# National Household Travel Survey, 2013

**Technical Report** 

Statistics South Africa

#### National Household Travel Survey, 2013: Technical Report / Statistics South Africa

Published by Statistics South Africa, Private Bag X44, Pretoria 0001

#### © Statistics South Africa, 2014

Users may apply or process this data, provided Statistics South Africa (Stats SA) is acknowledged as the original source of the data; that it is specified that the application and/or analysis is the result of the user's independent processing of the data; and that neither the basic data nor any reprocessed version or application thereof may be sold or offered for sale in any form whatsoever without prior permission from Stats SA.

Stats SA Library Cataloguing-in-Publication (CIP) Data

National Household Travel Survey, 2013: Technical Report / Statistics South Africa. Pretoria: Statistics South Africa, 2014

**Report 03-20-01 44** pp

ISBN 978-0-621-42571-0

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 report is available on the Stats SA website: www.statssa.gov.za

Enquiries:

Tel: (012) 310 8358

(012) 310 8093

Email: magdaj@statssa.gov.za

inadp@statssa.gov.za

## **Contents**

1.	Introduction	1
2.	Questionnaire design	2
3.	Sample design	4
3.1	Design of the sampling frame	4
3.2	Variable composition of the frame	8
3.3	EA (PSU) sample	8
3.3.1	Stratification and sample allocation to strata	8
3.3.2	Sampling of PSUs with probability proportional to size	9
3.4	Listing verification	11
3.4.1	Introduction	11
3.4.2	Verification methodology	12
3.4.3	DU frame	13
3.5	DU sample	14
3.6	Weighting	15
4.	Data collection	16
5.	Data collection debriefing	18
5.1	Planning (Survey methodology and sampling)	19
5.1.1	Successes	19
5.1.2	Shortcomings	19
5.1.3	Changes made to baseline plan/scope	19
5.1.4	Recommendations	19
5.2	Recruitment	20
5.2.1	Successes	20
5.2.2	Shortcomings	20
5.2.3	Changes made to baseline plan/scope	20
5.2.4	Recommendations	20
5.3	Geography and listing	20
5.3.1	Successes	20
5.3.3	Changes made to baseline plan/scope	21
5.3.4	Recommendations	21
5.4	Training	21
5.4.1	Successes	21
5.4.2	Shortcomings	21
5.4.3	Changes made to baseline plan/scope	21
5.4.4	Recommendations	21

5.5	Publicity	21
5.5.1	Successes	21
5.5.2	Shortcomings	22
5.5.3	Changes made to baseline plan/scope	22
5.5.4	Recommendations	22
5.6	Data collection	22
5.6.1	Successes	22
5.6.2	Shortcomings	22
5.6.3	Changes made to baseline plan/scope	23
5.6.4	Recommendations	23
5.7	Logistics	23
5.7.1	Successes	23
5.7.2	Shortcomings	23
5.7.3	Changes made to baseline plan/scope	23
5.7.4	Recommendations	23
6.	Response rates and measures of quality	24
7.	Limitations of the study	25
8.	Comparability with previous surveys	25

#### 1. Introduction

The first National Household Travel Survey (NHTS) was conducted in 2003, and the second survey was executed by Statistics South Africa (Stats SA) from February to March 2013. The aim of the NHTS is to gain strategic insight into the travel patterns and transport problems in the country because the collected information will serve as the basis for DoT research, planning and policy formulation. The information will further assist transport authorities to effectively target subsidies. This information will also serve as a data source for the definition and measurement of Key Performance Indicators for land passenger transport, as required in terms of the National Land Transport Transition Act (Act No. 22 of 2000).

The survey primarily covers land transport travel. Land transport focuses on public and private transport and includes non-motorised transport such as walking all the way, cycling or animal-drawn vehicles. It encompasses travel related to education, work, business and leisure and migration for individuals. Most of the work and education related questions are associated with a randomly selected travel day (Monday to Friday). In addition to these themes, household level information was also collected about the demographic profiles of individuals, socio-economic circumstances of households and general attitudes and perceptions about transport. Air and water transport are included as options when travellers were asked about the mode of travel used, but not as specific areas of enquiry.

The specific objectives of the study were:

- To assist in the evaluation and effective targeting of public transport subsidies;
- To identify transport needs in disadvantaged regions and communities;
- To understand the transport needs of households and travellers;
- To ascertain the cost of transport and assess whether households can afford to pay for the mobility which is essential for their survival;
- To assess attitudes towards transport services and facilities;
- To measure the availability and use of motor cars;
- To measure the availability and use of non-motorised transport;
- To understand the travel choices of different market segments;
- ❖ To assess the provision of accessibility to opportunities such as work, education, markets, medical, police and welfare services; and
- ❖ To measure key performance indicators (KPIs) as required by the National Land Transport Transition Act and the National Land Transport Strategic Framework.

This report provides a synopsis of the technical details of the NHTS 2013. It starts by describing the questionnaire design process and the contents of the questionnaire. Section 3 considers the sampling frame, listing, sample design and weighting process. This is followed by a section that recaps the procedures used during data collection. The final two sections deal with the response rates and indicators of quality, and highlight the limitations of the study.

#### 2. Questionnaire design

The NHTS questionnaire was largely based on the 2003 questionnaire, but there was a need for some revision recognising changes in the information needs of the Department of Transport (DoT) and stakeholders. The revision process also had to consider the need to standardise certain questions from a Stats SA perspective and the technological requirements for scanning and processing. The design process started with stakeholder consultation and progressed through a number of internal and external consultative workshops in which DoT played a key role.

The first draft of the questionnaire was subjected to behind-the-glass testing. This resulted in further modifications which were then tested in the field during the pilot survey. The pilot survey had three main objectives in addition to the testing of the questionnaire and its content:

- To test the duration of interviews;
- To evaluate the methodologies around training, publicity and fieldwork; and
- ❖ To conduct trials on vehicle allocation, material distribution in the selected provinces and airtime allocation.

The impact of these additional objectives of the pilot survey on the ultimate execution of the survey will be discussed in more detail in Section 4 which deals with data collection. The final questionnaire consisted of 8 sections in addition to the cover page and demographic section. Its contents is summarised in Table 2.1.

A copy of the questionnaire is included in Annexure A and a comparative analysis of the 2013 and 2003 questionnaires is provided in Annexure B.

Table 2.1 Contents of the questionnaire

Section	Theme	Content	Number of questions
Cover page	General household, sample and data collection information	The cover page of the NHTS questionnaire contains information for use by the fieldworker (FW). It also contains details that enable the tracking of the questionnaires by Head Office as well as the provincial and district offices.	17
Demography section	Demographic characteristics	Demographic questions (e.g. gender, age, education) which are completed for all individual household members regardless of age.	8
Section 1	General characteristics	Household characteristics, social grants and general functioning for each individual in the household.	4
Section 2	General travel patterns	General travel patterns and modes of transport used by the household.	6
Section 3	Education related travel	Education and education related travel patterns of individuals.	14
Section 4	Work related travel	Work related travel patterns.	28
Section 5	Business related travel	Business trips as applicable to individuals 15 years and older who indicated that they are economically active in Section 4 of individuals.	5
Section 6	Other travel patterns Other travel patterns including migrant labour and vacation trips of individuals.		11
Section 7	Life circumstances of households	General household information such as dwelling type, income and income sources, ownership of vehicles, etc.	
Section 8	Household attitudes and perceptions	Attitudes and perceptions about transport and levels of satisfaction with the different public transportation modes. Language used during interview.	16
Back page	Official use	The final page is for office use. A table for general comments is also supplied. Here the question number, person number, and the general comments are recorded.	2

3

Even though care was taken during the design phase to make the questionnaire as clear and user-friendly as possible, it was found during training that it was necessary to draft standardised responses to queries raised during training on issues related to the phrasing of some questions and printing errors. The following points of clarification were identified during training and sent to the field to be used during provincial training and data collection.

Table 2.2 Problems/queries and clarifications/modifications made to questionnaire during training and fieldwork

Section	Question	Problem/query	Resolution/clarification
Cover page	D2: Survey Period	This field was supposed to have 7 blocks for 7 digits; One extra block was printed making it 8 blocks in total.	Define all three blocks as 2 digits. Fieldworker to record the month code (2 digits) in any of the two blocks leaving the one block empty.
Section 3	Q3.5d, Q4.4d and Q5.5d	What should be done with the TAZ travelling code block?	The TAZ (Travelling Analysis Zone) code must be left blank. This will be recorded at DPC.
	Q3.11	What happens if the travel day falls under school holidays or the person is sick?	Record a single zero in the far right block.  SUPERVISORS WERE REQUESTED TO MONITOR RESPONSES TO THIS QUESTION AND TO STRICTLY SEND BACK ANY QUESTIONNAIRES IN WHICH THERE ARE NO RESPONSES FOR HOUSEHOLD MEMBERS WHO ATTEND EDUCATIONAL INSTITUTIONS.
Section 4	Q4.9	What happens if travel day falls under leave/sick leave for a person?	Record a single zero in the far right block.  SUPERVISORS WERE REQUESTED TO MONITOR RESPONSES TO THIS QUESTION AND TO STRICTLY SEND BACK ANY QUESTIONNAIRES IN WHICH THERE ARE NO RESPONSES FOR HOUSEHOLD MEMBERS WHO ARE EMPLOYED.
Section 7	Q7.10	There is no block in the questionnaire to record the number of 'other' vehicles.	The description of the other motor vehicles that the household has for private use should be specified on the dotted line, and record the number thereof in the block provided.
Section 8	Q8.1	What should be done if only one problem or no problems are experienced?	If households experienced ONLY one problem, blocks for 'Problem 2' should be left blank. If the household did not experience ANY problems, record 88 in the blocks for 'Problem 1' and 'Problem 2'.
	Q8.6	What happens if there is only one reason for not using a passenger train?	If the respondent has ONLY one reason for not using a passenger train, leave the blocks for 'Reason 2' blank.
	Q8.9	What happens if there is only one reason for not using a passenger train?	If the respondent has ONLY one reason for not using a passenger train, leave the blocks for 'Reason 2' blank.
	Q8.10	This question has options 'a' to 'o', but <b>NO</b> blocks provided to record responses for option 'n'.	The <b>whole</b> space at the bottom below 'o' will be used by the fieldworker to record responses for 'n'.
	Q8.12	What happens if the respondent only has one reason for not using a mode of transport?	If the respondent has ONLY one reason for not using a specific mode of transport, e.g. a passenger train, leave the blocks for 'Reason 2' blank.
	Q8.13	This question has options 'a' to 'o', but <b>NO</b> blocks provided to record responses for option 'n'.	The <b>whole</b> space at the bottom below 'o' will be used by the fieldworker to record responses for 'n'.

During debriefing, some of the general comments about the questionnaire included that quality assurance prior to printing needs to be improved so that there is no need for an addendum. Generally, addendums are displaced easily. The use of leading zeros was confusing and had been applied inconsistently.

Normally, for household surveys, the sample is available well in advance of the survey and the unique number, PSU number and sampled dwelling unit number can be pre-printed on the questionnaires. However, since the first Census results were only released at the end of October 2012 and a sampling frame based on the data only became available well into November, it was not possible to pre-print this information onto the questionnaires for NHTS 2013. This introduced some errors in the field which had to be resolved during data processing. It is advisable that all efforts be made to pre-print the sample information on the questionnaires for future surveys. Skips are needed for Q2.2 and Q4.9 for those who did not travel and the incorrect skip instruction in Q5.1 needs to be corrected for future surveys.

In addition to the issues highlighted in Table 2.2, the following suggestions were made during the debriefing:

- Question E tended to be left blank by survey officers because it was not emphasised enough during training.
- ❖ In the case of Q1.1, a general guideline has to be provided as to what to do for children younger than 2 years.
- Section 8 does not make adequate provision for persons using private vehicles and this needs to be considered during the questionnaire design phase for the next survey.

During the pilot survey it was decided to centralise coding of the Transport Analysis Zones (TAZs) where educational institutions, place of work and destinations for business and other travel are located. However, it was found that fieldworkers did not provide detailed enough information to enable the coding to be done correctly, especially in metropolitan areas, where suburbs or subplace names were required. Future surveys should carefully consider both layout and training interventions to improve on this.

#### 3. Sample design

#### 3.1 Design of the sampling frame

During 2010, the Department of Transport contracted TRC Africa to update the TAZs that were used for the NHTS 2003, for the NHTS 2013, based on the most recent boundaries of the Municipal Demarcation Board (MDB). The findings and data of this assignment were presented in 2011 to the Department of Transport and Stats SA.

This document describes how the sampling frame was derived from the Census 2011 database as well as the decision rules used to link the Transport Analysis Zones (TAZs) with the Census 2011 enumeration areas.

#### Creation of TAZ EA link

The geography division within Stats SA then set out to create a link between these TAZs and the enumeration areas as demarcated for Census 2011.

The biggest part of the linking process was automated, using the intersection method and the ArcGIS 9.3 software.

The following datasets were used:

- 1. TAZ 2011 (as obtained from TRC Africa)
- 2. EA 2011
- 3. Dwelling frame
- 4. Imagery (aerial photo, SPOT 5)

The 80/20% decision rule was used. This means that all the polygons with areas greater or equal to 80% or less or equal to 20% were to remain with the TAZ ID of greater or equal to 80%. Areas between 20% and 80% were manually investigated and the TAZ ID was assigned based on dwelling unit distribution and the size of the TAZ. During this process the following rules were applied:

- 1. The EA with the most dwellings was assigned to the TAZ ID.
- 2. In the case of the same number of dwellings, the TAZ area/size was used (the biggest EA was assigned the TAZ ID).

Table 3.1 contains the analysis zone inconsistencies that were identified during the testing of the sampling frame. Two kinds of issues were identified, namely problems related to boundaries that were cut by a TAZ link, and situations where more than one municipality were included in one TAZ. In the case of the former, the situation was corrected manually by re-assigning the TAZ EA link so that the boundary was not violated. The only exception where no corrective action was taken, is the Kruger National Park which has a low population and was not considered for sampling. These changes are reflected in the variable TAZ\_ADJ in Version 2 of the sampling frame.

The TAZs that included more than one municipality did not represent examples of boundary violations. Given that one of the reporting domains is the municipality, it was decided to separate each municipality into its own TAZ. New codes were created for each 'new' TAZ, starting from the highest number already allocated within that province. These changes as well as the changes already described for the TAZ\_ADJ variable above are contained in a new variable called TAZ EXP.

Table 3.1 Analysis zones inconsistencies

				TAZs cutting across boundaries	More than one municipality in one TAZ
Province/district/ municipality/	PR_CODE	TAZ ID	EAs per TAZ	Resolution  Move to existing TAZ_ID  within correct geographical boundary	Resolution New ID
Eastern Cape	2	1045	362	Unchanged	
KwaZulu-Natal	5	1045	1	4045	
Mpumalanga	8	5025	44	Kruger NP leave as is	
Limpopo	9	5025	10	Kruger NP leave as is	
Chris Hani(DC13)	2	1045	362	Unchanged	

				TAZs cutting across boundaries	More than one municipality in one TAZ
Province/district/ municipality/	PR_CODE	TAZ ID	EAs per TAZ	Move to existing TAZ_ID within correct geographical boundary	Resolution New ID
eThekwini(ETH)	5	1045	1	4045	
City of Johannesburg(JHB)	7	3000	1	3008	
West Rand(DC48)	7	3000	348	Unchanged	
Sisonke(DC43)	5	4001	268	Unchanged	
UMgungundlovu(DC22)	5	4001	6	4003	
Ehlanzeni(DC32)	8	5025	44	Kruger NP leave as is	
Vhembe(DC34)	9	5025	4	Kruger NP leave as is	
Makana	2	1001	173		1059
Ndlambe	2	1001	176		1060
Baviaans	2	1003	60		1061
Ikwezi	2	1003	43		1062
Camdeboo	2	1003	-		1062
Kou-Kamma	2	1005	92		1064
Kouga	2	1005	211		1065
Gariep	2	1017	100		1066
Maletswai	2	1017	113		1067
Inkwanca	2	1019	75		1068
Lukanji	2	1019	493		1069
eThekwini	5	1045	1	4045	
IntsikaYethu	5	1045	362	Unchanged	
City of Johannesburg	7	3000	1	3008	
Westonaria	7	3000	348	Unchanged	
Impendle	5	4001	6		4143
Kwa Sani	5	4001	35		4145
Impendle	5	4003	88		4143
uMngeni	5	4003	168		4144
The Msunduzi	5	4008	1	4019	
uMshwathi	5	4008	178	Unchanged	
Mkhambathini	5	4017	119		4146
Richmond	5	4017	108		4147
Hlabisa	5	4129	90		4148
The Big 5 False Bay	5	4129	55		4149
Dipaleseng	8	5004	88		5026
Lekwa	8	5004	225		5027
Ba-Phalaborwa	8	5025	5	Kruger NP leave as is	
Thulamela	8	5025	1	Kruger NP leave as is	
Ga-Segonyana	3	6000	192		6013

				TAZs cutting across boundaries	More than one municipality in one TAZ
Province/district/ municipality/	PR_CODE	TAZ ID	EAs per TAZ	Resolution  Move to existing TAZ_ID  within correct geographical boundary	Resolution New ID
Gamagara	3	6000	79		6014
Joe Morolong	3	6000	275		6015
NamaKhoi	3	6001	141		6016
Richtersveld	3	6001	59		6017
Hantam	3	6002	167		6018
Khâi-Ma	3	6002	60		6019
Kamiesberg	3	6002			6031
Karoo Hoogland	3	6002			6032
Emthanjeni	3	6003	123		6020
Umsobomvu	3	6003	86		6021
Kareeberg	3	6004	47		6022
Thembelihle	3	6004	36		6023
Renosterberg	3	6004			6028
Siyathemba	3	6004			6029
Siyancuma	3	6004			6030
Khara Hais	3	6007	196		6024
Tsantsabane	3	6007	97		6025
Dikgatlong	3	6012	104		6026
Magareng	3	6012	50		6027
Musina	9	7011	125		7027
Mutale	9	7011	304		7028
Modimolle	9	7024	173		7029
Mookgopong	9	7024	106		7030
Lekwa-Teemane	6	8018	106		7031
Mamusa	6	8018	107		7032
Cape Agulhas	1	9013	109		9041
Swellendam	1	9013	81		9042
Hessequa	1	9014	180		9043
Kannaland	1	9014	59		9044
Bitou	1	9018	119		9045
Knysna	1	9018	172		9046
Beaufort West	1	9019	152		9047
Prince Albert	1	9019	60		9048

Once all EAs could be accurately associated with TAZs, a sampling frame consisting of primary sampling units (PSUs) was constructed. PSUs use EAs as their building blocks, and in most cases, one PSU is equal to an EA. However, for sampling purposes small EAs were combined to form new PSUs and large EAs were conceptually split into smaller units.

#### 3.2 Variable composition of the frame

The actual sampling frame was based on the Census 2011 data Version 10 and was analysed using SuperCross. The variables included in the frame were per EA:

- EA Code
- ❖ TAZ\_ID: TAZ code
- Number of persons
- Number of households (defined as options 1 and 2 of H01 in the Census questionnaire)
- Number of males and number of females
- ❖ Number of persons per each 5-year age category
- Number of persons per each population group category
- Number of people aged 15 to 64 years in each EA who fall into the following annual income categories: No income; R1–19 600; R19 601–38 200; R38 201–76 400; R76 401–153 800; R153 801–307 600; R307 601 PLUS

Subsequent to the revision, two more variables were added:

TAZ\_ADJ – which contains corrected TAZ codes for boundary violations; and TAZ\_EXP – which contains corrected TAZ codes for boundary violations as well as all municipalities that used to share a TAZ each with their own TAZ code.

#### 3.3 EA (PSU) sample

The NHTS 2013 sample is based on a stratified two-stage sample design with probability-proportional to size (PPS) sampling of PSUs from within strata at the first stage, and systematic sampling of dwelling units (DUs) from the sampled primary sampling units (PSUs) at the second stage. The sample population consisted of all non-institutionalised private dwellings and workers' hostels in the Republic of South Africa. Institutions and military quarters were excluded. In addition, EAs in the sparsely populated areas with very few dwelling units (number of DUs fewer than 25) were also excluded. Since the population in these sparsely populated areas is part of the target population, a weight adjustment factor was applied to account for the excluded population (see the subsequent subsection 3.6 on weighting).

#### 3.3.1 Stratification and sample allocation to strata

Stratification was done on two levels; firstly explicit stratification based on the Travel Analysis Zones within the provinces, and then implicit stratification based on the Geographic Area Type (Urban, Traditional and Farms). These were primarily selected for their importance within a transport survey context, administrative convenience and flexibility, and also to ensure that the sample of PSUs is spread across all the categories of the stratification variable(s).

Considering the required sample size, square root allocation was used to allocate PSUs across strata based on the weighted DU count as measure of size. The procedure ensures that the allocation considers the size of the Travel Analysis Zones, i.e. the sample is redistributed from

larger Travel Analysis Zones to smaller Travel Analysis Zones to ensure efficient estimates at both national and Travel Analysis Zone levels. The specified sample was adjusted for 10% non-response which resulted in a national sample size of the required sample size plus 10%. The fact that on average 10 DUs were to be sampled per PSU, was also taken into consideration.

Prior to PSU sample selection, there were two constraints that needed to be satisfied for the flexibility of weighting and estimation processes:

- At least two PSUs are selected from the stratum; and
- The stratum must comprise an even number of PSUs.

This resulted in an expected sample of 5 034 PSUs across the strata. Since the PSU size has an impact on the sampling selection method, large PSUs were then conceptually split into manageable sized PSUs, based on the probability of selection of these PSUs.

#### 3.3.2 Sampling of PSUs with probability proportional to size

A Randomised Probability Proportional to Size (RPPS) systematic sample of PSUs was drawn in each of the constructed strata, with the measure of size being the number of households in the PSU.

This method is described below:

Let  $^N$  be the total number of PSUs in the stratum, and the number 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 RPPS 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 numbers 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 numbers for the PSUs.

#### 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  $p_i = \frac{x_i}{X}$ ; i = 1, 2, 3, ---N, where N is the total number 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 numbers  $Z_i = n \times p_i \times R$ ;  $i = 1, 2, 3, \dots, N$ . It is easy to verify that  $\sum_{i=1}^N Z_i = n \times R$ . Next, round the N real numbers  $Z_i$ ;  $i = 1, 2, 3, \dots, N$  to integer values  $R_i$ ;  $i = 1, 2, 3, \dots, N$  such that each  $R_i$  is as close as possible to the corresponding  $R_i$  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  $R_i$  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,...,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:

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

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

Step 5: Generate an integer random number r between 1 and R, and compute n integers  $r_1, r_2, \dots, r_n$  as follows:

$$\begin{split} r_1 &= r \\ r_2 &= r_1 + R \\ r_3 &= r_2 + R \\ \cdot \\ \cdot \\ \cdot \\ r_i &= r_{(i-1)} + R \\ \cdot \\ \cdot \\ \cdot \\ r_n &= r_{(n-1)} + R. \end{split}$$

Step 6: Select  $^n$  PSUs out of the  $^N$  PSUs in the stratum with the labels (sequence numbers) number  $^{i_1, i_2, \dots, i_n}$  such that:

Then, the  $^n$  PSUs with the labels  $^{i_1,\,i_2,\,\ldots,\,i_n}$  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 Listing verification

#### 3.4.1 Introduction

As indicated in the previous section, the NHTS sampling frame was based on the Census 2011 EAs and population data. Even though Census 2011 was also preceded by a listing process, this process used a different methodology than what is needed for household surveys. These differences and the fact that Census listing was executed between August and September 2011 made it necessary to do listing verification prior to the finalisation of the NHTS 2013 sample.

The methodologists used the Census 2011 sampling frame to draw an initial sample of PSUs for the purpose of the NHTS, and these PSUs all had to be verified. Listing verification was primarily aimed at identifying new dwelling units that may have been constructed since 2011, as well as structures of which the use or function may have been changed since then. This information was then used to update and create a database of the number of dwelling units in each PSU so that sampling could be applied. Recruitment of contract workers took place in December 2012 when 267 listers and 52 supervisors were contracted. Listing verification training was then executed from 7 to 11 January 2013 in three locations, namely Cape Town, Gauteng and eThekwini.

Listing was conducted from 21 January until the end of February 2013. A team of Head Office monitors from Household Survey Operations and Census Field Operations covered all provinces for the duration of the listing exercise. The team constantly interacted with project management on all issues pertaining to listing.

#### 3.4.2 Verification methodology

Listing verification was done on the original Census listing books in two phases. Firstly, EA verification was done, and during Phase 2, the actual listing entries were checked, corrected and/or amended where necessary.

Listing – HH3 entries Info to be verified to be completed Column-> В С D Ε F G K L M R T **EA** type Н J 1. Formal 2. Informal 3. Traditional 4. Farm 5. Collective (workers' hostels)

Phase 1 - EA verification

□ Required entry

6.Smallholdings

#### Phase 2 - Updating

#### Listing updates during verification

- 1. Name Change ->Scratch 'old' name; add 'new' name;
- 2. Structure Description Change -> Scratch 'old' description; add 'new';
- 3. Where there is missed DU(s) on the ground, you should:
  - Add the additional structure onto the last record on the HH3 form. The DU numbering will be continuous from the last DU number that was verified as mentioned above.
- 4. Where there are duplicates:
  - Structures recorded that were duplicated erase the entire record and on column T do not allocate a DU number.
  - Records duplicated erase the entire record and on column T do not allocate a DU number.
  - Comment on the HHQ form.
- 5. Structure not classified as DU, but has DU # ->Verify; if DU changes Feature Code, if not, erase DU #.
- 6. Structure classified as DU, but no DU # -> Verify; allocate a DU number in column T.
- 7. Growth -> Record structure from last record # , enter feature code, assign DU # if applicable from last DU #.
- 8. Missed DU -> Record structure from last record # , enter feature code, assign DU # from last DU #.

All corrections had to be made in pencil.

#### 3.4.3 **DU frame**

A drawn sample with a total of 5 034 PSUs had to be verified across all provinces. The verification teams worked with the original copies of the Census listing books where available. In the case of informal settlements, new listings had to be done as the required listing methodologies were completely different from that needed for the Census.

Listing and listing updates were based on the PSU sample frame and were done in all nine provinces between mid-January and mid-February 2013. The NHTS DU frame received from listing verification was in Excel format. The consolidated DU frame contained 5 038 records and 2 variables, namely Psuno (PSU number) and Total private dwelling units (Total Pds) per PSU. KwaZulu-Natal (KZN) province had four duplicated PSUs on the provisional frame. The duplicated PSUs were removed before DU sample selection and a final frame with 5 034 PSUs was used for sampling the DUs. The distribution of the PSUs that was sent to the field for listing verification and the PSUs received by methodology after listing verification are summarised in the Table 3.2 below.

Table 3.2: Distribution of the PSUs within provinces before and after verification

Province	Number of PSUs sampled (before verification)	Number of PSUs received from the field (after verification)
WC	570	570
EC	710	710
NC	206	206
FS	350	350
KZN	970	974 (extra 4, duplicates)
NW	390	390
GP	1028	1 028
MP	366	366
LP	444	444
National	5 034	5 038

Table 3.3 below illustrates the 22 PSUs which had DUs during Census 2011, but were reported as having no private dwellings during listing verification. Reasons for these changes include change of status of dwellings in areas such as, for example, the clearance of informal settlements for other developments, or permission to list was not granted and/or the area was too dangerous to enter. No sample was drawn from these PSUs.

Table 3.3: PSUs without private dwellings or inaccessible PSUs in the frame

Obs	EA_CODE	PSUNO	TOTALPDS
1	16110001	161100012	0
2	16910063	169100631	0
3	17610242	176102421	0
4	17710252	177102521	0
5	17910070	179100701	0
6	19912191	199121911	0
7	19912197	199121971	0
8	19914803	199148031	0
9	19915580	199155801	0
10	19915759	199157591	0
11	19916108	199161081	0
12	59911339	599113391	0
13	59913798	599137981	0
14	59914486	599144861	0
15	59914489	599144891	0
16	59914490	599144901	0
17	66210100	662101001	0
18	66510106	665101061	0
19	79710263	797102631	0
20	79814987	798149871	0
21	79913082	799130821	0
22	97410981	974109811	0

Once an updated measure of the number of private dwelling units and workers' hostels in each PSU was available, the final sample was selected. Section 3.4 provides more details about this process.

#### 3.5 DU sample

After the selection of the PSUs and the construction of the dwelling unit frame, a procedure on the second stage of the sample design which is the selection of dwelling unit was carried out. The number of DUs selected per PSU varied from PSU to PSU and depended on the Inverse Sampling Ratios (ISR) of each PSU. A sample of 5 034 primary sampling units was selected from the Census dwelling frame, with stratification at TAZ and provincial levels. Twenty-two of these PSUs were vacant and 51 341 dwelling units (DUs) were sampled from the remaining 5 012 PSUs.

Table 3.4 summarises the sample distribution per province. The number of dwelling units sampled per PSU ranged from 1 to 14.

**Table 3.4: Distribution of the sample** 

Province	Number of TAZs unadjusted	Number of TAZs adjusted	Number of PSUs	Average number of dwelling units per PSU	Total number of dwelling units
Western Cape	37	43	559	10	5 528
Eastern Cape	54	60	710	11	7 497
Northern Cape	13	29	206	10	2 103
Free State	30	30	350	10	3 601
KwaZulu-Natal	74	78	965	10	9 806
North West	27	28	388	9	3 628
Gauteng	58	58	1 025	10	10 683
Mpumalanga	25	26	366	10	3 794
Limpopo	26	28	443	11	4 701
RSA	344	380	5012	10	51 341

#### 3.6 Weighting

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 sampling weights, also called design weights, for the NHTS 2013 are the inverse sampling rate (ISR) for the TAZ and are assigned to each of the households in a TAZ.

The adjusted weights for the NHTS 2013 full sample were obtained by applying three adjustments to the design weights. The first adjustment was applied to account for PSU natural growth; the adjustment factors were truncated at the 99<sup>th</sup> percentile (which was 2.32432) in an attempt to minimise the sample variation. The second adjustment was applied to account for the EAs with fewer than 25 households excluded during the survey design, and the third was the non-response adjustment. There were two types of non-response adjustments: PSU non-response adjustment and household non-response adjustment. The PSU non-response adjustment was applied at stratum (TAZ) level, whereas the household non-response adjustment was applied at PSU level.

The final calibrated weights were constructed by calibrating (benchmarking) the adjusted design weights to the known population estimates as control totals using the 'Integrated Household Weighting' method. The lower bound of the calibrated weights was set equal to 50 when computing the calibrated weights with the StatMx software.

The population estimates of mid-February 2013 were used for benchmarking. These estimates were produced by the Demographic Analysis division and were based on the mid-year population series published in 2013. The population estimates used were cross-classified by age group by race by gender population groups at national level, and by age groups at province level. The age groups at national level were the five-year age groups: 0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, and 75 and over, and those at province level were the four broad age groups: 0–14, 15–34, 35–64, and 65 and over. The race categories were black African, coloured, Indian/Asian and white. The calibrated weights were constructed such that all persons in a household would have the same final weight.

It is important to note that, since the calibrated weights were constructed using the known national and provincial level population estimates, this then posed limitations to the use of these weights:

- 1. The lower level (any geographic level except province) estimates cannot be produced using the constructed weights; and
- 2. The weights can only produce meaningful aggregates at provincial and national levels.

#### 4. Data collection

Data collection consisted of three phases: pre-enumeration, enumeration and post-enumeration, as depicted in Figure 4.1. The primary activities during pre-enumeration were planning, publicity, listing, quality assurance and training. The main purpose of publicity was to inform the potential respondents and stakeholders of the upcoming survey and its purpose. This process was planned to be conducted a week before data collection commenced and was eventually implemented to run parallel with data collection, as it was deemed to be more time and cost-efficient. Posters, pamphlets and approach letters were used. The latter were given to gatekeepers, whilst the publicity pamphlets were distributed to selected dwelling units informing the respondents about the purpose and objectives of the survey. During this phase, appointments were also arranged with households who could not be interviewed at the time that publicity was conducted.

Data collection training was divided into two phases: national and provincial. Different modules (competencies) were covered during training, which included, amongst others:

- Map reading and PSU/DU identification
- Listing verification
- Publicity procedures
- Questionnaire completion
- Quality assurance
- Progress reporting

Figure 4.1: Phases of data collection

PRE-ENUMERATION
Planning
Publicity
Listing
Quality assurance
Forward logistics
Training

ENUMERATION
Publicity
Completion of
questionnaires
Quality assurance
Capturing

POST-ENUMERATION Reverse logistics Data processing Analysis Compilation of metadata Data and report dissemination National training was executed from 28 January to the 01 February 2013 in Pretoria and was attended by 65 trainers representing all nine provinces. They were responsible for provincial training which took place from 5 to 10 February 2013. Each training venue had sub-training venues, comprising 40 to 50 trainees per venue.

Different quality measures were utilised to assess the understanding and competency of the trainees. The following measures were used:

- Evaluation exercises
- Role play
- Group discussions and feedback
- Field practice (questionnaire completion exercise)

Data collection took place from 18 February to 20 March 2013. The data collection structure consisted of four levels, as summarised in Table 4.1.

A number of quality assurance procedures were implemented by different survey teams. The process was conducted by the provincial Quality Assurers (QAs), Head Office Quality Assurers, the Fieldwork Coordinators (FWCs)/District Survey Coordinators (DSCs) and the District Managers (DMs) in certain districts. The main role of the quality assurance team was to check the quality of all questionnaires and verify non-responses. The roles of quality assurers were highlighted in the QA manual with all the reporting forms attached and explained.

The following were the key roles of Quality Assurers:

- Checking that the correct PSUs and dwelling units have been visited.
- Checking that survey instruments re correctly completed.
- Checking that fieldwork procedures are correctly followed including ensuring the confidentiality of completed survey instruments.
- Support by sharing information about the problems encountered by other field teams and solutions that they adopted to avoid recurrence of similar situations and giving feedback to other members of the field team on issues that concern them.
- Checking that all other survey related documents are correctly completed including admin documents.
- Reinforcing the training of field staff and retraining if the need arises during fieldwork.

Table 4.1: Data collection staffing framework with roles and responsibilities

Level	Responsibilities
Provincial Survey Coordinator (PSC)	The Provincial Survey Coordinator is responsible for the administration and management of NHTS activities at provincial level.
Fieldwork Coordinator (FWC)	The Fieldwork Coordinator reports to the Provincial Survey Coordinator for NHTS-related content matters and the District Manager on administrative matters. He/she is also in charge of the overall administration, management and implementation of NHTS activities at district level.
Fieldwork Supervisor (FWS)	The Fieldwork Supervisor reports to the District Survey Coordinator and is responsible for the supervision of the publicity, listing and enumeration processes. The Fieldwork Supervisor will be in charge of approximately four Fieldworkers specifically assigned under his/her supervision.
Fieldworker (FW)	The Fieldworker is responsible for publicity, listing and enumeration in the assigned EA.

Copies of job descriptions of the contract workers can be found in Annexure B.

As can be seen in Table 4.2, a total of 800 Fieldworkers, 267 Supervisors and 52 District Fieldworker Coordinators were contracted for the survey. Their numbers and distribution per province were primarily determined by the distribution of the sampled dwelling units.

Table 4.2: Contract fieldwork force

Province	No of Fieldworkers	No. of Supervisors	No. of Fieldworker Coordinators
Western Cape	79	26	8
Eastern cape	46	15	5
Northern Cape	211	70	5
Free State	159	53	11
KwaZulu-Natal	59	20	5
North West	54	18	3
Gauteng	65	22	4
Mpumalanga	30	10	5
Limpopo	97	33	6
RSA	800	267	52

The number of people found in a particular household and their travel patterns influenced the amount of time needed to complete a questionnaire. On average, most interviews took between thirty and sixty minutes to complete. Several PSUs in KwaZulu-Natal and Gauteng had problems related to service delivery protests and instability, which made it difficult for the enumerators to work in those areas.

#### 5. Data collection debriefing

The NHTS debriefing sessions were held at provincial and national levels. The national debriefing took place on 03 April 2013 in Pretoria. Three general recommendations emerged from this session. Firstly, that provincial staff be part of project planning; secondly, that it is necessary to decentralise some logistical arrangements to district level; and thirdly, that the project log template should be used to communicate quality issues. More specific successes and shortcomings are summarised in subsequent sections.

#### 5.1 Planning (Survey methodology and sampling)

#### 5.1.1 Successes

- ❖ The involvement of the provincial and district office staff during the planning stage gave districts the power to be part of the decision-making process.
- ❖ Decentralisation of signing powers on certain budget items to provinces made the logistical processes run much smoother.
- ❖ The budget allocated for the project was sufficient to cover the requirements.

#### 5.1.2 Shortcomings

- The decision to pay field staff the equivalent of the Census stipend led to challenges in the field as staff was demoralised by the big differences between their salaries and that of the permanent staff.
- ❖ The work plans submitted by the provincial staff were not considered in certain cases, leading to shortfalls in planning.
- The timelines allocated for field operations were too short.
- ❖ The workload for the Fieldwork Coordinators (FWCs) was unrealistic when comparing with the number of staff under their supervision, i.e. each coordinating 8 Fieldwork Supervisors (FWSs) and 38 Fieldworkers (FWs).
- ❖ Terrain conditions were not adequately considered when vehicle allocations were done, and some inaccessible areas initially did not have adequate transportation means.

#### 5.1.3 Changes made to baseline plan/scope

District office staff had to resort to pairing NHTS staff with other surveys' staff where there was a shortage of or difficulty with:

- Lack of maps;
- Vehicles not suitable for terrain; and/or
- Extensive publicity done at gatekeeper level.

#### 5.1.4 Recommendations

- Field staff should not be paid on a stipend method.
- There should be frequent project review meetings.
- Sufficient time should be allocated to the project to execute all the required processes.

#### 5.2 Recruitment

#### 5.2.1 Successes

- ❖ Decentralisation of the recruitment process to provinces and support for recruitment from provincial Human Resources (HR).
- Recruiting from the Census 2011 database made the process smoother.

#### 5.2.2 Shortcomings

- Recruitment period (December) was not ideal.
- Recruiting without sample analysis.
- Ratio of FWC: FWS: FW was unrealistic.
- ❖ Absence of the supervisor layer during verification resulted in quality issues.
- Appointment of FWSs before training.
- Lack of appointment of the Survey Administrator.

#### 5.2.3 Changes made to baseline plan/scope

- Some of the recruited supervisors did not have driver's licences, in spite of this being included as a criteria for recruitment.
- In some provinces, the contracts were administered by the District Office Administrators (DOAs).

#### 5.2.4 Recommendations

Training results should be used for the final appointment of field staff.

#### 5.3 Geography and listing

#### 5.3.1 Successes

- Summary books were made available on time.
- Screening of the 'out-of-scope' structures minimised the duration of the verification process.
- Integrating field operations with the other survey staff members assisted with the listing verification process.

#### 5.3.2 Shortcomings

- Time frame allocated for listing verification was not sufficient.
- Not all summary books were received by provinces.
- Utilisation of the Census listings compromised quality.
- Most listings did not have maps attached.
- In some cases there was an incorrect report/indication of total number of occupied dwelling units (DUs), leading to re-sampling.

#### 5.3.3 Changes made to baseline plan/scope

- ❖ A number of enumeration areas (EAs) had to be re-listed since DUs could not be identified.
- ❖ In some cases, listing and verification was conducted in the office since access was denied in some high-wall areas, leading to unverified DU totals given.

#### 5.3.4 Recommendations

- At least a month should be allocated for listing verification (if it is to be done).
- Listing needs to be conducted from scratch for projects such as the NHTS.

#### 5.4 Training

#### 5.4.1 Successes

- Conducting training at provincial level allowed for proper logistics arrangements.
- Training material was supplied on time.
- Facilitators knew and understood the training content.
- Trainees were allowed active participation and feedback was given daily.

#### 5.4.2 Shortcomings

- In some cases, training venues were too small to accommodate all trainees comfortably (GP).
- Training material had a lot of addendums.
- ❖ The evaluation exercises had too many open-ended questions, which were timeconsuming to complete and mark.
- ❖ Field exercise was not sufficient for proper questionnaire completion practice.

#### 5.4.3 Changes made to baseline plan/scope

- In some cases, the trainees who had dropped out during training could not be replaced.
- Some trainees that could achieve the expected pass rate were recruited after being retrained since the exact number of recruits were trained.

#### 5.4.4 Recommendations

Training duration should be at least two weeks to accommodate sufficient questionnaire completion exercise.

#### 5.5 Publicity

#### 5.5.1 Successes

- Publicity material was received on time.
- Assistance by other survey staff with gatekeeper publicity reduced refusals.

#### 5.5.2 Shortcomings

- Time frame allocated for publicity was too short.
- ❖ Non-translation of pamphlets to other languages led to difficulties, especially in Afrikaans-speaking areas.
- ❖ Incorrect contact numbers indicated on some publicity documents resulted in refusals.
- ❖ A lack of information on the posters reduced the impact on the community, and, in some cases, resulted in their being removed by community members.

#### 5.5.3 Changes made to baseline plan/scope

- Publicity was conducted at the same time with data collection due to the short publicity timeframe.
- Publicity was not conducted in some DUs due to the short publicity timeframe.

#### 5.5.4 Recommendations

- ❖ A separate team of publicity officers should be appointed to conduct publicity, a month before data collection takes place.
- Corporate Communications should assist with high-level publicity (print, visual, vocal, etc.), to decrease the high refusal rate in difficult areas.

#### 5.6 Data collection

#### 5.6.1 Successes

- Questionnaires and vehicles were received on time.
- Primary sampling unit (PSU) identification went smoothly with the assistance from other survey staff.
- Conducting spot-checks and retraining on the ground helped with the improvement of data quality.
- The sweeping method used for collection assisted in sample execution.
- Daily submission of reports assisted with quality assurance.
- Utilisation of guides in difficult areas was helpful (GP).

#### 5.6.2 Shortcomings

- Insufficient time allocated for revisits in the case of non-contacts.
- Incorrect DU counts on some of the listings led to delays in data collection because of the need to resample, whilst already in the field.
- The completion of questionnaires using pens contributed to high error rates and untidy questionnaires; in some cases questionnaires had to be replaced and rewritten completely.
- There is a shortage of monitors to cover all areas.

#### 5.6.3 Changes made to baseline plan/scope

- Some FWCs and District Managers had to do some of the follow-up visits of the noncontacts due to the workload and short time frame available for data collection.
- Other survey staff, e.g. dwelling frame, were used to conduct fieldwork due to resignation of contract NHTS staff.

#### 5.6.4 Recommendations

- Allocate at least a monitor for each and every district.
- More emphasis should be applied on the questionnaire completion exercise/practice to minimise the error rate on questionnaire completion using pens.

#### 5.7 Logistics

#### 5.7.1 Successes

- Conducting driving tests for drivers before field work is undertaken.
- Sufficient allocation of vehicles.
- Field material available on time.
- Allocation of petrol funds whilst awaiting petrol cards.
- Petrol cards received on time.
- Accommodation provided for teams that had to travel long distances to their working areas.
- Collection of material (reverse logistics) from a central point minimised a lot of risks.

#### 5.7.2 Shortcomings

- Late/non-loading of airtime for field staff.
- Delivery of vehicles in areas that were too far by service providers (NW).
- Faulty vehicles received from service providers (EC).
- Ever-changing of the reporting templates.
- Allocation of one data capturer per province and sharing them with other surveys was insufficient.

#### 5.7.3 Changes made to baseline plan/scope

- Field staff used own or permanent staff's airtime to make calls to respondents and for reporting.
- Overloaded vehicles unable to accommodate staff and materials.
- Walking in areas where vehicles could not reach.

#### 5.7.4 Recommendations

- Decentralise airtime loading to provinces.
- Include provincial and district staff on logistics planning.
- ❖ Hire correct/sufficient size of vehicles for field, considering the terrain.
- Include provincial staff contact details on communication tools.

#### 6. Response rates and measures of quality

Of the sampled DUs, there were 849 DUs for which no questionnaires were received or completed. Amongst the 5 012 PSUs, there were 4 957 PSUs that had at least one responding household. Furthermore, 5 PSUs had all sampled DUs with 'out-of-scope' households, while the remaining 50 PSUs had sampled DUs without responding households.

The mapping of the 'final result' to the three response status categories ('Resp\_Code') is provided in Table 5.1, where response code 1 = Respondent, 2 = Non-respondent, and 3 = Out-of-scope. The table also shows the percentage of households in each category.

Table 5.1: Result codes of the response status categories and percentage of households in each category

Result code	Label	Response code	Frequency	Percentage
11	Completed	1	43389	83,6
12	Partly completed	1	118	0,2
21	Non-contact	2	5409	10,4
22	Refused	2	2345	4,5
31	Unoccupied	3	26	0,1
32	Vacant	3	8	0,0
33	Demolished	3	2	0,0
34	New dwelling under construction	3	2	0,0
Missing or invalid	Missing or invalid codes	3	605	1,2

Table 5.2 summarises the response rates obtained nationally and in each province. The national response rate is slightly lower than that of the NHTS 2003, which was 86,6%. However, the decrease is in line with a general decrease in response rates for household surveys noted over the same time period.

Table 5.2: National and provincial response rates

Province	NHTS 2013
Western Cape	80,5
Eastern Cape	82,5
Northern Cape	83,2
Free State	85,1
KwaZulu-Natal	86,5
North West	86,1
Gauteng	80,3
Mpumalanga	83,6
Limpopo	84,4
RSA	83,3

#### 7. Limitations of the study

The sample design is such that households and individuals who live in institutions such as boarding houses, residential hotels, military barracks and hospital accommodation were excluded from the sample. The study was executed within a limited time frame and with contract survey officers. Training had to start after the December holidays and fieldwork had to be completed before travel patterns changed for the Easter school holidays at the end of March. Given that the Stats SA provincial offices are occupied with other surveys throughout the course of the year, executing an ad hoc survey – albeit with contract workers – placed additional strain on their organisation resources. Even though care was taken to train the survey officers and monitor the implementation of the survey, its sheer scope made it difficult to ensure that the survey was implemented in exactly the same way in all districts. A number of questionnaire printing errors resulted in an addendum being distributed during training in order for errors to be corrected. This may also not have been applied consistently across all provinces.

#### 8. Comparability with previous surveys

Even though the importance of maintaining a time series was recognised, advances in technology and questionnaire design, as well as the need to reduce respondent burden, made it necessary to modify some of the questions in the 2013 questionnaire. Since the last survey was executed in 2003, it was decided to start building a new time series using the 2013 questionnaire as the base with five-year intervals moving forward. Where possible, analysis did refer back to 2003. However, if the comparisons were not completely valid, explanatory notes of differences were provided. A comparative analysis of the questions contained in the 2003 and 2013 questionnaires is contained Annexure B of the technical report.

It is important to note that the possibility of re-weighting the 2003 data to correspond with current provincial boundaries and the most recent population model from a benchmarking perspective, was seriously considered. However, it was eventually decided not to re-benchmark the 2003 data. The main reasons for not re-weighting the 2003 data were:

- One of the biggest sample design challenges faced in 2003 was that the 2001 Census results were not yet processed to such as extent that the sampling frame could be based on the final Census data set.
- 2) In addition to this the sampling statisticians also had problems linking Taz zone boundaries with the Census EA boundaries as the EA did not always correspond with MDB boundaries and GIS technologies were not as advanced as it currently is.
- 3) Thus within the above context re-benchmarking the 2003 data according to the 2011 provincial boundaries may have further compromised sample design integrity and perhaps compound the existing sampling errors.
- 4) If re-benchmarking was done, no adjustment at sub-provincial level would have been possible given the constraints mentioned in points 1 and 2. In practise this would have meant that two sets of weights would have had to be distributed with the 2003 data: a) the new weights for national and provincial data and b) the existing weights for sub provincial analysis. This undoubtedly would have increased the complexity of data set use and increased the possibility of users unintentionally using the wrong weights.

Generally the comparability of the two periods was found to be good for person and household data. However, when interpreting differences it is important to note that due to provincial boundary changes since 2003, significant population shifts have taken place between Gauteng and North West; Mpumalanga and Limpopo; KwaZulu Natal and Eastern Cape and North West and Northern Cape. Tables with comparative statistics at provincial level should therefore be interpreted with care and the focus should be on percentages rather than on absolute numbers. In terms of geographic region comparisons it is therefore important to highlight once again three considerations:

- a) National comparisons of percentages and where the questions are comparable are generally sound. Since models to estimate the population have been refined and updated using the 2011 Census as a further data point, the current revised population estimates for 2003 are different from the population estimates used for benchmarking in 2003. However, these differences are not major.
- b) Provincial boundaries were not the same in 2003 and 2013. In most cases, except perhaps for the Western Cape, provinces have seen population shifts (both additions and subtractions) taking place due to provincial boundary changes. It is difficult to predict how these changes may have influenced reported number and percentage estimates at provincial level if it was possible to re-benchmark the 2003 data using the new provincial boundaries.
- c) Metropolitan areas in 2003 did not include Buffalo City and Mangaung.

The team of statisticians working on the 2013 report also found that the 2003 "attitudes" data file used an unusual weighting system that is quite different from the household weighting system used for the 2013 data on attitudes. It is therefore advisable in the case of attitudes to only use percentages and not compare absolute numbers for attitude related questions.

#### **Annexure A: Questionnaire**



# **National Household Travel Survey 2013**

A: Particulars of the dwel	lling	UQ N	lo																						
A1: PSU Number		D1:	Tr	ave	el d	lay																			
A2: Assignment number		D2:	: Sı	ırve	ey	per	iod	ł											1			2	0	1	3
A3: Dwelling unit number				sit o.	Dat <b>d</b>	te ac <b>d</b>		ı m	ı y	у	у		Resu	lt Code	d		Next '				у	у			
A4: Physical ID of the dwelling unit/ house	sehold		1																						
			2	2																					
			3	3																					
			4																						
A5: Telephone number of enumerated ho	ousehold	E2: F	inal	resu	ılt co	ode										E4	:Taz (	Code	•						
A6: Total number of persons in househol	ld	E3: 0	E3: Comments and full details for result codes 12-34																						
A7: Questionnaire number of this housel	hold																								
B: Households at the sele	ected dwelling unit																								
B1: Household number for this househol	ld																								
B2: Total Number of households at selec	cted dwelling unit																								
C: Field staff																									
C1: Field worker name	Persal number	d	d	m	m	у	у	у	у			_													
												- 1		ult cod Comp					33	I Do	molis	hod			
C2: Field work supervisor name	Persal number	d	d	m	m	У	У	у	у				12	Partly		letec	<u> </u>		34	Ne	w dw	elling	under	<u> </u>	
													21	Non-c	ontact					construction					
C3: Field work coordinator name	Persal number	d	d	m	m	У	У	У	У			-	22 31	Refus											

### Aim and use of the survey

The National Household Travel Survey will provide information to help the National Department of Transport (NDOT) to understand how and why people travel and to gain strategic insight into the transport problems and travel patterns of people of South Africa. The aim of the survey is to understand the transport needs and behaviour of households at all times of the day, to assess the effectiveness of the existing public transport subsidy mechanism, to assess attitudes towards transport services and transport facilities and to ascertain the cost of transport and assess level of affordability.

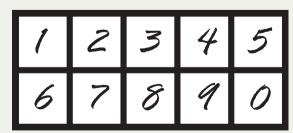
# Write figures very carefully

Close the zeros (0) so that they will **not** be mistaken for the sixes (6).

When there is more than one zero (0), as for instance in the value 1 000, do **no**t connect the zeros on top, which is very common. Don't write the figures sideways or diagonally.

Never use decimal points (or decimal commas).

Your figures should be made like this:



Your crosses should **not** touch the sides:



FLAP This section covers particulars of each person in the household

The following information must be obtained for every person who is considered to be a member of the household.
Oo not forget babies. If there are more than 10 persons in the household, use a second questionnaire.

	h	h	m	m	
INTERVIEW START TIME					1

						Person (respo	ndent) number				
		01	02	03	04	05	06	07	08	09	10
Α	First name and surname  Write down first name and surname of each member of the household, starting with the head or acting head. If more than one head or acting head take the oldest										
	Surname:										
В	Has stayed here (in this household) for at least four nights on average per week during the last four weeks?										
	1 = Yes 2 = No	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
С	ls a male or a female?  1 = Male 2 = Female	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2

		04	00	02	0.4	0.F	06	0.7	00	00	10
		01	02	03	04	05	06	07	80	09	10
D	What is's date of birth and age in completed years?										
	<b>Day of Birth:</b> Example of day 05	d d	d d	d d	d d	d d	d d	d d	d d	d d	d d
	Month of birth:  Example of month 1 1	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
	Year of birth:  Example of year 2007	ууууу	у у у у	у у у у	у у у у	y y y y	y y y y	уууу	y y y y	y y y y	ууууу
	<b>Age in years</b> Less than one year = 0										
E	What population group does belong to?										
	1 = Black African 2 = Coloured 3 = Indian/Asian 4 = White 5 = Other (specify in box below)	1 2 3 4 5									

□⊗Ο

2

10	- 2	Yes No 1 2 1 2 1 2 2 2 1 2	
60	- N	Yes No 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1 2 1	
80	<b>←</b> Ø	Yes No	
20	- 0	Yes No 1 1 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	
90	- N	Yes No	
05	- 0	Yes No 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1 2 1	
04	- 0	Yes No 1 1 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 1 2 1	
03	+ 0	Yes No 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 1	
02	- 0	Yes No 1 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	■ Go to A
01	+ Q	Yes No 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2	√es N
	Doeshave a driver's licence? For persons who are aged 15 years and less should answer "No".  1 = Yes  2 = No → Go to H	Does have a driver's licence for a?  Read all options.  1 = Motorcycle (Code A1, A)  2 = Car (Code B, EB)  3 = Heavy vehicle (Code C, C1, EC, EC1)	Is there any other person residing in this household, other than those already mentioned, who is <u>not</u> presently here?
	ш	O	I

Section 1: Household characteristics GENERAL FUNCTIONING

10		σ	٩	O	Q	Φ	<b>y</b>		Yes No	1	1	1	1	1	1	1	1	1
60		Ø	۵	ပ	Ф	Φ	<b>4</b> -		Yes No	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	7
80		Ф	۵	O	Ф	Φ	4		o Z	1	1	1 2	1 2	1 2	1	1	1	0
20		D	۵	U	Q	Φ	<b>-</b>		No Yes	2	2	2	2	2	2	2	2	C
									Yes	_	_	_	_	_			_	7
90		В	۵	O	σ	Φ	4-		<u>8</u>	2	2	2	2	2	2	2	2	C
									Yes									7
02		Ø	٩	O	σ	Φ	4-		S <sub>o</sub>	2	2	2	2	2	2	2	2	0
									Yes			_						7
40		Ø	Q	O	σ	Φ	4-		8	1	1	1	1	1	1	1	1	C
									Yes	7	2	2	01	01	01	7	01	c
03		Ø	Q	O	σ	Φ	4-		s No	_	_	-	_	_	_	_	-	7
									Yes	2	2	2	2	2	2	2	2	C
02		D	٩	O	σ	Φ	4-		s No	_	_	_	_	_	_	_	_	_
									Yes	2	2	2	2	2	2	2	2	c
0		Ø	Q	O	σ	Φ	<b>-</b>		Yes No	_	_	~	~	_	_	_	_	_
	Does have difficulty in doing any of the following? Read all the options; use the codes below to indicate the degree of problems:	a = Seeing (even with glasses if he/she wears them)	b = Hearing (even with a hearing aid, if he/she wears one) c = Walking a kilometer or climbing a flight	of steps d = Remembering and concentrating e = With self-care, such as washing or dressing	<ul> <li>f = In communicating in his/her usual language including sign language (understanding others and being understood by others)</li> </ul>	CODES	1 = No difficulty 2 = Some difficulty 3 = A lot of difficulty	4 = Unable to do 5 = Do not know 6 = Cannot yet be determined	Does use any of the following?	1 = Eve alasses/spectacles/contact lenses	2 = Hearing aid	3 = Walking stick/walking frame	4 = A wheelchair	5 = Chronic medication	6 = Crutches	7 = Guide dogs/ assistance dogs	8 = Personal assistant	9 = Other assistive devices
	7.								1.2									



<b>O</b> ⊗ □	
<b>○</b>	

	Ь	
	<b>AL GRANTS AND SOCIAL RELIEF</b>	
	CIAL	
	ND SC	
	NTS A	
	- GRA	
	OCIA	
	E OF S	
	HE USI	
	OUT T	
出	<b>JW GOING TO ASK ABOUT THE USE OF SOCIAL </b> G	
L RELI	TO AS	
SOCIA	OING	
AND	NOW G	
ANTS	IAM	
SOCIAL GRAN	READ OUT: I AM	
SOCI	REAL	

	10	- 0 m		N <sub>o</sub>	2	2	2	2	2	2	2	N
				Yes	_	_	_	_	_	_	_	<del>-</del>
	60	- 0 E		Š	2	7	2	2	2	7	2	8
	0			Yes	_	_	_	_	_	_	_	<del>-</del>
	80	<b>-</b> α α		S S	2	2	2	2	2	2	2	N
	0			Yes	_	_	_	_	_	_	_	-
	20	+ ∨ ∞		8	2	2	2	2	2	2	2	N
	0			Yes	_	_	_	_	_	_	_	-
	90	− N W		8	2	2	2	2	2	2	2	N
H	0			Yes	_	_	_	_	_	_		-
- REL	02	<del>-</del> α α		<sub>o</sub> N	2	2	2	2	2	2	2	8
OCIA	0			Yes	_	_	_	_	_	_	_	-
ND SC	04	<del>-</del> α α		8	2	2	2	2	2	2	2	8
TS AI	0			Yes	~	_	_	~	_	_	_	-
SRAN	03	<del>-</del> α α		8 N	2	2	2	2	2	2	2	8
IAL	O			Yes	_		_	_	_	_	_	<b>~</b>
SOC	02	<b>- ∨ ∞</b>		2	2	2	2	2	2	2	2	2
SE OF	J			Yes	_	_	_	_	_	_		<del>-</del>
HE US	01	- 0 m		2	2	2	2	2	2	2	2	6
UTT	O			Yes	_	_		_	_	_	_	<del>-</del>
READ OUT: I AM NOW GOING TO ASK ABOUT THE USE OF SOCIAL GRANTS AND SOCIAL REI		Does anyone in this household receive a social grant, a pension or social relief assistance from the Government? Exclude those persons who receive a pension from previous employment.  1 = Yes 2 = No 3 = Do not know	Does receive? Answer for each person who qualified for the grant and NOT for the person who applied on behalf of/physically receives the money. Someone who used to work for the Government and receives a pension does not get an old age grant	Read all the options	1 = Old-age grant (60-74;R1200; 75+; R1220)	2 = Disability grant (<60;R1200)	3 = Child support grant (0-16;R280)	4 = Care dependency grant (0-17;R1200)	5 = Foster child grant (<22; R770)	6 = War veterans grant (60+; R1220)	7 = Grant-in-aid (R250 and should have another grant)	8 = Social relief of distress
REA		<del>.</del> .	4.									

	ě								
60	o S	1 2	1 2	1 2	1 2	1 2	1 2	1	← 0/ m
	≺es								
08	8 S	2	2	2	2	2	2	2	<b>-</b> α ω
0	Yes	_	_	~	_	_	_	_	
	<u>8</u>	7	7	7	7	7	7	7	<del>-</del> α ω
07	Yes	~	_	~	_	~	~	_	
	, 2	2	7	7	7	2	7	2	
90	Z Kes	_	_	_	_	_	_	-	← 0/ w
	۶	0	7	CI.	~	0	2	2	
02	N <sub>o</sub>								<b>-</b> ⋈ ⋈
	Yes	_		_		_			
4	2	2	7	2	7	2	2	2	← ⋈ ⋈
04	Yes	~	_	~	_	~	~	_	
	°Z	7	7	2	7	7	7	2	<del>-</del> α ω
03	Yes I	~	_	~	_	~	~	~	
	2	7	7	7	7	7	7	7	
02	Yes	_	_	_	_	_	_	~	- α ε
		7	2	2	7	2	7	7	
5	s No	_	_	_	_	_	_	_	← N W
	Yes								
	On which days doesusually travel/ leave the house? e.g. going to work, school, visiting friends/ relatives or going to the shops. Read all.	1 = Monday	2 = Tuesday	3 = Wednesday	4 = Thursday	5 = Friday	6 = Saturday	7 = Sunday	Didtake any trip/travel in the last seven days? e.g. going to work, school, visiting friends/ relatives or going to the shops.  1 = Yes

2.2

− ი ო

0000000

SECTION 2: GENERAL TRAVEL PATTERNS

2.1

\_\_\_ | **O** | ⊗ | □

10			
60			
80			
20			
90			
02			
04			
03			
02			
10			
	Ask if No in Q 2.2  What is the main reason why did not make any trips/travel in the last seven days?  Write only ONE response  01 = Did not need to travel  02 = Financial reasons (Not enough money)	03 = Not well enough to travel/sick 04 = Too expensive 05 = Not enough time to travel 06 = Usual transport not available 07 = No available public transport 08 = Disabled: unable to leave the house 09 = Disabled: transport inaccessible 10 = Too old/young to travel 11 = Worried about safety/security/crime 12 = No interest/Nothing to see or do that appeals to me 13 = Taking care of children/sick/elderly relative 14 = No particular reason 15 = Transport strike 16 = Other, Specify	
	2.3		

Sun 7 9 Sat 60 Fri 80 Thu 07 Wed 90 Tue 02 Mon 04 Travel Day 03 02

10 Thinking about the travel day, how many trips did ... make to the following? Read out all options
Complete with a single zero in case of no trip. 04 = To take someone else somewhere05 = Educational institution 02 = In the course of work/business specify..... 03 = Visiting friends/relatives 08 = Medical services 09 = Traditional healer 10 = Welfare offices11 = Church 01 = Usual work place 07 = Looking for work sdoys = 90 12 = Home 13 = Other, 2.4

**○** ⊗

 $\infty$ 

10			<u> </u>																					
60																								
80																								
07																								
90																								
90																								
04																								
03	es																							
02	how many times																							
01	nd also specify																							
	2.5 On the travel day, which modes of travel were used and also specify how many	01 = Train (Metrorail)	02 = Long distance train/Shosholoza	03 = Bus	04 = BRT bus/IRT bus	05 = Metered taxi	06 = Commuter/short-distance/ local minibus taxi	07 = Long-distance minibus taxi	08 = Sedan taxi/ four plus one	09 = Bakkie taxi/ tambai	10 = Car/ Bakkie passenger	11 = Car/ Bakkie driver	12 = Truck/Lorry/tractor/trailer passenger	13 = Truck/Lorry tractor/trailer driver	14 = Company vehicle	15 = Scooter/motorcycle	16 = Bicycle	17 = Animal drawn transport/vehicle	18 = Boat/ ship	19 = Aircraft	20 = Gautrain	21 = Walking all the way	22 = Other (specify)	

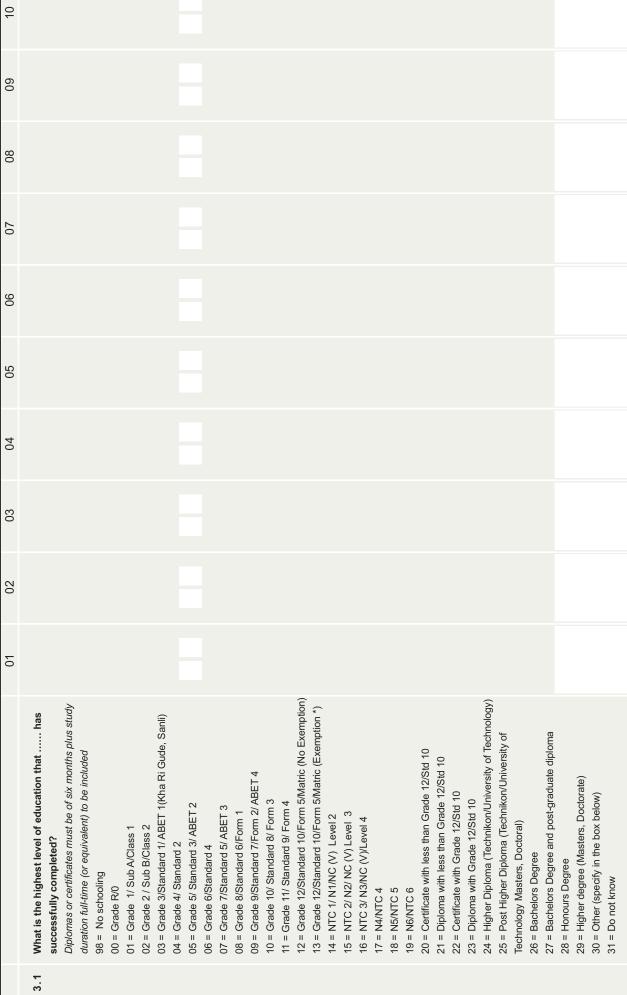
If option 21, continue with the questions, otherwise, Go to Section 3.

**O** ⊗ □

Ask	Ask if walking is the only mode of transport used by respondent (Option 21 selected in Q2.5)	sed by re	spondent	Option 2	Selected	in Q2.5)				
		01	02	03	04	05	90	07	08	60
2.6	What is the main reason why walked all the way									
	to their destination?									
	Write only ONE response									
	01 = It was by choice									
	02 = Public transport too expensive									
	03 = No available public transport									
	04 = Not enough public transport									
	05 = Nearby									
	06 = Health reasons									
	07 = To avoid traffic congestion									
	08 = No parking at destination									
	09 = Fuel costs									
	10 = Other Specify									

only mode of transport used by respondent (Option

10



SECTION 3: EDUCATION AND EDUCATION RELATED TRAVEL PATTERNS

**○** ⊗

SECTIO

10	- α ε		F 0
60	- 0 m		F 0
80	← α α		F 0
07	7 2 6		F 2
90	F 8 6		F 0
02	F 0 6		F 2
04	F 0 6		F 2
03	← 0 0		F 0
02	F 0 6		F 2
01	← α α		F 0
	Iscurrently attending any educational institution? e.g. school, technical university, university, college, home school, pre-school, crèche, day care, distance/correspondence education.  1 = Yes 2 = No	Which of the following educational institutions doesattend?  Read all the options, if more than one record the MAIN institution  1 = Pre-school (including day care, crèche, pre-primary, ECD centre, nursery school)  2 = School (including Grade R/Grade 0 learners who attend a formal school)/  (Grade 0 - Grade 12)  3 = Adult Basic Education and Training Learning Centre (ABET Centre)  4 = Literacy classes (e.g. Kha Ri Gude)  5 = Higher Educational Institution (University/University of Technology)  6 = Further Education and Training College (FET)  7 = Other College  8 = Home based education/home schooling  9 = Other than any of the above	Ismainly studying through? Read all and select ONE options 1 = Attending classes 2 = Distance learning
	3.2	ო ო	4. 6



0	
$\otimes$	
П	

		10	02	03	04	90	90	20	80	60	10
3.5	Where is the educational institution? Place where educational institution is situated.										
ro O	Suburb/Town/place name										
Q	Province 1 = Western Cape 2 = Eastern Cape	- 2	F 8	F 0	- 2	<b>←</b> 0	- 2	- 2	F 8	F 8	- 2
	3 = Northern Cape 4 = Free State	ω 4	ε 4	ω 4	ω 4	ω 4	ω 4	ω 4	ε 4	ε 4	ω 4
	5 = KwaZulu-Natal 6 = North West	O 21	യ വ	ତ ହ	ഉ ഉ	ତ ହ	ഉ ഉ	<b>Q</b> 2	യ വ	യ വ	9
	7 = Gauteng 8 = Moumalanda	<b>~</b> 80	7 8	7	<b>≻</b> ∞	7 80	<b>≻</b> ∞	<b>≻</b> ∞	7 8	7 8	<b>~</b> 80
	9 = Limpopo	o	, o	, o	o o	o o	o o	o o	o o	o	o o
v	<b>District Code</b> (Refer to back of the questionnaire)										В
σ	Travel Analysis Zone (Taz) code										
3.6	How many days per week doesusually travel to the educational institution?										

Q3.5 AND Q3.6 ARE NOT BASED ON THE TRAVEL DAY.

00 00 00 10 10 10 10 10 10 10 10 10 10 1
00 90 90 W H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W H H H W W W W H H H W
80 H H H H H H H H H H H H H H H H H H H
20 H H H H H H H H H H H H H H H H H H H
90
Σ Σ Σ Σ
Σ
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Σ Σ Σ 1 1
Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ Σ
10 I I I I I I I I I I I I I I I I I I I
a. 7 At what time did leave to go the educational institution he/she attends on the travel day?  Write the time using the 24 hour clock:  e.g. 1930 or 0520  How long didwalk to get from here to his/her first transport on the travel day?  Give the answer in minutes  998 = Do not know  888 = Not applicable  How long did wait for his/her first transport to arrive on the travel day?  Give the answer in minutes  998 = Do not know  888 = Not applicable  13.10 How long did have to walk at the end of the trip to reach his/her educational institution on the travel day?  Give the answer in minutes  998 = Do not know  888 = Not Applicable  13.11 At what time did arrive at the educational institution he/she attends on the travel day?  Write the time using the 24 hour clock:  e.g. 1930 or 0520
8.8 8.9 11.8 11.8

Sun 7

Sat

Fri D 5

Thu 4

Wed 3

Tue

Mon

Travel Day





Sun 7	10	Mode 1	Mode 2		Mode 3			
Sat 6	60	Mode 1	Mode 2		Mode 3			
Fri	80	Mode 1	Mode 2		Wode 3			
Thu	20	Mode 1	Mode 2		Mode 3			
Wed	90	Mode 1	Mode 2		Mode 3			
Tue	02	Mode 1	Mode 2		Mode 3			
Mon	04	Mode 1	Mode 2		Mode 3			
Travel Day	03	Mode 1	Mode 2		Mode 3			
	02	Mode 1	Mode 2		Mode 3			
	10	Mode 1	Mode 2		Mode 3			
		2 What mode of travel did use to get to the educational institution he/she attends on the travel day? Indicate all mode of travel in the order (Mode1,2,3) in which they are used.	01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi	07 = Long-distance minibus taxi 08 = Sedan taxi/ four plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie passenger 11 = Car/ Bakkie driver 12 = Truck/Lorry/tractor/trailer	passenger 13 = Truck/Lorvy tractor/trailer driver 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle	19 = Aricrant 20 = Gautrain 21 = Walking all the way 22 = Other (specify)	Write 88 if not applicable	

**○** ⊗

10	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
60	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
80	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
20	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
90	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
05	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
04	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
03	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
02	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
10	Mode 1	Mode 2	Mode 3	Mode 1	Mode 2	Mode 3	
Q3.13 AND Q3.14 ARE NOT BASED ON THE TRAVEL DAY.	For the mode/s selected in Q3.12, does make a payment	2 = Per return trip 3 = Per week 4 = Per month 5 = Not applicable / Go to Section 4	i do not pay 6 = Do not know Go to Section 4	For the mode selected above, how much did it costas per payment method selected in Q3.13?			
33.13 AN	3.13			3.14			

d above)	,
15 years an	
ople aged 1	
NS (Ask pe	
L PATTERI	<b>&gt;</b> :
TED TRAVE	<b>1E TRAVEL DA</b>
ORK RELAT	T BASED ON TH
CTION 4: WORK RELATED TRAVEL PATTERNS (Ask people aged 15 years and abov	TO Q4.8 ARE NOT BASED ON THE TRAVEL DAY.

**○** ⊗

SECTION 4: WORK RELATED TRAVEL PATTERNS (Ask people aged 15 years and above)  4.1 Doeshave a job/run a business or did hashe down when the hask seven days.  1.1 In 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10	<b>⊢</b> α α	
aged 15 years and above)  03		60	← 0 m	
aged 15 years and above)  03		80	← 0 m	
aged 15 years and above)  03 04 05 06  1 1 1 1  2 2 2 2  3 3 3 3		07	F 0 0	
aged 15 years and above)  1 1 2 2 3 3 3		90	F 0 6	
	(avoç	02	<b>⊢</b> α α	
	ears and al	04	<b>⊢</b> α α	
work related pay.  Be not based on the Travel Day.  In of a jobrum a business or did at any work in the last seven days, the activity on which the or illness?  In one give the activity on which the main reason why did not ring the last seven days?  Informal sector (registered) → Go to Q4.4	aged 15 ye	03	<b>−</b> α α	
WORK RELATED TRAVEL PATTERNS (A  E NOT BASED ON THE TRAVEL DAY.  1 have a job/run a business or did to any work in the last seven days, 1 liness?  Ann one give the activity on which formal sector (registered) → Go to Q4.4  Informal sector	sk people	02	F 0 6	
WORK RELATED TRAVEL PAY.  E NOT BASED ON THE TRAVEL DAY.  have a job/run a business or did do any work in the last seven days,  nelshe was absent from work due or illness?  nelshe was absent from work due or illness?  nelshe was absent from work due or illness?  than one give the activity on which e is spent per week formal sector (registered) → Go to Q4.4  informal sector (registered) → Go to Q4.4  informal sector  weason work on the work of the work asonal worker, not working presently ooses not to work nnot find work alth reasons is on leave her (specify)	TERNS (A	10	<b>−</b> α α	
Does I he/she deven if he/she deven if he/she deven if hore try most tim to leave If what is work du to leave If what is work du to leave If what is work du to leave If most tim to leave If most time If most t	TION 4: WORK RELATED TRAVEL PATO 0 Q4.8 ARE NOT BASED ON THE TRAVEL DAY.		do any work in the last seven do any work in the last seven he/she was absent from wo e or illness? than one give the activity on v me is spent per week — formal sector (registered) — informal sector	What is the main reason why did not work during the last seven days?  1 = Scholar or student 2 = Homemaker or housewife 3 = Pensioner / retired person/ too old to work 4 = Seasonal worker, not working presently 5 = Chooses not to work 6 = Cannot find work 7 = Health reasons 8 = Was on leave 9 = Other (specify)
9.8ECT 4.1 4.2	SECT Q4.1 TC		4 L	2.

		01	02	03	04	02	90	0	08	60	10
£.	If is currently not working or running his/her own business, is he/she willing to work?  1 = Yes 2 = No Go to Section 5	<b>←</b> Ø	← N	← N	← N	<b>⊢</b> N	<b>⊢</b> N	<b>←</b> 0	<b>⊢</b> N	<b>←</b> Ø	← Ø
4.4	Where is's workplace? Place where the workplace is situated?										
Ø	Suburb/Town/place name										
۵	Province 1 = Western Cape 2 = Eastern Cape 3 = Northern Cape 4 = Free State 5 = KwaZulu-Natal 6 = North West 7 = Gauteng 8 = Mpumalanga 9 = Limpopo	- 0 6 4 5 9 F 8 6	- C & 4 & 0 L & 6	- 0 0 4 to 0 1 to 0	- 0 6 4 5 9 F 8 6	- 0 6 4 5 9 F 8 6	- 0 % 4 % 0 \ % 0	- 0 % 4 to 0 b % 0	- 0 0 4 G O F 8 O	- 0 6 4 5 9 F 8 6	- 0 % 4 % @ F % 0
U	District Code (Refer to back of the questionnaire)										
ס	_										
4.5	How many days per week does usually travel to work? Write 8 if he/she works from home										



10		F 0 6							
60		F 0 0							
80		F 0 0							
20		F 0 0							
90		F 0 0							
90		F 0 6							
04		F 0 6							
03		F 0 0							
02		F 0 0							
10		F 0 6							
	ner <u>main</u> job? onus, after any ole figures, IOW"	2.4.6	NOW" <b>in Q 4.6</b> oplicable code.	Annually	NONE R1-R2 400 R2 401 - R6 000	R6 001 - R12 000 R12 001 - R18 000 R18 001 - R30 000	R30 001 - R42 000 R42 001 - R54 000 R54 001 - R72 000	R72 001 - R96 000 R96 001 - R132 000 R132 001 - R192 000	R192 001 - R360 000 R360 001 OR MORE DON'T KNOW REFUSE
	alary/pay at his/. Illowances and b. Ive amount in wh ecimals. E" <b>or</b> "DO NOT KN	unt is given in C	USE" or "DO NOT k 3 and mark the ap	Monthly	NONE R1-R200 R201 - R500	R501 – R1 000 R1 001 - R1 500 R1 501 = R2 500	R2 501 - R3 500 R3 501 - R4 500 R4 501 - R6 000	R6 001 - R8 000 R8 001 - R11 000 R11 001 - R16 000	R16 001 - R30 000 R30 001 OR MORE DON'T KNOW REFUSE
	What is's total salary/pay at his/her main job? Including overtime, allowances and bonus, after any lax or deductions. Give amount in whole figures, without any text or decimals.  If 'NONE', "REFUSE" or 'DO NOT KNOW"  WRITE 999 999 999  Go to Q 4.8	Ask only if an amount is given in Q 4.6 Is this 1 Per week 2 = Per month 3 = Annually  ■ Go to Q 4.9	Only if "NONE", "REFUSE" or "DO NOT KNOW" in Q 4.6 Show prompt card 3 and mark the applicable code.	Weekly	NONE R1 - R46 R47 - R115	R116 - R231 R232 - R346 R347 = R577	R578 - R808 R809 - R1 039 R1 040 - R1 386	R1 387 - R1 848 R1 849 - R2 540 R2 541 - R3 695	R3 696 - R6 928 R6 929 OR MORE DON'T KNOW REFUSE
	4.6 What Included tax or without If 'NC WRIT	4.7 Ask ls ti 1= t 1 = 2 2 = 2 3 = 3	<b>4.8 Onl</b> Sho		00 03 03	00 05 06	07 08 09	2 7 2	£ 4 £ £ £

**○** ⊗ □

If respondent works from home — Go to section 5

Tavel day?    Tavel days   Tave
Other   Othe
1 day?
1
H
day?
Iday?  H H M M H H M M H H M M H H M M H H M M H H M M H H M M H H M M H H M M H H M M H H M M H H M M M M H H M M M M H M
day?
I day?
Iday?  Iday?  Iday?  Iday?
ravel day?
At what time didleave to go to work on the travel day?  Write the time using the 24 hour clock: e.g. 1930 or 0520  At what time did get to the place of work on the travel day? Write the time using the 24 hour clock: e.g. 1930 or 0520  Did walk all the way to work on the travel day?  1 = Yes — Go to Section 5 2 = No  Did cycle all the way to work on the travel day? 1 = Yes — Go to Section 5 2 = No  Did drive all the way to work on the travel day? 1 = Yes 2 = No  Which of the following vehicles did drive to work on the travel day? 1 = Truck/Lorry 2 = Car/ Bakkie 3 = Motor cycle/Scooter 4 = Minibus (private) 5 = Other (specify)
4.19 4.13 4.13 4.14

Sun 7

Sat

Fri 5

Thu 4

Wed 3

Tue

Mon

Travel Day





Sun 7

Sat 6

Fri D 5

Thu

Wed

Tue

Mon

Travel Day

1 Mode 1 Mode 1 Mode 2 Mode 2 Mode 2 Mode 2 Mode 3 Mode 4										
What mode of travel def use to get to his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of employment on the travel day? his her place of travel in this braid his her place that he place that her place tha	10	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel id i use to get to	60	Mode 1	Mode 2	Mode 3	Mode 4					
Minker place of mayol dir use to get to   Minker place of mayol dir use to get to   Minker place of mayol direct and another place of mayol must not the travel day?   Minker place of mayol must not the travel day?   Minker place of mayol must not the travel day?   Minker place of mayol must not the travel day?   Minker place of mayol must not the travel day?   Minker place of mayol must not the travel day?   Minker place of mayol must not the must not t	08	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to	20	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to his/her place of employment on the travel day? Indicate all modes of travel did use to get to his/her place of employment on the travel day? Indicate all modes of travel day Indicate all modes of travel are used. Indicate all travel are travel are used. Indicate all travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate all travel are travel are travel are used. Indicate are travel are	90	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to hisher place of employment on the travel day? hisher place of employment on the travel day? hisher place of employment on the travel day? hisher place of of travel in the order (Mode 1, 2, 34) in which they are used. O1 = Train (Metrorial) O2 = Long distance train/Shosholoza O3 = Bus Sabered than Shosholoza O4 = BRT bus/IRT bus O6 = Commuter/short-distance flocal minibus stay O7 = Long-distance minibus taxi O8 = Saden taxif four plus one O8 = Saden taxif four plus one O9 = Bakke davier O7 = Long-distance minibus taxi O8 = Saden taxif four plus one O9 = Saden taxif four pl	05	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to his/her place of employment on the travel day? his/her place of employment on the travel day? his/her place of fravel in the order (Mode 1, 23.4) in which they are used. 01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/HT bus 05 = Metrered tax 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi four plus one minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi four plus one 10 = Car/ Bakkie divier 11 = Car/ Bakkie divier 12 = Truck/Lory/tractor/trailer 13 = Truck/Lory/tractor/trailer 14 = Company vehicle 15 = Scooter/motorcycle 16 = Busycle 17 = Animal drawn transport/vehicle 18 = Boad ship 19 = Advircant 21 = Walking all the way 22 = Other (specify)  Write 88 if not applicable	04	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to his/her place of employment on the travel day? Indicate all modes of travel in the order (Mode 1.2.3.4) in which they are used. O1 = Train (Metrorail) Mode 2 C2 = Long distance train/Shosholoza O3 = Bus O4 = BRT bus/IRT bus O6 = Metered taxi O6 = Commuter/short-distance/ local milibus taxi O7 = Long-distance minibus taxi O6 = Commuter/short-distance/ local milibus taxi O7 = Long-distance minibus taxi O8 = Sedan taxi/ four plus one O9 = Bakkie taxi/ tambai O7 = Long-distance minibus taxi O8 = Sedan taxi/ four plus one O9 = Bakkie taxi/ tambai O7 = Long-distance minibus taxi O8 = Sedan taxi/ four plus one D9 = Bakkie taxi/ tambai O7 = Long-distance minibus taxi O8 = Sedan taxi/ four plus one D9 = Bakkie taxi/ tambai O7 = Long-distance minibus taxi O8 = Sedan taxi/ four plus one D9 = Baycila diversity O9 = Gautrain O1 = Cautrain O2 = Cautrain O2 = Cautrain O2 = Cautrain O2 = Cautrain O3 = Use of taxi O4 = Cautrain O5 = Cautrain O6 = Coutrain O7 = Cautrain O	03	Mode 1	Mode 2	Mode 3	Mode 4					
What mode of travel did use to get to hisher place of employment on the travel day? Indicate all modes of travel in the order (Mode1, 2, 3, 4) in which they are used. 01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 06 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ four plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie passenger 11 = Car/ Bakkie driver 12 = Truck/Lory/tractor/trailer 13 = Truck/Lory/tractor/trailer 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Boat/ ship 19 = Aircraft 20 = Gautrain 21 = Walking all the way 22 = Other (specify) Write 88 if not applicable	02	Mode 1	Mode 2	Mode 3	Mode 4					
	10	Mode 1	Mode 2	Mode 3	Mode 4					
4.21		What mode of travel did use to get to his/her place of employment on the travel day? Indicate all modes of travel in the order (Mode1,2,3,4) in which they are used.  O1 = Train (Metrorail)  O2 = Long distance train/Shosholoza	03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi	07 = Long-distance minibus taxi 08 = Sedan taxi/ four plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie passenger 11 = Car/ Bakkie driver	12 = Truck/Lorry/tractor/trailer passenger 13 = Truck/Lorry tractor/trailer driver 14 = Company vehicle 15 = Scooter/motorcycle	16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Boat/ ship	20 = Gautrain 21 = Walking all the way 22 = Other (specify)	Write 88 if not applicable		
		4.21								

Sun 7

Sat

Fri D 5

Thu 4

Wed 3

Tue

Mon 1

Travel Day



(	)	
0	3	

	10	Mode 1	M ode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	60	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	80	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	20	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	90	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	90	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	04	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	03	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
	02	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Wode 3	Mode 4
.,	10	Mode 1	Mode 2	Mode 3	Mode 4	Mode 1	Mode 2	Mode 3	Mode 4
Q4.22 AND Q4.23 ARE NOT BASED ON THE TRAVEL DAY.		4.22 For the modes of travel used, how much did it costto travel to work?				4.23 For the modes of travel used, did make a payment 1 = Per single trip 2 - Der system trip	3 = Per return up 3 = Per week 4 = Per month 5 = Not applicable / I do not pay 6 = Do not know		
Q4.2		4				4			

0 7 7	
60 7 7	
88 7 7	
70 1 2	
90 7 7	
2 1 2	
7 7 7	
2 7 03	
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
70 7 2	
Does's employer give him/her cash for public transport to travel to and from work?  1 = Yes 2 = No  How much is this worth per month?  Give the answer in Rand  Give the answer in minutes 998 = Do not know 888 = Not applicable  How long did wait for his/her first transport to arrive on the travel day?  Give the answer in minutes 998 = Do not know 888 = Not applicable  How long did wait for his/her first transport to arrive on the travel day?  Give the answer in minutes 998 = Do not know 888 = Not applicable  How long did walk at the end of the trip to reach his/her place of work on the travel day?  Give the answer in minutes 998 = Do not know 888 = Not applicable  How long did walk at the end of the trip to reach his/her place of work on the travel day?  Give the answer in minutes 998 = Do not know 888 = Not applicable	
4.24 Does trans 1 = 2 = 2 = 2 = 6   How   first t Give   998 = 888	

Sun 7

Sat

Fri D 5

Thu 4

Wed 3

Tue

Mon 1

Travel Day



r both.	
ight trip(s) o	JAY.
ay or overn	THE TRAVEL I
can be a d	F BASED ON 1
Business trips can be a day or overnight trip(s) or both.	SECTION 5 IS NOT BASED ON THE TRAVEL DAY.

10	- 0		
60	F 0		
80	<b>⊢</b> ∨		
20	<b>←</b> Ø		
90	F 0		
90	<b>←</b> ∅		
04	F 0		
03	F 0		
02	← N		
10	← N		
	Has undertaken any business trip(s) longer than 20 km away from his/her usual place of wor within the RSA in the past calendar month? 1 = Yes 2 = No	How many business trips has undertaken in the past calendar month? Write the number of trips	Thinking of 's last business trip what mode of travel did use for the longest part of the trip?  01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ four plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie driver 11 = Car/ Bakkie driver 12 = Truck/Lorry/tractor/trailer driver 13 = Truck/Lorry/tractor/trailer driver 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Boat' ship 19 = Aircraft 20 = Gautrain 21 = Walking all the way 22 = Other (specify) Write 88 if not applicable
	5.1	5.2	ເບ ເບ

		LO	70	03	04	CO	90	/0	000	60	2
5.4	How much did it cost for the trip there and back?  Write costs for transport recorded in Q5.3.  (Provide in Rands with no decimals or cents)										
5.5	What was the main destination on this trip?										
a	Suburb/Town/place name										
۵	Province  1 = Western Cape 2 = Eastern Cape 3 = Northern Cape 4 = Free State 5 = KwaZulu-Natal 6 = North West 7 = Gauteng 8 = Mpumalanga 9 = Limpopo	- N W 4 W 0 F 80 0	- N & 4 & & P & & &	- N W 4 W W P & O	- N W 4 M O F & O	- N W 4 W W P & O	- N W 4 W O P & O	- N W 4 W W P & O	- 0 6 4 6 9 F 8 0	- 0 % 4 % © \ % O	- 0 m 4 m 0 r m 0
ט ס	District Code (Refer to back of the questionnaire)  Travel Analysis Zone (Taz) code										

(above)		
5 years and	PS	
ople aged 1	/ERNIGHT TRI	
RNS (Ask pe	T DAY AND OV	
ECTION 6: OTHER TRAVEL PATTERNS (Ask people aged 15 years and above)	<b>ECTION 6 IS BASED ON THE MOST RECENT DAY AND OVERNIGHT TRIPS</b>	
THER TRA	<b>ASED ON THE</b>	
ECTION 6: C	CTION 6 IS BA	

	10		- 0	10 00 00 00 00 00 00 00 00 00 00 00 00 0	
	60		F 8	00 00 00 00 00 00 11 11 13	
	80		7 7	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	20		- 2	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	90		- 2	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	90		- 2	2 2 8 4 8 8 6 8 6 7 7 8 4	
ove)	04		F 0	1	
'5 years and above) PS	03		7 7	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
iged 15 ye. HT TRIPS	02		- 2	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
ik people a	10		7 2	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
SECTION 6: OTHER TRAVEL PATTERNS (Ask people aged 1 SECTION 6 IS BASED ON THE MOST RECENT DAY AND OVERNIGHT TRI		Day trips	Has undertaken any day trip/s away from this home in the past twelve months?  1 = Yes  2 = No	What was the main purpose of the trip? (recent trip)  Mark ONE response only  01 = Home for leisure/holiday  02 = Leisure/ holiday  03 = Shopping – business  04 = Shopping – personal  05 = Sporting – spectator  06 = Sporting – participant  07 = Home to visit friends and/or family  08 = Visit friends and/or family  09 = Funeral  10 = Medical  11 = Wellness (e.g. spa, health farm)  12 = Religious  13 = Wedding  14 = Other, (Specify)	
SECT			6.1	9.7	

	6.3			4.
	What was the main mode of travel used for this trip? This is the mode of travel used for the longest part of the journey in terms of distance to reach the destination.	01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ tor plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie passenger 11 = Car/ Bakkie driver 12 = Truck/Lorry/tractor/trailer passenger 13 = Truck/Lorry/tractor/trailer 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Boat' ship	20 = Gautrain 21 = Walking all the way 22 = Other (specify) Write 88 if not applicable	How much did it cost to reach the main destination?
)				
-				
)				
)				
5				
)				
)				
2				



**○** 

10		- 0	02 03 04	00 00 00 00 00 00 00 00 00 00 00 00 00
60		F 0	01 03 04	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
80		- 2	01 02 03	10 00 00 00 00 00 00 00 00 00 00 00 00 0
20		- 2	02 03 04	00 00 00 00 00 00 00 00 00 00 00 00 00
90		- 2	02 03 04	00 00 00 00 00 00 00 00 00 00 00 00 00
90		F 0	00 03 04	00 00 00 00 00 00 00 00 00 00 00 00 00
04		- 2	02 03 04	00 00 00 00 00 00 00 00 00 00 00 00 00
03		F 0	01 02 03	00 00 00 00 00 00 11 11 13
02		- 0	03 03 04 04	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10		F 0	02 03 04	00 00 00 00 00 00 00 11 11 13
	Overnight trips	Has undertaken any overnight trip/s away from this home in the past twelve months?  1 = Yes  2 = No	How often didundertake overnight trip/s in the past twelve months? (Mark one option)  1 = Weekly (four or more times in a month)  2 = One to three times in a month  3 = Every two to three months (4 to 6 times in a year)  4 = One to three times in a year	What was the main purpose of the trip? (recent trip) Mark ONE response only 01 = Home for leisure/holiday 02 = Leisure/ holiday 03 = Shopping – business 04 = Shopping – personal 05 = Sporting – spectator 06 = Sporting – participant 07 = Home to visit friends and/or family 08 = Visit friends and/or family 09 = Funeral 10 = Medical 11 = Wellness (e.g. spa, health farm) 12 = Religious 13 = Wedding 14 = Other, (Specify)
		6.5	9.	6.7



_		
2		
60		
00		
6		
3		
CO		
40		
SO		
70		
-0		
	What was the main mode of travel used to reach the main destination?  This is the mode of travel used for the longest part of the journey in terms of distance to reach the destination.  01 = Train (Metrorall) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ four plus one 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie driver 11 = Car/ Bakkie driver 12 = Truck/Lorry/tractor/trailer driver 13 = Truck/Lorry/tractor/trailer 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Boat/ ship 19 = Aircraft 20 = Gautrain 21 = Walking all the way 22 = Other (specify)	How much did it cost to reach the main destination?
	ω ω	6.9

**○** ⊗

10				
60				
80				
20				
90				
90				
04				
03				
02				
10				
	What was the main mode of travel used to return to the usual place of residence?  This is the mode of travel used for the longest part of the journey in terms of distance to reach th destination.	01 = Train (Metrorail) 02 = Long distance train/Shosholoza 03 = Bus 04 = BRT bus/IRT bus 05 = Metered taxi 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ tambai 10 = Car/ Bakkie taxi/ tambai 11 = Car/ Bakkie diver 12 = Truck/Lorry/tractor/trailer passenger 13 = Truck/Lorry/tractor/trailer 14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal drawn transport/vehicle 18 = Bayt	19 = Aircraft 20 = Gautrain 21 = Walking all the way 22 = Other (specify) Write 88 if not applicable	How much did it cost to return to his/her usual place of residence?
	6.10			6.11

**○** ⊗ □

### SECTION 7: GENERAL HOUSEHOLD INFORMATION

r.	Indicate the type of main dwelling that the household occupies  01 = Dwelling/house or brick/concrete block structure on a separate stand or yard or on farm  02 = Traditional dwelling/hut/structure made of traditional materials  03 = Flat or apartment in a block of flats  04 = Cluster house in complex  05 = Town house (semi-detached house in complex)  06 = Semi-Detached house  07 = Dwelling/house/flat/room in backyard  08 = Informal dwelling/shack in backyard  09 = Informal/squatter settlement or on farm  10 = Room/ flatlet on a property or a larger  dwelling/ servants' quarters/granny flat  11 = Caravan/tent	Main Dwelling	
7.2	What was the total household expenditure in the last month? Include money spent on food, clothing, transport, rent and rates, alcohol and tobacco, school fees, entertainment and any other expenses.  01 = R0  02 = R1 - R199  03 = R200 - R399  04 = R400 - R799  05 = R800 - R1 199  06 = R1 200 - R1 799  07 = R1 800 - R2 499  08 = R2 500 - R4 999  09 = R5 000 or more  11 = Do not know  12 = Refuse		

Ves No		1	1	1	1	1	1	1	1						7 7
What are the sources of income for this household? Read all the options	1 = Salaries/wages/commission	2 = Income from a business	3 = Remittances/ including child maintenance	4 = Pensions	5 = Grants	6 = Sales of farming products and services	7 = Income from UIF	8 = Other income sources e.g. rental income, interest	9 = No income — Go to Q 7.7	Which one of the above income sources usually provides the most money for the household? (choose only one source) Write the option number in the block provided	If the household receives an income from remittances please specify how much they get per month.	If the household receives an income from pensions or retirement annuities (Not old age grant) please specify how much they get per month.	How many bicycles that are in working order does this household own and use for transport?	How many animal drawn vehicles that are in working order does this household own and use for transport?	Do you own animals that can pull animal drawn vehicles? 1 = Yes 2 = No
7.3										7.4	7.5	7.6	7.7	7.8	7.9





## SECTION 7: GENERAL HOUSEHOLD INFORMATION

7.10	How many of the following motor vehicles in working order does this household have available for private use (exclude tractors) (Read out all options)	
	Motorcycle/Scooter	
	Car/Bakkies/Station wagons/4x4s owned by employer/company	
	Car/Bakkies/Station wagons/ 4x4s owned by the household	
	Car/Bakkies/Station wagons/ 4x4s owned by relatives / friends	
	Minibus/Kombis	
	Trucks	
	Other, specify	

#### **SECTION 7: GENERAL HOUSEHOLD INFORMATION**

7.11		How do members of your household get to the nearest of each of the following facilities? And how long does it take to get there in minutes from this household to the facility (door to door)? (If more than one member of the household travels to a facility, record the mode of travel used by the person who goes there most often. If more than one mode of travel is used, mark the one used over the longest distance) Write the appropriate codes	avels to a facility, record the mode of
	Facility	Codes:  01= Walk  02 = Train  03 = Bus  04 = Minibus taxi/bakkie taxi/sedan taxi  05 = Metered Taxi  06 = Car/ Bakkie/ Minibus (private)  07 = Truck/ Lorry  08 = Tractor/ Trailer  09 = Motorcycle/ Scooter  10 = Bicycle  11 = AnimalTransport  12 = Do not need to go there	Time in Minutes (single trip) 998 = Do not know 888 = Not applicable/No Service
	Food or grocery shops		
	Other shops		
	Traditional healer		
	Church		
	Medical Services		
	Post office/ agent		
	Welfare office		
	Police station		
	Municipal office		
	Tribal authority		
	Financial services/Banks		





# SECTION 8: ATTITUDES AND PERCEPTIONS ABOUT TRANSPORT This section covers information on your attitudes towards transport services.

		Φ Δ σ	0 0
When travelling, which factor influences your households' choice of mode of travel most?  (Mark one option)  01 = Travel time  02 = Travel cost  03 = Safety from accidents  04 = Security from crime  05 = Flexibility (you can travel wherever you want, whenever you want)  06 = Drivers attitude  07 = Distance from home to transport	08 = Comfortability 09 = Timetable not available/ information inaccurate 10 = Reliability 11 =Other, Specify	How long does it take in minutes to walk to the nearest?  a = Taxi rank/ route ( Minibus, sedan and/or bakkie taxi)  b = Bus Stop/ station  c = Bus Rapid Transport (BRT)/ IRT station  d = Passenger Train Station	888 = Not applicable/ No service 998 = Do not know
8 2		8.3	
Problem 1			
What are the two most important transport-related problems experienced by the household?  01 = No buses available 02 = No buses at specific times e.g. late at night 03 = Buses too far 04 = Buses too expensive 05 = Reckless driving by bus drivers 06 = No taxis available 07 = No taxis at specific times e.g. late at night 08 = Taxis too far 09 = Taxis too far	10 = Reckless driving by taxi drivers 11 = No trains available 12 = No trains at specific times e.g. late at night 13 = Trains too far 14 = Trains too expensive 15 = Trains are not reliable 16 = Crime 17 = Overload 18 = Rude drivers 19 = Poor condition of roads 20 = Parking	22 = Congestion 23 = No transport problems 24 = Other (specify) 88 = Not applicable	

Mode 1	Mode 2		
What are the two main modes of travel does the household usually use?  01 = Train (Metrorail)  02 = Long distance train/Shosholoza 03 = Buz	05 = Metered taxis 06 = Commuter/short-distance/ local minibus taxi 07 = Long-distance minibus taxi 08 = Sedan taxi/ four one plus 09 = Bakkie taxi/ tambai 10 = Car/ Bakkie/ Minibus (private) passenger 11 = Carl/ Bakkie/ Minibus (private) driver 12 = Truck/Lorry/tractor/trailer passenger 13 = Truck/Lorry/ tractor/trailer driver	14 = Company vehicle 15 = Scooter/motorcycle 16 = Bicycle 17 = Animal transport 18 = Boat/ ship 19 = Aircraft 20 = Gautrain 21 = Walking all the way 22 = Other (specify)	
∞ 4.			

8.7																							
- 2		Reason 1				Reason 2																	
Have you used a passenger train in the past calendar month? 1 = Yes —► Go to Q8.7 2 = No	Give two reasons why you did not use a passenger train in the past calendar month?	01 = No Train available at all	02 = Train Not available often enough	03 = Train Not available at the right times	04 = Train too expensive	05 = Too much crime (Too dangerous)	06= Travel time too long/Too slow	07 = Trains too crowded	08 = Trains always late	09= Trains don't go where needed	10= Station too far from home	11= Station too far from destination	12 = Have to change transport (transfer)	13 = No knowledge of timetable and routes	14 = Prefer private transport	15 = Prefer taxi	16 = Prefer bus	17 = Can walk	18 = Don't travel much	19 = Other (specify in the block)	G0 10 40.0		

8.7	How satisfied or dissatisfied are you with the following aspects of the passenger train service? (Read out all options)				
		Metrorail	Shosholoza	Bluetrain	Gautrai
	$a=\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	В	В	В	Т
	b = The travel time by train	Q	Q	Q	Ω
	c = Security on the walk to/from the station	U	O	O	O
	d = Security at stations	р	σ	ρ	ъ
	e = Security on the train	Φ	Φ	Φ	Φ
	f = The level of crowding in the train	<b>-</b>	4	4-	<b>—</b>
	g = Safety from accidents	ס	D	D	ס
	h = The frequency of trains during peak period	드	ح	ح	ے
	i = The frequency of trains during off-peak period				
	j = The punctuality of trains				
	k = The train fares	×	*	*	×
	I = The facilities at the stations e.g. toilets, offices	-	-	-	
	m = The train service overall	Ε	Ε	Ε	_
	1 = Very Satisfied 2 = Satisfied 3 = Dissatisfied 4 = Very Dissatisfied 8 = Not applicable				

**○** ⊗

**○** ⊗

∞	Have you used a bus in the past calendar month? 1 = Yes	F 0	
6.8	Give two reasons why you did not use a bus in the past calendar month?		
	01 = No Bus available at all	000	
	02 = Bus Not available often enough	Leason	
	03 = Bus Not available at the right times		
	04 = Bus too expensive		
	05 = Too much crime (Too dangerous)		
	06= Travel time to long/Too slow	Reason 2	
	07 = Buses too crowded		
	08 = Buses always late		
	09= Buses don't go where needed		
	10= Bus stop too far from home		
	11= Bus stop too far from destination		
	12 = Have to change transport (transfer)		
	13 = No knowledge of timetable and routes		
	14 = Prefer private transport		
	15 = Prefer taxi		
	16 = Prefer train		
	17 = Can walk		
	18 = Don't travel much		
	19 = Too many accidents		
	20 = Other (specify)		
	50 50 50 50 50 50 50 50 50 50 50 50 50 5		

 8.10	How satisfied or dissatisfied are you with	Bus	BRT/IRT bus
	the following aspects of the bus service?	ď	σ
	(Read out all options)	σ	ס
	a = The distance between the bus stop and your home	Q	٩
	b = The travel time by bus		
	c = Security on the walk to/from the bus stop	O	O
	d = Security at the bus stops	7	7
	e = Security on the buses	5	5
	f = The level of crowding in the bus	Φ	Φ
	g = Safety from accidents		,
	h = The frequency of buses during peak period	-	-
	i = The frequency of buses during off-peak period	0	0
	j = The punctuality of buses		)
	k = The bus fares	ح	ᅩ
	I = The facilities at the bus stops e.g. shelters		
	m = Behaviour of the bus drivers towards passengers	-	-
	n = The bus service overall		
	o = Availability of information		
	1 = Very Satisfied	×	×
	2 = Satisfied	-	-
	3 = Dissatisfied		
	4 = Very Dissatisfied	Ε	Ε
	8 = Not applicable	0	0

How satisfied or dissatisfied are you with the following aspects of the minibus taxi service?  (Read out all options)  a = The distance between the taxi rank/ route and your home  b = The travel time by taxi  c = Security on the walk to/from the taxi rank  d = Security on the taxi services  e = Security on the taxis	f = The level of crowding in the taxis g = Safety from accidents h = The frequency of taxi during peak period i = The frequency of taxi during off-peak period	k = The taxi fares  I = The facilities at the taxi ranks e.g. shelters  m = Roadworthiness of taxis  n = Behaviour of the taxi drivers towards passengers  o = The taxi service overall  1 = Very Satisfied  2 = Satisfied  3 = Dissatisfied  4 = Very Dissatisfied  8 = Not applicable	
.13			
n 2 1	on 2		

q

O

р

Φ

g 4 Ε 0

#### used a minibus taxi in the past calendar month? —► Go to Q8.13 Give two reasons why you did not use minibus taxis in the past calendar month? 01 = No Taxis available at all 02 = Taxis Not available often enough 03 = Taxis Not available at the right times 04 = Taxis too expensive 05 = Too much crime (Too dangerous) 06 = Taxis too crowded 07 = Taxis don't go where needed 08 = Prefer private transport 09 = Prefer train 10 = Prefer bus 11 = Can walk 12 = Don't travel much 13 = Too much violence/ wars 14 = Have to pay cash 15 = Drivers are rude 16 = Taxis Not roadworthy 17 = Too many accidents 18 = Drivers drive recklessly 19 = Other (specify) End of interview 8.12

End of interview

∑ ∑ H H INTERVIEW END TIME Indicate the column number of the person who answered most of the questions in Sections 1-8 Interviewer to answer questions below: 8.14 Thank the respondent!

40

**○** 

•		-	
	_	٠	

**○** 

**○** ⊗

42

+

Province	District Name	Province	District Name
1 = Western Cape	0 >	6 = North West	35 = Bojanala District Municipality 36 = Ngaka Modiri Molema District Municipality 37 = Dr Ruth Segomotsi Mompati District Municipality 38 = Dr Kenneth Kaunda District Municipality
	uɔ = Eden District Municipality 06 = Central Karoo District Municipality	7 = Gauteng	39 = Sedibeng District Municipality
2 = Eastern Cape	07 = Cacadu District Municipality 08 = Amatole District Municipality 09 = Chris Hani District Municipality 10 = Ukhahlamba District Municipality		40 = Metsweding District Municipality 41 = West Rand District Municipality 42 = Ekurhuleni Metropolitan Municipality 43 = City of Johannesburg Metropolitan Municipality 44 = City of Tshwane Metropolitan Municipality
	11 = O N ranno District Municipality 12 = Alfred Nzo District Municipality 13 = Nelson Mandela Bay Metropolitan	8 = Mpumalanga	45 = Gert Sibande District Municipality 46 = Nkangala District Municipality
3 - Northorn Cano	14 - Kaologodi Dietrict Municipality		4/ = Enlanzeni District Municipality
	14 - Ngalagadi District Municipality 15 = Namakwa District Municipality 16 = Pixley Ka Seme District Municipality 17 = Siyanda District Municipality 18 = Frances Baard District Municipality	9 = Limpopo	48 = Mopani District Municipality 49 = Vhembe District Municipality 50 = Capricorn District Municipality 51 = Waterberg District Municipality 52 = Capric Municipality
4 = Free State	<ul> <li>19 = Xhariep District Municipality</li> <li>20 = Motheo District Municipality</li> <li>21 = Lejweleputswa District Municipality</li> <li>22 = Thabo Mofutsanyane District Municipality</li> <li>23 = Fezile Dabi District Municipality</li> </ul>		98 = Don't know
5 = KwaZulu-Natal	24 = Ugu District Municipality 25 = uMgungundlovu District Municipality 26 = uThukela District Municipality 27 = uMzinyathi District Municipality 28 = Amajuba District Municipality 29 = Zululand District Municipality 30 = uMkhanyakude District Municipality 31 = uThungulu District Municipality 32 = ilembe District Municipality 33 = Sisonke District Municipality 33 = Sisonke District Municipality 34 = EThekwini Municipality		

**○** ⊗

## Annexure B: Comparison of the 2013 and 2003 questionnaires

Statistics South Africa

# Comparative analysis: National Household Travel Survey questionnaires 2003 and 2013

### Flap

No.	Question	2003	2013
4	First name and surname	Equivalent	
3	Four-by-four rule	Equivalent	
O	Sex	Equivalent	
0	Date of birth		New question
	Population group	Equivalent	
U	Driver's licence (Age >=16)		New question
(D	Type of driver's licence	Equivalent Q4.1	
_	Other person residing in the household but not presently here?   Equivalent QF	Equivalent QF	

### Section 1: Household characteristics

No.	Question	2003	2013
<b>General functioning</b>	nctioning		
1.1	Difficulty in seeing, hearing, walking/climbing, remembering	Equivalent Q2.2	New response
	and concentrating, self-care, communicating		categories
1.2	Use of assistive devices		New question
Social gran	Social grants and social relief		
1.3	Receive social grant, pension or social relief		New question
1.4	Type of grant		New question

### Section 2: General travel patterns

No.	Questions	2003	2013
2.1	On which day does usually travel/leave the house?		New question
2.2	Did take any trip/travel in the past seven days?	Equivalent Q2.3	Q2.2
2.3	Main reasons for not making any trip/travel. Ask if 'No' to Q2.2	Equivalent Q2.4	Q2.3
			The question is
			rephrased and more
			response categories are
			added
2.4	Number of trips made	Equivalent Q2.5	Q2.4
2.5	Modes of travel used	Equivalent Q2.6	Q2.5
			More response
			categories are added
5.6	Main reasons why walked all the way to the destination?		New question

Section 3: Education and education related patterns

No.	Questions	2003	2013
3.1	Highest level of education	Equivalent	
3.2	Is currently attending an educational institution?	Equivalent	
3.3	Type of educational institution	Equivalent	
3.4	Is mainly studying through attending classes or distance learning?	Equivalent	
3.5	Where is the educational institution?	Equivalent	TAZ code has
	a. Suburb		been added to
	b. Province		the response
	c. District code		categories
	d. Travel Analysis Zone (TAZ) code		
3.6	Number of days per week a person travels to an educational institution		New question
3.7	At what time did leave to go to the educational institution on the travel	Equivalent Q3.6	Q3.7
	day?		
3.8	How long did walk to get from here to his/her first transport?		New question
3.9	How long did wait for his/her first transport to arrive?		New question
3.10	How long did have to walk at the end of the trip to reach his/her the		New question
	educational institution?		
3.11	At what time did arrive at the educational institution he/she attends on	Equivalent Q3.7	Q3.11
	the travel day?		
3.12	Mode of transport used to get to the educational institution	Equivalent Q3.8	Q3.12
3.13	For the mode/s selected in Q3.12, is the payment made per single trip, per	Equivalent	Q3.13
	return trip, per week, per month?	Q3.10	
3.14	How much did it cost? If payment made in Q3.14	Equivalent Q3.9	Q3.14

## Section 4: Work related travel patterns (Ask people aged 15 years and above)

2003 questions: Are not based on the travel day whereas

2013 questions: Are based on the travel day

No.	Question	2003	2013
4.1	Does have a job/run a business or did he/she do any work in the	Equivalent Q4.2	
	last seven days, even if he/she was absent from work due to		
	leave/illness?		
4.2	Reason for not working in the last seven days? Ask if 'No' in 4.1	Equivalent Q4.3	
4.3	If is currently not working or running his/her business, is he/she		
	willing to work?		
4.4	Workplace(Place where the workplace is situated)	Equivalent Q6.1	
	a. Suburb		
	b. Province		
	c. District code		
	d. Travel Analysis Zone (TAZ) code		
4.5	Number of days per week a person travels to work		New question
4.6	Total salary at the main job	Equivalent Q5.4a	
4.7	Is the amount <b>per week, per month or annually</b> ? Ask only if amount	Equivalent Q5.4ab	
	is given in Q4.6		
4.8	If 'None' 'refuse' or 'do not know' in Q4.6, show prompt card 3 and	Equivalent Q5.4ac	
	mark the applicable code		
4.9	At what time did leave to go to the work on the travel day?	Not equivalent Q6.2	
4.10	At what time did get to the place of work on that travel day?	Not equivalent Q6.3	
4.11	Did walk all the way to work on the travel day?	Not equivalent Q6.4	
4.12	Did cycle all the way to work on the travel day?	Not equivalent Q6.5	
4.13	Did drive all the way to work on the travel day?	Not equivalent Q6.6	
4.14	Type of vehicle driven to work on the travel day	Not equivalent Q6.7	

<ul> <li>4.16 Did have to drop/pick up passengers on his/her way to work on the travel day?</li> <li>4.17 Did have to drop/pick up passengers on his/her way back home on the travel day?</li> <li>4.18 For the vehicle used to drive to work, how much does it cost to travel to work?</li> <li>4.20 Did change transport on the way to work on the travel day? (e.g. Not equi train to train, bus to train)</li> <li>4.21 Mode of transport used to get to work on the travel day</li> <li>6.22 For the modes of travel used, how much did it cost to travel to work?</li> <li>4.23 Was the payment in Q4.22 made: per single trip, per return trip, per work?</li> <li>4.24 Does's employer give him/her cash for public transport to travel to and from work?</li> <li>4.25 How much is this worth per month?</li> <li>4.26 How long did walk to get from here to his/her first transport on the travel day?</li> <li>4.27 How long did walk at the end of the trip to reach his/her place of Not equi work has travel day?</li> <li>4.28 How long did walk at the end of the trip to reach his/her place of Not equi work has travel day?</li> </ul>	<b>4.15</b>   Did need	Did need his/her vehicle at work for work purposes on the travel	Not equivalent Q6.8	
Did have to drop/pick up passengers on his/her way to work on the travel day?  Did have to drop/pick up passengers on his/her way back home on the travel day?  For the vehicle used to drive to work, how much does it cost to travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	day?			
the travel day?  Did have to drop/pick up passengers on his/her way back home on the travel day?  For the vehicle used to drive to work, how much does it cost to travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		to drop/pick up passengers on his/her way to work on	Not equivalent Q6.9	
Did have to drop/pick up passengers on his/her way back home on the travel day?  For the vehicle used to drive to work, how much does it cost to travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work has travel day?	the travel d	ау?		
the travel day?  For the vehicle used to drive to work, how much does it cost to travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		to drop/pick up passengers on his/her way back home on	Not equivalent Q6.10	
For the vehicle used to drive to work, how much does it cost to travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	the travel d	ау?		
travel to work?  Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		icle used to drive to work, how much does it cost to		New question
Was the payment in Q4.18 made per single trip, per return trip, per week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	travel to wo	ork?		
week, per month?  Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		yment in Q4.18 made per single trip, per return trip, per		New question
Did change transport on the way to work on the travel day? (e.g. train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	week, per ı	nonth?		
train to train, bus to train)  Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		ge transport on the way to work on the travel day? (e.g.	Not equivalent Q6.11	
Mode of transport used to get to work on the travel day  For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	train to trai	n, bus to train)		
For the modes of travel used, how much did it cost to travel to work?  Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		insport used to get to work on the travel day	Not equivalent Q6.12	
work?  Was the payment in Q4.22 made: per single trip, per return trip, per  week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		des of travel used, how much did it cost to travel to	Equivalent Q6.13	
Was the payment in Q4.22 made: per single trip, per return trip, per week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	work?			
week, per month?  Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		yment in Q4.22 made: per single trip, per return trip, per	Equivalent Q6.14	
Does's employer give him/her cash for public transport to travel to and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	week, per ı	nonth?		
and from work?  How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		nployer give him/her cash for public transport to travel to	Not equivalent Q6.15	
How much is this worth per month?  How long did walk to get from here to his/her first transport on the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	and from w	ork?		
How long did walk to get from here to his/her first transport on the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		is this worth per month?	Not equivalent Q6.16	
the travel day?  How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?		id walk to get from here to his/her first transport on	Not equivalent Q6.17	
How long did wait for his/her first transport to arrive on the travel day?  How long did walk at the end of the trip to reach his/her place of work on the travel day?	the travel d	ay?		
day?  How long did walk at the end of the trip to reach his/her place of		id wait for his/her first transport to arrive on the travel	Not equivalent Q6.18	
How long did walk at the end of the trip to reach his/her place of	day?			
work on the travel day?		id walk at the end of the trip to reach his/her place of	Not equivalent Q6.19	
work of the travel day:	work on the	travel day?		

Section 5: Business trips (Ask people aged 15 years and above)

Š.	Question	2003	2013
5.1	Has undertaken any business trip(s) longer than 20 km away	Not equivalent Q5.5	The trip distance changed
	from her place of work within the RSA in the past calendar		from 200 km to 20 km
	month?		and the question is
			slightly rephrased
5.2	Number of trips taken in the past calendar month	Equivalent Q5.6	
5.3	Mode of transport used for the longest part of the trip	Equivalent Q5.8	
5.4	How much did it cost for the trip there and back?		New question
5.5	Main destination of the trip	Equivalent Q5.7	
	a. Suburb		
	b. Province		
	c. District code		
	d. Travel Analysis Zone (TAZ) code		

Section 6: Other travel patterns (Ask people aged 15 years and above)

Day trips		2003	2013
6.1	Has undertaken any day trip/s away from home in the past	Day trips are not	New questions
	twelve months?	covered in this	
6.2	Main purpose of the trip	section	
6.3	Main mode of travel used for the trip		
6.4	How much did it cost to reach the main destination?		
Overnight trips	sdi		
6.5	Has undertaken any overnight trip/s away from home in the	Not equivalent Q5.9	
	past twelve months?		
9.9	How often did undertake overnight trip/s in the past twelve	Not equivalent Q5.11	
	months?		
6.7	Main purpose of the trip		New question
8.9	Main mode of travel used for the trip	Not equivalent Q5.13	
6.9	How much did it cost to reach the main destination?	Not equivalent Q5.14	
6.10	Main mode of travel used to return to the usual place of		New question
	residence		
6.11	How much did it cost to return to his/her usual place of		New question
	residence?		

## Section 7: General Household Information

No.	Question	2003	2013
7.1	Type of main dwelling	Equivalent Q1.1	
7.2	Total household expenditure in the last month	Equivalent Q1.5	
7.3	Source of income for the household		New question
7.4	Income source that usually provides the most money for the		New question
	household		
7.5	Income from remittances; specify how much they get per month		New question
9.7	Income from pensions or retirement annuities; specify how much		New question
	they get per month		
7.7	Number of bicycles in working order a household owns and uses	Equivalent Q1.7	Question slightly
	for transport		rephrased
8.7	Number of animal-drawn vehicles in working order a household		New question
	owns and uses for transport		
6.7	Do you own animals that can pull animal-drawn vehicles?		New question
7.10	Number of motor vehicles in working order a household has	Equivalent Q1.8	
	available for private use		
7.11	How do members of the household get to the nearest facility of	Equivalent Q1.4	
	kind		

## Section 8: Attitudes and perceptions about transport

No.	Question	2003	2013
8.1	Transport related problems experienced by the household	Equivalent Q1.2	Response categories
8.2	Factors influencing households' choice of mode of travel		New question
8 3	How long does it take in minites to walk to the nearest taxi	Farrivalent O1 3	
?	rank/route, bus stop/station?	בלמוֹעמוֹכּוֹוּ לְדִּינִ	
8.4	Main modes of travel used by the household		New question
8.5	Have you used a passenger train in the past calendar month?	Equivalent Q7.2	
8.6	Reasons why you did not use a passenger train in the past calendar month	Equivalent Q7.3	
8.7	Satisfaction about the passenger train service	Equivalent Q7.4	Types of trains are
			added on the
			response categories
8.8	Have you used a bus in the past calendar month?	Equivalent Q7.5	
8.9	Reasons why you did not use bus in the past calendar month	Equivalent Q7.6	
8.10	Satisfaction about the bus service	Equivalent Q7.7	
8.11	Have you used a minibus taxi in the past calendar month?	Equivalent Q7.8	
8.12	Reasons why you did not use minibus taxi in the past calendar	Equivalent Q7.9	
	month		
8.13	Satisfaction about the minibus taxi service	Equivalent Q7.10	
8.14	Language used to conduct the interview		New question
8.15	Type of living quarters		New question

### Annexure C: Job descriptions of contract staff

- Fieldworker
- Fieldwork Coordinator
- Fieldwork Supervisor
- Lister

Fieldworker: National Household Travel Survey

38

(Salary Level: Stipend equal to R5 000 per month) (Ref. No.:)

### Key performance areas:

- Attend training when required to. If you miss one day's training without proper reason you will be excluded from continuing in the project.
- Do publicity at the sampled primary sampling units (PSUs) and the selected dwelling units (DUs).
- Facilitate cooperation from all households when conducting publicity and enumeration fieldwork.
- Collect data from sampled dwelling units by completing the relevant questionnaires for all households at the sampled dwelling units.
- Submit daily report on completed work to your Fieldwork Supervisor (FWS).
- Handle gueries on the completed guestionnaires referred back to your supervisor.
- Receive all the fieldwork materials (satchel with EA Summary Book, questionnaires, FW manual, bib, stationery) required from your Fieldwork Supervisor.
- Safeguard all materials issued for the purpose of conducting the survey.
- Perform quality assurance checks on all completed questionnaires before handing them over to your FWS.
- Conduct reverse logistics.

### Prerequisites:

- A matric certificate, preferably with Mathematics/Accounting
- Experience in conducting surveys and censuses
- Knowledge of data collection and geography
- Knowledge of MS Office Suite
- Valid driver's licence and clean accident record during Census and the past year

### Person profile:

This position will suit a person with:

- Good interpersonal, communication, report writing, conflict-resolution, interviewing, and decision-making skills;
- The ability to understand diversity and work with people; and
- A willingness to work long hours.

### FIELDWORK COORDINATOR National Household Travel Survey

### (Salary Level: Stipend equal to R7 000 per month) (Ref. No.:)

### **Key performance areas:**

- Attend training when required to. If you miss one day's training without proper reason you will be excluded from continuing in the project.
- Engage gatekeepers and seek permission to conduct fieldwork in the allocated primary sampling units (PSUs).
- Assist with training of Fieldworkers and Fieldwork Supervisors for whom you are responsible.
- Receive all the fieldwork materials (satchels with EA Summary Books, questionnaires, Fieldworker (FW) manuals, bibs, stationery) required from your Provincial Survey Coordinator (PSC) and ensure distribution to all Fieldworkers and Fieldwork Supervisors for whom you are responsible.
- Your key responsibilities in the primary sampling units (PSUs) allocated to you include the supervision of:
- Publicity done by FWs/ FWSs;
- Enumeration done by FWs and FWSs to ensure that all households that are occupying dwelling units in the primary sampling units (PSUs) allocated to them are enumerated; and
- FWs and FWSs to ensure that all information collected from all households is relevant and accurately captured on the questionnaire.
- Implement all phases of field operations, e.g. publicity, training, collection and quality assurance.
- Compile training report at the end of the training period.
- Compile closure report at the end of the fieldwork period.
- Report progress daily to your PSC

### In addition you will be required to:

- Assist FWs/ FWSs with handling of refusals or difficult respondents.
- Do everything to ensure cooperation from all households when conducting publicity and enumeration fieldwork.
- Handle gueries on the completed questionnaires referred back to you by the PSC.
- Do spot-checks in the field to ensure the correct PSUs and DUs are enumerated by FWs/ FWSs.
- Do spot-checks in the field to ensure/confirm vacant/unoccupied/demolished etc. result codes recorded by FWs/ FWSs.
- Observe fieldwork interviews conducted by FWs /FWSs to ensure that questionnaire is administered correctly.
- Re-train FWs and FWSs if problems are experienced with fieldwork procedures or questionnaire completion.
- Conduct detailed planning sessions with relevant stakeholders and staff.
- Develop project plans.
- Assign tasks to staff and monitor execution thereof.
- Monitor and evaluate performance of staff.
- Monitor and manage transport, budget, human resources and survey instruments.
- Attend meetings and write reports.
- Monitor the risk management plan.
- Manage risks.
- Provide administrative and technical leadership to field staff.

 Perform quality assurance checks on all questionnaires completed and handed to you by Fieldworkers and FWSs, whom you are responsible to monitor, before handing them over to your PSC.

### Prerequisites:

- A matric certificate, preferably with Mathematics/Accounting
- Experience in conducting surveys and censuses
- Knowledge of data collection and geography
- Knowledge of MS Office Suite
- Valid driver's licence and clean accident record during Census and the past year

### Person profile:

This position will suit a person with:

- Good interpersonal skills, communication skills, decision-making skills, report writing skills, conflict-resolution, interviewing skills, organisational, presentation, facilitation, map reading and interpretation skills, leadership skills, language proficiency, presentation skills, strategic thinking, conflict resolution, team player;
- The ability to understand diversity and work with people; and
- A willingness to work long hours.

### LISTER

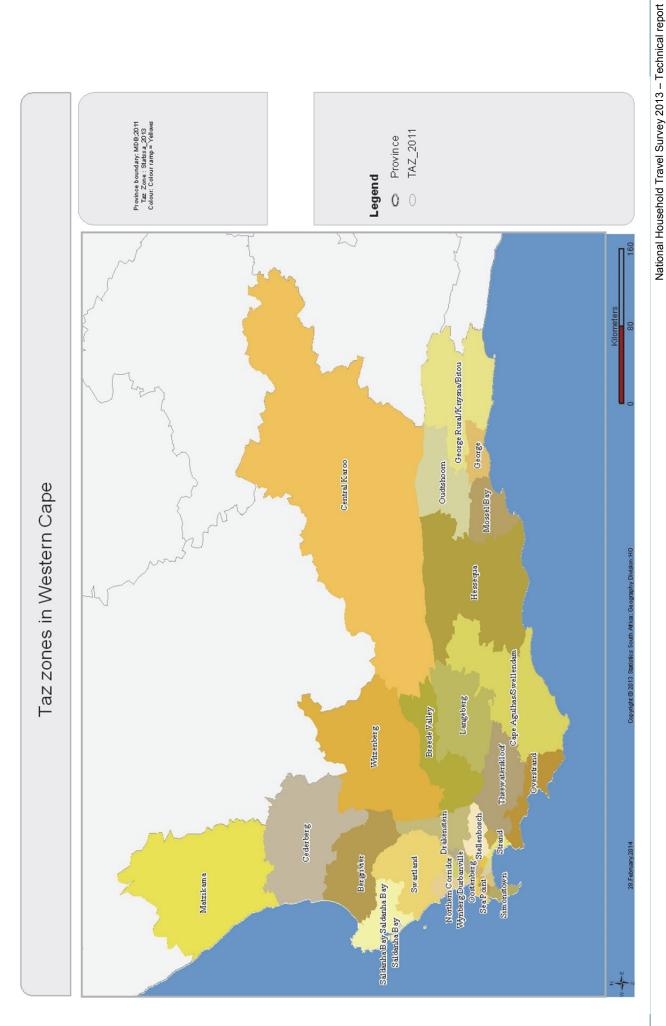
### Recruitment criteria:

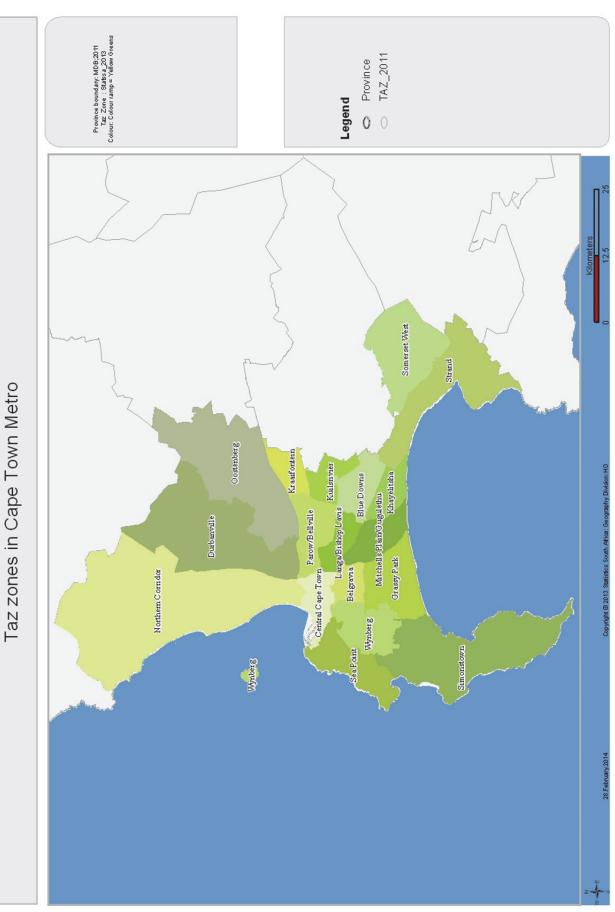
- Matric certificate with Geography as one of the subjects
- Experience in survey and census fieldwork
- Driver's licence for field staff from farms and smallholdings, otherwise it is an added advantage for other EA types
- Recruited from areas where they live

### **Duties and responsibilities:**

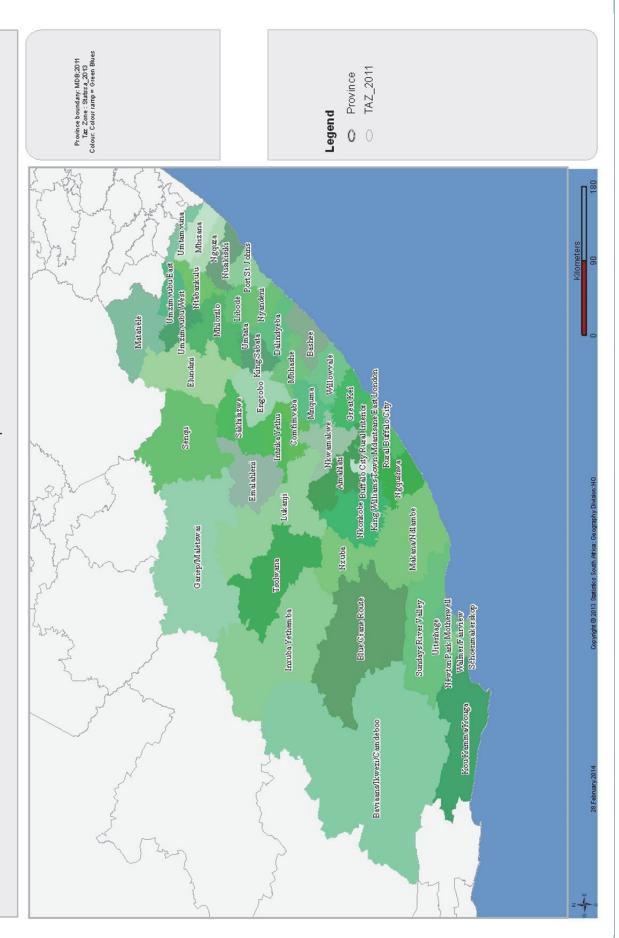
- Find the physical boundaries of the allocated EA;
- Conduct publicity and listing in the allocated EA;
- Visit the allocated EA and conduct publicity and listing following the procedures and instructions in the publicity and listing manual to perform fieldwork duties;
- · Conduct map annotations and make field sketches; and
- · Complete the EA Summary Book.

### Annexure C: Taz zone maps

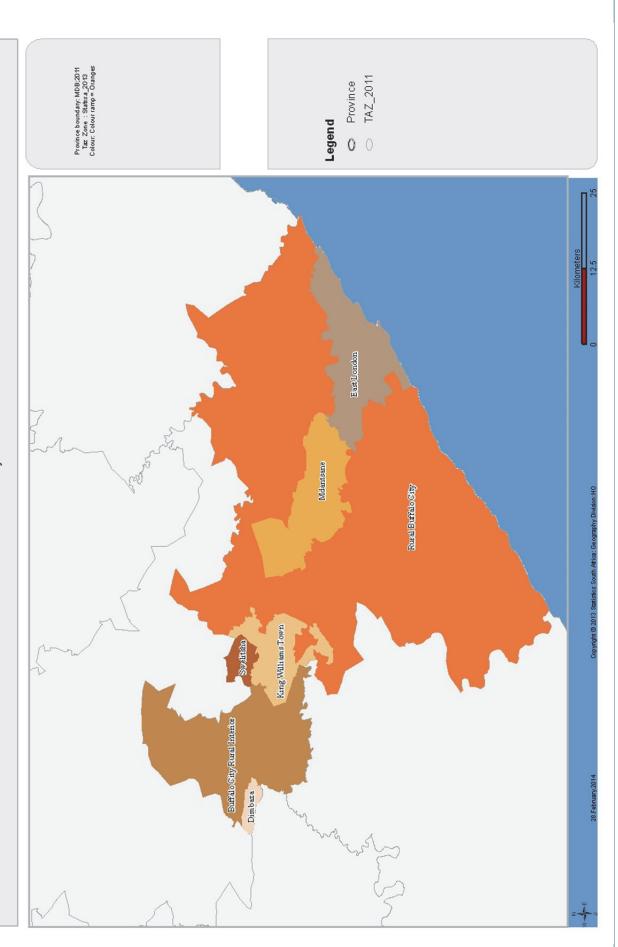


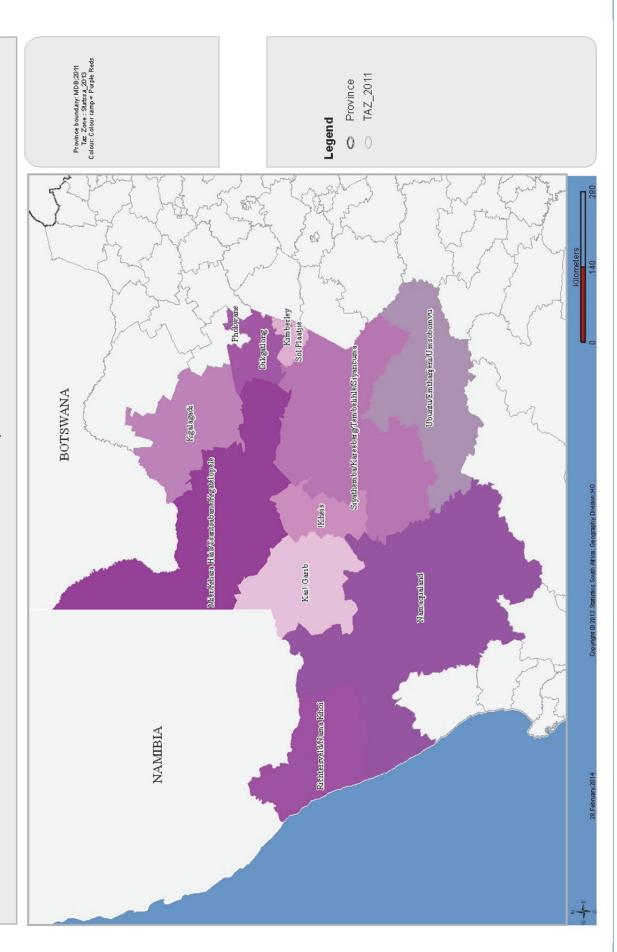


## Taz zones in Eastern Cape



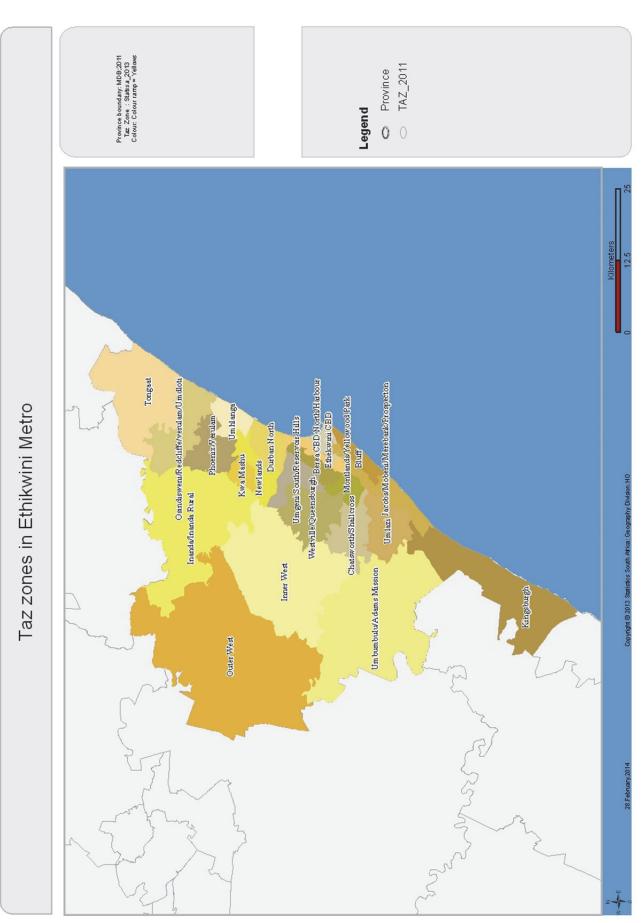


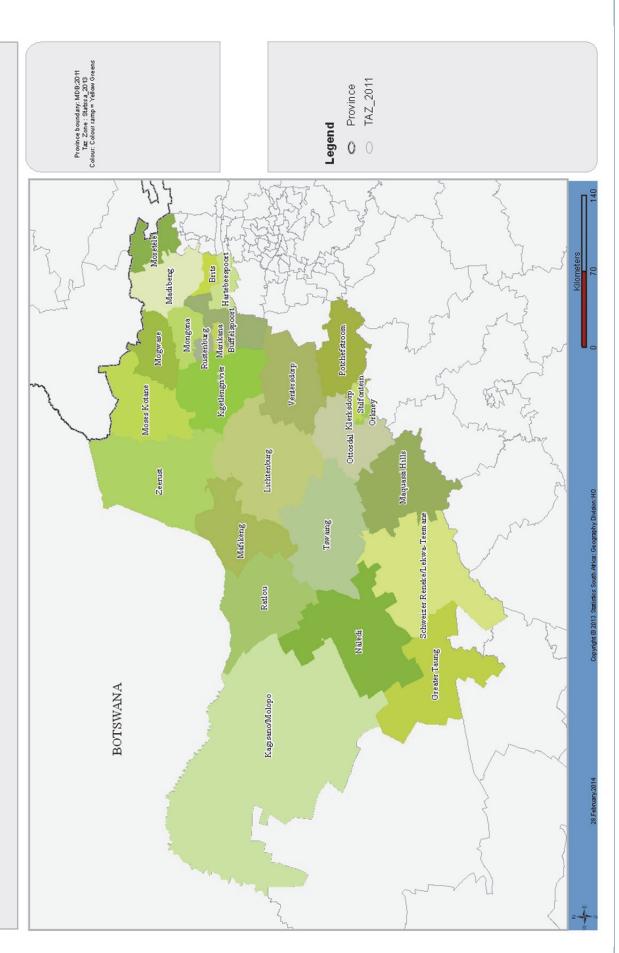




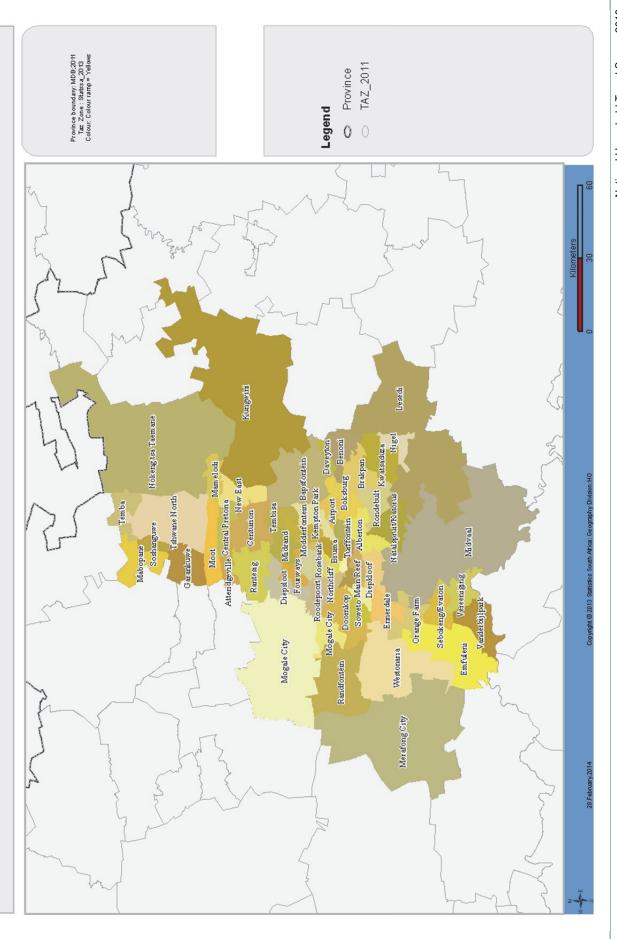
Taz zones in KwaZulu Natal

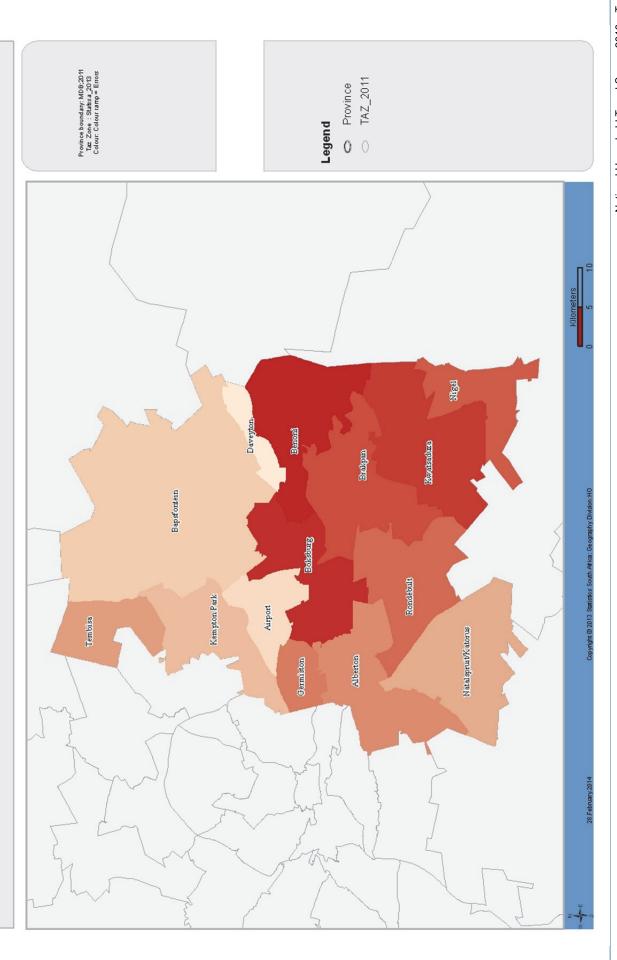
25

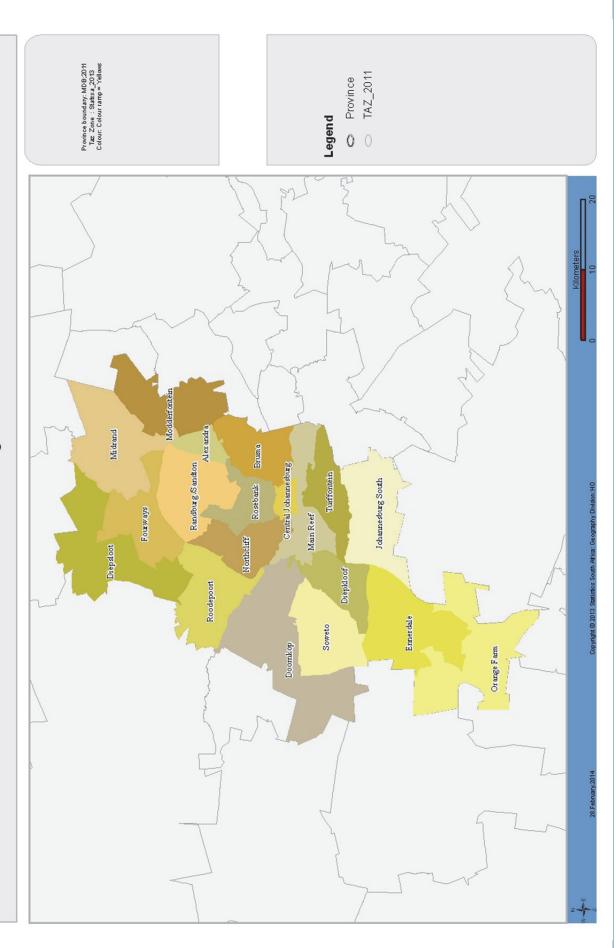


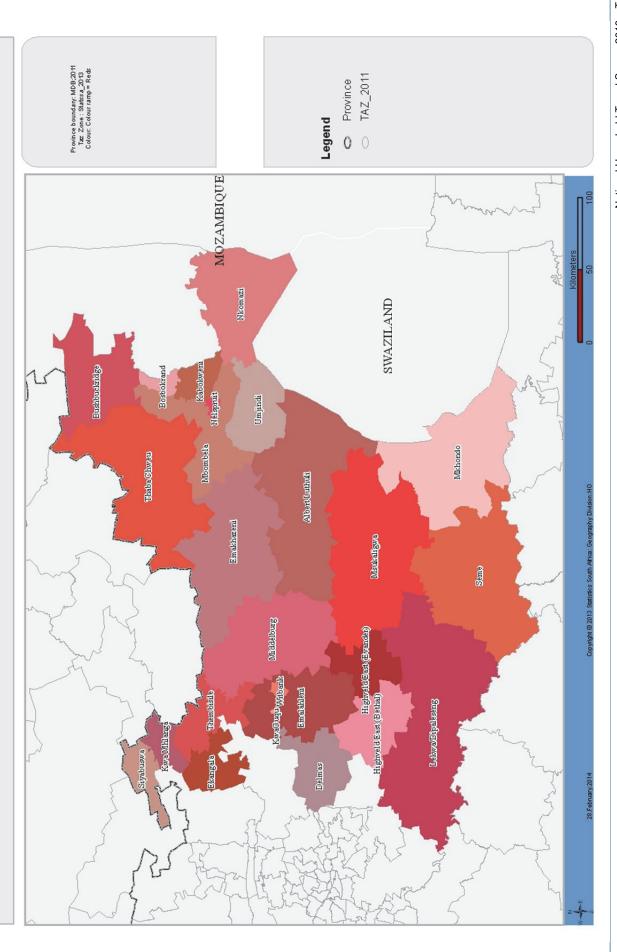


## Taz zones in Gauteng









29

