

Limpopo: Informal settlements status



RESEARCH REPORTS



RESEARCH SERIES PUBLISHED BY THE HOUSING DEVELOPMENT AGENCY

The Housing Development Agency (HDA)

Block A, Riviera Office Park,
6 – 10 Riviera Road,
Killarney, Johannesburg
PO Box 3209, Houghton,
South Africa 2041
Tel: +27 11 544 1000
Fax: +27 11 544 1006/7

Acknowledgements

- Eighty 20

DISCLAIMER

Reasonable care has been taken in the preparation of this report. The information contained herein has been derived from sources believed to be accurate and reliable. The Housing Development Agency does not assume responsibility for any error, omission or opinion contained herein, including but not limited to any decisions made based on the content of this report.

Contents

PART 1: Introduction	3
PART 2: Data sources and definitions	4
2.1 Survey and Census data	4
2.2 Other data from Stats SA	7
2.3 National Department of Human Settlements (NDHS) and LaPsis	8
2.4 Eskom's Spot Building Count (also known as the Eskom Dwelling Layer)	8
PART 3: The number and size of informal settlements in Limpopo	9
3.1 Estimating the number of households who live in informal settlements	9
3.2 Estimating the number of informal settlements	12
PART 4: Profiling informal settlements in Limpopo	13
4.1 Basic living conditions and access to services	13
4.2 Profile of households and families	15
4.3 Age of settlements and permanence	16
4.4 Education	18
PART 5: Conclusions	19
PART 6: Contacts and references	20
PART 7: Appendix: Statistics South Africa surveys	21
7.1 Community Survey 2007	21
7.2 General Household Survey	21
7.3 Income and Expenditure Survey 2005/6	22
7.4 Census 2001	22
7.5 Enumerator Areas	22

List of abbreviations


CORC	Community Organisation Resource Centre
EA	Enumeration Area
GHS	General Household Survey
GIS	Geographical Information Systems
GTI	GeoTerraImage
HDA	Housing Development Agency
HH	Households
IES	Income and Expenditure Survey
LaPsis	Land and Property Spatial Information System
NDHS	National Department of Human Settlements
PSU	Primary Sampling Unit
Stats SA	Statistics South Africa

PART 1

Introduction

In terms of the HDA Act No. 23, 2008¹, the Housing Development Agency (HDA), is mandated to assist organs of State with the upgrading of informal settlements. The HDA therefore commissioned this study to investigate the availability of data and to analyse this data relating to the profile, status and trends in informal settlements in South Africa, nationally and provincially as well as for some of the larger municipalities. This report summarises available data for the province of Limpopo.

¹The HDA Act No.23, 2008, Section 7 (1) k.



PART 2

Data sources and definitions

A number of data sources have been used for this study. These include household level data from the 2001 Census and the 2007 Community Survey conducted by Statistics South Africa (Stats SA). Settlement level data was also reviewed, including data from the NDHS, the HDA and Eskom.

There is no single standard definition of an informal settlement across data sources, nor is there alignment across data sources with regard to the demarcation of settlement areas. It is therefore expected that estimates generated by various data sources will differ.

It is critical when using data to be aware of its derivation and any potential biases or weaknesses within the data. Each data source is therefore discussed briefly and any issues pertaining to the data are highlighted. A more detailed discussion on data sources is provided in the national report on informal settlements prepared for the HDA.

2.1 Survey and Census data

Household-level data for this report was drawn from the 2001 Census and the 2007 Community Survey (CS)². Sample sizes for the General Household Survey (GHS) and the 2005/6 Income and Expenditure Survey (IES)³ were too small to generate robust estimates⁴.

The census defines an informal settlement as 'An unplanned settlement on land which has not been surveyed or proclaimed as residential, consisting mainly of informal dwellings (shacks)'. In turn, the census defines an 'informal dwelling' as: 'A makeshift structure not erected according to approved architectural plans'. In the 2001 Census all residential Enumeration Areas (EAs)⁵ are categorised as either Informal Settlements, Urban Settlements, Tribal Settlements or Farms. In addition, dwellings are categorised as either formal dwellings⁶ or informal dwellings, including shacks not in backyards, shacks in backyards and traditional dwellings. There are therefore two potential indicators in the 2001 Census that can be used to identify households who live in informal settlements, one based on enumeration area (Informal Settlement EA) and the other based on the type of dwelling (shack not in backyard).

² The Community Survey is a nationally representative, large-scale household survey. It provides demographic and socio-economic information such as the extent of poor households, access to facilities and services, levels of employment/unemployment at national, provincial and municipal level.

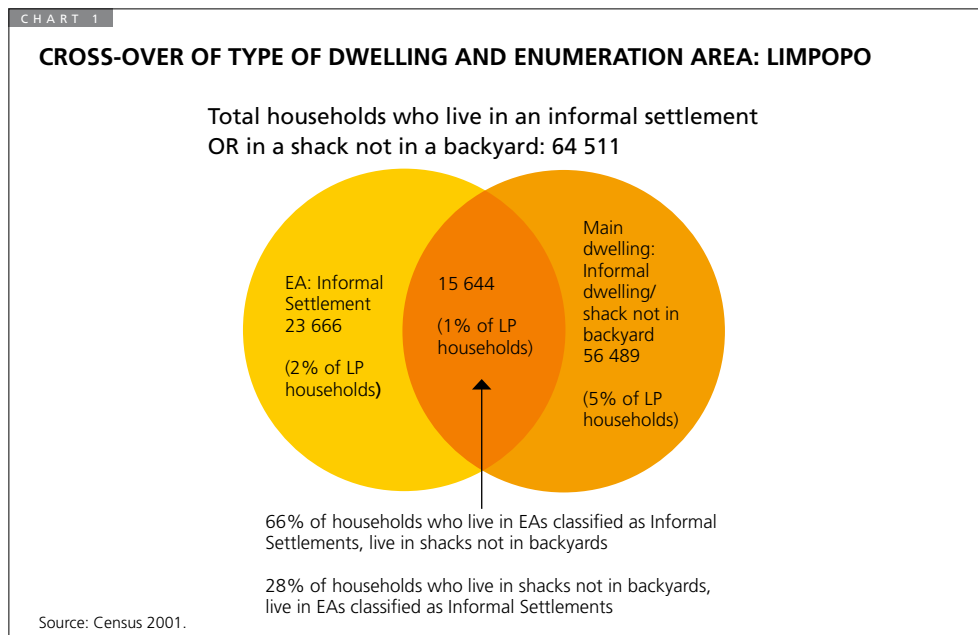
³ The Income and Expenditure Survey was conducted by Statistics South Africa (Stats SA) between September 2005 and August 2006 (IES 2005/2006). It is based on the diary method of capture and was the first of its kind to be conducted by Stats SA.

⁴ There are 57 observations for households living in shacks not in backyards in the 2009 GHS and 56 observations in the 2005/6 IES.

⁵ An EA is the smallest piece of land into which the country is divided for enumeration, of a size suitable for one fieldworker in an allocated period of time. EA type is then the classification of EAs according to specific criteria which profiles land use and human settlement in an area.

⁶ Formal dwellings include house or brick structure on a separate stand, flat in a block of flats, town/cluster/semi-detached house, house/flat/room in backyard and a room/flatlet on a shared property.

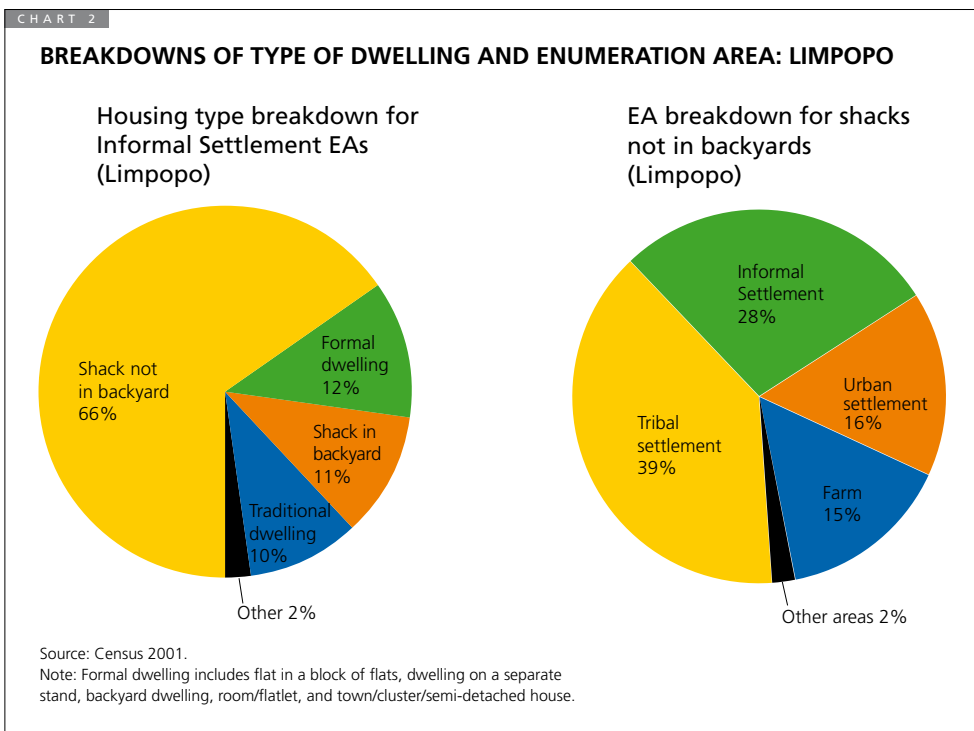
According to the 2001 Census, 56,000 households in Limpopo (5% of households) lived in an informal dwelling or shack not in a backyard in 2001 while 24,000 households (2% of households) lived in enumeration areas that are characterised as Informal Settlements. Just under 16,000 households live in both.



Unlike census data, survey data does not provide an EA descriptor. However, surveys do provide an indication of dwelling types, aligned with the main categories defined in the census. In the absence of an EA descriptor for informal settlements, the analysis of survey data relies on a proxy indicator based dwelling type, namely those who live in an 'Informal dwelling/shack, not in backyard e.g. in an informal/squatter settlement'.

Census data can provide an indication of the suitability of this proxy. According to the Census, of those households in Limpopo who live in EAs categorised as Informal Settlements, 66% live in shacks not in backyards. A further 12% of households in these EAs live in formal dwellings, 11% live in shacks in backyards (it is not clear whether the primary dwelling on the property is itself a shack) and 10% live in traditional dwellings.

Conversely the data indicates that only 28% of all households in Limpopo who live in shacks not in a backyard live in EAs categorised as Informal Settlements. 39% live in EAs categorised as Tribal Settlements and 16% live in Urban Settlement EAs.



The analysis based on surveys using the dwelling type indicator ‘shack not in backyard’ to identify households who live in informal settlements should therefore be regarded as indicative as there is insufficient data in the surveys to determine whether these households do, in fact, live in informal settlements as defined by local or provincial authorities.

A further challenge with regard to survey data relates to the sampling frame. In cases where survey sample EAs are selected at random from the Census 2001 frame, newly created or rapidly growing settlements will be under-represented. Given the nature of settlement patterns, informal settlements are arguably the most likely to be under-sampled, resulting in an under-count of the number of households who live in an informal settlement. Further, if there is a relationship between the socio-economic conditions of households who live in informal settlements and the age of the settlement (as it seems plausible there will be) a reliance on survey data where there is a natural bias towards older settlements will result in an inaccurate representation of the general conditions of households who live in informal settlements. This limitation is particularly important when exploring issues relating to length of stay, forms of tenure and access to services. A second word of caution is therefore in order: survey data that is presented may under-count households in informal settlements and is likely to have a bias towards older, more established settlements.

A final consideration relates to the underlying unit of analysis. Survey and census data sources characterise individuals or households rather than individual settlements. These data sources provide estimates of the population who live in informal settlements as well as indications of their living conditions. The data as it is released cannot provide an overview of the size, growth or conditions at a settlement level⁷ although it is possible to explore household-level data at provincial and municipal level depending on the data source and sample size.

The definition of a household is critical in understanding household level data. By and large household surveys define a household as a group of people who share a dwelling and financial resources. According to Statistics SA 'A household consists of a single person or a group of people who live together for at least four nights a week, who eat from the same pot and who share resources'. Using this definition, it is clear that a household count may not necessarily correspond to a dwelling count; there may be more than one household living in a dwelling. Likewise a household may occupy more than one dwelling structure.

From the perspective of household members themselves the dwelling-based household unit may be incomplete. Household members who share financial resources and who regard the dwelling unit as 'home' may reside elsewhere. In addition, those who live in a dwelling and share resources may not do so out of choice. Household formation is shaped by many factors, including housing availability. If alternative housing options were available the household might reconstitute itself into more than one household. Thus, while the survey definition of a household may accurately describe the interactions between people who share a dwelling and share financial resources for some or even most households, in other cases it may not. The surveys themselves do not enable an interrogation of this directly.

2.2 Other data from Stats SA

A dwelling frame count was provided by Stats SA for the upcoming 2011 Census. The Dwelling Frame is a register of the spatial location (physical address, geographic coordinates, and place name) of dwelling units and other structures in the country⁸. It has been collated since 2005 and is approximately 70% complete. The Dwelling Frame is used to demarcate EAs for the 2011 Census⁹.

There are 40 sub-places in Limpopo with at least one EA classified as 'Informal Residential'¹⁰, totalling 119 EAs (covering a total area of 25.82 square kilometres). There are Dwelling Frame estimates for 33 (83%) of these 'Informal Residential' EAs, totalling 11,978 Dwelling Frames. Since the Dwelling Frame is only approximately 70% complete, and not all units are counted within certain dwelling types, the count should not be seen as the official count of dwellings or households within the EA type.

⁷ It may be possible for Statistics South Africa to match EA level data from the 2001 Census to settlements to provide an overview of specific settlements. Given that the Census data is ten years old, and that conditions in informal settlements are likely to have changed significantly since then, the feasibility of this analysis was not established.

⁸ Bhekani Khumalo (2009), 'The Dwelling Frame project as a tool of achieving socially-friendly Enumeration Areas' boundaries for Census 2011, South Africa', Statistics South Africa.

⁹ An EA is the smallest piece of land into which the country is divided for enumeration, of a size suitable for one fieldworker in an allocated period of time. EA type is then the classification of EAs according to specific criteria which profiles land use and human settlement in an area.

¹⁰ The EA descriptor for informal settlements in the 2011 Census is 'Informal Residential'; in 2001 the EA type was 'Informal Settlement'.

2.3 National Department of Human Settlements (NDHS) and LaPsis

The 2009/2010 Informal Settlement Atlas compiled by the NDHS indicates there are 135 informal settlement polygons in Limpopo. No household estimates are provided.

LaPsis (Land and Property spatial information systems), an online system developed by the HDA, builds on the data gathered by the NDHS and overlays onto it land and property data including cadastre, ownership, title documents and deeds (from the Deeds Office), administrative boundaries (from the Demarcation Board) and points of interest from service providers such as AfriGIS¹¹. The data indicates there are 151 informal settlements in Limpopo. No household estimates are provided.

2.4 Eskom's Spot Building Count (also known as the Eskom Dwelling Layer)

Eskom has mapped and classified structures in South Africa using image interpretation and manual digitisation of high resolution satellite imagery. Where settlements are too dense to determine the number of structures these areas are categorised as dense informal settlements. Identifiable dwellings and building structures are mapped by points while dense informal settlements are mapped by polygons.

Shape files provided by Eskom revealed 13 polygons categorised as Dense Informal Settlements in Limpopo, covering a total area of 0.8 square kilometres. The dataset does not characterise the areas, nor does it match areas to known settlements. Latest available data is based on 2008 imagery. Eskom is currently in the process of mapping 2009 imagery and plans to have mapped 2010 imagery by the end of the year.

¹¹ AfriGIS was given informal settlements data by the provincial departments of housing to create the map layers.

PART 3

The number and size of informal settlements in Limpopo

3.1 Estimating the number of households who live in informal settlements

According to the Census, 24,000 households in Limpopo (2% of households in the province) lived in EAs classified as Informal Settlements in 2001¹². 75% lived in enumeration areas classified as Tribal Settlements and a further 11% in EAs classified as Urban Settlements. Limpopo province accounts for 2% of all households in informal settlement EAs in the country (it accounts for 11% of all households overall).

Census data at a municipal level is summarised below for Limpopo.

Municipality	Number of HH in Informal Settlement EA	% of HH in municipality/ province that live in Informal Settlement EAs
Bohlabela (now eliminated)	0	0%
Capricorn	8 949	3.1%
Mopani	2 062	0.9%
Greater Sekhukhune	0	0%
Vhembe	552	0.2%
Waterberg	12 103	7.2%
Limpopo	23 666	1.9%

Source: Census 2001.

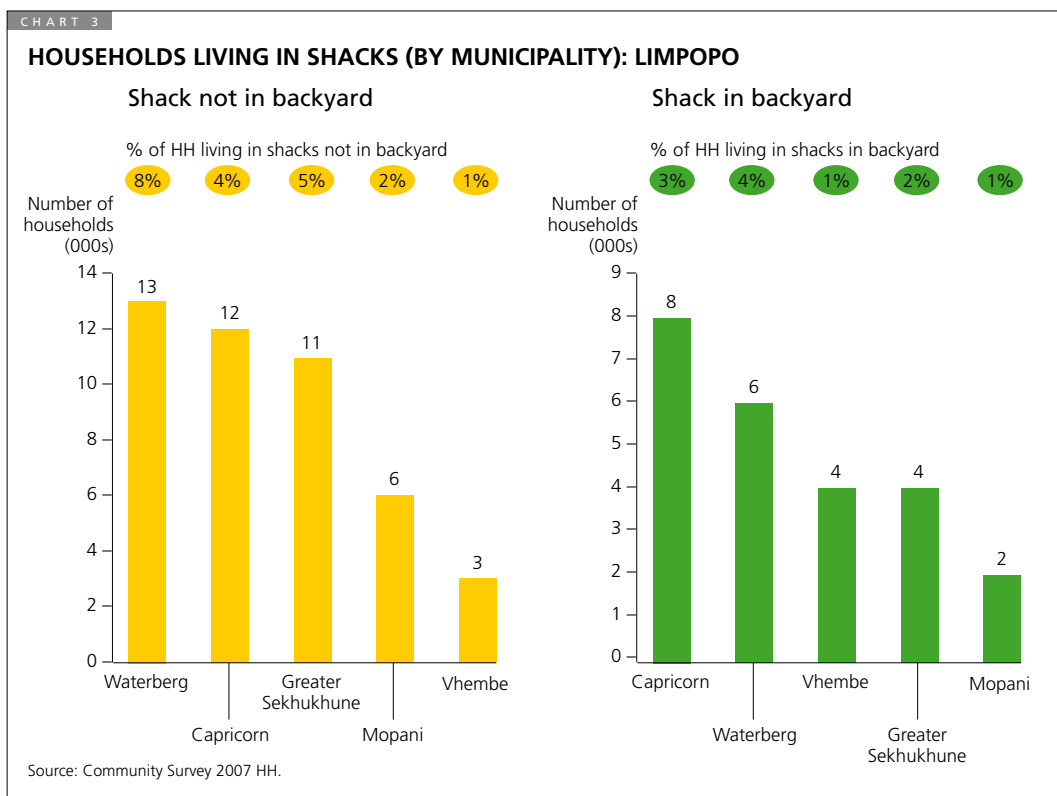
Note: The 12th amendment to the Constitution in December 2005 reduced the number of districts from 53 to 52 (Bohlabela was eliminated), and also eliminated cross-border districts (each district is now completely contained within a province). With regards to Limpopo, Sekhukhune was in 2001 also in Mpumalanga province. Those households are not included in the estimates above.

¹² With regards to settlement type, Informal Settlement is one of the ten EA descriptors used.

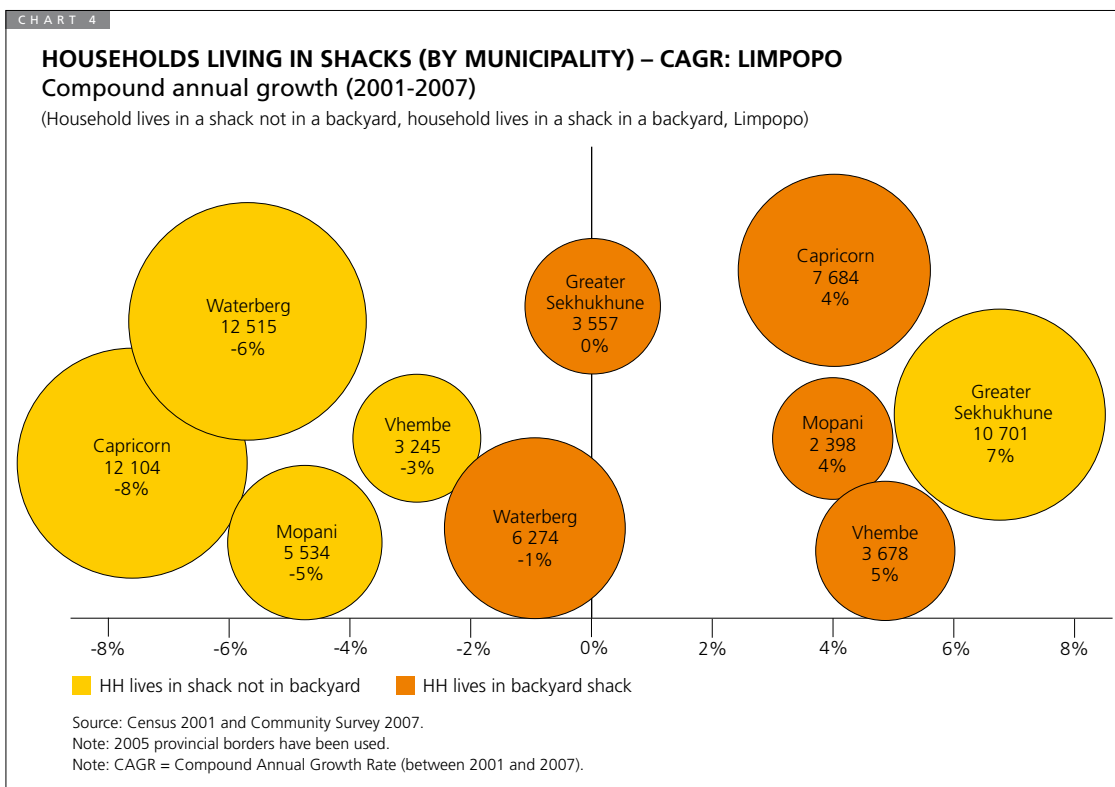
According to the 2007 Community Survey 44,000 households (approximately 4% of households in Limpopo) live in shacks not in backyards, down from 57,000 households (5% of households) in 2001 as reported by the Census. In terms of absolute numbers there was a decrease of around 13,000 in the number of households living in shacks not in backyards between 2001 and 2007.

According to the Community Survey roughly 4% of households in shacks not in backyards live in this province (roughly 10% of all households in the country live in this province).

According to the Community Survey, at over 12,500 the Waterberg Municipality has the highest number of households living in shacks not in backyards in Limpopo. The chart below summarises municipal-level data for Limpopo for all shacks, including shacks not in backyards and shacks in backyards.



Data from the 2001 Census and the 2007 Community Survey can be used to identify areas where growth in the number of households living in shacks not in backyards has been particularly rapid. This data is summarised in the bubble chart below. The size of the bubble indicates the size of the segment in 2007 while its location along the x-axis indicates the annual rate of growth. Of course in some of these areas high growth has occurred off a very low base. For those areas with significant scale, Greater Sekhukhune has the highest rate of growth at 7% per annum.



3.2 Estimating the number of informal settlements

While survey and census data provide an estimate based on households, various data sources provide estimates of the number of informal settlements. LaPsis reports 151 informal settlements across the province while the Informal Settlements Atlas dataset from the NDHS indicates 135 informal settlement polygons.

Available data sources at a 'settlement' level are summarised below together with household level data based on the 2001 Census and the 2007 Community Survey. Note that settlements are identified and defined differently in these data sources.

	Number of informal settlements				Number of households in informal settlements		
	LaPsis: Informal settlements	Atlas: Informal settlement polygons	Stats SA: Sub Places with at least one EA classified as 'Informal Residential'	Eskom: Polygons classified as 'Dense Informal'	Census 2001: HH in informal settlement EA	Census 2001: HH in shacks not in backyards	Community Survey 2007: HH in shacks not in backyards
Bohlabela (now eliminated)	–	–			0	2 240	–
Capricorn	12	12			8 949	19 576	12 104
Mopani	20	6			2 062	7 331	5 534
Greater Sekhukhune	4	–			0	4 941	10 701
Vhembe	9	5			552	3 963	3 245
Waterberg	106	101			12 103	18 437	12 515
Limpopo	151	135	40	13	23 666	56 489	44 099

* Households in informal settlements to be upgraded between 2010/11 and 2013/14 (Outcome 8¹³): 31,200 in Limpopo.

¹³ Outcome 8 relates to Sustainable Human Settlements and Improved Quality of Life. National government has agreed on twelve outcomes as a key focus of work between 2010/11 and 2013/14.

PART 4

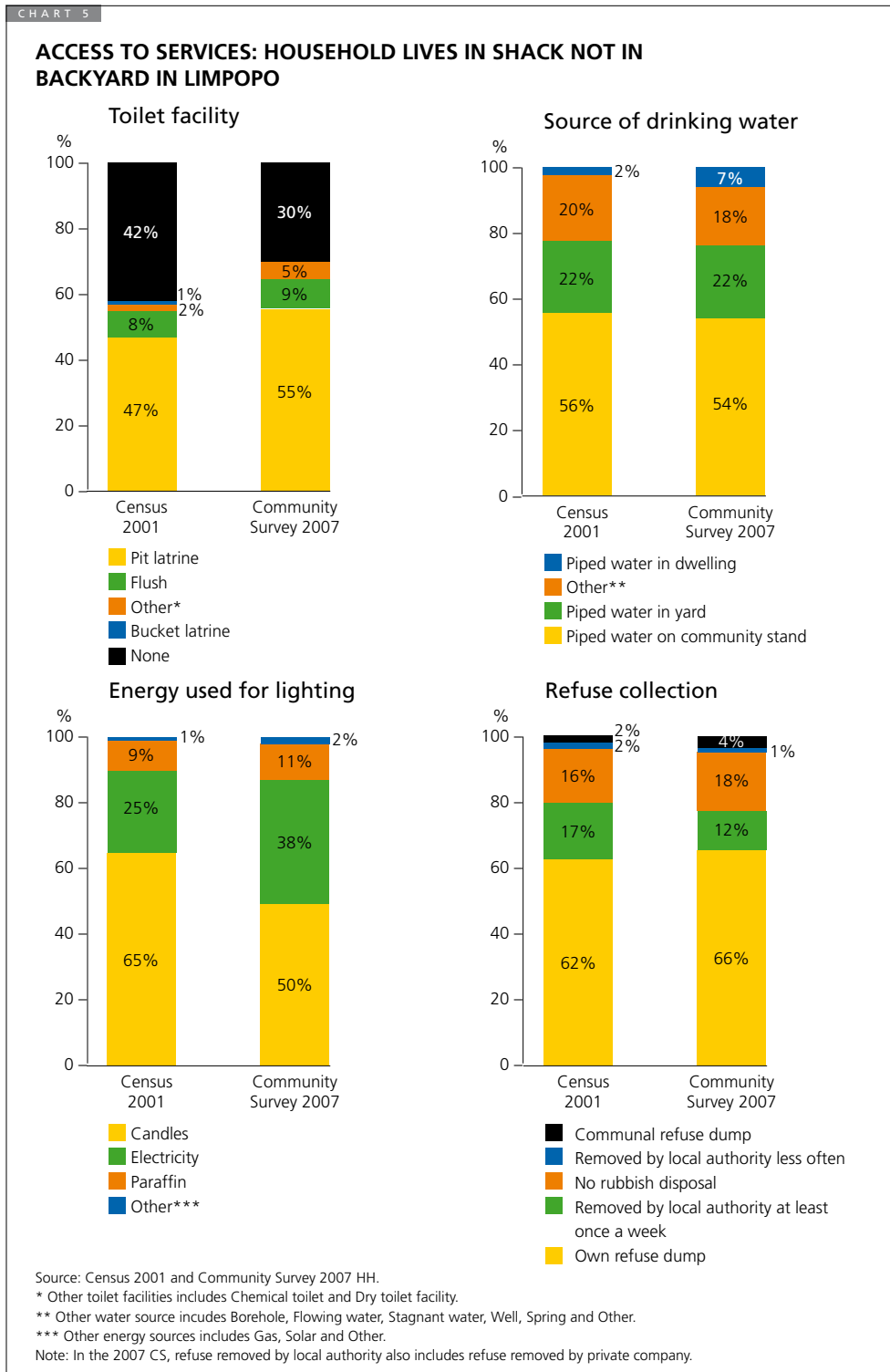
Profiling informal settlements in Limpopo

The analysis of survey data investigates the characteristics of the dwellings and the profile of households and individuals living in shacks not in backyards. As noted this variable is a proxy for households who live in informal settlements. Where available, Census 2001 data relating to households who live in Informal Settlement EAs has been summarised in the introductory comments at the start of each sub-chapter.

4.1 Basic living conditions and access to services

In 2001, 16% of households living in informal settlement EAs had piped water in their dwelling or on their yard. A further 25% could obtain piped water within 200 metres of their dwellings. 52% had access to piped water in excess of 200 metres from their dwellings (there is no indication of how far away the water source is) while 7% had no access at all. 7% of households in informal settlement EAs had flush toilets, 45% used pit latrines, 1% used bucket latrines and 2% had chemical toilets; the remaining 44% had no access to toilet facilities. 10% of households in informal settlement EAs used electricity for lighting and 26% had their refuse removed by the local authority.

Key trends relating to access to services for households living in shacks not in backyards are summarised in the chart below.



Access to services appears to have improved between 2001 and 2007; the proportion of households who live in shacks not in backyards who say they have no toilet facilities declined from 42% in 2001 to 30% in 2007. Drinking water access improved slightly while use of electricity for lighting increased from 25% to 38% between 2001 and 2007. An exception is refuse removal. In 2001, 20% of households that live in shacks not in a backyard had their refuse removed by the local authority. In 2007, 12% of households that live in a shack not in a backyard had their refuse removed by the local authority or a private company.

As has been highlighted, a word of caution is required in interpreting this data given potential biases in the sample design towards more established settlements where service provision is better.

4.2 Profile of households and families

In 2001, 26% of Limpopo households living in informal settlement EAs were single person households. The average household size was 3.1. The majority of households were headed by males (58%).

According to the 2007 Community Survey, 28% of households in Limpopo living in shacks not in backyards comprise a single individual. This is slightly higher than the national average for households living in shacks not in backyards where 23% comprise a single individual. It is noteworthy that 29% of these individuals who live on their own are married.

According to the Community Survey 38% of Limpopo households living in shacks not in backyards comprise four or more persons. The average household size of households living in shacks not in backyards in 2007 is 3.3 (in 2001 this was 3.2), which is slightly lower than the provincial average of 4.2 for those living in formal dwellings (in 2001 this was 4.3). 34% of households living in shacks not in backyards live in over-crowded conditions¹⁴.

Household heads in shacks not in backyards are noticeably younger than those in formal dwellings; 40% are under the age of 35 compared to 21% in households who live in formal dwellings.

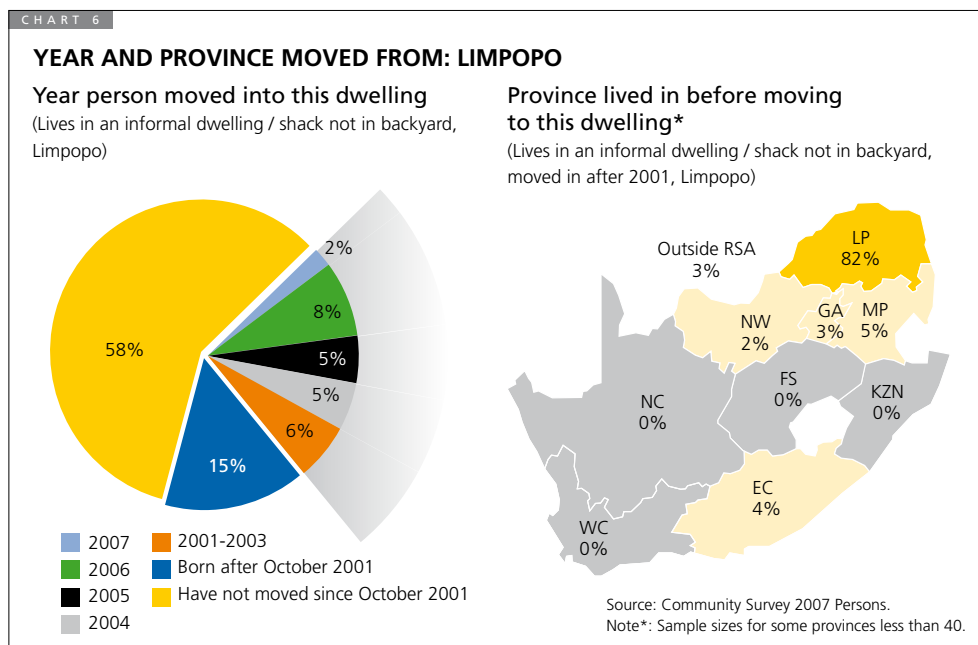
67,000 children under the age of 18 live in shacks not in backyards corresponding to 44% of the population who live in these dwellings. According to the Community Survey 58% of households in shacks not in backyards have one or more children.

¹⁴ A household is considered over-crowded if there are more than two people per room. It is possible that this estimate is understated in the case where more than one household inhabits the same dwelling.

4.3 Age of settlements and permanence

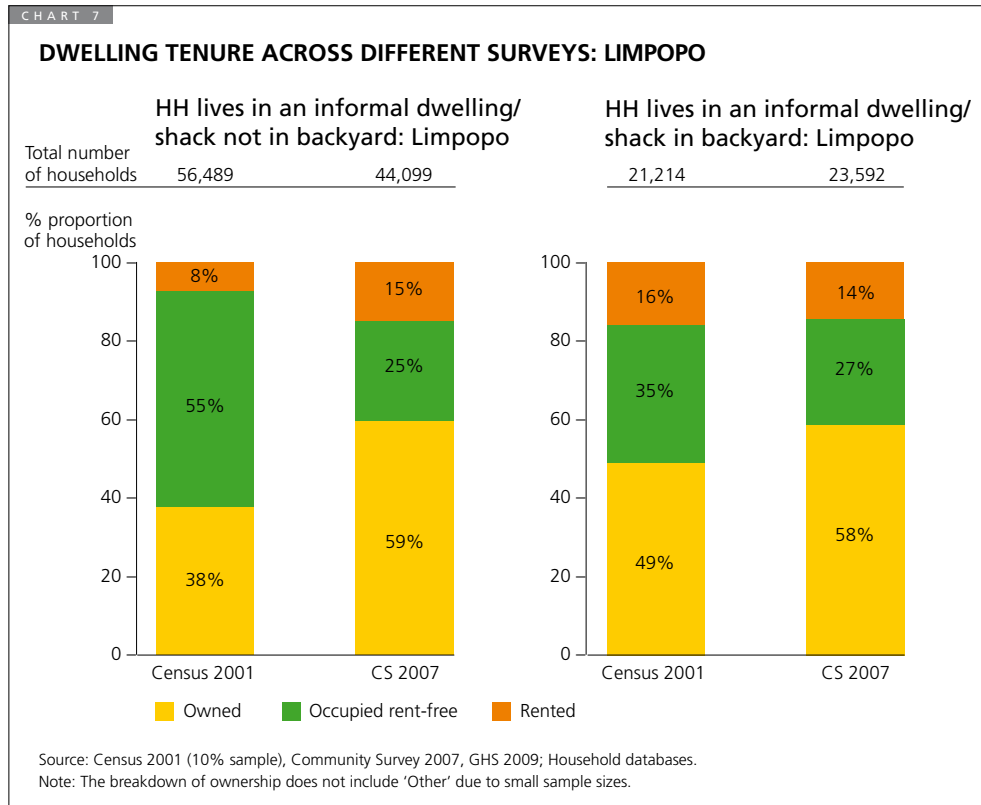
In 2001, just over half of households living in informal settlement EAs in Limpopo (55%) were living there five years previously. In 2001, 33% of households living in informal settlement EAs claimed to own their dwelling; 14% rented and 51% occupied the dwelling rent-free. 15% of Limpopo households in informal settlement EAs had another dwelling aside from their main dwelling.

Analysis of data from the 2007 Community Survey indicates that the majority of people living in Limpopo in a shack not in a backyard in 2007 had been living there for an extended period of time. Across the province, 58% said they had not moved since 2001. Those who have moved since 2001 mainly moved from within the province though a small proportion of people moved from surrounding provinces and from the Eastern Cape.



There may be some basis for a degree of scepticism when looking at this data. As noted in the overview of data sources, there may well be a sampling bias towards older, more established settlements. In addition, if households in informal settlements believe there is a link between the duration of their stay in that settlement and their rights either to remain in the settlement or to benefit from any upgrading programmes they may well have an interest in over-stating the length of time they have lived in their dwellings.

Data on tenure status can also provide an indication of permanence. The primary survey categories include rental, ownership (with or without a mortgage or other form of finance) and rent free occupation. Survey data on tenure is summarised below.



There has been a noticeable increase both in stated ownership and in rentals for those who live in shacks not in backyards. However, data on tenure status can be difficult to interpret. There is no indication whether ownership is formal (i.e. whether there is a title deed). Further, it is not entirely clear what 'ownership' means to the household. On the one hand those who say they own their dwellings may be communicating a strong sense of belonging and permanence despite the informal nature of the dwelling. They may also reflect growing official recognition of their rights despite the lack of formal title. Alternatively those who say they own their dwellings may simply be referring to their ownership of the building materials used to construct their dwellings. Data on rentals is also difficult to interpret. Some households who say they rent their shacks may own the building materials but rent the land; if they were to be evicted from the land they would still retain possession of the physical structure. Other renter households may rent both the structure and the land. The proportion of those who live in shacks in backyards who say they rent their dwellings is noticeably lower than the national average of 48%. It is not clear whether those who say they own backyard shacks mean they own the structure and rent access to land or whether they own the main dwelling on the property and have rented it out.

4.4 Education

In 2001, 26% of adults aged 18 and above living in informal settlement EAs had no schooling; 15% had a Matric and a further 2% completed Technikon, University or other Post Matric.

According to the 2007 Community Survey 14% of adults aged 18 and above living in shacks not in backyards in Limpopo had no schooling. This is noticeably lower than the 2001 Census which found that 26% had no schooling.

PART 5

Conclusions

By their nature, informal settlements are difficult to monitor. They can change more rapidly than the systems designed to monitor them. Nevertheless, there is some data available, although it is far less detailed in the case of Limpopo than it is for many other provinces.

The schema below summarises some of the most common indicators associated with individuals, households, dwellings and settlements. While the importance of the indicators depends on the analysis required, those indicators in red are thought to be particularly important to track over time in order to assess priorities for upgrading purposes. To populate this data, a range of data sources is required, including photography, household surveys, municipal data relating to services provided and available infrastructure as well as location and capacity indicators relating to facilities such as schools, hospitals and law enforcement.

CHART 8			
INFORMAL SETTLEMENT INDICATORS			
Individuals	Household level	Dwelling level	Settlement level
<ul style="list-style-type: none"> • Number • Age • Gender • Place of birth • Highest level of education • School attendance • Occupation • Marital status • Spouse live in the dwelling • Relationship to household head • Perception of key risks • Experience of key risks • Health levels • Experience of crime • Date moved to the settlement • Date moved into the dwelling 	<ul style="list-style-type: none"> • Number of households • Household size • Household composition • Household income • Year household moved to the settlement • Year household moved into the dwelling • Household level access to water, sanitation, electricity and refuse removal • Rental/ownership of land • Basis of land ownership (formal title or other) • Rental/ownership of dwelling • Number of people employed in the household • Number of grant recipients in the household 	<ul style="list-style-type: none"> • Number of dwellings • Dwelling size (rooms and squ. meterage) • Type of dwelling • Materials used to construct the dwelling 	<ul style="list-style-type: none"> • Number of settlements • Boundary and square meterage • Dwelling count and densities • Household count • Key community based organisations active in the settlement • Facilities, density and capacity indicators within/near settlement <ul style="list-style-type: none"> – Health – Safety – Social services – Education – Transport and roads – Commercial facilities • Proximity to and capacity of bulk service infrastructure • Burden of disease (as per health records) • Reported crime (as per police records or community forums) • Reported incidents of fire • Reported incidents of flooding • Land ownership • Geo technical characteristics
Household survey	Household survey	Household survey Aerial photography	Satellite photography Aerial photography Household surveys Municipal data Other agency data

PART 6

Contacts and references

List of key contacts

Alwyn Esterhuizen, AfriGIS (email and telephone)
Isabelle Schmidt Dr., Statistics South Africa (telephone and email)
Maria Rodrigu, Chamber of Mines Information Services (email and telephone)
Niel Roux, Statistics South Africa (email and telephone)
Pieter Sevenshuysen, Remote Sensing and GIS Applications, GTI (email and telephone)
Rob Anderson, Statistics South Africa (email and telephone)
Stuart Martin, GTI (email and personal interview)

Other sources

Census 2001, Statistics South Africa
Community Survey 2007, Statistics South Africa
General Household Survey (various years), Statistics South Africa
http://www.info.gov.za/events/2011/sona/supplement_poa.htm
Income and Expenditure Survey 2005/6, Statistics South Africa
Labour Force Survey 2004, Statistics South Africa
2009 National Housing Code, Incremental Interventions: Upgrading Informal Settlements (Part 3)
Bhekani Khumalo (2009), 'The Dwelling Frame project as a tool of achieving socially-friendly Enumeration Areas boundaries for Census 2011, South Africa', Statistics South Africa
Catherine Cross (2010), 'Reaching further towards sustainable human settlements', Presentation to DBSA 2010 Conference, 20 October 2010, HSRC
Land and Property Spatial Information System (LaPsis) data, provided by the HDA
National Department of Human Settlement 2009/2010 Informal Settlement Atlas, provided by the HDA

PART 7

Appendix: Statistics South Africa surveys

7.1 Community Survey 2007

The 2007 Community Survey, the largest survey conducted by Stats SA, was designed to bridge the gap between the 2001 Census and the next Census scheduled for 2011. A total of 274,348 dwelling units were sampled across all provinces (238,067 completed a questionnaire, 15,393 were categorised as non-response and 20,888 were invalid or out of scope). There is some rounding of data (decimal fractions occurring due to weightings are rounded to whole numbers, therefore the sum of separate values may not equal the totals exactly) in deriving final estimates. In addition, imputation was used in some cases for responses that were unavailable, unknown, incorrect or inconsistent. Imputations include a combination of logical imputation, where a consistent value is calculated using other information from households, and dynamic imputation, where a consistent value is calculated from another person or household having similar characteristics.

Several cautionary notes on limitations in the data were included with the release of reports on national and provincial estimates in October 2007¹⁵. The October 2007 release adjusted estimates of the survey at national and provincial levels to ensure consistency by age, population group and gender. Estimates at a municipal level were reviewed due to systematic biases (as a result of small sample sizes). These revisions used projected values from the 1996 and 2001 Censuses. Adjustments were made to the number of households separately to the number of individuals.

Direct estimates from the Community Survey are therefore not reliable for some municipalities. However, measurement using proportions rather than numbers is less prone to random error. Therefore the Community Survey is useful for estimating proportions, averages and ratios for smaller geographical areas.

7.2 General Household Survey

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

¹⁵ More details on this can be found in the Community Survey statistical release provided by Stats SA (P0301.1).

The sample was selected by stratifying by province and then by district council. Primary Sampling Units (PSUs) were randomly selected from the strata and then Dwelling Units were randomly selected from within the PSUs. For the 2007 GHS, a total of 34,902 households were visited across the country and 29,311 were successfully interviewed during face-to-face interviews. For the 2009 GHS, a total of 32,636 households were visited across the country and 25,361 were successfully interviewed during face-to-face interviews. To arrive at the final household estimate the observations were weighted up to be representative of the target population.

7.3 Income and Expenditure Survey 2005/6

The Income and Expenditure Survey is a survey of the income and expenditure patterns of 21,144 households. This survey was conducted by Stats SA between September 2005 and August 2006. It is based on the diary method of capture. It is the most comprehensive nationally representative source for data on household income; however income estimates in this survey are lower than estimates in the national income accounts reported by the Reserve Bank. The Analysis of Results report published by Stats SA highlights that respondents will under-report income 'either through forgetfulness or out of a misplaced concern that their reported data could fall into the hands of the taxation authority'¹⁶. No adjustments have been made.

7.4 Census 2001

The Statistical Act in South Africa regulates the country's Censuses. In general a census should be conducted every five years unless otherwise advised by the Statistics Council and approved by the Minister in charge. The Act also allows the Minister to postpone a census. In the case of the census meant to follow that of 2001, a postponement was granted in order to examine the best approach to build capacity and available resources for the next census. Consequently the next Census will only take place in late 2011.

7.5 Enumerator Areas

All EAs, which are mapped during the dwelling frame and listing process for Census, have a chance to be selected for the master sample used in the Stats SA sample surveys. Once an EA is listed, the listing is maintained, and it has a chance to be selected for a survey based on the Stats SA stratification criteria. Thus, the EA is chosen regardless of the classification that was done in Census 2001.

¹⁶ Statistics South Africa (2008), Income and Expenditure of Households 2005/2006: Analysis of Results, Report No. 01-00-01, 2008.

TABLE 3 2011 ENUMERATION AREA TYPES				
2011 EA types	EA land-use/zoning	Acceptable Range in Dwelling Unit (DUs) Count per EA	Ideal EA Dwelling Unit Count (DUs)	Geographic size constraint
Formal residential	Single house; Town house; High rise buildings	136-166	151	None
Informal residential	Unplanned squatting	151-185	168	None
Traditional residential	Homesteads	124-151	137	None
Farms		65-79	72	< 25km diameter
Parks and recreation	Forest; Military training ground; Holiday resort; Nature reserves; National parks	124-151	137	None
Collective living quarters	School hostels; Tertiary education hostel; Workers' hostel; Military barrack; Prison; Hospital; Hotel; Old age home; Orphanage; Monastery	>500	500	None
Industrial	Factories; Large warehouses; Mining; Saw Mill; Railway station and shunting area	113-139	126	<25 km ²
Smallholdings	Smallholdings/ Agricultural holdings	105-128	116	None
Vacant	Open space/ Restant	0	0	<100 km ²
Commercial	Mixed shops; Offices; Office park; Shopping mall CBD	124-151	137	<25 km ²

Source: Statistics South Africa.

The Housing Development Agency (HDA)

Block A, Riviera Office Park,
6 – 10 Riviera Road,
Killarney, Johannesburg
PO Box 3209, Houghton,
South Africa 2041
Tel: +27 11 544 1000
Fax: +27 11 544 1006/7



www.thehda.co.za