommodation as an allowance (entitlement), etc.,
- Has the household accommodation by virtue of some relationship to the owner, lessee, etc., who is not in the household,
- Makes the most decisions in the household.

If two or more persons have equal claim to be head of the household, or if people state that they are joint heads or that the household has no head, then denote the eldest as the head.

Formal dwellings

Include a house on a separate stand, a flat or apartment in a block of flats, a townhouse, a room in a backyard, and a room or flatlet on a shared property.

Informal dwellings

Refer to shacks or shanties in informal settlements or in backyards.

Piped water in dwelling or on site

Includes piped water inside the household's own dwelling or in their yard, It excludes water from a neighbour's tap or a public tap that is not on site.

Electricity for cooking, heating and/or lighting

Refers to electricity from the public supplier.

UN disability

Concentrating and remembering are grouped together as one category. If an individual has 'Some difficulty' with two or more of the 6 categories then they are disabled. If an individual has 'A lot of difficulty' or is 'Unable to do' for one or more category they are classified as disabled.

Severe disability

If an individual has 'A lot of difficulty' or is 'Unable to do' for one or more category they are classified as severely disabled.

Poor household

Poor households have been defined households who spend less than R2 500 per month.

Water of RDP standard or higher

'Piped water in dwelling or in yard' and 'Water from a neighbour's tap or public/communal tap' are also included provided that the distance is less than 200 metres.

Improved sanitation facility

Flush toilet connected to a public sewerage system or septic tank or a pit latrine with ventilation pipe.

3.7 Specific departmental indicators and question linkages

Table 3.1: Agriculture

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
Percentage of households involved in agricultural production activities	National and provincial	8,1	Main source	# of households option 1 in Q8,1/total # of households who responded*100
Percentage of households involved in different agricultural production sectors	National and provincial	8,3	Main source	# of households for each option in Q8,3/total # of households who responded *100
Percentage of households involved in different crop planting activities	National and provincial	8,8a	Main source	# of households for each option in Q8,8a/total # of households who responded *100
Percentage of households who produce crops on 1 or more hectares	National and provincial	8,8b	Main source	# of households who produce crops option 3 to 7 in Q8,8b/total # of households who responded *100
Percentage of households who own the land on which they produce crops	National and provincial	8,8c	Main source	# of households who produce crops option 1 in Q8,8c/total # of households who produce crops*100
Percentage of households who sell most of the agricultural produce they produce	National and provincial	8,5a	Main source	# of households who chose option 1 in Q8,5a/total # of households who are involve in agricultural production activities*100
Percentage of households involved in agriculture who received support from government during the past 12 months	National and provincial	8,6a	Main source	# of households who chose option 1 in Q8,6a/total # of households who produce crops*100
Percentage of households classified as: Food access adequate Food access inadequate Food access severely inadequate	National and provincial	7,9–7,12	Main source	Adequate: one or no 'Yes' responses for the first part of Q7,9–Q7,12 Inadequate: 2–3 'Yes' responses for any of Q7,9–Q7,12 Severely inadequate: 4–6 'Yes' responses for any of Q7,9–Q7,12

Table 3.2: Education

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
Age-specific Enrolment Ratio (ASER)	National Provincial UNESCO	1,20, D	Main source	# (persons aged 7–13 attending educational institutions)/ # persons aged 7–13 * 100 # (persons aged 7–18 attending educational institutions)/ # persons aged 7–18 *100
Repetition rates (Grades 10–12)	National Provincial UNESCO	1,20, 1,21	Validation Data confrontation	# who attend Grd 10 to Grd 12 and repeating /(# who attend Grd 10 to Grd 12)*100
Enrolment for 16–18-year-olds	National Provincial	1,20, 1,12	Validation Data confrontation	# aged 16–18 who are enrolled in any institution # who attend any institution/(# 16–18 years old) *100
Percentage of children with special needs aged 7–15 not enrolled in educational institutions	National Provincial	1,10, 1,11	Main source	(# of persons aged 7-15 with disabilities[3] not enrolled)/#aged 7-15 yrs with disabilities)*100
Percentage of learners in public schools that do not pay school fees	National Provincial	1,16	Validation Data confrontation	# persons attend public school who do not pay school fees/# of persons attending public schools*100
Percentage of learners in schools receiving social grants	National Provincial	1,13, 3,1a 3,1b	Main source Data confrontation	# persons attending school who receive any grant/# of persons who attend school and answered the question*100
Percentage of learners who walk for more than 30 minutes to the nearest school	National Provincial	1,15a, 1,15c	Main source	# learners who walk for 30 minutes or more to attend the nearest school/ # of persons attending schools*100
Percentage of learners in public schools benefiting from free scholar transport	National Provincial	1,10,1,12,1,15a	Validation source	# learners who chose option 6 in Q1,15a/ # of persons attending public schools*100
Percentage of learners in public[4] schools benefiting from the nutrition programme	National Provincial	1,22b	Validation source	# persons options 2–4 in Q1,22b/# of persons attending Grd 0–Grd 12*100
% of reported incidents of corporal punishment	National Provincial	1,23b	Main source	# persons options 1 in Q1,23b/# of persons attending school (option 2 in Q1,12)
Adult literacy rates	National Provincial	D,1,5	Validation source	# persons options with highest education less than Grd 7/# of persons 20 years and older

---

[3] Un definition of disabilities
[4] Question on public and private school

Table 3.3: Environmental affairs

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
# of households using borehole water	National and provincial	5,12	Supply data towards its calculation	# of households options 3 and 8 for Q5,12
# of households using wood or coal for cooking	National and provincial	5,31b	Main source	# households option 5, 6 for Q5,31b
Percentage of households whose refuse or rubbish is removed by a local authority or private company	National and provincial	5,32	Main source	# of households options 1–4 in Q5,32/# of households who answered the question*100
Percentage of households who feel that they are experiencing pollution by categories	National and provincial	5,36 Option 1	Main source	# of households who answered 'Yes' for selected options in Q5,36/# of households who answered the question*100
Percentage of households who have used pesticides and herbicides in and around their dwellings during the past twelve months	National and provincial	5,37	Main source	# of households to which the question applies who answered 'Yes' in Q5,37/# of households who answered the question*100

Table 3.4: Health

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
% of orphans aged 7–18 years attending educational institutions	National and provincial	1,3a, 1,4a, 1,12, D	Main source	# of children aged 7–18 years who lost one or both of their biological parents attending school/ # of children aged 7–18 who lost one or both of their biological parents*100
% of people 20 years and older with no schooling	National and provincial	D, 1,5	Main source	# of persons 20 years and older with no schooling/# of persons 20 years and older*100
% of persons with medical aid coverage	National and provincial	2,1	Main source	# of persons who responded 'Yes' in Q2,1/# of persons who responded to the question*100
% of households for which the usual place of consultation is a public facility	National and provincial	7,1	Descriptive/ interpretive One of the sources	# of persons who responded 'Yes' to options 1–3 in Q7,1/# of persons who responded to the question*100

Table 3.5: Human settlement

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
Percentage of households who live in an RDP or state subsidised house	National and provincial	5,10a	Main source	# of households who replied 'Yes' in Q5,10a /# of households who answered the question*100
Percentage of households receiving a housing subsidy from the state	National and provincial	5,11	Validation source	# of households whose response is 'Yes' in Q5,11/# of households who answered the question*100
Percentage of households who state that the condition of the walls of their state provided/ subsidised housing is weak/very weak	National and provincial	5,4, 5,10a	Validation source	# of households with a 'Yes' answer in Q5,10a and response 1–2 in Q5,4/# of households 'Yes' in Q5,10a
Percentage of households who state that the condition of the roof of their state provided/ subsidised housing is weak/very weak	National and provincial	5,4, 5,10a	Validation source	# of households 'Yes' in Q5,10a and response 1–2 in Q5,4/# of households 'Yes' in Q5,10a
Percentage of households who pay rent for a state provided/ RDP house,	National and provincial	5,6, 5,10a	Main source	# of households 'Yes' in Q5,10 and option 1 in Q5,6/# of households 'Yes' in Q5,10
Percentage of households who fully own their dwellings	National and provincial	5,6	Main source	# of households options 5 in Q5,6/# of households who answered the question*100

Table 3.6: Social development

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
% of persons 60 years and older that are disabled	National and provincial	D, 2,9	Only source	# of persons aged 60 years and older who are disabled UN definition/# of persons who answered the question *100
% of persons 60 years and older that are severely disabled	National and provincial	D, 2,9	Only source	# of persons aged 60 years and older who are severely disabled/# of persons who answered the question *100
% of people 60 years and older who received old-age grant	National and provincial	D, 3,1b	Only source	# of persons aged 60 years and older who received an old-age grant/# of persons who answered the question *100
% of people 60 years and older who received social grants	National and provincial	D, 3,1a	Only source	# of persons aged 60 years and older who received a social grant/# of persons who answered the question *100
% of households with persons 60 years and older with: Food access adequate Food access inadequate Food access severely inadequate	National and provincial	D, 7,9, 7,10, 7,11 and 7,12	Descriptive/ interpretive Validation	# of persons aged 60 years and older who answered 'Yes' to 7,9,7,10,7,11 and 7,12/# of persons who answered the question *100

General Household Survey, Selected development indicators, 2017

Table 3.6: Social development (concluded)

Annual reporting level	Questions in the GHS	GHS relative to other sources	GHS relative to other sources	Definitions and/or formulas

# of households classified as: 	
    Food access adequate
    Food access inadequate
    Food access severely inadequate
	National and provincial	7,9–7,12	Inputs towards indicator calculation	# of households who answered 'Yes' to 7,9,7,10,7,11 and 7,12

# of households classified as poor using household monthly expenditure of below R2 500 as the cut-off	National and provincial	8,14	-	# of households whose total monthly expenditure is below R2 500
# of households classified as poor using household monthly expenditure of below R2 500 as the cut-off and who have children aged 7–18	National and provincial	8,14	-	# of households with children aged 7-18 and total monthly expenditure is below R2 500
% of poor households with children aged 7–18 who do not spend money on school fees	National and provincial	D, 1,15, 8,14	Main source	# of households with children aged 7–18 and monthly expenditure below R2 500 who did not spend any money on school fees for at least one of their children/# of households that are poor and have children aged 7–18 years

Table 3.7: Transport

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
# of passenger trips made per month with each public transport mode: Minibus/taxi Bus Train	National and provincial	6,8	Validation	Only calculated for household members who made trips using public transport
% of the household's income spent on transport per month: 1-10% 11-20% 21-30% 30% or more	National and provincial	6,8–6,10, 8,9a	Main source	Only calculated for households with valid income and expenditure on transport data
% of learners travelling for longer than 30 minutes to an educational institution	National and provincial	1,15b	Main source	Only calculated for individuals attending educational institutions who provided a response to the question on time taken, Missing values were excluded from the denominator
% of workers travelling for longer than 30 minutes to their place of work	National and provincial	4,4b	Main source	Only calculated for individuals working and who provided a response to the question on time taken, Missing values were excluded from the denominator

Table 3.8: Water and sanitation

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
# of households with water supply infrastructure of RDP standard or higher	National and provincial	5,12, 5,13a	Validation and data confrontation	On or above RDP is piped water in dwelling or yard or borehole in the yard (options 1,2&3) or tap less than 200 meters from yard (options 5,6&8) and option 1 Q5,13a; all others are below,
# of households with water supply infrastructure less than RDP standard	National and provincial	5,12, 5,13a	Validation and data confrontation	On or above RDP is piped water in dwelling or yard or borehole in the yard (options 1,2&3) or tap less than 200 meters from yard (options 5,6&8) and option 1 Q5,14; all others are below,
# of households with no water supply infrastructure	National and provincial	5,12	Validation and data confrontation	'No water supply' is options 3, 4, 7–13,
Consumer perception index of water quality: # Safe to drink # Clear # Good in taste # Free from bad smells	National and provincial	5,14	Validation and data confrontation	# of households option 'Yes' in Q5,14/# of households who answered the question*100
# of consumers who experienced water supply interruptions of 48 hours or more at a time	National and provincial	5,20	Validation and data confrontation	# of households option 'Yes' in Q5,20/# of households who answered the question*100
# of consumers who have experienced a cumulative interruption of more than 15 days for the financial year	National and provincial	5,21	Supply data towards its calculation	# of households option 'Yes' in Q5,21/# of households who answered the question*100

Table 3.8: Water and sanitation (concluded)

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and/or formulas
# of households with access to a functioning basic sanitation facility (strategic framework)	National and provincial	5,22–5,25a	Main source	'Basic facility' is defined as options 1, 2, and 4 Q5,22
% households with access to a functioning basic sanitation facility (strategic framework)	National and provincial	5,22–5,25a	Main source	# of households with basic facilities/# of households*100
# of households with substandard toilet facility	National and provincial	5,22–5,25a	Main source	'Substandard' is defined as options 3, 5, 6, 7, 8 in Q5,22
% of households with substandard toilet facility	National and provincial	5,22–5,25a	Main source	# of households with substandard facilities/# of households*100
# of households using bucket toilets	National and provincial	5,22, 5,25a	Main source	# of households who chose option 7 (none)
# of households with no sanitation facility	National and provincial	5,22	Main source	# of households who chose option 6 (bucket toilet)
# of poor households receiving free basic sewerage and sanitation	National and provincial	5,22–5,23	Supply data towards its calculation	Poor households are households who spend less than R2 500 per month
% of poor households receiving free basic sewerage and sanitation	National and provincial	5,22 and 5,23	Supply data towards its calculation	# of poor households who are connected to the sewerage system and answered 'Yes' to 5,23/# of households who answered the question*100