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1. Introduction and methodology

1.1 Background

The execution of the General Household Survey (GHS) in 2011 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 do not have staff capable of analysing the GHS data and engaging consultants for this purpose is 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 report summarises the data for each province and the country as a whole. It also provides a summary of the status of each indicator in relation to administrative data and other sources.

1.2 Methodology and fieldwork

A multi-stage, stratified random sample was drawn using probability proportional to size principles. First level stratification was based on province and second tier stratification on district council. Field staff 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 31 932 sampled households were visited across the country and 25 096 (including multiple households) were successfully interviewed during face-to-face interviews.

Two hundred and thirty-three enumerators (233) and 62 supervisors and coordinators participated in the survey across all nine provinces. An additional 27 quality assurers were responsible for monitoring and ensuring questionnaire quality. National training took place over a period of four days and provincial training was done one week later in 9 provinces for 5 days. Thereafter district training was executed in 40 localities for a period of six days.

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 2011 report (P0318). Section 4 describes the methods used to calculate each indicator value. When calculating percentages, missing values were discarded from the denominator unless otherwise stated.

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Statistician-General: Statistics South Africa

2. Indicator tables

2.1 Agriculture

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of households who engaged in agricultural activities during the past 12 months	7,3	37,0	28,7	16,3	18,6	23,6	5,9	33,9	52,7	23,0
% of households involved in:										
1 = Livestock production	3,6	23,3	11,5	5,3	14,7	10,4	2,8	8,7	14,5	10,1
2 = Poultry production	0,7	26,0	6,2	5,5	14,9	12,3	0,6	16,6	18,2	10,5
3 = Grains and food crops	0,1	20,5	0,5	2,3	13,4	1,1	0,3	16,3	31,5	9,6
4 = Industrial crops	0,1	0,1	0,0	0,0	0,1	0,0	0,0	0,2	0,1	0,1
5 = Fruit and vegetable production	3,5	15,4	3,5	12,3	6,5	9,8	2,8	22,6	20,4	9,3
6 = Fodder, grazing/pasture or grass for animals	0,1	0,3	0,3	0,2	0,2	0,2	0,1	0,4	0,2	0,2
7 = Fish farming/aquaculture	0,0	0,0	0,0	0,0	0,2	0,0	0,1	0,1	0,0	0,1
8 = Forestry	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0
9 = Game farming	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,0
10 = Other	0,3	0,1	0,1	0,3	0,1	0,1	0,0	0,1	0,1	0,1

Table 2.1: Agriculture (concluded)

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of households involved in different crop planting activities:										
1 = Farm land (communal or private)	0,3	3,8	1,1	0,9	1,6	0,6	0,1	1,9	3,5	1,4
2 = Backyard garden	3,1	25,7	2,8	12,1	15,0	9,4	2,6	25,7	36,7	13,9
3 = School garden	0,0	0,1	0,0	0,0	0,0	0,1	0,0	0,1	0,1	0,0
4 = Communal garden	0,0	0,2	0,0	0,0	0,6	0,1	0,2	0,5	0,4	0,3
5 = On verges of roads and unused public/municipal land	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,2	0,0	0,1
6 = Other	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,0	0,1	0,0
% of households who sell most of the agricultural produce they produce	7,9	1,5	11,5	3,4	2,9	7,9	1,8	0,8	0,8	2,5
% of households involved in agriculture who received support from DOA during the past 12 months	12,7	26,9	6,3	2,9	17,6	7,7	9,3	5,1	2,1	12,3
% of households classified as:										
Food access adequate	76,6	75,0	70,3	77,4	82,9	67,1	81,5	73,9	86,8	78,9
Food access inadequate	16,6	17,3	19,3	14,7	13,1	23,6	12,6	17,2	7,8	14,6
Food access severely inadequate	6,8	7,7	10,4	8,0	4,1	9,3	5,9	8,9	5,4	6,5

2.2 Education

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
Gross enrolment in ECD expressed as a % of the official age-group concerned (0-4)	35,8	32,4	26,1	37,7	24,2	28,9	42,7	30,4	41,3	33,8
Age Specific Enrolment Ratio (ASER)										
Primary	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
All	0,9	0,9	0,9	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Repetition Rate (RR) Grd 10	8,5	19,2	23,7	29,1	9,8	30,8	16,0	22,4	39,7	21,4
Repetition Rate (RR) Grd 11	5,9	13,3	19,9	22,3	13,6	26,1	8,4	25,4	36,0	18,3
Repetition Rate (RR) Grd 12	5,1	12,6	9,0	5,5	7,2	7,5	11,3	18,1	17,4	10,9
#s Enrolled (16-18) in any institution N ('000)	210	430	56	147	630	181	385	225	429	2 693
% of 16-18 year olds who attend any institution	76,4	83,3	79,2	86,3	85,7	84,9	81,7	86,7	93,1	84,9
% of children with special needs aged 7-15 NOT enrolled in educational institutions	26,1	12,7	3,8	5,0	6,1	11,0	6,2	3,9	4,9	7,6
% of learners in public schools that do not pay school fees	33,3	78,6	62,4	78,6	59,2	53,7	44,1	61,9	96,1	64,1
% of learners in schools receiving social grants	36,8	61,9	64,9	57,7	57,1	57,4	35,9	55,1	54,9	52,5
% of learners in schools who walk for more than 30 minutes to the nearest school of its kind	1,6	13,5	5,3	8,1	24,2	12,6	3,5	7,9	14,6	13,3

Table 2.2: Education (concluded)

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of learners in public schools benefiting from free scholar transport	2,0	1,4	2,1	0,9	0,3	0,8	2,0	2,3	0,5	1,2
% of learners in public ¹ schools benefiting from the nutrition programme	51,5	83,3	86,9	71,7	75,2	77,6	45,3	82,4	94,9	73,8
% of learners attending school who reported incidents of corporal punishment	3,7	30,2	16,5	22,1	22,5	17,2	5,9	7,0	19,3	17,2
Adult illiteracy rates (persons 20 years and older with less than Grade 7 as highest level of education)	10,0	25,2	26,8	19,6	21,2	26,4	8,8	21,7	26,2	18,2

¹ Question on public and private school

2.3 Environmental indicators

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
# of households using borehole water	2	8	9	26	83	64	66	62	118	439
# of households using wood/coal for cooking	28	348	38	46	525	107	72	280	642	2 085
% of households whose refuse is removed by a local authority or co.	88,4	42,3	62,4	78,6	46,5	48,7	87,2	36,1	15,2	59,8
% of households who collect waste for recycling	13,6	4,2	4,5	2,6	5,4	2,5	7,3	1,8	2,8	5,7
% of households who sell waste for recycling	9,9	75,5	58,5	65,2	10,1	80,9	24,2	75,1	76,9	29,4
% of households who feel that they are experiencing problem with:	25,2	35,8	25,8	41,0	26,0	32,9	29,3	41,2	29,7	30,8
Littering										
Water pollution	9,6	21,6	17,8	18,1	14,8	13,7	13,5	9,3	6,1	13,7
Air pollution	9,4	10,2	31,3	18,8	12,1	26,0	20,1	26,8	12,7	16,5
Land degradation	8,5	41,5	41,6	38,8	24,9	39,6	24,8	45,2	29,3	29,3
Excessive noise pollution	15,3	11,2	19,9	12,0	9,3	20,3	21,6	22,9	17,6	16,3
% of households who have used during past 12 months :	26,9	43,0	54,8	44,1	45,6	45,1	49,6	44,0	45,3	44,2
Pesticides in dwelling										
Pesticides in garden	12,2	12,1	14,3	7,5	7,9	9,2	20,3	7,6	9,9	12,2
Herbicides/weed killers	7,5	5,7	6,3	4,1	4,9	4,8	13,8	6,0	6,2	7,5

2.4 Health/MRC/Health Systems Trust

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of orphans aged 7-18 years attending educational institutions	88,4	92,5	90,1	94,3	93,7	92,1	92,9	92,8	95,4	93,1
% of people 20 years and older with no schooling	1,8	7,4	11,3	5,8	7,8	10,1	2,7	10,4	12,9	6,6
% of persons with medical aid coverage	25,1	11,1	13,0	17,0	12,3	13,7	23,9	14,4	7,3	16,1
% of households for which the usual place of consultation is a public facility	52,6	81,4	73,5	63,8	77,8	73,7	62,9	72,6	87,3	71,0

2.5 Human Settlement

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of households who live in an RDP or state subsidised house	19,7	13,8	18,0	26,9	10,3	15,6	14,4	18,7	13,9	15,3
% of households receiving a housing subsidy from the state	11,2	6,8	11,6	15,7	6,4	12,4	10,2	9,4	9,3	9,5
% of households living in informal dwelling/tents/caravans	15,1	6,6	7,0	11,1	7,3	18,5	20,4	7,0	4,5	12,2
% of households who state that the condition of the walls of their state provided/subsidised housing is weak/very weak	35,0	21,9	28,8	15,4	13,6	17,6	5,6	9,5	6,9	15,5
% of households who state that the condition of the roof of their state provided/subsidised housing is weak/very weak	35,3	23,2	31,3	15,9	14,0	17,8	5,6	10,4	8,1	16,1
% of households who pay rent for a state provided/RDP house.	16,6	9,9	5,0	7,3	12,9	3,2	4,7	7,4	1,2	8,1
% of households who fully own their dwellings	43,3	61,9	55,1	48,8	63,5	54,1	37,6	63,9	72,8	53,6
% of households with at least one person on a housing demand database/waiting list	10,1	14,1	10,5	10,8	12,4	11,0	15,5	16,1	13,2	13,3

2.6 Social development

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
% of persons 60 years and older that are disabled (UN definition)	18,8	18,0	29,4	22,9	19,1	22,1	13,5	19,1	17,1	18,2
% of persons 60 years and older that are severely disabled	12,4	11,1	21,4	13,4	9,9	15,1	9,0	12,7	10,1	11,3
% of people 60 years and older who received old age grant	47,4	79,3	76,4	70,5	74,9	75,5	47,3	76,4	87,8	67,2
% of people 60 years and older who received social grants	49,3	81,4	78,1	73,1	76,6	76,9	49,1	78,0	89,5	69,0
# of persons 60 years and older	514	598	105	236	747	294	868	218	389	3 969
# of households with at least one person 60 years and older	418	520	90	198	635	244	696	195	334	3 330
% of households with persons 60 years and older with: Food access adequate	82,6	79,7	69,2	80,8	82,1	67,8	82,3	74,9	90,7	80,8
Food access inadequate	13,0	15,6	22,4	12,7	14,2	24,0	13,6	17,7	6,8	14,5
Food access severely inadequate	4,4	4,8	8,4	6,6	3,7	8,2	4,2	7,4	2,5	4,8

Table 2.6: Social development (concluded)

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
# of households classified as:										
Food access adequate	1 211	1 365	230	702	2 322	675	3 118	775	1 247	11 645
Food access inadequate	262	316	63	133	366	237	482	181	113	2 152
Food access severely inadequate	108	139	34	72	115	94	226	94	77	960
Number of households classified as poor using household monthly expenditure of below R2500 as the cut-off	732	1 430	231	616	2 065	709	1 977	753	1 275	9 787
Number of households classified as poor using household monthly expenditure of below R2500 as the cut-off and who have children aged 7-18	297	698	109	280	1 007	303	641	376	714	4 426
% of poor households with children aged 7-18 who do not spend money on school fees	44,9	79,6	64,1	82,3	62,8	64,5	54,8	69,5	95,3	70,3

2.7 Transport

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
# of passenger trips made per month with each public transport mode N ('000)										
Minibus/taxi	4 552	5 174	494	2 987	11 014	3 859	18 086	3 037	3 344	52 547
Bus	1 484	374	60	591	1 206	826	2 683	2 406	864	10 496
Train	2 386	158	1	7	911	60	2 537	3	8	6 071
% of the household's income spent on transport per month										
1-10%	65,3	49,0	56,5	59,2	41,4	45,7	41,2	50,8	51,7	48,0
11-20%	18,8	24,4	18,3	19,8	24,3	24,0	25,0	23,9	20,5	23,1
21-30%	5,5	10,6	10,0	7,7	10,8	10,4	11,8	9,0	9,2	10,0
30% or more	10,4	16,0	15,2	13,4	23,5	19,9	22,0	16,3	18,6	18,9
% of learners traveling for longer than 30 minutes to an education institution	13,1	17,0	9,9	13,5	26,9	18,5	15,8	11,4	17,8	18,1
% of workers traveling for longer than 30 minutes to their place of work	35,9	16,5	15,4	25,2	36,7	34,3	46,6	30,9	37,4	35,9

2.8 Water and sanitation

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
# of households with water supply infrastructure of RDP standard or higher N ('000)	1 546	1 182	304	879	2 078	835	3 696	875	1 026	12 420
# of households with water supply infrastructure less than RDP standard N ('000)	35	638	24	28	724	171	128	175	411	2 335
# of households with no water supply infrastructure N ('000)	8	458	16	34	435	104	97	138	255	1 546
Consumer perception index of water quality N ('000)										
# Safe to drink	1 529	1 520	288	860	2 503	941	3 737	935	1 362	13 673
# Clear	1 521	1 531	282	849	2 528	929	3 721	935	1 366	13 661
# Good in taste	1 510	1 502	277	856	2 547	925	3 718	929	1 302	13 564
#Free from bad smells	1 522	1 593	299	862	2 544	959	3 735	945	1 371	13 831
# of consumers who experienced interruptions of 48 hours or more at a time N ('000)	41	448	78	151	461	257	242	470	532	2 679
# of WSAs whose consumers have experienced a cumulative interruption of more than 15 days for the financial year N ('000)	27	297	52	78	239	185	132	409	428	1 846

Table 2.8: Water and sanitation (concluded)

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
# of households with access to a functioning basic sanitation facility (strategic framework) N ('000)	1 476	1 115	269	740	1 965	650	3 414	597	663	10 890
% households with access to a functioning basic sanitation facility (strategic framework)	95,4	63,0	84,2	83,1	71,4	65,4	90,6	57,6	46,8	75,1
# of households with substandard toilet facility N ('000)	71	656	50	151	789	345	356	439	754	3 611
% of households with substandard toilet facility	4,6	37,0	15,8	16,9	28,7	34,6	9,5	42,4	53,2	24,9
# of households using bucket toilets N ('000)	29	10	7	19	2	2	9	1	-	79
# of households with no sanitation facility N ('000)	24	291	17	22	130	53	35	70	113	755
# of poor households receiving free basic sewerage and sanitation N ('000)	252	211	54	225	330	119	818	51	57	2 117
% of poor households receiving free basic sewerage and sanitation	36,8	15,3	24,1	38,2	16,4	17,2	44,1	7,0	4,6	22,5

2.9 Basic household and population data used for benchmarking the GHS 2011

Indicators	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	South Africa
Number of persons N ('000)	5 565	6 657	1 159	2 932	10 632	3 500	10 950	3 665	5 264	50 325
Number of households N ('000)	1 581	1 820	327	907	2 802	1 006	3 826	1 050	1 437	14 756

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-institutionalized and non-military persons or households in South Africa.

3.2 Sample design

The sample design for the GHS 2008 was based on a master sample (MS) that was originally designed for the QLFS and was used for the first time for the GHS in 2008. This master sample is shared by the Quarterly Labour Force Surveys (QLFS), General Household Survey (GHS), Living Conditions Survey (LCS), Domestic Tourism Survey and the Income and Expenditure Surveys (IES).

The master sample used a two-stage, stratified design with probability-proportional-to-size (PPS) sampling of PSUs from within strata, and systematic sampling of dwelling units (DUs) from the sampled primary sampling units (PSUs). A self-weighting design at provincial level was used and MS stratification was divided into two levels. Primary stratification was defined by metropolitan and non-metropolitan geographic area type. During secondary stratification, the Census 2001 data were summarised at PSU level. The following variables were used for secondary stratification; household size, education, occupancy status, gender, industry and income.

Census enumeration areas (EAs) as delineated for Census 2001 formed the basis of the PSUs. The following additional rules were used:

- Where possible, PSU sizes were kept between 100 and 500 dwelling units (DUs);
- EAs with fewer than 25 DUs were excluded;
- EAs with between 26 and 99 DUs were pooled to form larger PSUs and the criteria used was same settlement type;
- Virtual splits were applied to large PSUs: 500 to 999 split into two; 1 000 to 1 499 split into three; and 1 500 plus split into four PSUs; and
- Informal PSUs were segmented.

A Randomised Probability Proportional to Size (RPPS) systematic sample of PSUs was drawn in each stratum, with the measure of size being the # of households in the PSU. Altogether approximately 3 080 PSUs were selected. In each selected PSU a systematic sample of dwelling units was drawn. The # of DUs selected per PSU varies from PSU to PSU and depends on the Inverse Sampling Ratios (ISR) of each PSU.

3.3 Allocating sample sizes to strata²

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 $i = 1, 2, 3, \dots, N$. 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 #s. Once the PSUs have been randomised, we can generate permanent sequence #s for the PSUs.

² 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 $p_i = x_i / X$; $i = 1, 2, 3, \dots, N$, 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 $Z_i = n \times p_i \times R; i = 1, 2, 3, \dots, N$. It is easy to verify that $\sum_{i=1}^N Z_i = n \times R$. Next, round the N real #s $Z_i; i = 1, 2, 3, \dots, N$ to integer values $R_i; i = 1, 2, 3, \dots, N$ 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 $[\cdot]$ 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 $R_i; i = 1, 2, 3, \dots, N$ are also the PSU inverse sampling rates (ISRs) for systematic sampling of dwelling units.

Step 4: Obtain cumulative ISR values

We denote by $C_i; i = 1, 2, 3, \dots, N$ 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 #s that were assigned after the randomisation. Then, the cumulative ISRs are defined as follows:

$$C_1 = R_1,$$

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

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, \dots, 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 #s) $\# i_1, i_2, \dots, i_n$ 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, \dots, 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 ³

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.

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

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 December/January 2006. 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

A household is a group of persons who live together and provide themselves jointly with food and/or other essentials for living, or a single person who lives alone.

Note: The persons basically 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, sharing 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 occur when two or more households live in the same dwelling unit.

Note: 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 is the main decision-maker, or the person who owns or rents the dwelling, or the person who is the main breadwinner.

Acting household head is any member of the household acting on behalf of the head of the household.

Formal dwelling is a structure built according to approved plans, i.e. house on a separate stand, flat or apartment, townhouse, room in backyard, rooms or flatlet elsewhere.

Contrasted with *informal dwelling* and *traditional dwelling*.

Informal dwelling is a makeshift structure not erected according to approved architectural plans, for example *shacks* or *shanties* in *informal settlements* or in backyards

Piped water in dwelling or on site is 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.

Poor household (for the purposes of this report) refers to households who spend less than R2 500 per month.

Hygienic toilet facility refers to flush toilet, chemical toilet or pit latrine with ventilation pipe.

Indigent households are households that qualify to receive some or all basic services for free because they have no income or low income.

3.7 Classifications

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.

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.

4. Specific departmental indicator and question linkages

4.1 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	4.5	Main source	# of households Option 1 in Q4.5/total number of # of households *100
Percentage of households involved in different agricultural production sectors	National and provincial	4.6	Main source	# of households for each option in Q4.6/total # of households *100
Percentage of households involved in different crop planting activities	National and provincial	4.10	Main source	# of households for each option in Q4.10/total # of households*100
Percentage of households who sell most of the agricultural produce they produce	National and provincial	4.7	Main source	# of households who chose option 2 in Q4.7/total # of households who produce crops*100
Percentage of households involved in agriculture who received support from DOA during the past 12 months	National and provincial	4.8	Main source	# of households who chose option 1 in Q4.8/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	4.1-4.4	Main source	Adequate: one or no "Yes" responses for the first part of Q4.1-Q4.4; Inadequate: 2-5 "Yes" responses for any of Q4.1-Q4.4 Severely inadequate: 6-8 "Yes" responses for any of Q4.1-Q4.4

4.2 Education

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and or formulas
Gross enrolment in early childhood development programmes, including public, private, and community programmes, expressed as a percentage of the official age-group concerned.	UNESCO	1.7	Validation Data confrontation	Age 0-4 years; Number who responded Yes in Q1.7
Age Specific Enrolment Ratio	National Provincial UNESCO	1.10, D	Main source	# (persons aged 7-13 attending educational institutions)/ # persons aged 7-13 # (persons aged 7-18 attending educational institutions)/ # persons aged 7-18
Repetition rates (Grad10-12)	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	1.10	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	Main source	(# of persons aged 7-15 with disabilities ⁴ not enrolled)/#aged 7-15 yrs with disabilities)*100
Percentage of learners in public schools that do not pay school fees	National Provincial	1.10, 1.12, 1.13, 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	1.10,1.12, 1.32a	Main source Data confrontation	# persons attending school who receive any grant/# of persons who attend school and answered the question*100

⁴ Un definition of disabilities

4.2 Education (concluded)

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and or formulas
Percentage of learners who walk for more than 30 minutes to the nearest school	National Provincial	1.12, 1.15c, 1.15a, 1.15b	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 public⁵ schools benefiting from the nutrition programme	National Provincial	1.12, 1.13, 1.22b	Validation source	# persons options 2-4 in Q1.22b/# of persons attending Grd0-Grd7*100
% of reported incidents of corporal punishment	National Provincial	1.12, 1.23b	Main source	# persons options 1 in Q1.23b/# of persons attending school (option 2 in Q1.12)
Adult illiteracy rates	National Provincial	D,1.6	Validation source	# persons options with highest education less than grd 7/# of persons 20 years and older

⁵ Question on public and private school

4.3 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	3.12	Supply data towards its calculation	# of households options 3 and 8 for Q3.12
# of households using wood or coal for cooking	National and provincial	3.31	Main source	# households option 5, 6 for Q3.31
Percentage of households whose refuse or rubbish is removed by a local authority or private company	National and provincial	3.32	Main source	# of households options 1-2 in Q3.32/# of households who answered the question*100
Percentage of households who collect waste for recycling	National and provincial	3.34a	Main source	# of households option 1 in Q3.34a/# of households who answered the question*100
Percentage of households who sell waste for recycling	National and provincial	3.35	Main source	# of households option 1 in Q3.35/# of households who answered the question*100
Percentage of households who feel that they are experiencing pollution by categories	National and provincial	3.36 Option 1	Main source	# of households who answered Yes for selected options in Q3.36# 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	3.37	Main source	# of households to which the question applies who answered Yes in Q3.37/# of households who answered the question*100

4.4 Health, MRC, Health systems trust related indicators

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, 1.10, 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, 1.6	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	1.25	Main source	# of persons who responded 'Yes' in Q1.25/# of persons who responded to the question*100
% of households for which the usual place of consultation is a public facility	National and provincial	3.46	Descriptive/int erpretive One of the sources	# of persons who responded 'Yes' to options 1-3 in Q3.46/# of persons who responded to the question*100

4.5 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	3.9a	Main source	# of households who replied Yes in Q3.9a/# of households who answered the question*100
Percentage of households receiving a housing subsidy from the state	National and provincial	3.10	Validation source	# of households whose response is Yes in Q3.10/# of households who answered the question*100
Percentage of households living in informal dwellings/ tents/caravans	National and provincial	3.1	Main source	# of households whose response is 8 and 9 in Q3.1/# 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	3.3, 3.9a	Validation source	# of households with a Yes answer in Q3.9a and response 1-2 in Q3.3/# of households Yes in Q3.9a
Percentage of households who state that the condition of the roof of their state provided/subsidised housing is weak/very weak	National and provincial	3.3 ,3.9a	Validation source	# of households Yes in Q3.9a and response 1-2 in Q3.3/# of households Yes in Q3.9a
Percentage of households who pay rent for a state provided/RDP house.	National and provincial	3.5, 3.9a	Main source	# of households Yes in Q3.9a and option 1 in Q3.5/# of households Yes in Q3.9a
Percentage of households who fully own their dwellings	National and provincial	3.5	Main source	# of households options 4 in Q3.5/# of households who answered the question*100
Percentage of households with at least one person on a housing demand database/waiting list	National and provincial	3.11	Validation source	# of households option Yes in Q3.11/# of households who answered the question*100

4.6 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 1.30	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, 1.30	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, 1.32b	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, 1.32a	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, 4.1,4.2,4.3, 4.4	Descriptive/int erpretive Validation	# of persons aged 60 years and older in each category//# of persons who answered the question *100

4.6 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	4.1, 4.2, 4.3, 4.4	Inputs towards indicator calculation	-
# of households classified as poor using household monthly expenditure of below R2500 as the cut-off	National and provincial	4.14	-	-
# of households classified as poor using household monthly expenditure of below R2500 as the cut-off and who have children aged 7-18	National and provincial	4.14	-	-
% of poor households with children aged 7-18 who do not spend money on school fees	National and provincial	D, 1.16, 4.14,	Main source	# of households with children aged 7-18 and monthly expenditure below R2500 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.

4.7 Transport

Indicator	Annual reporting level	Questions in the GHS	GHS relative to other sources	Definitions and or formulas
<p># of passenger trips made per month with each public transport mode</p> <p>Minibus/taxi</p> <p>Bus</p> <p>Train</p>	<p>National Province</p>	<p>3.43, 344, 345</p>	<p>Validation</p>	<p>-</p>
<p>% of the household's income spent on transport per month</p> <p>1-10%</p> <p>11-20%</p> <p>21-30%</p> <p>30% or more</p>	<p>National Province</p>	<p>3.43, 344, 345, 2.3</p>	<p>Main source</p>	<p>Only calculated for households with valid income and expenditure on transport data.</p>
<p>% of learners traveling for longer than 30 minutes to an education institution</p>	<p>National Province</p>	<p>1.15b</p>	<p>Main source</p>	<p>Only calculated for individuals attending education institutions who provided a response to the question on time taken. Missing values were excluded from the denominator.</p>
<p>% of workers traveling for longer than 30 minutes to their place of work</p>	<p>National Province</p>	<p>2.4b</p>	<p>Main source</p>	<p>Only calculated for individuals working and who provided a response to the question on time taken. Missing values were excluded from the denominator.</p>

4.8 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	3.12, 3.13a	Validation and data confrontation	On or above RDP is piped water in dwelling or yard (options 1&2) or tap less than 200 meters from yard (options 5&6) and option 1 Q3.13a; all others are below.
# of households with water supply infrastructure less than RDP standard	National and provincial	3.12, 3.13a	Validation and data confrontation	On or above RDP is piped water in dwelling or yard (options 1&2) or tap less than 200 meters from yard (options 5&6) and option 1 Q3.13a; all others are below.
# of households with no water supply infrastructure	National and provincial	3.12	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	3.14	Validation and data confrontation	# of households option Yes in Q3.14/# 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	3.20	Validation and data confrontation	# of households option Yes in Q3.20/# 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	3.21	Supply data towards its calculation	# of households option Yes in Q3.21/# of households who answered the question*100

4.8 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	3.22	Main source	Basic facility is defined as options 1,2, and 4 Q3.22
% households with access to a functioning basic sanitation facility (strategic framework)	National and provincial	3.22	Main source	# of households with basic facilities/# of households*100
# of households with substandard toilet facility	National and provincial	3.22	Main source	Substandard is defined as options 3,5,6,7,8 in Q3.22
% of households with substandard toilet facility	National and provincial	3.22	Main source	# of households with substandard facilities/# of households*100
# of households using bucket toilets	National and provincial	3.22	Main source	# of households who chose option 6 (Bucket toilet)
# of households with no sanitation facility	National and provincial	3.22	Main source	# of households who chose option 7 (none)
# of poor households receiving free basic sewerage and sanitation	National and provincial	3.23, 4.14	Supply data towards its calculation	Poor households are households who spend less than R2500 per month.
% of poor households receiving free basic sewerage and sanitation	National and provincial	3.23, 4.14	Supply data towards its calculation	# of poor households who are connected to the sewerage system and answered No to 3.23//# of households who answered the question*100