



Census Undercount and strategies

Version 6

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Introduction

Population censuses are the most expensive undertakings governments carry out. They provide the requisite data required for informed decision making in terms of policy formulation, programming and implementation of projects. The data collected in censuses also facilitate the measurement of the impact various previous policies and programmes have had as far as socio-economic and demographic development are concerned. For the above to be achieved, the data has to be accurate and relevant. However, one of the major challenges many countries confront relates to the under-coverage of the population which results in having figures which are inaccurate. A census is designed to count everyone, but there are always people who are missed (undercount), as well as a few who are counted more than once (over count). The difference between undercount and over count is termed net census undercount, and at times referred to as net omission rate (Weeks,2008).

Knowledge of the net undercount for a particular population census is a useful and necessary tool for assessing the quality of a population census. The undercount level, usually expressed as a percentage of the total population under study, is used as a measure of confidence in the quality of the coverage and by extension the usefulness of the census data. The lower the undercount, the better the quality of the census coverage. In other words, the undercount tells how well the count was done. It can be used to benchmark national statistics. In planning for subsequent censuses and to ensure continuous improvement, the previous undercount figures have to be taken into account. There are many factors which contribute to under-coverage of the population. These include:

- Poor planning which is manifested by lack of integration of activities, lack of effective monitoring and evaluation systems, poor budgeting, ineffective governance structures etc;
- Lack of ownership as a result of not adequately involving stakeholders in all phases;
- Political interference/disturbances which create fear for some people to avail themselves to be enumerated;
- Gaps in the demarcation of the country into Enumeration Areas (EAs) which lead to some areas not being enumerated;
- Hard to count groups such as mobile populations, children, illegal migrants and even persons with disabilities;
- Inadequate research to inform the topics and questions to be asked; and
- Poor recruitment and training of fieldworkers, amongst others which are unique to countries.

There are two principal methods that countries employ in measuring undercount;

- 1) Demographic analysis, an approach where a balancing equation is used to estimate what the population at the latest census should have been and then compares with the actual count of the population. A comparison of the calculated figure with actual census count provides a clue on the extent of inaccuracies of the census data in terms of coverage. One limitation of this method is that most countries with poor/inadequate registration system of vital events do not have accurate count of births, deaths and migrants. In such instances, this method is therefore unreliable.
- 2) Dual-system estimation which involves comparing census results with other sources of information about the people counted. The post enumeration survey (PES) is based on a sample, whose results are matched with census results. The success of the measure of undercount using this approach depends on the following assumptions:
 - a. Closed population
 - b. Independence between the census and the PES
 - c. No erroneous inclusions in either system
 - d. No incomplete matches
 - e. No assumption regarding which system is better

The dual-system estimation approach also allows for testing of content errors by comparing peoples' responses on the census questionnaire with their answers to the PES questionnaire. The United Nations recommends that countries carry out Post Enumeration Surveys (PES) immediately after the enumeration to ascertain the level of census coverage. This entails complete re-enumeration of a representative sample of EAs and matching each individual who is enumerated in the PES with information from the main enumeration to:

- Assess the degree of coverage during census enumeration
- Examine the implications of any coverage deficiencies, if any, on the usefulness of the census data
- Obtain information for the design of future censuses and surveys
- Determine the characteristics of persons who may have been missed or erroneously included during census enumeration.

Levels of undercount in some countries

Table 1 below shows undercount levels of some countries. In spite of different methodologies employed by different countries to determine the undercount, global patterns indicate undercount of less than eight percent in most recent censuses.

Table1: Undercount levels of some countries

Country	Census Year	Undercount (National)
Canada	1996	2.6%
Mozambique	1997	5.1%
Mauritius	2000	2.5%
USA	2000	1.2%
Nepal	2001	5.3%
New Zealand	2001	2.2%
Australia	2001	2.2%
Tanzania	2002	7%
Seychelles	2002	2.4%

Undercount levels in South Africa

After the democratic breakthrough of 1994, South Africa conducted two censuses, in 1996 and 2001, and a large-scale Community Survey in 2007. In 1996, the post-enumeration survey (PES) calculated an undercount of 10% and in 2001 it increased to an alarming 17%. The average in African countries and globally is less than 5%. It is critical that the undercount be reduced to an acceptable level during Census 2011.

This document will briefly discuss the factors which contributed to coverage errors in the 1996 and 2001 censuses, and outline strategies that have been put in place to ensure that during census 2011, every person is counted. Planning and management issues, partnership programs and operational aspects will be discussed in the document. Key strategies discussed include census 2011 management structure, enumeration programs targeted at hard-to-count groups, countrywide effective advocacy and publicity program, Stats SA employees' involvement in census operations in their respective communities, and Province specific strategies

Factors that contributed to undercount

The undercounts in the last two censuses have been attributed to a number of reasons. Although no formal study has been conducted on undercount and its causes, a number factors have been suggested, based on results from the post-enumeration survey (PES), brain-storming sessions conducted within the organization, the Community Survey Publicity Follow-up Survey and literature reviews such as Census 2001 Debriefing Report. There is a litany of factors that

aggregately resulted in the undercount in Census 2001 which should be adequately addressed before Census 2011. For example, according to the Stats SA Census 2001 Debriefing report, “a major deficiency of the 1996 Population Census (Census '96) that was quickly noted was that documentation of key elements of the census (Census '96) was not properly classified, catalogued and archived. As a result, the strategic and operational planning for some key areas of Census 2001 was not based on the lessons and experiences of Census '96”. According to this report, a number of anomalies believed to have contributed to undercount were noted as follows:

- a. Programme and Policy issues
- b. Financial management
- c. Logistics and procurement
- d. Geographic Information System (GIS), house listing, mapping and demarcation
- e. Enumeration
- f. Census questions, concepts and definitions, training and post-enumeration survey
- g. Publicity
- h. Human resources
- i. Data processing and information technology

A brief Overview of Weaknesses

The areas identified to have caused problems with regards to the above issues related to high-level management of the census; integration and communication across, and coordination between the various sub-projects which were characterized by frequent changes in business processes and plans. In addition, these issues together with the fact that there was limited planning time allocated for sub-projects with major dependencies on other sub-projects which resulted in planning and implementation of Census 2001 beginning very late, contributed a great deal in the undercount..

1.1 Lack of permanent Organizational Structure and capacity

One key factor in management and execution of massive and complex projects such as a census is human resources. Good census plans (both strategic and operational) and their implementation require personnel that have expertise in census undertaking and above all managerial skills. This translates into well executed project, within the set timelines and costs. Lack of census structure in previous censuses led to improvisation, ad hoc planning and implementation, hence the upward trend of undercount. In census 2001, regional offices experienced shortages of qualified managers and therefore field staff did not have adequate support to accomplish desirable outcome- quality field operations. Proper supervision was therefore lacking, hence the omissions

1.2 Insufficient lead time in planning

The Census 2001 Debriefing report evidently demonstrates that there was insufficient lead time for planning for Census 2001. This created conditions of incoherence and inconsistencies in terms of role definition, decision-making and budgeting. This impacted negatively on a number of sub-projects due to frequent changes which had to be communicated and sometimes explained to the sub-project leaders which often operated in silos. The overall impact was imposed by the silo approach; lack of integration and ineffectiveness of communication throughout the whole project had adverse effects on communication processes on downstream processes as every change needed to be communicated to and explained to sub-projects leaders, provincial and regional offices, fieldworkers, trainers, compilers and editors of field manuals to avoid conflicting versions of the same information necessary to execute the project diligently according to pre-determined standard and procedures.

1.3 The timing of census 2001 pilot.

Essentially, the pilot is a critical barometer that is used by a census taking agency to measure the degree of preparedness to conduct main census. The pilot presents an opportunity to test and double check methodologies and plans for appropriateness and effectiveness for use in the main data collection processes. This implies that there must be enough lead time between the pilot and the main enumeration in order to allow planners to implement changes that may be necessary and/or required to improve the quality of the main census based on the pilot experiences. The major shortcoming for Census 2001 was that there was less than seven (7) months lead time between Census 2001 pilot (March 2001) and the main census in October of the same year. This delay in planning and implementing the Census 2001 pilot was particularly damaging as it did not only compromise planning and budgeting for the main census but it also negatively impacted on all other downstream sub-processes that were linked to these two major processes.

1.4 Timing of Payment of Fieldworkers

The timing of the payment of fieldworkers disrupted data collection activities as fieldworkers were stuck in the long queues for payment instead of completing their assigned responsibilities. Furthermore, the post office payment system was not effective; therefore, other methods of payments such as banks, smart cards, cheques, cash or bank transfers should be investigated with an aim of one of them. To avoid any disruptions during enumeration, payment of fieldworkers should be done either immediately after training or immediately after enumeration. The risks associated with the former approach are that enumerators who are paid prior the

performance of their tasks may compromise the operations as fieldworkers may either disappear or simply lose the drive and motivation required to do their assigned tasks.

1.5 Logistics and Procurement: Identification and Opening of regional offices

An initial needs assessment, approved in January 2001, specified 70 regional offices. This was based on an estimate of 85 000 enumerator areas nation-wide. Slow finalization of demarcation had its inevitable knock-on effects, and when the EA estimate was raised to 100 000, the number of regional offices was increased to 95. This had its consequence in the late opening of some regional offices [Census 2001 Debriefing, p. 23]. Early identification of regional and district offices would help to ameliorate this problem.

1.6 Inadequate advocacy and publicity campaigns

The success of any census hinges on public's willingness to participate in the exercise. Public's involvement and participation however is not guaranteed unless efforts are made by the census office to have thorough and all inclusive advocacy and publicity programmes aiming at

- ❖ Positively changing the mindset of the public about census and its intentions;
- ❖ Educating the public about the importance of accurately generated information on the size, demographic characteristics and living conditions of the country's households;

Previous censuses were characterized by high level campaigns that may not have reached audiences at the grassroots' level. It was noted that In census 2001, internal management of census publicity was weak and this impacted negatively on the management of publicity partnerships (Census 2001 debriefing report). Inadequate integration and co-ordination between management, census publicity, and other census projects had implications on delivering effective publicity campaigns to the grassroots. Poor census publicity at DU and EA levels impacts negatively on response rates ultimately leading to undercount.

1.7 Incomplete and inaccurate address list

It has been noted that during Census 2001, demarcation process started late and this impacted on downstream processes of recruitment, training, listing and EA verification. Time was insufficient and some field operations including listing were not completed when enumeration commenced. The purpose of listing is to assist enumerators to find dwellings, estimating the number of households and dwellings in each EA, and can also be used as a quality check on the coverage. Due to late commencement of listing process, listing output did not assist in identifying EAs that were abnormally large to be completed by one enumerator. It is no doubt that incomplete listing process must have contributed to coverage errors For instance, some households could have been missed during enumeration because they were not appearing in the

09 book and during enumeration phase, Fieldworkers (FW's) ignored these dwellings. It was also reported that some listers cheated during listing exercise to maximize wages. (Census 2001 debriefing report)

1.8 Limited resources (Capital and Human)

Censuses in South Africa are solely funded by the government, and this exercise requires massive funding (usually in billions of rands). In some instances, the census funds may not be adequate in ensuring that all planned for activities are implemented. Field operations in particular should be allocated sufficient funds to prevent unnecessary unrest among field staff. If rate of pay for field workers is very low, it may attract field staff of low grade and this translates into poor quality work, including omissions of structures and population. Good planning (budgeting and expenditure that is activity based) coupled with strict cost control measures such as minimizing costs; a well executed census can be achieved. However, some cost cutting measures should not be done at the expense of census activities. Clear Strategies must be devised relating to payment plan and these must be tested before endorsing it for the main census. Salary structure and levels and any allowances for field staff should be determined and included in the salary package. In 2001, late disbursement of allowances to field staff delayed the commencement of enumeration, resulting in extension of enumeration period and its cost implications

In terms of human resource, management of field operations and their implementation requires adequate numbers and skilled field personnel. In Census 2001, the ratio of FWC to FWS was on average, 1:10. This ratio might have led to inadequate supervision, and this meant that field activities were not effectively and efficiently coordinated and quality assured, leading to poor quality. Quality control processes play significant role in minimizing undercount. Quality assurance during field operations seeks to identify errors and other challenges and address them promptly to improve the quality of data collected.

1.9 Untargeted recruitment of Census field staff

The last two censuses' approach to recruitment of field staff was that of hiring the unemployed which at times is disadvantageous as in some cases, the applicants are not qualified. Census training may therefore not be able to polish some applicants to deliver quality work. It should be noted that though there is need for job creation, the organization's mandate still remains; to collect quality statistics on whose country's plans, policies and decision making are based.

1.10 Inadequate training of census field staff

Training of census field staff is often undertaken within a very short period and therefore some field staff may not master census methodologies, content and applications. Yet some are

expected to become trainers at lower levels. Recruitment of low calibre field staff as enumerators and supervisors has negative implications in terms of data collected. Given the massive numbers involved, it's a challenge to adequately equip such numbers with necessary skills to undertake a successful census in terms of quality. The cascade method leads to dilution of information as training is conducted at lower levels of supervision and field work. Unless targeted recruitment is effected; where strict requirements are adhere to during recruitment, training, however effective it may be, may not resolve committing errors such as omissions during listing and enumeration. It was remarked that some census trainers in 2001 simply handed over manuals to field workers to read on their own without any explanations on the content or methodology the field workers were to apply in the field!

1.11 Insufficient time to test new technologies

In census 2001, some systems were introduced into census operations very late (after the pilot) and this caused major decisions to be rushed, major scope changes occurred frequently affecting development and testing, Census Administrative System (CSAS) in 2001 was introduced and became a challenge during recruitment, payment of field staff, progress reporting and during reverse logistics. The system became ineffective and other plans had to be devised for such activities to be completed. Deployment/introduction of any IT technologies should be tested thoroughly before implementing them in big operations such a census. Thorough training must be effected to build capacity and this requires the organization to form mutual partnership with service provider and manage the process.

1.12 Questionnaire length

Census questionnaires are no longer limited to demographic questions and have therefore become complex and longer as more sections get added due to demand for data at the lowest geographical level. However, on the other hand, respondents are not willing to complete lengthy questionnaire. In 2001, self enumeration was allowed and it is likely that some households may have been discouraged to complete the questionnaire and therefore opted for not sending them back.

1.13 Inadequate quality assurance and monitoring processes

The magnitude of census activities, particularly field operations requires quality assurance plans that are implemented at all levels. In 2001, there were no clear documentation on quality assurance and therefore the quality of information collected, how it was collected must have been compromised.

1.14 Hard-to-count groups

South Africa is characterized by a lot of dynamics and diversity in community settings and these dynamics influence peoples' attitudes and behaviour towards others. Also due to past legacies, some communities have become inaccessible due to security concerns, political agenda and lack of service delivery, making it difficult for the organization to access all households and enumerate them. In census 2001, there were no clear strategies on how to enumerate such groups.

1.15 Missing household members

National population profiles depict that age groups 0-9, 20-29 and generally older persons were underestimated in the last two censuses (Community Survey, 2007). Some studies have shown that mothers tend to forget to count babies they would be carrying at their backs and those sleeping at the time of the interview. Also due to high mobility of the youth, they are easily missed during the counting exercise.

2. Extent of Undercount: 1996 and 2001

Figure 1 below shows the comparisons in the household undercount for each province in 1996 and 2001. In all nine provinces, the percentage of household undercount increased significantly in 2001 as compared to 1996. In 1996, the Northern Cape recorded the highest household undercount percentage (10.4 %), followed by the then Northern Province (8.0%). In 2001, Kwazulu-Natal recorded the highest household undercount percentage of 26.2%, followed closely by Gauteng with 23.0%. Gauteng's household undercount percentage increased significantly from 6.83 % in 1996 to 23.0 % in 2001.

Figure 1: Households Undercount Censuses 1996 and 2001

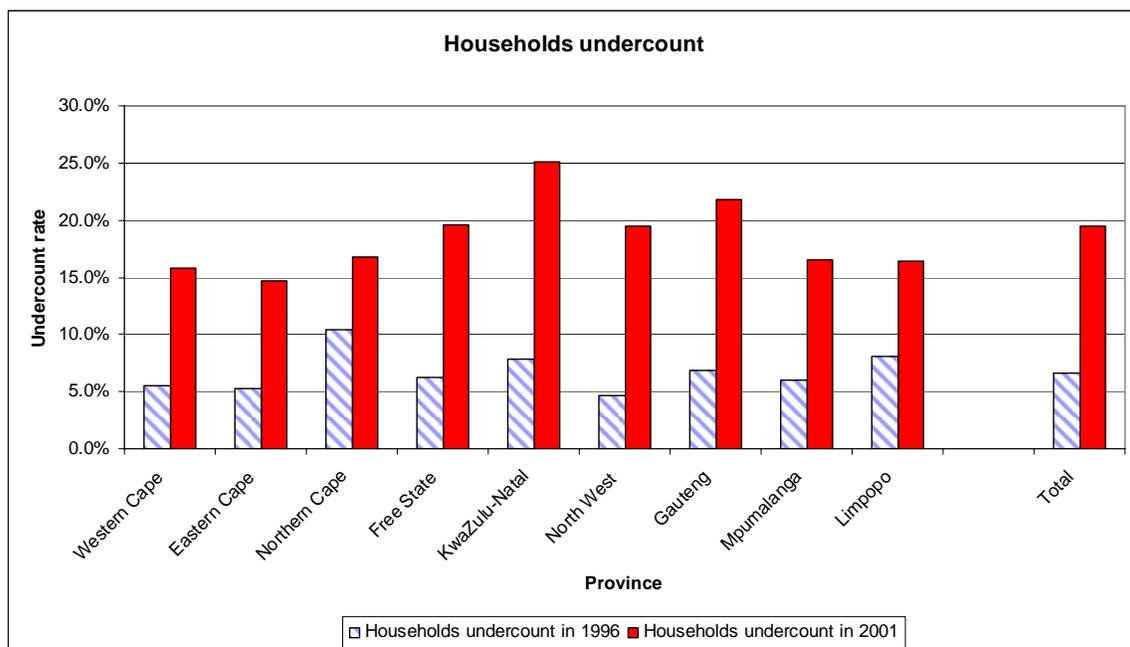


Figure 2 below shows the net undercount rate for persons by province. Again, we see the increase in 2001 as compared to 1996. Amongst the provinces, the highest undercount percentage was observed in Kwazulu-Natal, Gauteng and Free State (22.5%, 18.7%, and 17.6%, respectively). The highest undercount recorded in 1996 was in the Northern Cape (15.6%), followed by Kwazulu-Natal (12.8%). Again it is observed that Gauteng's undercount rate increased significantly from 10.0 % in 1996 to 18.7 % in 2001.

Figure 2: Persons undercount Censuses 1996 and 2001

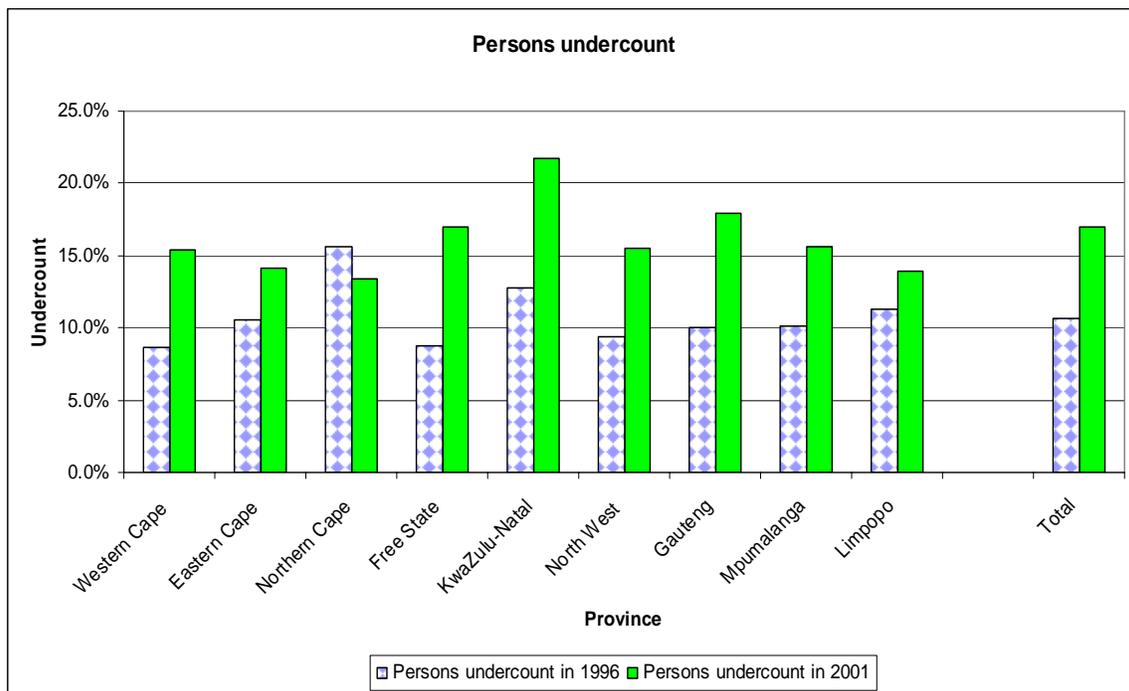


Table 2 below shows the undercount rates by population groups per province. When population groups for 1996 and 2001 are compared, the highest undercount is found among the black population (10.8%) and amongst the white population in 2001 (22.0%). There is no significant difference in undercount among the African, Coloured and Indian/Asian groups. Gauteng follows this national trend, with the highest undercount rate found amongst the black population in 1996 (10.8 %) and amongst the white population in 2001 (23.1%).

Table 2: Derived Undercount by Population group

Population group	African/Black		Coloured		Indian/Asian		White	
	1996	2001	1996	2001	1996	2001	1996	2001
Western Cape	9.3	19.6	8.7	13.6	8.4	15.2	7.4	14.8
Eastern Cape	10.4	13.9	12.9	14.7	11.2	15.9	5.5	17.0
Northern Cape	14.3	9.5	17.1	13.9	10.8	8.4	12.0	23.2
Free State	8.1	16.9	13.7	19.8	7.4	11.8	10.8	16.2
KwaZulu-Natal	13.2	21.8	12.9	30.2	6.0	15.5	16.2	28.6
North West	9.5	14.3	8.7	14.0	7.7	13.0	8.0	33.4
Gauteng	10.8	16.7	10.5	14.9	7.9	19.5	7.6	23.0
Mpumalanga	9.2	15.4	18.7	16.2	18.5	5.1	17.4	19.0
Limpopo	10.6	13.5	16.3	18.1	12.2	25.5	22.4	33.4
South Africa	10.8	16.7	10.7	14.6	6.7	16.2	9.8	22.0

Table 3 below shows the derived undercount percentages per province by EA type in 2001. The highest undercount rates nationally were found in Farm EAs (38.8 %), small holdings (34.3 %) and informal settlements (24.5 %). Similar results were found in Gauteng, with farms, small holdings and informal settlements being the biggest contributors of undercount (49.0%, 38.1% and 18.2% respectively).

Table 3: Derived Undercount from adjustment factor by EA type

Province	Fewer households	Tribal settlement	Farm	Small holding	Urban settlement	Informal settlement	Recreational	Industrial area	Institution	Hostel
WC	1.2		27.8	19.6	13.2	25.7	0.1	0.0	0.0	14.7
EC	1.1	13.1	31.5	24.6	12.5	24.9	0.0	1.5	0.8	13.3
NC	0.1	7.2	31.1	15.6	10.1	7.6	34.7	0.0	0.0	14.2
FS	1.5	8.0	44.6	31.5	8.5	44.3	0.0	0.0	0.1	8.0
KZN	1.8	19.5	33.1	30.3	21.3	28.4	6.2	0.9	0.0	24.0
NW	0.0	13.0	30.8	31.3	15.6	15.3	18.1	0.2	0.0	20.1
GP	11.5		49.0	38.1	16.8	18.2	12.5	1.2	0.3	17.9
MP	0.7	11.0	46.7	21.5	7.9	8.8	2.2	0.7	0.0	21.7
LP	2.0	10.9	54.5	53.1	10.6	56.9	0.0	0.0	0.0	15.1
SA	1.9	14.1	38.8	34.3	14.9	24.5	5.0	0.8	0.2	17.7

Table 4 shows the undercount by dwelling type in 2001. Nationally, the highest undercount rate was found in collective living quarters (26.3 %), followed by informal dwellings not in the backyard (22.7%).

Table 4: Derived Undercount from adjustment factor by type of main dwelling

Type of housing unit	House on a separate stand or yard	Traditional dwelling	Flats	Townhouse (simplex; duplex; triplex)	House in back yard	Informal dwelling in back yard	Informal dwelling NOT in back yard	Room not in back yard	Caravan or tent	Private ship/boat	Collective living quarters
WC	14.9	13.0	13.6	13.9	13.7	16.7	22.9	14.9	16.0	16.1	8.6
EC	15.8	23.0	12.5	13.9	14.5	18.2	33.4	16.7	25.2	16.4	12.2
NC	21.2	23.4	22.4	24.2	25.1	22.2	19.6	25.2	20.2	21.6	24.1
FS	24.4	22.6	27.1	22.8	25.7	27.7	28.5	29.1	28.2	23.0	33.7
KZN	14.3	13.4	15.0	15.2	16.7	21.9	30.9	21.9	22.1	12.2	36.4
NW	14.6	21.4	15.9	16.0	15.6	15.3	15.9	19.9	16.6	13.6	27.0
GP	16.9	21.1	14.8	15.2	15.7	12.7	13.4	17.7	10.6	22.4	23.1
MP	18.4	20.4	22.4	20.5	23.2	20.5	18.5	25.7	19.9	27.9	30.6
LP	15.1	17.1	15.9	15.5	15.0	15.3	21.5	17.2	16.2	14.2	9.4
SA	18.1	17.8	21.4	20.5	21.9	20.6	22.7	23.2	20.8	19.7	26.3

3. Census 2011 strategies to deal with undercount

There are a number of factors that contributed to undercount experienced in the past two censuses that need to be addressed in order to have a successful census 2011. A number of strategies ranging from national to province specific have been outlined aiming at reversing the disturbing upward trends of undercount in South Africa.

3. 1 National strategies

✚ Planning and Capacity building

One of the lessons learnt from previous censuses is relating to having an integrated census plan and adequate skilled human capacity. Extensive Planning for census 2011 is already underway, fully fledged by census management and supporting structures.

A permanent census management structure has been established to ensure;

- Census plans at strategic and operational levels are developed and executed effectively and efficiently;
- Proper utilization of resources throughout the duration of the Census Project;
- Staff in managerial positions provide not only leadership but also extensive coaching, mentoring and training to field personnel;
- Field staff is timeously recruited and developed and;
- Personnel with skills in census undertaking are retained.

In preparation for a complete count of population and structures in 2011, a strategy plan has been developed and subsequently all planning documents (national project plan and operational plans). Census 2011 questionnaires and methodologies have already been developed and tested in a Pilot which was conducted in October 2009. Plans are under way to conduct further tests on re-engineered household questionnaire, training approach and other methodologies that were not tested during the pilot.

✚ Resource allocation and integration of expertise

It is important that an adequate amount of resources be allocated to the Census 2011 project in order for data collection to be completed successfully. Qualified Head Office staff, field staff and if necessary, consultants must be brought on board to ensure that processes are effectively carried out as planned. Expertise from survey components within Statistics SA, who are familiar with field operation processes, will be utilized. The census is the largest project undertaken at Stats SA and it is important that staff and resources are effectively utilized. Co-ordination and integration across and between projects, particularly on provincial level must be emphasized.

During census field activities, some of other Stats SA projects should be suspended to allow the organization utilizes resources from these projects to maximize quality. However, this should be carefully done to avoid the negative impact this arrangement had on the core deliverables of the organization.

Fieldwork Organization

A complete census count is largely dependent on enumeration as a census activity, which in turn hinges on good planning, management, demarcation, listing, training, publicity, logistics and above all questionnaire content and design. To reverse the upward trend in undercount, great effort is required and turn - around strategies in field organization; in terms of calibre of field staff, training, workload, timing and number of household visits, logistics (payment) and methodology.

a) Calibre of field workers

One of census 2011 strategies is to have a mix of civil servants as supervisors and fieldwork coordinators. Recruitment of civil servants such as teachers, municipal workers as supervisors/coordinators is vital because;

- a. They will provide better management of field operations
- b. They have a better training background
- c. They will be accountable
- d. They command respect in communities

Recommended staff: Teachers, municipal workers, non government organizational/ Community based staff etc. These cadres to be paid stipends. However, there is need to engage other departments like DPSA, DoE, etc to get approval exemption for stipends and HR regulations

b) Field staff workload

Enumeration procedures for census 2011 have reduced workload of field staff to ratios of 1 field work supervisor (FWS) to 4 field workers (FWs), and 1 field work coordinator (FWC) to 5 FWs to ensure easier management of fieldwork. This will help in ensuring that all FW's and their FW's are closely monitored, resulting in the reduction/elimination of bogus enumeration and improvements in the quality of information collected.

c) Training

Training of field staff is essential in any census undertaking. Prior to participating in field activities, it is mandatory for persons who will be involved to undergo training on core field activities; publicity, listing and enumeration. Census concepts and procedures as well as roles of

recruited field staff must be explained thoroughly. However, Census recruitment attracts millions of applicants many of whom are of low calibre in terms of formal training. The magnitude of required numbers and at times their skewed distribution (in terms of geographical residence) forces census offices to recruit people that do not meet minimum qualification requirements. This has negative implications on training and data collected. The challenge is to adequately equip such numbers with necessary skills in census methodologies and content in very short time, often characterized by intensive training. Inadequate training undermines the organization's goal of providing relevant and accurate statistical information

The last two censuses used cascade method (3 tier training) which at times lead to dilution of information at lower levels of training .It is very crucial to adopt a training approach that will ensure standardized and uniform training procedures. The training strategy must outline not only how quality trainers will be recruited but also how the acquired knowledge through training will be transferred without losing information as it cascades down to the enumerator/field worker.

The proposed Census 2011 training strategy;

- involves decentralization of training activities to the district level
- Training sessions to dwell on practicals (field practice) to enable the prospective field staff to familiarize themselves with data collection tools, hence reducing coverage and content errors during the actual census exercise.
- Written Assessments to be a major tool in determining one's appointment and at what level instead of the traditional way-conducting interviews.

However, the suggested training approach has not been tested. It is envisaged that the training approach will be tested in the upcoming mini test scheduled for October 2010. If tested and well implemented, the training approach (bottom-up) will enable Stats SA deliver a successful census 2011 as best alternative.

d) Timing and number of household visits

Census operations require field staff to visit households during the day and yet in many instances, members of the household particularly working age and school going ages are only available in the evenings. For example it was reported that in Census 2001, the window for enumeration was effectively a two-hour period (17:00-19:00). This means that a field worker has to make successive callbacks. Multiple contacts/visits are therefore of paramount importance in response rates. Use of local people in enumerating their respective areas will promote use of after-hours to gain access to households.

e) Logistics (payment of field workers)

- With the implementation of field integration approach where one field worker undertakes all the three census field activities (publicity, listing and enumeration), payment is affected at the end of the three processes.
- All allowances pertaining to fieldwork will be embedded in the total salary package

f) Enumeration methodology

In previous censuses of 1996 and 2001, field operations (listing and enumeration) were conducted independently by different census contract field staff. Field staff was recruited to compile listing of structures across the country after which their contracts were terminated. Recruitment of enumerators followed. This methodology had logistical implications on recruitment, appointment and payment of contract staff and generally led to unnecessary delays in subsequent census activities. During the census 2011 pilot conducted in 2009, a different approach to field organization (integrated approach) was devised and tested. In this approach, one FW is appointed and is responsible for all three field processes – publicity, listing and enumeration.

In terms of recruitment, each field worker is employed to work in the area where he/she resides. This is an advantage in a sense that;

- there are no transport costs involved;
- Census official knows dynamics of the community and its surroundings (social issues, terrain, security, boundaries) and therefore no need to hire guides;
- Census official is familiar local languages and therefore able to communicate easily with community/household in language of choice;
- census official is known in the community and may thus gain cooperation from all households
- Census official can work after hours; time when most people are at home.

With this approach, it is assumed that coverage errors will be reduced and those that occur will be easily resolved.

Other methods of enumeration

- Although self enumeration is discouraged, efforts will be made to ensure that all households are counted. In high-walled areas other situations where self enumeration may be preferred to interview,

- Households that wish to enumerate themselves will be asked to register with district offices during publicity at DU level;
 - Enumerators will drop off questionnaires before enumeration with instruction manuals for HH to fill names;
 - Before collecting questionnaires, enumerators will do quality checks to ensure that the questions were all answered correctly.
- Previous censuses were characterized by missing household members (depicted in community survey 2007 population pyramids). To rectify this problem, households will be reminded during publicity to ensure they compile a list of all people that will spend census night at their residence and the list should be available to the enumerator during the interview. This list will also be useful for household opting for self enumeration to remind them of who qualifies to be included in the questionnaire at the time of questionnaire completion.
 - Census office will encourage the public to make use of toll-free number to report cases where some areas/households are not enumerated.

Progress reporting of field processes

Implementation of daily progress reporting for each enumeration area assists management in picking up some issues pertaining to FW capability, logistics, terrain and coming up with remedies to resolve any issues that may hinder progress. Progress reporting will also assist in identifying areas where information is missing.

- All field staff must therefore be trained on reporting and importance of giving actual information timeously
- Progress reporting forms must be kept simple for every field staff to understand and complete with ease.

Quality assurance and Monitoring Processes

Quality control processes also play an important role in minimizing undercount. Quality assurance during field operations seeks to identify problematic FW's and seek to improve the quality of data collected as soon as possible. If errors such as incorrect listing, bogus unoccupied are closely monitored and corrected through follow-up visits, a more complete enumeration will be conducted. The quality control structure for Census 2011 will be embedded in the roles and responsibilities of field staff. Each census staff member is responsible for producing a high standard of work. Supervisory staff, including the FWC, FWS and Quality Assurance Monitor (QAM) will have the responsibility to monitor whether these standards are being applied and take

corrective action, when necessary. For field operations to run smoothly and produce data of acceptable quality, field operations staff needs to actively and continuously be involved with quality control. On the strategic level, a number of actions should take place to make the running of these quality processes possible. These actions, outlined in the Census 2011 Strategic Plan, include:

- Deploying a competent field staff team and training team adequately
- Documenting and implementing stringent quality checks
- Implementing the 'Hard-to-Count' enumeration plan
- Implementing appropriate monitoring and evaluation systems
- Setting up and adhering to timelines for all activities
- Adhering to organizational classifications and standards

Partnership with stakeholders

Census undertaking is a complex exercise that can not be accomplished successfully with effort of a single organization-Stats SA. It is very crucial that Stats SA and census management in particular identify key stakeholders and form partnerships for every census activity. Key partnerships may include:

- **National departments and local governments.** It is essential to engage departments in processes such as;
 - o Recruitment and training of census field staff if civil servants are to be part of field personnel.
 - o Security and safety of census field staff requires partnerships with security companies, SAPS and local communities to identify potential high risk areas and to execute security plan during census operations
 - o Partnership with municipalities. Municipalities are among the main users of census information/statistics and it is therefore imperative for them to play central role in soliciting cooperation from the public and ensure that the public willingly and proactively give accurate information during census activities. Partnership with local municipalities will be extensively explored and their potential roles and responsibilities with regard to the census discussed. Municipal managers understand the importance of the census and will be encouraged to engage local civic, community and faith-based organizations to reach out to their constituencies to provide grass-roots support for a complete count. Municipalities

can also be used to promote recruitment drives, develop strategies to mobilize local participants and can also be used as a possible provider of free venues for training.

- **Private businesses.** During the planning phase, it is crucial that the organization identifies in advance all activities that need to be contracted out and form partnerships with service providers during implementation phase. Whenever some services are outsourced, it is recommended that decision-making and direction should at all times remain the responsibility of Stats SA census management (Census 2001 debriefing report). Some of census activities such as advertising and promotions require strong partnerships with private companies and media to ensure that publicity messages are consistent and coherent.
- **Volunteer groups in form of Complete Count Committees.** These groups know community dynamics and partnerships with them will assist the organization in executing its mandate; delivering a complete census 2011. One way to help ensure that everyone is counted is to form such Committees at ward level in all communities across the country. Complete Count Committees may consist of community leaders, faith-based groups, schools, businesses, media outlets and others who are appointed by elected officials and work together to make sure entire communities are counted. These committees will develop targeted outreach plans specific to their communities to supplement what Stats SA is already doing through paid advertising and partnership efforts. One of their responsibilities could be; to create awareness within their communities about the upcoming 2011 census, donate space for training, publicize recruiting efforts and obtain endorsements from local leaders. In addition, they will assist in organizing census rallies, media luncheons, and interfaith breakfasts and weekend events closer to Census Day.

Census is about the people and for the people and therefore involving everybody through partnerships is of paramount importance. Forming partnerships will not only assist Stats SA in tapping on the knowledge and expertise of partners in their respective arenas but also promoting sense of ownership of census exercise and this will translate into increased public participation. It is crucial that potential partnering organizations, groups and individuals are brought on board in the initial stages of planning and that their level of involvement and expectations are clearly defined.

Publicity and Advocacy

In order to obtain maximum co-operation and participation from respondents during census 2011 field operations, a thorough and all inclusive advocacy and publicity strategy has been developed. This is aimed at:-

- Positively changing the mindset of the public about census and its intentions;
- Educating the public about the importance of accurately generated information on the size, demographic characteristics and living conditions of the country's households;
- Reaching-out, mobilizing, informing and publicizing important census dates to the public in order to keep them abreast on what is and will be happening from now until 2013.
- Ensuring the public willingly and proactively give accurate information to the data collecting agency on the state of their living conditions so that the developmental imperatives of the country and proper evaluation of the policies aimed at improving their lives can be realized.

Planning an effective publicity campaign is a large and complex task and it is important that partnerships are established to reach audiences at the lowest geographical level. A number of campaigns have been planned focusing on: forming partnerships, alliances and/or coalitions, lobbying and negotiating (for executive support) and appointment and Implementation of Census management committees (Advocacy Leadership). This will be done by:-

- Involving community leaders, influential and religious leaders;
- Identifying key existing community groups;
- Identifying existing community channels for information dissemination;
- Organising the group (identify group members, group leaders, use of terms of reference)
- Mobilising the groups through village meetings, group discussions, folk and traditional media, live entertainment etc.

Questionnaire length

- Census 2011 questionnaire length and content has been tested and is being subjected to continuous revision. The revised questions are to be further tested in the upcoming October mini test
- Approved version of the questionnaire to be presented to users
- Sensitive questions will be published and discussed in public forum
- Households will be provided with a guide on how to complete the questionnaire with ease.
- Data collection will form partnership with subject matter specialists in writing manual; section on the questionnaire completion

Stats SA Employees involvement in Census 2011

Each and every Stats SA official either comes from or lives in one enumeration area or the other during census. Small holdings, high-walled areas, residential complexes, traditional areas and townships are but some of the areas in which these employees reside. Even those employees that do not live with these communities have some understanding of the lifestyles that are practiced in these communities because some of them either once lived with them or next to them. For example, it can be argued very strongly that many Stats SA employees have something connecting them to some of the hard-to-count areas such as township, informal settlements, high-walled areas as well as some farm areas. Being both Stats SA employees and members of these communities gives the organization a chance to utilize them as ambassadors in their respective communities to ensure that Stats business of conducting a census is achieved.

Strategies

- Stats SA employees to be an interface between the organization and communities where they reside during the census. During publicity at EA level, involvement of Stats SA employees is very crucial in ensuring that they bridge the communication gap that often exists between these communities and Stats SA. Their apt understanding of the dominant culture, the local protocols, geographical layout and the local language puts them in a better strategic position to mobilize and solicit cooperation from such communities.
- Hence, the Census management team must ensure that all Stats SA staff is educated and conversant with census methodologies (publicity, listing and enumeration) so that they can render assistance to field staff in their respective EAs whenever the need arises. This

can be achieved through regular briefings on Census activities and major milestones achieved using internal communication tools such as "Pulse" newsletter and Friday presentations.

- Formation of partnerships between Stats SA employees and census field staff in their designated EAs. It is assumed that a field staff team that enjoys full support from other Stats SA employees in the area will be motivated to work hard and accomplish its tasks effectively and efficiently. Employees that will portray the zeal and impetus in delivering a successful census 2011 will not only be proud of their efforts but also the organization and the nation at large should this be achieved.
- In circumstances where field stations need to be established, employees offering part of their premises to act as field stations will enhance confidentiality and resolve other logistical issues particularly in places such as rural and informal settlements where securing space is anticipated to be a challenge.

In preparation for census 2011, it is therefore of paramount importance that each employee begins to engage their respective communities in discussions relating to censuses, benefits of conducting censuses, and the role communities play in ensuring that such a complex exercise becomes a success.

3.2 Provincial specific strategies

It is important to highlight the fact that certain provinces contributed more to undercount than others. This is evident from the variety of definitive pointers displayed in the opening tables and graphs. There is a clear indication that provinces need to devote sufficient time and resources to effectively plan for census 2011. In addition, the amount of omissions recorded are a sign that, in addition to planning for census, partnerships with all relevant stakeholders are a very critical determining factor of a complete and accurate count. This requires a lot of mobilization through campaigns aimed at educating and persuading them to be part of census from beginning to the end. It is also critical to have an extensive publicity and marketing drive that will help to create awareness about census thus ensuring that all citizens are willing and ready to partake.

In this regard, provincial and district officials responsible for implementation of census project in their different capacities across the country constitute an indispensable resource and potent force that are critical in the generation of pointed strategies of reducing the undercount. In other words, they must work hand in hand with other stakeholders, identify challenges and craft strategies that will address them in their respective areas of operation.

A recently organized workshop which consisted of delegates from all provinces and their respective districts bears testimony to the latter approach. As expected, the output of the workshop was not far from the above facts, as provinces actively outlined their internal and external issues that were believed to be posing challenges in their areas. They also proposed solutions to these challenges as Stats SA plans to deliver a remarkable and complete count of South Africa's population in 2011 census. This section summarizes their input

It is important to note that some province specific strategies outlined may be similar and appear to be repeated in the document. This is due to the fact that some of the issues and challenges are common to particular provinces.

1. Western Cape Province

The data depicted in the bar graph contained in the opening paragraphs of this document show that the household undercount recorded in the Western Cape Province was lower than the rest of other provinces. By contrast, the data shows that there was a sharp increase in the household undercount for this province even though it was below that of KwaZulu-Natal, Gauteng and Free State. There is more or less similar trend with persons undercount for the two censuses. Another essential observation to be made about the Western Cape is that just like Gauteng and unlike majority of provinces, it does not have tribal or traditional areas. It is dominated by mostly urban settlements such as affluent suburbs, gated residential complexes, informal settlements, townships and commercial farms. Each of these settlement types has its own dynamics that one way or another contribute to the provincial undercount. The following paragraphs discuss a number of factors that together contributed to the undercount in the Western Cape. They also discuss a number of proposed strategies to employ as strategies to change the situation for the better in 2011.

1.1 High walled area

Contributing factors

- Households in such areas are not easily accessed and this is attributed to a number of reasons; security concerns and lack of willingness to participate in a census. Failure to obtain interviews for all households (non-contact, refusals, non-return of questionnaires left for self-enumeration) leads to omissions, yet the aim of conducting a census is to count everyone within the borders of a country.
- Failure to access a dwelling means that Publicity at DU level will not be possible and this may translate into lack of enthusiasm and limited knowledge on how to complete census form/questionnaire. In case such households opt for self enumeration, this may result into incomplete or poor-quality information resulting into omissions
- Failure of gatekeepers in these areas to co-operate with census officials means that the latter will not access dwellings and therefore may end up not enumerating them.

Strategies

- The provincial census personnel must build partnership with key stakeholders such as body corporate, ward councilors, neighborhood watch, security companies etc many months prior to field operations of listing and enumeration. This will involve

- ❖ Scheduling meetings with the chairpersons of various body corporates to develop and maintain a professional relationship.
 - ❖ In situations where the management of such areas refuse outsiders to enter such areas and conduct enumeration, the province will liaise with security companies and find out if its possible to use their personnel as fieldworkers
- Self enumeration - There will be a process of identifying households in high walled areas that wish to enumerate themselves, and provisions will be made to drop and pick completed questionnaires. The following criteria will be used;
- ❖ Prior to census activities, communication channels such as social networks; "Facebook" and
 - ❖ E-mails will be used to engage high walled communities in discussions to solicit views on
 - ❖ Preferred method of enumeration.
 - ❖ Households opting for self enumeration will complete Registration form provided by Stats SA to be used to find out those households who want to enumerate themselves
 - ❖ District offices will utilize schools; both primary and high schools to publicise census and census activities so that students become the ambassadors between census office and their homes.
 - ❖ Involvement and engagement of gatekeepers early in advocacy and publicity should be made a priority. The following communication channels will be used;
 - a) Integrated Development Plan forums
 - b) Municipality bills
 - c) Local media
 - d) Social networks such as Facebook
- Task teams will be established in each district composed of experienced field staff and district manager to handle difficult situations as they arise

1.2. Informal settlements

Contributing factors

- Some communities are inaccessible due to political intolerance and others are increasingly becoming insecure due to service delivery riots and crime. It becomes difficult for any government department to conduct activities smoothly in such communities as workers fear to risk their lives.
- Informal settlements are characterized by makeshift structures that are in most instances too cluttered, making application of census listing methodology impractical. With the new integrated approach where one FW covers the EA alone, there is a high risk of the FW erroneously living out certain structures during listing or enumeration.

Strategies

- Targeted recruitment has been suggested as one of the solutions to the above problem. It is envisaged that recruitment of field workers from within communities will minimize fears of insecurity because local people are conversant with the area, people and situations as they arise.
- Building partnerships and Collaborations with gatekeepers (CDW's; SANCO; Local Municipalities, police, security companies, etc) prior to main census activities may greatly enhance access to such areas.
- In areas where insecurity exists, use of guides is of paramount importance
- Relax the recruitment requirements in cases where there is poor response to advertised posts. However, this implies that training has to be intensified in order not compromise quality of information to be collected.
- Segmentation and blocking. The listing methodology applied in social stats surveys will be employed so that FW can easily identify and access all the structures.
- District Managers should establish long term relationships with community leaders, municipalities, IDP forums etc
- Statistics SA must establish long term relationship with communities. For example, when census Information is collected; communities must receive feedback on results.
- Thank you token such as cards should be given to the communities after completion of a survey
- Statistics SA must be involved in community development activities so that it can be visible in such communities

1.3 Illegal immigrants

Contributing factors

- Illegal immigrants are not easily accessed because of fear of being arrested and deported by the department of Home Affairs. It is very hard for any government department to easily interact with this group as the latter is suspicious that information may be leaked to Home affairs which would in turn put them at a risk of being identified and deported to their home countries.

Strategy

- Districts must identify areas where immigrants reside long before census night and establish rapport with influential group leaders who in turn will influence others and encourage them to participate in a census.
- During census, publicity campaigns and advocacy must address the issue of confidentiality of information collected.

1.4 Transient population

Transient population in Western Cape includes Khoisan (nomadic) communities, homeless and truck drivers.

Contributing factors

Khoisan Communities – Members of these communities often have no permanent places of residence and their movements are seasonal and socially determined.

Strategies

- The districts where Khoisan people are dominant must identify places where they live and map out their movements. In addition, a rapport must be established with their leaders prior to and during the census. GIS may also be used to map the pattern of their movement
- Form partnership with police and security companies

Homeless - These are normally dominant in urban areas. Normally counted on the census night. This requires the organization to involve other stakeholders particularly the police to ensure safety of field staff.

Strategies

- Provincial office will form partnerships with the soup kitchens and social development to organize the homeless in groups and provide them with a meal as we count them.
- To address the security issues, field staff must move in groups.

Truck drivers - These are always on transit.

Strategies

- They will have to be counted on census night. Field staff will identify stopover areas and filling stations to enumerate them

1.5 Terrain/Landscape

Contributing factors

- Some EAs are or become inaccessible during field operations due to landscape (mountainous), semi-desert, conditions or vast farms leading to failure to list and/or enumerate some habited areas, hence omissions

Strategies

- Identification of such areas and make logistic requests (transport) on time. There is a need to use bakkies (4X4), vehicles, boats, horses, etc.
- Involve relevant stakeholders and follow farm protocols when seeking access.

1.6 Demarcation and listing

Contributing factors

- Incomplete demarcation may lead to use of 2001 EAs which may have grown too big to be managed by one FW. This increases the risk of certain portions of the EA being left out during listing and/or enumeration.
- Boundary demarcation problems or boundary interpretation problems may cause overlap or omission of parts of EAs;

Strategies

- Demarcation must be completed
- Verification of newly demarcated EAs to identify abnormally large EAs prior to listing
- Increase number of quality assurors for listing phase

1.7 Questionnaire length

Contributing factors

- Census 2011 questionnaire is too long and complex. It takes approximately 40 minutes to complete one questionnaire. In cases where the EA has many household, FWs may not finish on time leading to omissions of dwelling units and households.
- Households opting for self enumeration may be discouraged to complete the questionnaire on realizing that the questionnaire is too long and not user friendly due to complex skipping instructions.

Strategies

- The pilot questionnaire should be shortened. Re-engineering of some sections such as employment and disability, and revision of some questions will greatly reduce time taken to complete a questionnaire. The section working on the questionnaire must therefore incorporate inputs from discussion forums, particularly the undercount workshop where all provinces pointed out that if the length of the questionnaire is not reduced, this may lead to refusals and poor quality and these directly translating into omissions

1.8 Tracking of questionnaires

Contributing factors

- During enumeration and reverse logistics, if proper measures are not put in place, some completed questionnaire may be misplaced and others lost. This would ultimately lead to undercount

Strategies

- Completed and checked questionnaires (EA) must be brought to the satellite offices on daily basis
- During packaging, field staff must take necessary precautions to ensure that all questionnaires are accounted for.
- Proper control measures (CSAS) during reverse logistics should be in place

1.9 Publicity and marketing

Contributing factors

- Poor census publicity at DU and EA levels may cause refusal and non- contact ultimately leading to undercount

Strategies

- Targeted publicity at DU and EA levels will create awareness hence building lasting relationships with households.
- Establishment of census brand
- Involvement of Stats in community activities such as Integrated Development Plan (IDP) forums so that communities can be aware of its activities

2. Eastern Cape Province

The Census 1996 household undercount for the Eastern Cape was 5 percent and equal to that of the Western Cape (also at 5 percent) and almost equal to the North West undercount which was calculated at slightly below 5 percent. In Census 2001, this figure almost tripled jumping to almost 15 percent although this was the lowest household undercount compared to other provinces. The persons undercount for Census 1996 was slightly above 10 percent while this figure jumped to just below 15 percent in Census 2001. Once again this proof that regardless of the fact that the Eastern Cape has registered moderate undercount rates compared to other provinces, in general, there has been a very steep upward trend.

2.1 Planning

Contributing factors:

- Centralised planning
- Unexpected scope changes

Impact on census

It resulted in unexpected project costs and other major disruptions, poor coordination and monitoring of fieldwork resulting in poor quality control and management.

Strategies:

- Provinces must be part of all planning activities from H.O. down to Provincial and district levels;
- Census committees must be put in place immediately and must be made effective;
- These committees must serve as conduits for escalation of ideas from provinces to the high level of planning in the organisation;
- Major scope changes in the middle of the project must be avoided where possible and planning around inevitable ones must be done prior to project enumeration;
- Project funds must be approved and committed timely;
- High level interaction with other surveys concerning publicity to avoid overlapping of visits in the same area must be done immediately.
- Decision on the deployment of management staff to different areas during enumerations must be based on those manager's understanding of the urban-rural divide and vice versa

2.2 Process related factors

There a number of process issues that affected the fieldwork operations in the past. These issues involved incomplete demarcation of the country and enumeration areas which resulted in lack of field verification and validations of enumeration areas

Contributing factors:

- Incomplete and inaccurate demarcation, verification, validation and listing
- Wrong capturing of some Xhosa Place Names:
- Abnormally large enumeration areas were only discovered during enumeration.

Impact on census

The net effect or outcome of the lack of verifications and validations was that it compromised listing and by extension total coverage of enumeration areas due to incomplete listing. The effect of the incomplete listing was that:

- Not all dwelling units (DU) were visited
- The training process was not adequate to equip fieldworkers with skills of map reading:
- Only office demarcation was done and other dwelling units could not be found; and,
- Not all members of households in each dwelling units were enumerated.
- There were difficulties associated with locating different areas or places during enumeration.
- In most cases, when this happened, there were insufficient resources, both human and material, to cover the whole area.

Strategies

- Demarcation, listing, verification and validation must be completed on time so that vast areas will be identified early and allocation of necessary resources will be properly planned;
- Ensure that all local place names (especially sub-place names) are captured correctly. The involvement of Xhosa speaking people in the capturing process and timely, thorough and accurate demarcation, listing, verification and validation must be ensured for 2011.
- The method of segmentation of EAs that are too large and increasing resources where it is necessary must be considered as a solution to this problem;
- The early completion of demarcation will also help to:
 - ❖ identify strategies to avoid demarcating across administrative boundaries
 - ❖ identify prominent features so that they can be clearly recorded
 - ❖ open opportunity to transverse the EA before working in it (i.e. before listing)

- Early preparation should include the assigning of specific tasks to experienced staff
- There is a need to review quality assurance methods with a view to improving Quality Assurance and monitoring
- Enumerators must do evening and morning enumeration to minimize non-contacts
- The training for enumerators must also include an understanding of issues pertaining to immigration and the whole migrant labour system in the Eastern Cape
- Necessary vehicles such bakkies are always needed for Fieldwork Supervisors in farms and villages with vast areas and they must be made available to them instead of district managers;
- Enumerators must be able to fetch the questionnaire physically in the case of self enumeration instead of waiting for the post
- If possible, training for enumerators must be done in vernacular;
- Two day refresher training between phases
- There must be finality in the issue of the length of questionnaire lessons to be learned from the Kenyan census

2.3 Stakeholder related issues

The lack of a coherent advocacy and publicity strategy resulted in a number of stakeholder related issues that negatively impacted on the census data collection.

Contributing factors

Lack of proper Gatekeeper Advocacy and Publicity

- Issues such as lack of buy-in from stakeholders due to inadequate gate-keeper advocacy and publicity, especially with councillors and traditional leaders constituted the biggest problems.

Political environment

- Although In 1996 and 2001 there was less or no service delivery protests and as such the environment was not politically contaminated, at times disgruntled citizens vented their frustrations of lack of service delivery on issues like high rate of unemployment, lack or late consultation and very high crime rates in their neighbourhood by refusing to participate in the enumeration. Other citizens did not trust enumerators since they feared that the information they give out would not be protected and therefore may be disclosed to the third party.

2.4 Hard-to-Count Groups

- Obviously, each and every province has its fair share of groups or communities that are very difficult to enumerate for a variety of reasons. For example, the large proportion of these hard-to-count groups in the Eastern Cape Province may be different from Free State and KwaZulu-Natal. For example, it is difficult to enumerate locals in the deep and mountainous rural areas in the Eastern Cape because they often mistrust strangers and they run away because of their illegal economic activities. (E.g. some trade in dagga or marijuana). Some high-walled areas also highly security conscious and they also mistrust of strangers.

Lack of knowledge

- The other issue that makes it difficult or compounds the above-mentioned problems is the lack of knowledge about census as to why it is important that they participate by giving information to enumerators. The conflict between Ward Councilors and Tribal Authorities often catalyses the challenges already mentioned and therefore more refusals are experienced.

Proposed solutions / Strategies

To solve the above challenges, the following strategies are proposed:

- There must be an extensive advocacy and publicity programme that will address all key stakeholders and gate keepers, including tribal areas (chiefs, headmen, iindunas, etc).
- Usage of over-shirts must revised to differentiate between police officers or law enforcement personnel and enumerators.
- There must be maximization of advocacy and publicity in high walled areas which will target their interest groups such as golf clubs, diving clubs, bowling clubs, etc.
- Efforts to step up the use of different communication channels, especially mass communication media such as community radio stations in the rural areas and road-shows for tribal areas, must be stepped up in order to reach out to a big number of people

2.5 Human Resources Related Issues

The absence of a coherent Recruitment and Training Strategy resulted in a number of human resources related challenges. Some of these issues related to lack of skilled training personnel and lack of depth in terms of requisite qualifications in communities which ultimately resulted in a in the following situation:

- Less or no emphasis on methodology during training of fieldworkers which resulted in inaccurate data collected and omission of some structures during publicity and listing phase;
- Lack of skilled fieldworkers; and
- Omission of work experienced personnel due to stringent recruitment and selection criteria which also eventually led to lack of continuity in data collection.

Proposed Strategies

The above problems can be resolved by having a Recruitment Strategy that is linked to Training Strategy. The recruitment and training strategy must focus on the following areas: Human Resources must be streamlined in such a way that permanent staff must run the census and contract staff must play a supporting role. This will allow permanent staff to be able to account for all the equipment allocated to them and the decisions they make during census.

Review of Ratio of supervisor to fieldworker

- The ratio of supervisor to fieldworkers must be such that it takes into cognizance that some enumeration areas are extra-ordinarily bigger than others. Therefore care must be taken to ensure that abnormally huge enumeration areas are decreased into manageable units with an effective balance struck between supervisors to fieldworkers. Furthermore, there must be a layer of Quality Assurors to assist Field work Supervisors where there are long distances to be traveled with EAs, especially in large EAs.

Appointment of Staff

- In addition to the above issues, provinces are calling for the appointment of the following personnel to serve in provincial and district offices during census.

Information Technology Personnel

- There must be at least one Information Technology Technician per district to be supervised by at least one Provincial Information Technology Technician.

Human Resources Officers

- There must be at least three Human Resources Officers deployed or appointed to serve in the province.

State Accountant

- Each province requires at least four Assistant State Accounts to be appointed

District Logistics Officers

- Each district must have its own District Logistical Officer. The province must have at least three major warehouses to serve as the repository/storerooms for district questionnaire after fieldwork.

Community Survey Staff

- Former Community Survey staff members who are no longer with census must be lured back to serve census. In addition, other projects must support census by releasing or seconding their under-utilised staff or human resources to census during the census period.

Deployment of Interns

- The recruitment strategy must also speak to the deployment of interns to the provinces and districts. Because of the high rate of accidents, special assistance to both permanent staff and interns to obtain drivers' licenses and adequate experiential driving or practice to avoid unnecessary accidents that cost the census a lot of money must be addressed as a matter of urgency.

Targeted recruitment in abnormal EAs

- The recruitment strategy must also determine effective targeted recruitment. This means that it must also consider relaxing qualifications in some areas while putting more emphasis on training.

Training Strategy

- It has been noted with concern in a number of mini projects, including census 2011 pilot that took place last year, that it is sometimes difficult to accurately apply targeted recruitment.
- It is therefore suggested that the recruitment strategy must also look into the possibility of using the database instead of conventional recruitment methods of advertising in newspapers and radio stations, etc...
- Since recruitment and training go hand-in-hand, it is crucial that planning for training takes into account what the recruitment strategy seeks to achieve. For instance, in order to avoid a situation of employee turnover of contract workers, immediately before, during and after census, it is suggested that the method of overtraining should be thoroughly explored.

Recruitment of Guides in Crime ridden areas

- Access into some crime ridden areas has always been a problem as enumerators are warned against entering these places, especially townships and informal settlements. The recruitment strategy should be able to devise methods of how locals can be recruited to become guides that can be used to assist as volunteers in these high crime areas. For example, local authorities can be used to accompany Fieldworkers as guides because of their influence or clout in the communities.

3. Northern Cape Province

The household undercount bar chart shows that the Northern Cape experienced the highest undercount of 10 percent in Census 1996 with North West at the bottom end at 5 percent. However, it can be deduced from the data depicted in the graphs that even though this province was did not experience the highest household and persons undercount during Census 2001, the figures were still alarmingly high as they were still way above the international average of 5 percent. The following factors have been identified as major contributors to the high undercount;

3.1 Planning

Factors contributing to undercount

- Lack of integrated approach to planning.

How these factors affect the undercount

- Without integrated planning, some staff members are demoralized and do not participate to their full potential. This may result to fewer trainers and experienced staff members that may be needed in running the census. Some staff members may resort to being spectators rather than participants.

Strategies to reduce the undercount

- Establish provincial census committee (FOM, PCC, DM, PSC) and district census committee (DM, DSC, and other supporting staff members who are available and have experience)
- Involvement of all relevant stakeholders in the planning sessions

3.2 Training

Factors contributing to undercount

- Training period
- Cascading method of training
- Competency of trainers
- Video Training

How these factors affect the undercount

- Field staff being forced to be trainers even though they are not experienced in field or professional trainers. Incompetent trainers fail to impart knowledge to the trainees which may lead to incompetent trainees
- Field staff unable to grasp/understand content resulting in incompetent staff due to limited period of training. Incompetent field staff result in errors or omissions of DUs on the ground resulting to undercount

Strategies to reduce the undercount

- Acceptable time limit for each module should be identified to enable an average person to grasp the content.
 - ❖ Review/extend the number of training days allocated for training.
 - ❖ For national and provincial training, the province should identify trainers, irrespective of their designation to attend the training of trainers.
- Make use of the HCD staff members.
- Ratio of trainers to trainees 1: 40 with more than 1 trainer in the venue, using subject matter specialist in all modules.
- Video presentations should be avoided at all costs, because there is no interaction between the trainees and the trainer. Instead, field practice should be conducted.

3.3 Publicity

Factors contributing to undercount

- Failure to sensitize the public
- Targeted publicity

How these factors affect the undercount

- Respondents may refuse to participate in the census because they have no idea of what a census is and how it will benefit them.

Strategies to reduce the undercount

- Partnership with stakeholders such as Municipalities, SAPS, Government departments and other concern groups, Street Committees, churches and schools should be formed to assist during publicity.

- Integrated publicity campaign outreach should be implemented i.e. other surveys currently running should start publicity for Census 2011 by giving out pamphlets, posters etc. including Census@School.
- Publicity campaign to include promotional activities such as organisational and implementation of Road Shows.
- Have targeted publicity (e.g. in general meeting farm unions)
- Publicity strategy designed for different EA types (farms, hostels, mines, recreational etc)
- Integration between all publicity strategies in the Organisation.

3.4 Demarcation

Factors contributing to undercount

- No validation and verification of Office demarcation
- Incomplete demarcation
- Inaccurate demarcation
- The use of outdated maps

How these factors affect the undercount

- If demarcation is not completed on time, some EAs will be abnormally large resulting in DUs not listed and therefore not enumerated.
- Inaccurate demarcation leads to status changes not being acknowledged or recorded.
- Outdated maps may not have developments which are on the ground resulting to abnormally big EAs which cannot be completed in allocated time.

Strategies to reduce the undercount

- Office demarcation should be verified by GISS and MM.
- HO should send completed demarcated municipalities to the provinces for verification.
- Demarcation should be completed on time to allow time for verification of all EA boundaries.
- Large EAs should be segmented to manageable EAs
 - ❖ Urban formal between 120 - 150 households.
 - ❖ Urban Informal between 150- 170 households
 - ❖ Rural / farms 60 – 80 households
 - ❖ Tribal / Traditional 130 – 150 households

3.5 Enumeration

Factors contributing to undercount

- Non-responses

How these factors affect the undercount

- Refusals and non-contacts increase the undercount

Strategies to reduce the undercount

- Non-response follow up week to help reduce the number of refusals and non-contacts.
- Intensify publicity at all levels.

3.6 Hard to count group

Factors contributing to undercount

The following groups are hard to count and hence increase the undercount

- Illegal immigrants
- Farmers
- Nomads
- Transients
- Homeless
- High walled area
- Informal workers

How these factors affect the undercount

- Illegal (undocumented) immigrants and informal workers do not trust enumerators and refuse to be interviewed
- Nomads and homeless/street kids are difficult to track as they do not have a permanent address.
- In high walled areas it is difficult to access the DUs (security complexes, Townhouses, Estates etc)
- In the farms there is a challenge of language barrier and protocol to access these farms.
- It is also difficult to get field workers from these areas, in cases where they are available they will either have the following conditions:

- ❖ They either do not have Matric or are illiterate.
- ❖ They are not prepared to work long or after hours
- ❖ They are not prepared to do call backs or revisits.
- The farmers feel the training is too long (6 days is too long) and hence cannot be employed. These farms may not have a FW from the area and an FW from another area may not be accepted in the premises.

Strategies to reduce the undercount

- Mapping should be done before hand (6 months) to identify all unusual places where you can find hard to count respondents.
- Make use of a shorter questionnaire to enumerate in hard to count areas.
- Minimum requirements for recruitment should be relaxed in farm areas.
- More frequent meetings with Agri-Northern Cape and other Stake holders will assist a lot with the farmer's attitudes.
- Identification of households that prefer self enumeration before hand especially in high walled areas.
- Identify the hot spot of Nomads and Homeless / Street Kids.

3.7 Field Organization

Factors contributing to undercount

- Unclear roles and responsibilities of field staff.
- Reporting time
- Integrated Fieldwork

How these factors affect the undercount

- If roles and responsibilities are not clearly outlined, field staff will not do what is expected from them, e.g. FWC doing logistics roles, instead of ensuring that the boundary of the EA was clearly identified to avoid inclusion or exclusion of other DUs.
- The reporting time is usually late in the afternoons when FW are supposed to be busy with respondents who come late from work. Instead of following up on non-contacts at late afternoon they are busy compiling a report. Time set for reporting interferes with the business of the day
- Due to integrated approach of fieldwork errors committed during listing may be concealed until end of enumeration. These errors may include DU omission.

Strategies to reduce the undercount

- Clearly outline roles and responsibilities of field staff from the PCC to the FW.
- Change reporting time to at least the following day in the morning.
- Strict monitoring of each phase of fieldwork should be emphasised.

3.8 Resources

Factors contributing to undercount

- Logistics – lost or damaged completed questionnaires and EA Summary Books

How these factors affect the undercount

- If questionnaires are lost, the information from that particular EA will not be captured.

Strategies to reduce the undercount

- Good tracking system (CSAS) should be used to identify the location of questionnaires and EA Summary Books.

3.9 Self-enumeration

Factors contributing to undercount

- Missing questionnaires

How these factors affect the undercount

- Field staff not collecting completed questionnaires from respondents.
- Respondents who opt for self-enumeration and losing questionnaires.

Strategies to reduce the undercount

- Self-enumeration should be properly managed. The FW who drops the questionnaire must be the one that collects the questionnaire from the respondent.

4. Free State Province

Although percentages computed for the Free State show that it had the household undercount that was slightly above Eastern Cape, Western Cape and North West (above 5%) in 1996, it was counted among the provinces that recorded the lowest household undercount in that census. Within the same, the persons undercount for Free State was computed to be quite above the household undercount. It is shown to be somewhat above 5 percent but marginally below 10 percent. In 2001, the Free State was the third highest province in terms of the undercount in the whole country at 20.6 percent. This percentage is equal to the national omission rates for the persons within the age groups of 20-29 which was also 20.6 percent and the white population group undercount which was 23.3 percent. In addition the Census 2001 undercount for the Free State shows a lot of resemblance to the national undercount. There are a number of known factors that contributed to the undercount in this province such as poor planning, inaccurate demarcation and no physical verification of newly demarcated EAs, incomplete listing, outdated map backdrop and lack of access, insufficient recruitment strategy; ineffective training; wrong fieldwork methodology interpretation; cumbersome questionnaire; insufficient publicity and advocacy campaigns; clear strategy on hard-to-count groups and managing of difficult settlement types. In the succeeding paragraphs, these issues will be categorized as strategic or leadership, process, stakeholder or human resources related issues. Thereafter, details of how these contributed to undercount in this province will outlined and strategies of how to deal with them are articulated.

4.1 Planning

Contributing factors

- Poor and centralized planning

Impact on census

- It resulted in constant scope changes which derailed the project progress;
- Lack of proper allocation of roles and issuing of instructions;
- Disruptions and lack of accountability in many instances which negatively impacted upon the downstream and upstream processes of communication.

Strategies:

- Planning must involve all stakeholders from provinces to districts from beginning to the end.

4.2 Demarcation related issues

Contributing factors:

- Inaccurate demarcation and no physical verification of newly demarcated EAs
- Cumbersome questionnaire

Impact on Census:

- Lack of physical verification of demarcated enumeration areas.
- Incomplete listing
- Outdated map backdrop and lack of access

Strategies:

- Demarcation must be done on time to reduce these errors;
- access to the completed newly demarcated EAs per Municipality must be made available to the province and districts for physical verification;
- Demarcation team must be able plan for these “abnormal” eventualities.
- The size and type of questions must inspire or influence respondent participation.
- Look at reducing or removing unemployment, income and expenditure questions and use other surveys that deal specifically with this question to address this issue.
- Alternatively, include all questions for a percentage sample in the EA and have a shorter version for the rest to reduce data collection period, refusals and non-contacts due to more time saved and alternatively used to find more respondents. It will also reduce processing time and the budget;

4.3 Stakeholder related issues

Contributing factors:

- Inadequate publicity and advocacy strategy.

Impact on census

- Lack of cooperation from the stakeholders during enumeration due to misunderstanding and lack of awareness about census.
- No clear strategy on Hard-to-count groups and high-walled areas and other difficult settlement types including foreigners (legal and illegal).
- There is a definite language barrier
- Illegal immigrants concern on deportation and arrests
- Provide mostly incorrect information
- Form some of the non-contacts during enumeration.

Strategies

- Use election and world cup advocacy campaigns to benchmark best practice for the Census
- Appointment of a service provider to do marketing, advocacy and publicity for census.
- To create partnerships with other parties or establishments and stakeholders including be developed municipalities, political parties, unions, media, traditional leaders, security companies, religious leaders, police and police forums, army, community leaders, complexes and institution administrators, schools, etc.;
- To set up effective toll free hot line to deal with all Census queries and to follow-up process
- To ensure that such facilities are also in place in the provinces and districts to ensure all issues are resolved.
- Recruitment of locals so that enumerators can work after hours with less cost. This will also ease concerns associated with safety, transport and language.
- Offer attractive incentives to fieldworkers working in high income household to lure them into working for census, especially at supervisor and Fieldwork Supervisor level
- Target the security companies, complex administrators, mass media and political parties.
- Interpreters to be appointed on a need to be basis
- Advocacy and Publicity campaign must be clear that all people in South Africa will be counted and no ID document is needed to be counted as well as the confidentiality clause must be emphasis;
- Involve Department of Home Affairs in identifying where foreigners stay and their language proficiency;
- Ensure all traditional leaders and locally elected leaders are involved;
- Keep abreast of community meetings and ensure representation in all of them.

4.4 Unemployed and informal areas:

Impact on census

- Many people query criteria of recruitment and placement of fieldworkers if they are not represented and they often refuse to participate if there is a lack of service delivery from government
- Density of informal areas makes it difficult to count
- People in these areas are politically active.

Strategies

- Appoint people from the areas that qualify to be appointed

- Importance of Census to these communities must be publicized because it will be an input and identification where service delivery must be improved
- In informal areas, involve the local structures in enumeration and for coverage

4.5 Farms

Contributing factor

- Farm security due to farm murders and robberies.

Impact on census:

- Due to rampant farm killings, robberies or murders reported in the country, security is always high on the agenda for farmers and access is often limited.

Strategies:

- Farm visit protocols to be adhere to
- Involve the farmers union
- Targeted recruitment to ensure representation of language and race for farm fieldworker teams because of the sweeping method
- Involve the police and mass media in publicizing the Census
- The vehicles type to reach some of the farms need to be look at.

4.6 Inaccessibility of Formal areas

Contributing factors

- For a number of reasons, it was difficult to access some formal areas such as townships due to volatility of these areas.

Strategies:

- Involve police forums, ward councilors and any other local authorities
- Targeted recruitment in areas where no or few application is received

4.7 Human resources related issues

Contributing factor

- Lack of coherent recruitment, training and payment strategy

Impact on census

- Lack of clarity on whether academic qualifications more important than experience, especially in situations where only one of these requirements can be met.
- People who had been on contract and loyal to the organization for years are usually inadvertently kicked out of the system. In Census 2001 recruitment started just before Census taking

- Difficulty in capturing all applications before Census taking.
- Difficulty in placing Fieldworkers in the correct EAs
- Ineffective training which caused wrong fieldwork methodology interpretations;
- No clear strategy on hard-to-count groups and managing of difficult settlement types
- Lack of trained fieldwork and competent support staff;
- Lack of capacity building and skills retention causing those who have been trained to leave during and after training;
- Irregular and abnormal working hours resulting in incompetence due to fatigue.
- Delayed payments of field staff and lack of transparency in the labour relations and other HR policies.

Strategies

- Recruitment for Census 2011 must start now and possible candidates be put on a data base;
- Ensure a clear and early recruitment, training and payment strategy is in place;
- Ensure enough time is allocated to place and identify gaps in the data base;
- Headhunting in certain areas will be necessary;
- The data base need to be updated on a regular basis;
- Improve participation in areas such as high-walled, farm and politically hostile areas;
- The data base need to be updated on a regular basis;
- Existing Stats SA databases need to be merged with CSAS in order to reduce time in capturing by only updating and to include the experience fieldworkers from other surveys.

5 KwaZulu-Natal Province

KwaZulu-Natal is undoubtedly one of the biggest challenges when it comes to undercount. While the Northern Cape Province had the highest household undercount (10 percent) and the North West recorded the lowest at just below 5 percent in Census 1996, it was KwaZulu-Natal that recorded the highest household undercount in Census 2001 at 25 percent. The persons undercount for the province was between 20 and 25 percent. These are quite huge percentage figures that show that KwaZulu-Natal and Gauteng were the major contributors to the huge undercount at national level. A lot has been done by the province to respond to this challenge with the outcome that several factors have been identified as contributors that need to be addressed in preparation for Census 2011.

5.1 Planning

Contributing factors:

- Less involvement of provincial field operations structures during planning
- Unforeseen scope changes
- Ineffective communication channels
- No clear role of district managers in the census structure
- Lessons learnt from 1996 were not implemented in 2001

Impact on Census:

- Long time taken to make decisions on issues that have an impact on downward processes;
- Provinces having to deal with unrealistic timelines;
- Lack of synergy in head office structures that provide inputs to provinces e.g. Geography and Geography Census Support;
- The experience of not being able to pay field staff on time translated into no work or go slows
- Province was unable to handle emerging challenges since it had no clue on how to plan its work due to absence of concrete plans
- No feedback in terms of recommendations that have already been implemented and challenges that prevent implementation of others
- The lessons learnt must form the basis of every planning process including why there is lack of their implementation in the successive censuses in order to avoid repeating the same mistake/s over and over again;
- Cost analysis of mistakes incurred to sensitize the organization

Strategies:

- Provinces should form an integral part of all planning processes;
- Identify task team from provinces to form core team during planning;
- All census plans should be completed by 30 April 2010 and be reviewed on regular basis thereafter;
- Each province must give feedback on planning documentation, if no comment indicate so;
- Turnaround time for decisions should form part of a performance contract or Service Level Agreements;
- Clear lines of communication must be supported by an efficient and effective organisational structure that clarifies the matrix of operations;
- An effective management structure at District level to manage the Census is crucial to attend to issues that require intervention, such as enumeration;
- District Manager's role within census should also be clarified as they prove to be a valuable resource;
- District Managers must be given responsibility to manage census in the districts to ensure effectiveness in accountability at that level
- Draft plans must be timely circulated to all role players & timelines must be negotiated;
- Census plans kept on the website/intranet must be updated on regular basis
- Lessons learnt must help us to improve instead of repeating the same mistake/s over and over again; therefore, recommendations suggested must be categorized and implemented;
- Implementation plan of the communication strategy for the census at HO/provincial
- Decision to decentralize liaison with local newspapers and community radio stations on publicity campaigns should be taken as a matter of urgency;
- Forum to review and provide feedback on implementation of strategies for the hard-to-count populations;
- Cost analysis of mistakes incurred must be done in order to sensitise the organisation of their future implications; and,
- Feedback to all role players, including external stakeholders must be provided on the recommendations implemented.

5.2 Process issues

- Incomplete Geographic Frames compromise other important processes that are dependent on it such as listing, verifications and validation.
- Centralised loading of airtime created reporting nightmares

- A combination of poor connectivity in district offices and inadequate office infrastructure also contributed to the communication nightmare;
- Random allocation of vehicles result in allocations of vehicles that are not suitable for specific terrains in the province;
- The method of allocating vehicles allocated per quota rather than per need is flawed
- Public indicated their dislike of bibs used by field staff.

Impact on census

- No one knows what has been done to date with regard to demarcation; how much has been done and what role the province will play.
- Lack of coherence between Dwelling Frame and Census listing due to different approaches and attributes used;
- Lack of compatibility between demarcated areas and the reality on the ground/ social boundaries;
- Both loading of airtime from head office and lack of connectivity restrict communication of essential information during data collection. Field issues cannot be resolved there and then but as an after effect as fieldworkers cannot contact their supervisors/call centre or even respondents;
- Inappropriate allocation of vehicles means that certain enumeration areas cannot be reached or easily accessed;
- Allocation of vehicles per quotas rather the need defeats the purpose for they are allocated in the first place; and,
- Public dislike of bibs may lead to refusals if the respondents perceive enumerators as not taking them seriously.

Strategies:

- Project plan for problematic settlements to be demarcated provincially must be designed immediately;
- Operational plan to verify and validate all newly demarcated EAs on the ground by 30 April 2010 must also be designed;
- Geography Head Office must provide data of all EAs demarcated thus far;
- A forum consisting Head Office & provincial teams must be formed to address differing listing methodologies and develop final uniform ones;
- Geography and Census must agree on what part of Dwelling Frame will be useful for census operations;
- Blocking and segmenting minimise duplication during listing and improves coverage of all DUs within the block and therefore should be used in the Census listing methodology

- Provinces as users of demarcated EAs should be regularly kept up to date on progress and methodologies used in creation of frames;
- Listing methodologies used in the organisation should be similar and standard across all projects for comparability purposes; and,
- Demarcation must be decentralized to provinces with resources and support because they are the ones that are in the coalface of the communities on the ground.
- KwaZulu-Natal is a very mountainous province and the allocation of vehicles should take this into consideration;
- The district offices must be fully resourced and functional before the census begins;
- Vehicles should be allocated on the basis of need and not the other way round; and,
- The organisation should, within its means, explore other branding and identity options to deal with the issue of bibs such as giving field staff decent attire such as t-shirts/golf shirts.

5.3 Stakeholder related issues

Contributing factors:

- Lack of coherent and effective Publicity & Advocacy programmes results in refusals;
- Unsustainable publicity does not make any impact on creating awareness;
- Centralised dealings with media preventing useful publicity;

Impact on Census:

- Insufficient coverage and ineffective census publicity leads to high rate of refusals and non-contacts. High non response rate has a bad bearing on the census results;
- Public is often not aware of the role of Stats SA and what the Census aims to achieve; thus not willing to participate as a result they are unable to support the organisation and the field processes;
- Not enough time lag allowed for publicity and advocacy to get buy-in from stakeholders and respondents
- Stats SA fails to attract fieldworkers from high-walled communities; and,
- Strategies used to enumerate hard-to-count populations not implemented fully and evaluated where they have been used;

Strategies

- There should be an integrated advocacy and publicity strategy to ensure ongoing stakeholder relations;

- Piggy-backing on 2010 world cup through publicity messages and partnership with the sporting fraternity can prove to be very useful;
- Census education must be embedded in advocacy and publicity campaigns such that it forms part of the curriculum. A memorandum of understanding can be signed between Department of Education and Stats SA to advance this cause;
- Integrated Fieldwork publicity strategy at Head Office level should be cascaded to provinces as soon as possible;
- Road shows should be set as soon as possible to educate communities on Stats SA;
- The advocacy and publicity programme should focus on educating the public on Stats SA , its role and the Census at large;
- Liaison with the media should be decentralized to provinces and Executive Managers should be able to speak to local media regarding the provinces they lead; and,
- Strategies suggested for hard-to-count populations should be reviewed on regular basis to accommodate changes in environment and to ensure impact after implementation.

5.4 Human resources issues

Contributing factors:

- Lack or absence of a Coherent and effective Recruitment, Payment and Training Strategy negatively affects census.

Impact on Census:

- The recruitment drive still fails to reach certain groups/areas (deep rural) which caused lack of support of personnel such as Human Resources officers and State Accountants. This created problems that caused unnecessary delays in labour disputes and other small issues;

Strategies

- There must be adequate Support Services at district level in order to reduce bureaucracy and improve efficiency;
- There must be a proper recruitment strategy that will take into account all areas and groups including headhunting where it is necessary;
- The loading of airtime can be decentralized once there is adequate support personnel at district levels and the same service providers can be used;
- Posts of support staff at district level should be funded for decentralised functioning
- Implement targeted recruitment in high-walled areas and expand database and recruitment advertisement drives should reach all affected communities;
- District offices must be fully resourced before demarcation starts at provincial level;

- Field staff to be provided with T-shirts and not bibs as communities indicated their dislike of these.
- Careful needs assessment to ensure maximum and cost effective usage of vehicles

5.5 Settlement types

South Africa has different settlements that are found in both rural and urban areas which provide different challenges in so far as enumeration is concerned. Debates on what is urban and what is rural apart, these communities form a significant proportion of the overall population. They are often groups that have been categorized as hard-to-count in the above paragraphs. They need a special attention and specific strategies in order to deal with them.

These are:

- ❖ Homeless people;
- ❖ people living in high-walled areas;
- ❖ gated-communities and residential complexes;
- ❖ informal settlements;
- ❖ far-flung tribal communities; and,
- ❖ Farms.

Impact on census:

- **Homeless people**
 - ❖ The Homeless are not attached to specific enumeration area.
- **High-Walled Dwellings, Gated Communities and Residential Complexes**
 - ❖ High Walled Dwelling Units, Gated Communities and Residential Complexes require a lengthy process to reach or have access to while it is difficult to identify dwelling units in industrial areas. Because of their movements and limited time to complete enumeration, it is sometimes difficult to enumerate in institutions such as hospitals and prisons. In hospitals there is also another factor of health risk which may result in undercount for people who are in the Intensive Care Units, labour or maternity wards. Holiday Homes or Caravan Parks as well as truck drivers add another dimension to the problems due to mobility while certain townships are notorious for political violence and crime.
- **Informal Settlements**

- ❖ It is sometimes difficult to enumerate in informal settlements due to congestion which also allow criminal activities to thrive in these areas. In addition, there is often a lot of political activism in these areas.
- **Tribal Communities**
 - ❖ Some tribal communities are situated in inaccessible terrains and ethnicity and politics are the order of the day.
- **Farms**
 - ❖ Some farmers blatantly refuse to participate and lock gates. Some of the farms are also situated in the inaccessible terrains and the fact that some farmers actual hire illegal immigrants as farm workers created more reason to turn down any request to enumerate in these close communities.

Strategies

- **The Homeless**
 - ❖ There must be a proactive interaction with the homeless prior to enumeration to identify specific spots.
- **High-walled areas, Gated Communities and Residential Complexes**
 - ❖ There must be a continuous engagement or consultation with body corporates, neighbourhood watch, property developers, etc long in advance to gain access. Strategic recruitment of enumerators in terms racial groups, e.g. white enumerators working in predominantly white communities in order to develop a rapport and to build or gain trust with them.
- **Industrial Areas**
 - ❖ Prior consultation with firm owners during listing to establish if there are any people residing in the premises can prove to be a very effective strategy.
- **Institutions**
 - ❖ Consultations must take place with institution management after which allocation of adequate enumerators to enumerate institutions must be done.
- **Holiday Homes and Caravan Parks**
 - ❖ Most of these communities have or belong to specific teams, therefore, it makes sense to identify all of them and have an arrangement to enumerate them on first days of enumeration.
- **Truck Drivers**

- ❖ They usually have resting spots which can be identified for enumeration only during enumeration night.
- **Townships**
 - ❖ Most of them are unemployed and using the recruitment strategy suggested above recruitment can be done in consultation with community leaders to get them involved in the whole process rather than having them outside it.
- **Informal settlements**
 - ❖ Due to the fact that they are congested, using the segmentation methodology during listing often helps. Therefore, enumeration, in consultation with SAPS, enumeration by males and grouping approach can be done in these areas. This must be done only during broad daylight and carrying of valuables during enumeration should be discouraged.
- **Tribal communities**
 - ❖ Allocate suitable vehicles such as four-by-fours to deal with inaccessible terrains and ensure that recruitment is also done in these areas in consultation with community leaders. Allow sufficient time for publicity and consultation before data collection or enumeration begins.

6. North West Province

As already indicated in the previous discussions, North West recorded the lowest household undercount (less than 5 percent) compared to all provinces in Census 1996. In 2001, this figure almost tripled. Again, the persons' undercount was somewhat below 10 percent and it was counted among the lowest in the country. However, in 2001, this figure went above 15 percent. This is the sign that something went horribly wrong during Census 2001. Some of the factors that contributed to this trend are outlined below.

6.1 Planning

Factors and how they contribute to the undercount

- Without integrated planning, staff members may be demoralised and not participate to their full potential. This may result to fewer trainers and experienced staff members that may be needed in running the census. This will result in lack of skills transfer. E.g. a GISS who was not involved in demarcation or identification of EAs.

Strategies to reduce the undercount

- Establish provincial census committee (FOM, PCC, DM, PSC) and district census committee (DM, DCC, and other supporting staff members who are available and have experience) and include these committees in all planning sessions at HO. e.g. via telecommunication

6.2 Training

Factors and how they contribute to the undercount

- Field staff unable to grasp/understand content resulting in incompetent staff due to limited period of training. Incompetent field staff result in errors or omissions of DUs on the ground resulting to undercount
- Field staff being forced to be trainers even though they are not experienced professional trainers. Incompetent trainers fail to impart knowledge to the trainees which may lead to incompetent trainees

Strategies to reduce the undercount

- Acceptable time limit for each module should be identified to enable an average person to grasp the content.
- Review/extend the number of training days allocated for training.
- For national and provincial training, the province should identify trainers, irrespective of their designation to attend the training of trainers.
- Make use of the HCD staff members.

- Ratio of trainers to trainees 1: 40 with more than 1 trainer in the venue, using subject matter specialist in all modules.
- Rearrange the training programme; start with the questionnaire followed by listing and enumeration.
- Have refresher training on the Questionnaire before enumeration fieldwork.
- Master trainers should be appointed on permanent basis
- Training aids to be improved
- All trainers to have Maths & Geography
- Use of audio visual (DVD and slides) materials which illustrate the basic structure of major variants of common interview situations.

6.3 Publicity

Factors contributing to the undercount

- Failure to sensitise the public may result in respondents refusing to participate in the census because they have no idea of what a census is and how it will benefit them.

Strategies to reduce the undercount

- Partnership with stakeholders such as Municipalities, SAPS, Government departments and other concern groups, Street Committees, churches and schools should be formed to assist during publicity.
- Integrated publicity campaign outreach should be implemented i.e. other surveys currently running should start publicity for Census 2011 by giving out pamphlets, posters etc. including Census@School.
- Publicity campaign to include promotional activities such as organisational and implementation of Road Shows.
- Have targeted publicity (e.g. in general meeting farm unions)
- Publicity strategy designed for different EA types (farms, hostels, mines, recreational etc)
- Integration between all publicity strategies in the Organisation.
- Appoint publicity officers in all districts

6.4 Demarcation

Factors contributing to undercount

- No validation and verification of Office demarcation
- Incomplete demarcation
- Inaccurate demarcation
- The use of outdated maps

How these factors affect the undercount

- If demarcation is not completed on time, some EAs will be abnormally large resulting in DUs not listed and therefore not enumerated.
- Inaccurate demarcation leads to status changes not being acknowledged or recorded.
- Outdated maps may not have developments which are on the ground resulting to abnormally big EAs which cannot be completed in allocated time.

Strategies to reduce the undercount

- Office demarcation should be verified by GISS and MM.
- HO should send completed demarcated municipalities to the provinces for verification.
- Demarcation should be completed on time to allow time for verification of all EA boundaries.
- FWs should preferably have both Geography and Maths
- Large EAs should be segmented to manageable EAs

6.5 Enumeration

Factors contributing to undercount

- Non-responses
- Accessibility to EAs
- Weather

How these factors affect the undercount

- Refusals and non-contacts increases the undercount
- Inaccessibility to DUs in some EAs may lead incomplete enumeration
- October is a rainy season in North West. If it rains it might reduce the number of collection days because FW will not be able to conduct their interviews.

Strategies to reduce the undercount

- Non-response follow up week to help reduce the number of refusals and non-contacts.
- Intensify publicity at all levels.
- Validation and verification of EAs will help identify problematic areas
- Provide relevant materials for rainy season. (umbrellas and raincoats)

6.6 Hard to count group

Factors contributing to undercount

- The following groups are hard to count and hence increase the undercount
- Illegal immigrants

- Farmers
- Nomads
- Transients
- Homeless
- High walled area
- Easily forgotten population

How these factors affect the undercount

- Illegal (undocumented) immigrants do not trust enumerators and refuse to be interviewed
- Nomads and homeless/street kids are difficult to track as they do not have a permanent address.
- In high walled areas it is difficult to access the DUs (security complexes, Townhouses, Estates etc)
- In the farms there is a challenge of language barrier and protocol to access these farms.
- Easily forgotten population includes babies (0-4), the aged (65+), bed ridden and disabled persons which household members may not include in the questionnaire.
- It is also difficult to get field workers from these areas, in cases where they are available they will either have the following conditions:
 - ❖ They either do not have Matric or are illiterate.
 - ❖ They are not prepared to work long or after hours
 - ❖ They are not prepared to do call backs or revisits.
- The farmers feel the training is too long (6 days is too long) and hence cannot be employed. These farms may not have a FW from the area and an FW from another area may not be accepted in the premises.

Strategies to reduce the undercount

- Mapping should be done before hand (6 months) to identify all unusual places where you can find hard to count respondents.
- Make use of a shorter questionnaire to enumerate in hard to count areas.
- Minimum requirements for recruitment should be relaxed in farm areas.
- More frequent meetings with Agri-Northern Cape and other Stake holders will assist a lot with the farmer's attitudes.
- Identification of households that prefer self enumeration before hand especially in high walled areas.
- The FWs should probe more on those easily forgotten population.
- Identify the hot spot of Nomads and Homeless / Street Kids.

6.7 Field Organization

Factors contributing to undercount

- Unclear roles and responsibilities of field staff.
- Reporting time
- Integrated fieldwork approach

How these factors affect the undercount

- If roles and responsibilities are not clearly outlined, field staff will not do what is expected from them, e.g. FWC doing logistics roles, instead of ensuring that the boundary of the EA was clearly identified to avoid inclusion or exclusion of other DUs.
- The reporting time is usually late in the afternoons when FW. are supposed to be busy with respondents who come late from work. Instead of following up on non-contacts at late afternoon they are busy compiling a report. Time set for reporting interferes with the business of the day
- Due to integrated approach of fieldwork errors committed during listing may be concealed until end of enumeration. These errors may include DU omission.

Strategies to reduce the undercount

- Clearly outline roles and responsibilities of field staff from the PCC to the FW.
- Change reporting time to at least the following day in the morning.
- Swapping of EA Summary Books after listing as a quality assurance measure between FWs.

6.8 Resources

Factors contributing to undercount

- Logistics – lost or damaged completed questionnaires and EA Summary Books

How these factors affect the undercount

- If questionnaires are lost, the information from that particular EA will not be captured.

Strategies to reduce the undercount

- Good tracking system (CSAS) should be used to identify the location of questionnaires and EA Summary Books.

6.8 Self-enumeration

Factors contributing to undercount

- Missing questionnaires

How these factors affect the undercount

- Field staff not collecting completed questionnaires from respondents.
- Respondents who opt for self-enumeration and losing questionnaires.

Strategies to reduce the undercount

- Self-enumeration should be properly managed. The FW who drops the questionnaire must be the one that collects the questionnaire from the respondent.

7. Gauteng Province

Gauteng province has similar characteristics to Western Cape in terms of the urban and rural divide. It does not have traditional authorities and/or villages where traditional leaders also have a jurisdiction. The only major difference is their demographic composition in terms of the population groups and the geographical location. This province has over the years become number two to KwaZulu-Natal in terms of the undercount. Due to the fact that it is characterized by quite a number of "Hard-to-count groups which need to be identified and planned for in advance if the province is to achieve 100 percent count in 2011. Appropriate strategies need to be put in place to ensure that every individual that spends a census night in the province is enumerated. Groups which are regarded as hard-to-count in the province include:

- Homeless population
- People in high-walled areas;
- Groups on private land developed and occupied;
- Farmers and farm worker;
- Migrant workers (including mine workers);
- Asylum seekers,
- People residing within security premises, industrial and commercial areas;
- Military bases and holiday homes.
- Sex workers

Provincial strategies to undertake a zero percent undercount must therefore be based on ensuring that barriers to counting all persons in these groups are identified, and mitigations are put in place during the planning phase, and monitored during census 2011 field activities.

7.1 The Homeless

Factors contributing to undercount:

- The Homeless are not attached to specific enumeration area. If no specific strategies are put in place, there are higher chances that this population may not be counted.

Strategies to minimize undercount

- Urban districts where homelessness is prevalent must identify specific spots for the homeless prior to census activities so that plans of enumerating them on census night are put in place
- Provincial office will form partnerships with the soup kitchens and other Non-governmental Organizations (NGOs) to organize the homeless in groups and provide them with a meal on census night as they get counted.

- To address security issues, field staff must move in groups on the census night

7.2 High Wall areas

Factors contributing to undercount:

- Dwelling Units in complexes and estates, and houses in suburbs have become inaccessible due to crime and safety concerns. This implies that households in such areas are likely to be missed, leading to coverage errors.
- Failure of field staff to access a dwelling means that publicity at DU level will not be possible and this may translate into lack of enthusiasm in participating in a census, and limited knowledge on how to complete census form/questionnaire. In case such households opt for self enumeration, this may result into incomplete or poor-quality information resulting into omissions
- Households in high-walled areas tend to have average to high standards of living and therefore may not attached any value in census undertaking.

Strategies

- Thorough stakeholder identification process will be established and thereafter engage them so that field staff can gain access during publicity, listing and enumeration.
- District managers and district census co-ordinators will have extensive consultations with body corporates, neighbourhood watch, property developers, etc in advance to negotiate access to dwelling units
- Strategic recruitment of enumerators in terms of racial groups, e.g. white FW's working in predominantly white communities and the same approach for other racial groups. There is a need to head hunt field staff when necessary.
- There will be a process of identifying households in high walled areas that wish to enumerate themselves, and provisions will be made to drop and pick completed questionnaires. Households opting for self enumeration will complete Registration form provided by Stats SA prior to commencement of census activities
- Hard- to-count areas will be profiled in advance and influential/leaders within those areas engaged in preparation for census 2011 activities. A committee composed of provincial executive manager, provincial census coordinator and field operations manager as key influential people in the province need to form partnerships with gatekeepers in such areas, who in turn are expected to influence people's attitudes towards census. Continuous meetings with stakeholders prior and during the project to address risks, quick response for hostility and refusing households and safety of the fieldworkers is of paramount importance in gaining access to such areas.

7.3 Industrial and commercial Areas

Contributing factors

- It is difficult to identify dwelling units due to a layout of structures in such areas
- If no proper strategies are put in place, there are chances of missing out on counting dwellings residing in these areas.

Strategies

- District census personnel will make prior consultation with company owners to establish if any people residing in the premises. This should be done before commencement of census field operations

7.4 Collective living quarters

Contributing factors

- Due to resource constraints (field staff and time); some persons that spent census in institutions such as hospitals, prisons, and army barracks may not be counted. For instance in hostels of miners, due the nature of work shifts, it is a challenge to secure interviews with everybody.

Strategies

- District census personnel will identify all collective living quarters in advance and establish their capacities and living arrangements so that enough resources (field staff, questionnaires) can be deployed on census night
- Manager or the gatekeeper to assist with information regarding working shifts to allow FWs to enumerate according to arranged time schedules.

7.5 Transient population

Contributing factors

- Statistics SA conducts a de facto census (people counted from where they spend census night) making it difficult to capture those that will be in transit within the country, particularly those that will not return home on census day.

Strategies

- Field staff will identify stopover areas such as airports, boarder posts, filling stations to enumerate them on census night.

7.6 Informal settlements

Contributing factors

- Some communities are inaccessible due to political intolerance and others are increasingly becoming insecure due to service delivery riots and crime. It becomes difficult for any government department to conduct activities smoothly in such communities as workers fear to risk their lives. Stats SA therefore must devise strategies on how to count everyone including communities that may be affected at the time of the census.
- Informal settlements are characterized by makeshift structures that are in most instances too cluttered, making application of census listing methodology impractical. With the new integrated approach where one FW covers the EA alone, there is a high risk of the FW erroneously missing out certain structures during listing or enumeration. Unless quality assurance is greatly emphasized, dwelling units and households are likely to be missed.
- Some squatter camps are constituted by many different ethnic groups; therefore, it is difficult to know the predominant culture.
- Failure of field staff to consult with all administrative structures results in lack of cooperation by these communities
- Deployment of enumerators who cannot speak all local languages exacerbates the problem- translates into refusals
- In some communities there may be negative attitudes towards the current government from disgruntled members which may result in some census field staff being denied access, contributing to undercount.

Strategies

- Targeted recruitment. It is envisaged that recruitment of field workers from within communities will minimize fears of insecurity because local people are conversant with the area, people and situations as they arise.
- Building partnerships and Collaborations with gatekeepers (Community Development Workers- CDWs; SANCO; Local Municipalities, police and security companies) prior to main census activities may greatly enhance access to such areas.
- In areas where insecurity exists, use of guides is of paramount importance

- Relax the recruitment requirements in cases where there is poor response to advertised posts. However, this implies that training has to be intensified in order not compromise quality of information to be collected.
- Segmentation and blocking. The listing methodology applied in social stats surveys will be employed so that FW can easily identify and access all the structures.
- District Managers should establish long term relationships with community leaders, municipalities, IDP forums etc
- Statistics SA must establish long term relationship with communities. For example, when census Information is collected; communities must receive feedback on results.
- Thank you token such as cards should be given to the communities after completion of a survey
- Statistics SA must be involved in community development activities so that it can be visible in such communities
- There must be continuous communication between census field staff and management for updates and unusual circumstances that may threaten success of certain census activities

7.7 Traditional Communities

Contributing factors

- Some traditional communities may be inaccessible during census field operations due to terrain, ethnic politics, intolerance and service delivery.

Strategies

- Allocate suitable vehicles. Some EAs are inaccessible during field operations due to landscape (hilly) and this lead to failure to list and/or enumerate some households and dwellings hence omissions
- Recruitment to be done in consultation with community leaders. District census personnel will identify traditional areas characterized by intolerance, power struggle and conflict and collaborate with relevant gatekeepers in these areas before census activities commence
- Stats SA to be represented at community meetings whenever availed a chance.
- Involve traditional leadership during publicity to educate to their communities on the benefits of conducting a census to both individuals and the country at large.

7.8 Farms

Contributing factors

- Farmers refusing to give access to their farms directly translate into failure to count farm workers residing on such farms. Some farmers use illegal immigrants as a source of cheap labour; thereby becoming suspicious that a government department may expose them to litigation as a result of non-adherence to the labour laws of the country.
- Farmers not willing to work as field workers and at the same time not allowing people from other areas to gain access to their farms. This means that census field staff will not access some farm based dwellings, resulting in undercount.
- Failure to access a dwelling means that publicity at DU level will not be possible and this may translate into lack of enthusiasm and interest in census undertaking. In case such households opt for self enumeration, this may result into incomplete or poor-quality information resulting into omissions
- Inaccessible terrain
- Illegal immigrant workers might refuse to participate in the census activities in fear of being deported if they gave in their personal details
- Farmers don't welcome fieldworkers who do not speak their language to be deployed in their area.

Strategies

- Involve relevant stakeholders such as Agri-SA, farmers union and follow farm protocols when seeking access and during census activities.
- Task teams and Provincial census committees to be established to deal with difficult situations that may affect progress of census activities in farming areas.
- Targeted recruitment to ensure representation of language and race for farm fieldworker
- The vehicles type to reach some of the farms need to be look at.

7.9 Immigrants

Contributing factors

- Migrant workers and asylum seekers are not easily accessed due to fear of victimization and those that are illegally in the country refuse to cooperate for fear of deportation
- It is very hard for any government department to easily interact with this group as the latter is suspicious that information may be leaked to Home affairs which would in turn put them at a risk of being identified and deported to their home countries.
- Some of immigrants are not speaking local languages, posing a challenge on how to enumerate them. Failure to get interpreters means that such people will not be counted.

Strategies

- Districts must identify areas where immigrants reside before the commencement of census activities and establish rapport with influential group leaders who in turn will influence others and encourage them to participate in a census.
- During census, publicity campaigns and advocacy must address the issue of confidentiality of information collected. This is aimed at building mutual trust.

7.10 Publicity

Contributing factors

- Failure of Statistics SA to sensitize the public may result in respondents refusing to participate in the census because they have no idea on census activities and their role as individuals, or how it will benefit them.
- Failure to involve all stakeholders, particularly gatekeepers in publicizing census activities may lead to lack of buy-in and cooperation from communities creating the risk of omission during enumeration.
- Publicity messages that are not persuasive may lead to poor response and limited participation. Lack of buy-in of all stakeholders may lead to high omissions of both people and structures
- If extensive publicity is not done properly in areas where during the previous censuses, problems were prevalent; a complete count is already threatened.

Strategies

- The province will form partnership with stakeholders such as Municipalities, Government departments, Committees, churches and schools prior to census 2011 field operations so that the public takes ownership of census undertaking by playing their part-maximum participation.
- Census personnel in the province will collaborate with other surveys run by the organization in spreading census messages prior to commencement of census activities
- Census 2011 publicity campaign and promotional activities such as Road Shows will be undertaken to create awareness and raise public's interest in participating in census exercise.
- The province will conduct targeted publicity (e.g. in general meeting farm unions) and also at dwelling unit level to enable all households' access to census messages and this will ultimately lead to increased participation.
- Schools will also be targeted to enable transfer of census messages from school children to their parents and the public at large. Children are very detailed people who are still

- more enthusiastic about learning and can therefore be used in writing names of all people who sleep at home on the census night.
- The province will also involve Political structures such as political parties, office of the president to publicize the census.
 - The province will sensitize stakeholders on the benefits to be accrued from a complete total count of the population in relation to decision making and planning both for government and private entities. Partnerships/priority committees with different stakeholders will be establish and nurtured prior to and during the census
 - Leaders of foreign nationals will be identified and included in the priority committees so that they sensitize other nationals on confidentiality of data collected by Stats SA. This will put illegal migrants at ease during enumeration, resulting in increased participation
 - There will be provincial and district launches-articulating benefits of census to stakeholders before commencement of census 2011 activities.
 - The province will target schools by distributing Census information leaflets to learners so that they can take them home and share information with their significant others.
 - Every Stats SA official at both provincial and district levels should make it their responsibility to share with local communities all the information about Census 2011.

7.11 Lack of systematic quality assurance measures

Contributing factors

- Failure to adhere to Statistical Quality Assessment Framework (SASQAF) principles; relevance, methodological soundness, accuracy, timeliness, accessibility, interpretability, coherence and integrity.
- Lack of skills to implement quality assurance systems during listing and enumeration ultimately leading to omissions in terms of population and structures

Strategies

- The province will recruit and utilize high caliber field staff. This will be achieved by intensive training on both census 2011 content and methodologies. Quality Assurors will have customized training to enable them deliver effectively.

7.12 Poor planning

Contributing factors to undercount

- Failure to take lessons learnt from past censuses into consideration. One such lesson learnt is failure to complete listing in 2001, which led to undercount.
- Not involving all stakeholders particularly provinces in planning activities
- Setting unrealistic timeframes. Field staff may hurriedly conduct census activities, leading to omissions
- An ad hoc planning and frequent change in procedures and plans (scope change) creates confusion, and if not managed well, may affect negatively the implementation of plans. This often leads to unrealistic timeframes for delivery of certain outputs, creating panic and these impacts negatively on the outcome - data quality.
- Complicated reporting system resulting in inaccurate reporting during fieldwork activities,

Strategies

- Provincial plans will be informed by lessons learnt from 1996 and 2001 censuses and community survey
- Unrealistic timelines should be avoided in order for field staff not to commit unnecessary mistakes including omissions of persons and structures
- Continuous physical interaction between Head Office, Provincial Office and District Offices through workshops and meetings.
- Payment strategy should be formulated, tested and adhered to during the census. In situations where guides are utilized to gain access to certain areas, they should be paid on time.
- The monitoring system on progress of field activities must be tested before using it for the main census
- All provincial census personnel involved in progress reporting will be thoroughly trained and conversant with reporting tools and timelines.
- District Satellite offices will be capacitated and equipped well in advance. This is to facilitate logistics so that census activities are run smoothly, giving a chance to field staff to concentrate on ensuring that everybody that spent census night in the country is counted.

7.13 Recruitment

Contributing factors to undercount

- Centralized recruitment/failure to recruit locally. In many instances, local media are not used leading to people from urban areas responding to the adverts, and others particularly people from rural areas and informal settlements not responding the adverts. This translates into relocation of staff to work in other areas, resulting into chaos during peak periods – overtime, weekends etc.
- Exclusion of gate keepers during recruitment process at times may lead to unrest in communities. Due to high levels of unemployment, some communities expect the organization to employ their children and once recruitment is done without consulting communities, we stand the risk of not accessing such areas, should people be recruited from other areas.
- Relying on CSAS for recruitment/technical failures of recruitment system. Past experiences with CSAS have shown that the system is not reliable and therefore other measures of recruitment should be devised.
- Late advertisement of positions and this consequently leading to late appointments of census personnel particularly field staff. This means that some field operations may not start on time hence opening gaps for omissions
- Not enough time allocated for recruitment results in incompetent staff being employed that might not have the right skills to deliver what is expected in the field.

Strategies

- Target recruitment at EA level using both CSAS and utility bills or a letter confirming residence from a gatekeeper of the respective area.
- Recruit staff via gatekeepers in certain areas (high walled, politically volatile etc) whenever necessary
- GIS may be used to indicate which EAs do not have sufficient applicants and those that don't have so that interventions can be made on time
- In the absence of qualified applicants, requirements for the job will be relaxed, and step up training
- Stats SA field operations of other surveys must be suspended during census activities to ensure that the necessary intensity of focus is given to Census 2011. Utilization of such experienced field staff in a Census will improve quality and reduce coverage errors-omissions

- Recruitment strategy to accommodate foreign nationals who meet recruitment criteria.

7.14 Demarcation

Contributing factors to undercount

- If demarcation is not completed on time, some EAs will be abnormally large resulting in DUs not listed and therefore some structures and people may not be enumerated, hence omissions
- Inaccurate demarcation may also result in EAs that are large in geographical area size and/or huge in population size making it virtually impossible for one FW to complete publicity, listing and enumeration on time.
- Use of outdated maps may not reflect new developments on the ground resulting into abnormally big EAs which cannot be completed in allocated time.

Strategies

- Census field staff will embark on verification of newly demarcated EAs to identify abnormally large EAs prior to publicity and listing. Unusual circumstances unearthed during field verifications must be report immediately
- Increase number of quality assurors for listing phase and the province will ensure that listing methodology per EA type is adhered to.
- Demarcation, validation and verification of all EAs must be done timeously and accurately. Information on demarcated municipalities should be dispatched to provinces for field verification on regular basis.

7.15 Listing

Contributing factors to undercount

- Failure to complete listing for all EAs and/or failure to adhere to listing methodology has negative implications on data collection. This directly translates into listing while enumeration is taking place and managing the two processes concurrently may result into omissions of structures and population in these structures.
- Poor quality listings causes misinterpretations during fieldwork and this may lead to omissions of structures

Strategies

- Quality assurance dimensions and measures to achieve them must be taken into consideration during listing to ensure that proper listing methodologies stipulated for each EA type are applied and all structures are listed.

- Training in census methodologies and content must be emphasized
- Where possible, experienced field staff to monitor and supervise listing/updating
- There will be tight monitoring and quality assurance during the listing. With integrated methodology where one FW conducts all fieldwork activities in their respective EAS, there are high chances of missing out structures and households (knowingly and unknowingly) as they rush to meet deadlines.

8. Limpopo and Mpumalanga Provinces

Limpopo and Mpumalanga provinces have more or less similar characteristics due to their proximity to each other. While the household undercount for Limpopo was slightly higher compared to that of Mpumalanga in 1996, it was exactly the same in 2001. There was not much variations in the persons undercount for both provinces although it can be said that Limpopo had the higher persons undercount in 1996 while Mpumalanga had the highest in Census 2001. A number of factors contributed to the upward undercount trend:

8.1 Hard-to-count groups

The Homeless

Factors contributing to undercount:

- The Homeless are not attached to specific enumeration area. If no specific strategies are put in place, there are higher chances that this population may be missed.

Strategies to minimize undercount

- Urban districts where homelessness is prevalent must identify specific spots for the homeless prior to census activities so that plans of enumerating on census night are put in place
- Provincial office will form partnerships with the soup kitchens and other Non-Governmental Organizations (NGOs) to organize the homeless in groups and provide them with a meal as we count them.
- To address security issues, field staff must move in groups

High Wall areas

Factors contributing to undercount:

- Failure of field staff to access high-walled areas results in high level of non-contacts & refusals
- Dwelling Units in complexes and estates, and houses in suburbs have become inaccessible due to crime and safety concerns. This implies that households in such areas are likely to be missed.
- Failure to access a dwelling means that publicity at DU level will not be possible and this may translate into lack of enthusiasm in participating in a census, and limited knowledge on how to complete census form/questionnaire. In case such households opt for self enumeration, this may result into incomplete or poor-quality information resulting into omissions
- Households in high-walled areas tend to have average to high standards of living and therefore may not attached any value in census undertaking.

Strategies

- Thorough stakeholder identification process will be established and thereafter engage them so that field staff can gain access during publicity, listing and enumeration.
- District managers and district census co-ordinators will have extensive consultations with body corporates, neighbourhood watch, property developers, etc in advance to negotiate access to dwelling units
- Strategic recruitment of enumerators in terms of racial groups, e.g. white FW's working in predominantly white communities and the same approach for other racial groups. There is a need to head hunt field staff when necessary.
- There will be a process of identifying households in high walled areas that wish to enumerate themselves, and provisions will be made to drop and pick completed questionnaires. Households opting for self enumeration will complete Registration form provided by Stats SA prior to commencement of census activities

8.2 Industrial and commercial Areas

Contributing factors

- It is difficult to identify dwelling units due to a layout of structures in such areas
- If no proper strategies are put in place, there are chances of missing out on counting dwellings residing in these areas.

Strategies

- District census personnel will make prior consultation with company owners to establish if any people residing in the premises. This should be done before commencement of census field operations

8.3 Collective living quarters

Contributing factors

- Due to resource constraints (field staff and time), some persons that spent census in institutions such as hospitals, prisons, army barracks may not be counted
- It is a major challenge to secure interviews with all households, particularly those that work in shifts

Strategies

- District census personnel will identify all collective quarters in advance and establish their capacities so that enough resources (field staff, questionnaires) can be deployed on census night
- Manager or the gatekeeper to assist with information regarding working shifts to allow FW's to enumerate according to arranged time schedules.

8.4 Transient population

Because of their movements, strategies need to be in place to ensure that they are not missed.

Contributing factors

- Statistics SA conducts a de facto census (people counted from where they spend census night) making it difficult to capture those that will be in transit within the country, particularly those that will not return home on census day.

Strategies

- Field staff will identify stopover areas and filling stations (for the case of truck drivers) to enumerate them on census night
- Province will liaise with department of Home Affairs so that people who will be leaving the country after midnight of census night are counted at the respective boarder post.

8.5 Informal settlements

Contributing factors

- Some communities are inaccessible due to political intolerance and others are increasingly becoming insecure due to service delivery riots and crime. It becomes difficult for any government department to conduct activities smoothly in such communities as workers fear to risk their lives. Stats SA therefore must devise strategies on how to count everyone including communities that may be affected at the time of the census.
- Informal settlements are characterized by make shift structures that are in most instances too cluttered, making application of census listing methodology impractical. With the new integrated approach where one FW covers the EA alone, there is a high risk of the FW erroneously living out certain structures during listing or enumeration. Unless quality assurance is greatly emphasized, dwelling units and households are likely to be missed.
- Some squatter camps are constituted by many different ethnic groups; therefore, it is difficult to know the predominant culture.

- Failure to consult with all structures (administrative) results in lack of cooperation by these communities
- Deployment of enumerators who cannot speak all local languages exacerbates the problem- translates into refusals
- In some communities there may be negative attitudes towards the current government from disgruntled members which may result in some census field staff being denied access, contributing to undercount.

Strategies

- Targeted recruitment. It is envisaged that recruitment of field workers from within communities will minimize fears of insecurity because local people are conversant with the area, people and situations as they arise.
- Building partnerships and Collaborations with gatekeepers (Community Development Workers- CDWs; SANCO; Local Municipalities, police and security companies) prior to main census activities may greatly enhance access to such areas.
- In areas where insecurity exists, use of guides is of paramount importance
- Relax the recruitment requirements in cases where there is poor response to advertised posts. However, this implies that training has to be intensified in order not to compromise quality of information to be collected.
- Segmentation and blocking. The listing methodology applied in social stats surveys will be employed so that FW can easily identify and access all the structures.
- District Managers should establish long term relationships with community leaders, municipalities, IDP forums etc
- Statistics SA must establish long term relationship with communities. For example, when census Information is collected; communities must receive feedback on results.
- Thank you token such as cards should be given to the communities after completion of a survey
- Statistics SA must be involved in community development activities so that it can be visible in such communities
- There must be continuous communication between census field staff and management for updates and unusual circumstances that may threaten success of certain census activities.

8.9 Traditional Communities

Contributing factors

- Some traditional communities may be inaccessible during census field operations due to terrain, ethnic politics, intolerance and service delivery.
- In some areas there are power struggle between Chiefs and Councilors
- Lack of public awareness on the value of census undertaking which might lead to lack of cooperation during census 2011 activities

Strategies

- Allocate suitable vehicles whenever the terrain is not conducive for field operations. Some EAs are inaccessible during field operations due to landscape (hilly) and this lead to failure to list and/or enumerate some households and dwellings hence omissions
- Recruitment to be done in consultation with community leaders. District census personnel will identify traditional areas characterized by intolerance and conflict and collaborate with relevant gatekeepers in these areas before census activities commence
- Stats SA to be represented at community meetings whenever such a chance is availed.
- Involve traditional leadership during publicity to educate to their communities on the benefits of conducting a census to both individuals and the country at large.

8.10 Farms

Contributing factors

- Farmers' refusing to give access to their farms directly translates into failure to count farm workers residing on the farm.
- Farmers not willing to work as field workers and at the same time not allowing people from other areas to gain access to their farms. This means that census field staff will not access dwellings and therefore may end up not enumerating them.
- Some farmers use illegal immigrants as a source of cheap labour; thereby becoming suspicious that a government department may expose them to litigation as a result of non-adherence to the labour laws of the country.
- Failure to access a dwelling means that publicity at DU level will not be possible and this may translate into lack of enthusiasm and interest in participating in a census. In case such households opt for self enumeration, this may result into incomplete or poor-quality information resulting into omissions

- Illegal immigrant workers might refuse to participate in the census activities in fear of being deported if they gave in their personal details
- Farmers don't welcome fieldworkers who do not speak their language to be deployed in their area.

Strategies

- Involve relevant stakeholders such as Agri-SA, farmers union and follow farm protocols when seeking access and during census activities.
- Task teams and Provincial census committees will be established to deal with unusual circumstances that may impinge on progress of census activities.
- Targeted recruitment to ensure representation of language and race for farm fieldworkers

8.11 Immigrants

Contributing factors

- Illegal immigrants are not easily accessed because of fear of being arrested and deported by Department of Home Affairs. It is very hard for any government department to easily interact with this group as the latter is suspicious that information may be leaked to Home affairs which would in turn put them at a risk of being identified and deported to their home countries.
- Some of immigrants are not speaking local languages, posing a challenge on how to enumerate them. Failure to get interpreters means that such people will not be counted.

Strategies

- Districts must identify areas where immigrants reside before commencement of census activities and establish rapport with influential group leaders who in turn will influence others and encourage them to participate in a census.
- During census, publicity campaigns and advocacy must address the issue of confidentiality of information collected.

8.12 Publicity

Contributing factors

- Marketing of census in communities is non-existent and this leads to Lack of buy-in and co-operation from communities
- Failure of the province to sensitize the public may result in respondents refusing to participate in the census because they have no idea of what a census is and how it will benefit them.
- Failure to involve all stakeholders, particularly gatekeepers in publicizing census activities may lead to lack of buy-in and cooperation from communities creating the risk of omission during enumeration.
- Publicity messages that are not persuasive may lead to poor response and limited participation. Lack of buy-in of all stakeholders may lead to high omissions of both people and structures
- If extensive publicity is not done immediately in the well-known problematic areas, a complete count is already threatened.

Strategies

- Targeted and timed media advertising at strategic points (i.e. TV, local radios, local newspapers, billboards, etc).
- Intensified census publicity campaign,
- Advertising on buses, taxis and trains, etc),
- Soccer Team to play schools and communities with Census branded on the team kit, branding materials for display during events and materials to give out such as brochures (subject to funding),
- Target school children with Census messages (collaboration with Maths4Stats and SSI)
- Interaction with local councils, community leadership and community based structures,
- Census awareness program for Stats SA employees to district level.
- The province will form partnership with stakeholders such as Municipalities, Government departments, Committees, churches and schools prior to census 2011 field operations so that the public takes ownership in census undertaking.
- Census personnel in the province will collaborate with other surveys run by the organization in spreading census messages prior to commencement of census activities.

- Publicity campaign to include promotional activities such as Road Shows will be undertaken to create awareness and raise public's interest in participating in the census exercise.
- Have targeted publicity (e.g. in general meeting farm unions) and also at dwelling unit level will enable most households to get census messages, and this will ultimately lead to increased participation.
- Schools will be targeted for publicity to enable transfer of census messages from school children to their parents and the public at large. Children are very detailed people who are still more enthusiastic about learning and can therefore be used in writing names of all people who sleep at home on the census night.
- The province will also involve structures such as political parties and religious groups to send messages across to communities.
- Sensitive stakeholders on the benefits to be accrued from a complete total count of the population in relation to decision making and planning both for government and private entities
- Every Stats SA official at both provincial and district levels should make it their responsibility to share with local communities all the information about Census 2011.

8.13 Lack of systematic quality assurance measures

Contributing factors

- Failure to adhere to Statistical Quality Assessment Framework (SASQAF) principles; relevance, methodological soundness, accuracy, timeliness, accessibility, interpretability, coherence and integrity.
- Lack of skills to implement quality assurance systems during listing and enumeration ultimately leading to omissions in terms of population and structures
- Inaccurate and incomplete QA and lack of quality control

Strategies

- Implement an appropriate monitoring and evaluation system aligned to the integrated approach
- Quality Assurors to have their customized training
- Deploy competent monitors from HO to Provinces during enumeration (no swapping of monitors)
- Documenting and implementing rigorous quality checks

- Province will recruit and utilize high caliber field staff. This will be achieved by intensive training on both census 2011 content and methodologies. Quality Assurors will have customized training to enable them deliver effectively.

8.14 Poor planning

Contributing factors to undercount

- Centralized planning does not cater for provincial dynamics
- Failure to take lessons learnt from past censuses into consideration. One such lesson learnt is failure to complete listing in 2001, which led to undercount.
- Not involving all stakeholders particularly provinces in planning activities
- **Short timeframes for planning.** Setting unrealistic timeframes. Field staff may hurriedly conduct census activities, leading to omissions
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- An ad hoc planning and frequent change in procedures and plans (scope change) creates confusion and if not managed well may affect implementation of plans, particularly field work negatively. This often leads to unrealistic timeframes for delivery of certain outputs, creating panic and these impacts negatively on the outcome - data quality.

Strategies

- Provincial plans will be informed by lessons learnt from 1996 and 2001 censuses and community survey
- Unrealistic timelines should be avoided in order for field staff not to commit unnecessary mistakes including omissions of persons and structures
- Continuous physical interaction between Head Office, Provincial Office and District Offices through workshops and meetings.

8.14 Recruitment

Contributing factors to undercount

- Centralized recruitment/failure to recruit locally. In many instances, local media are not used leading to people from urban areas responding to adverts, and others particularly people from rural areas and informal settlements not responding to the adverts. This translates into relocation of staff to work in other areas, resulting into chaos during peak periods – overtime, weekends etc.
- Reliance on media to advertise census positions. Exclusion of gate keepers during recruitment process at times may lead to unrest in communities. Due to high levels of unemployment, some communities expect the organization to employ their children and

- once recruitment is done without consulting communities, we stand the risk of not accessing such areas should people be recruited from other areas.
- Relying on CSAS for recruitment/technical failures of recruitment system. Past experiences with CSAS have shown that the system is not reliable and therefore other measures of recruitment should be devised. CSAS also unable to verify place of residence for field staff.
 - Late advertisement of positions and this consequently leading to late appointments of census personnel particularly field staff. This means that some field operations may not start on time hence opening gaps for omissions
 - Not enough time allocated for recruitment results in incompetent staff being employed that might not have the right skills to deliver what is expected in the field.
 - Replacement of field staff who has resigned takes too long
 - Population groups not taken into account during recruitment

Strategies

- Target recruitment at EA level using both CSAS and utility bills or a letter confirming residence from a gatekeeper of the respective area. This will be in addition to their academic qualifications and experience in census/survey undertaking. Place of residence for field staff should be verified before appointment.
- Recruit staff via gatekeepers in certain areas (high walled, politically volatile etc) whenever necessary
- GIS may be used to indicate which EAs do not have sufficient applicants and those that don't have so that interventions can be made on time
- In the absence of qualified applicants, requirements for the job will be relaxed, and step up training
- Stats SA field operations of other surveys must be suspended during census activities to ensure that the necessary intensity of focus is given to Census 2011. Utilization of such experienced field staff in a Census will improve quality and reduce coverage errors-omissions
- Recruitment and appointments must be done at the district level.
- 20% over training as opposed to 10%
- All field staff at all levels must be recruited according to the time frames
- Head hunt field staff from previously less represented population groups (during census) to target hard to access areas.

8.15 Training

Contributing factors to undercount

- Field practice not adequate to impart necessary skills. This leads to a lot of errors in the initial days of listing and enumeration and also causes unnecessary delays in field progress
- Lack of monitoring during Census training causing
- Poor/inadequate training
- Usage of video recordings for training leading to reduced participation and interaction to assess trainees' understanding.

Strategies

- Enough training time should be allocated
- Experienced staff members with training capabilities should be utilized.
- We should have detailed practical field training which is assessed and given high score and a two days refresher training to be done before the fieldworkers go out to the field for data collection
- Vigorous monitoring of training should be conducted. M&E to be resourced to monitor training
- Training session on factors that lead to undercount should be included in the programme,
- Training on map reading and listing should adopt a more practical approach and should be done in the field,
- Training should be customized according to the needs of the province; provincial trainers should be allowed to amend on aspects that do not apply to specific provinces.

8.16 Demarcation

Contributing factors to undercount

- If demarcation is not completed on time, some EAs will be abnormally large resulting in DUs not listed and therefore some structures and people may not be enumerated, hence omissions

- Inaccurate demarcation may also result in EAs that are large in geographical area and/or huge in population size making it virtually impossible for one FW to complete publicity, listing and enumeration on time.
- Use of outdated maps during office demarcation may not reflect new developments on the ground resulting to abnormally big EAs which cannot be completed in allocated time.

Strategies

- Census field staff will embark on verification of newly demarcated EAs to identify abnormally large EAs prior to commencement of publicity and listing.
- Demarcation, validation and verification of all EAs must be done timeously and accurately. Daily updates on progress must be sent to provinces.
- Survey Officers to assist with quality assurance during EA verifications. (due to the lack of mapping monitors/GIS)

8.16 Listing

Contributing factors to undercount

- Not enough emphasis given on monitoring of listing/updating process resulting in poor products and subsequently incomplete listing records
- Not enough geography staff to give daily needed support
- Failure to complete listing for all EAs has negative implications on data collection. This directly translates into listing while enumeration is taking place and managing the two processes concurrently may result into omissions of structures and population in these structures.
- Without complete listing no proper monitoring and progress reporting are possible.
- Poor quality listings causes misinterpretations during fieldwork and this may lead to omissions of structures

Strategies

- Quality assurance measures must be taken during listing to ensure that proper listing methodologies stipulated for each EA type are applied and all structures are listed accordingly
- Training in census methodologies and content must be emphasized
- Where possible, experienced field staff to monitor and supervise listing/updating

8.17 Cross – boarder Areas

Contributing factors to undercount

- Certain areas of Limpopo and Mpumalanga were hard to count because people in those areas want to be counted in the preferred province and they want to be counted by field workers only coming from their settlements.

Strategies

- Districts characterized by cross-boarder issues must identify key stakeholders and deliberate on such issues prior to commencement of census activities.

Conclusion

The impact of lack of implementation of some of the lessons learned in Census 1996 can be clearly noticed in the results of Census 2001. Whereas Census 2001 was supposed to be a great improvement from Census 1996, ironically, the opposite was the case. However, there is an opportunity to rise above these challenges in 2011 given the space offered for planning which has come out sharply as one of the critical challenges in the discussions throughout the document. The issues of process, stakeholders and human and financial resources will also have to be addressed adequately. This means that over and above the strategies and/or plans that have been put in place, some important decisions need to be taken sooner rather than later to ensure promptness of implementation. Among issues to be addressed in order of priority are issues of:

- Poor Census mapping (i.e. 1996 not all EAs were correctly demarcated);
- Boundary demarcation problems or boundary interpretation problems causing overlap or omission of parts of EAs (i.e. 1996 Octopus EAs). This is due to office demarcation with little inputs from the field;
- Incomplete listing of dwellings within EAs (failure to identify all places where people might live). Lack of link of the use of listed information and field data collection (i.e. 2001 Census listing was not completed in time);
- Failure to convince the household members to participate in the Census activities (i.e. High level publicity = TV, Radio with little impact on residential areas);
- Failure to visit all listed dwellings
- Failure to identify all households, where multiple households exist within dwellings;
- Failure to obtain interviews for all households (non-contact, refusals, non-return of questionnaires left for self-enumeration)
- Failure to identify all persons within households
- Incomplete or poor-quality information on persons for key variables
- Failure to observe the residence rule in Census 2001 based on the presence of the individual in the household on census reference night or usual members who might be absent

- Lost questionnaires

Once the above issues are promptly and effectively addressed, there is no doubt that the next census will be a dramatic improvement from both 1996 and 2001 censuses.

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