Enumeration Report

Barcelona Informal Settlement Pocket

DECEMBER 2016

A member of the SA SDI Alliance

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Western Cape Government
Human Settlements

CORC

SA SDI ALLIANCE

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LIST OF ACRONYMS AND ABBREVIATIONS

CoCT – City of Cape Town (refers to the municipality)
CORC – Community Organisation Resource Centre
The Department – Department of Human Settlements
EPWP - Expanded Public Works Programme
FEDUP – Federation of the Urban and Rural Poor
GIS – Geographical Information Systems
GPS – Global Positioning System
ISN – Informal Settlement Network
MEC – Member of the Executive Council
NGO – Non-Governmental Organisation
Province – The Western Cape Government
PSC – Project Steering Committee
SC – Sub-Council
SA SDI Alliance – South African Slum Dwellers International Alliance
SDI – Slum Dwellers International
StatsSA – Statistics South Africa

GLOSSARY

Enumeration:
An enumeration entails the gathering of socio-economic data and shack numbering for all households in informal settlement pockets.

Household:
A group of people under one structure sharing one common area. If the structure is divided and a different door is used to enter the next area and the common area is not shared, then that can be considered as a different household.

Household head:
The household head is a person who is recognized as such by the household. She or he is generally the person who bears the chief responsibiloty for managing the affairs of the household and takes decisions on behalf of the household. This person does not necessarily have to be the breadwinner.

Informal settlement pocket:
According to the City of Cape Town, an informal settlement pocket consists of one or more informal structures, which are known to the community as a unit with a unique name. It could be a stand-alone portion or form part of a larger grouping. An informal settlement area consists of one or more informal settlement pockets due to the geographical position and/or contiguous nature of these pockets.

PREFACE

The Community Organisation Resource Centre (CORC) is a support NGO linked to the global network of the urban poor known as Slum Dwellers International (SDI). In its role as a support NGO, CORC supports the social processes of two poor-people's movements, the Federation of the Urban and Rural Poor (FEDUP) and the Informal Settlement Network (ISN). CORC assists FEDUP & ISN to develop strategies for inclusive cities. This includes facilitating engagements with formal roleplayers like the state and supporting the development of savings, information-gathering and community-led development strategies. A second NGO, the uTshani Fund, provides finance for the urban poor. Together, these two social movements, along with the two support NGOs, form the South African SDI Alliance. One of the alliance's most important tools over the last two decades has been information collection through the profiling and enumeration of informal settlements. This report is a reflection of community-driven data collection processes implemented by the alliance that have proven to be far more effective in gathering accurate data about informal settlements.

Residents during an enumeration training workshop

CORC supervisor facilitates an enumeration training workshop

EXECUTIVE SUMMARY

A dense concentration of informal settlements is located along the N2 highway between Borcherds Quarry and Airport Approach Road. These include Barcelona and neighbouring settlements Kanana, Europe and Vukuzenzele. In Barcelona, 6456 residents make up 2723 households which results in an average household size of 2,4 people per household. The settlement is located on 25,6 hectares, which results in a population density of 110 dwelling units per hectare. In 1990 backyarders from Gugulethu first erected dwellings on a discontinued landfill site. Over the past 27 years, the settlement has grown rapidly.

Enumerators active in Barcelona

The Western Cape Government Department of Human Settlements appointed the Community Organisation Resource Centre (CORC), through a competitive tender process, to conduct an in-depth enumeration of Barcelona, which forms part of the Airport Informal Settlement Precinct consisting of ten (10) informal settlements, namely; Barcelona, Gxagxa, Lusaka, Kanana, Vukuzenzele, Europe, Thabo Mbeki, KTC, Tsunami IDA/TRA, and Hlazo Village. Kosovo was also enumerated as a priority project in the southern corridor. CORC works in partnership with the Federation of the Urban and Rural Poor and the Informal Settlement Network, who mobilised, trained and provided on-going support to Barcelona community members to act as enumerators in this study.

The data collection took place over two phases due to local government elections: 20 days in June 2016 and 15 days in September/October 2016. This was followed by verification and analysis of the data collected. The methodology included the use of locally trained fieldworkers and the utilisation of Trimble devices to ensure a level of geographic accuracy. Through CORC employment and the Expanded Public Works Programme of the City of Cape Town, 109 short-term employment opportunities were created in Barcelona during this study.

During the enumeration 2838 dwellings were numbered. Of these, 2606 dwellings were enumerated, which results in a response rate of 92%. During the enumeration, eight out of ten times household heads were the primary respondent to questions, followed by those closely associated to the affairs of the household such as boarders (10,9%) and spouses or partners (6,7%). This means that the most reliable sources of information related to households were obtained.

Single people account for 40% of all households. Of this group, 62% are male, 63% are younger than 35 years old and 86% have never been married (and are potentially without dependents). The dwellings of single-person households in Barcelona can be characterised as small (51% of all dwellings are less than 30 square metres), single room (32% of all dwellings), and recently occupied (36% of residents reported to have lived in their dwellings for less than five years). Although 78% of respondents asserted to own the dwelling they live in, 21% of Barcelona's residents, or 548 households, are subordinate to a lessor. When planning settlement upgrading, it is therefore important to take the informal property market into account.

The majority of Barcelona's residents face economic hardship. According to community responses the unemployment rate is 53%. The majority of households (93%) earn less than R3500 per month while 25% of households report to have no income at all. Those aged 31 to 35 years old are the most economically active, followed by 41 to 50 year olds. Young people aged 19 to 30 years, who make up 26% of the total population, are particularly affected. Youth unemployment is worryingly high since 59 in every 100 youth are unemployed. Women are particularly affected by the shocks related to unemployment since 65% of the unemployed youth are female. Only 4% of youth are reportedly self-employed. Those receiving child support grants numbered 1945 people, or 30% of respondents, while 173 pensioners receive the old age grant, and 56 residents receive the disability grant.

In Barcelona, 2184 children account for 34% of the settlement's population that is younger than 18 years old. It is therefore not surprising that 44% of children are in primary school and 19% at pre-school. College and university attendance is low and 2.7% of potential school-goers (aged 6 – 18 years old) do not attend school. Children find themselves in close proximity to schools since 63 out of 100 children attend schools in Gugulethu while 9% attend schools outside Cape Town.

The soil typologies of the discontinued landfill site make provision of more permanent services difficult. Prior to settlement upgrading, substantial land rehabilitation will be required. Despite these constraints, progress has been made in delivering services, especially in terms of access to electricity, which is reported as 62% prepaid, 31% illegally connected and 7% without access to electricity. Water and sanitation services are lacking due to the continued growth of the community over the years. At current levels, there are 56 taps, which results in a ratio of 49 households per water tap. Barcelona has 117 temporary toilets, which results in a ratio of 23 households per toilet.

This enumeration outlines and details evidence to inform the planning and developments strategies for the Airport Precinct initiative. Using the data collected through this study not only improves the evidence base from which settlement planning occurs, but has also proved to build community capacity as central partners in upgrading initiatives.

STRUCTURES

NUMBERED 2838[1]

ENUMERATED 2606

HOUSEHOLDS 2723

SANITATION 1:23 Toilet to household ratio

WATER 1:49 Tap to household ratio

ELECTRICITY

PREPAID 62%

ILLEGAL CONNECTION 31%

NO ELECTRICITY 7%

DISASTERS AND RISKS Fire and flooding

UNEMPLOYMENT RATE 53%

MAIN PRIORITIES Housing, sanitation and water

UPGRADING CATEGORY Many constraints. May need relocation if land is not rehabilitated

MAJOR CONSTRAINTS Located on top of a landfill

1 All information reflected in this report is based on the analysis of data collected during the enumeration exercise, unless otherwise stated

1. INTRODUCTION

01 Introduction

South Africa, like other developing countries, has seen a rapid rise of informal settlements in major cities.[2] This increase is attributed to a number of factors which can be grouped under two broad categories i.e. urbanisation and population growth. In terms of urbanisation, people migrate into cities in search of greener pastures. Upon arrival, they find it near impossible to secure affordable housing and are often forced to find accommodation in informal settlements. With respect to population growth, Census figures have shown a consistent increase in the population size and growth rates of the country. In addition, there is a growing phenomenon of young adults who split from families in order to set up home elsewhere in pursuit of independence. This further compounds the problems associated with housing demand.[3]

It is expected that housing would be affected by increases in population size and the decline of household size, which puts an additional strain on the state's available resources to provide adequate housing for the population.

2 HDA.2013b. South Africa: Informal Settlements Status.
3 Todes, A. et al. 2010. Contemporary South African Urbanisation Dynamics. Urban Forum 21:331–348

Structure densities in Barcelona

Trends in population increase and growth in informal settlements

The Western Cape Province accounts for 11.2 % of South Africa's total population with 5 823 000 residents; of this the City of Cape Town metropolitan area is home to 64% of the Province's residents (StatsSA: 2011). The population size in the Province increased by 2.6% per year between 2001 and 2011 while the average household size declined from 4 in 1990 to 3.4 in 2011, placing increased pressure on the demand for services and housing.

01 Introduction

Informal settlements are home to millions of people in developing countries. Between 1994 and 2011, the number of informal settlements in South Africa increased from approximately 300 to about 2 700 and it is estimated that 1.25 million households live in these settlements (NDHS, 2014). According to Statistics South Africa (Stats SA), 142 706 households lived in shacks (not in backyards) and informal residential areas in the Western Cape at the time of the 2001 Census. This figure is compared to 191 668 at the time of the 2011 Census (HDA, 2013:11). In 2013, approximately 193 000 households lived in 204 informal settlement areas in the City of Cape Town and this number increases each year. These statistics clearly illustrate that government needs to address informality as a matter of priority. As a starting point, policy and implementation need to align to the Western Cape Department of Human Settlements' strategic direction of allocating more resources to the Upgrading of Informal Settlements Programme (UISP) in order to improve the living conditions of informal settlement dwellers and those living in backyards who continue to wait for a housing opportunity.

Catalytic projects – creating opportunities at scale

In 2014, the national Minister of Human Settlements announced that the Department would embark on the delivery of catalytic human settlements projects to capitalise on the economies of scale of such projects. Subsequently, the Minister of the Western Cape Department of Human Settlements (WCDHS), Bonginkosi Madikizela announced in his 2015 Budget Speech that the Department had identified 5 catalytic and 9 priority projects in the province, which would be funded and jointly implemented with the National Department of Human Settlements (NDHS).

The Southern Corridor Integrated Human Settlements Project is one of the catalytic projects and is comprised of several projects within the City of Cape Town's area of jurisdiction. The Airport Informal Settlement Precinct and Kosovo are two projects that will be implemented through the Southern Corridor Integrated Human Settlements Project.

The Airport Informal Settlement Precinct consists of ten (10) informal settlements, namely; Barcelona, Gxagxa, Lusaka, Kanana, Vukuzenzele, Europe, Thabo Mbeki, KTC, Tsunami IDA/TRA, and Hlazo Village. These settlements form a strip of between 200 and 500 metres wide along the southern border of the N2. The majority of settlements border Steve Biko Street to the northwest and Borcherds Quarry Road to the southeast, stretching 2.5km in a northwest-southeast direction. Barcelona, Gxagxa, Lusaka, Kanana, Vukuzenzele, and Europe were enumerated in the first phase of the government contract. Thabo Mbeki, KTC, Tsunami IDA/TRA, and Hlazo Village were enumerated in the second phase and form part of the Airport Precinct. Kosovo was also enumerated in this government contract as a priority project in the Southern Corridor.

It is in this context that the Department commissioned an enumeration study across each of these informal settlement pockets, appointing the Community Organisation Resource Centre (CORC) through a competitive bidding process, to undertake this task.

01 Introduction

Overall purpose of the study

The overall purpose of the enumeration study was to gather data and information at household level in order to understand the profile of the households, social networks and the level of services in the informal settlement pockets that form part of the Southern Corridor. The data and information gathered will assist the Department in understanding the status quo of each informal settlement pocket in order to develop credible settlement profiles which will assist with determining human settlement needs per household, informing decision making, and future planning for the informal settlement pockets.

The project deliverables of the study were to:

- Negotiate, design, implement and manage a stakeholder participatory process
- Conduct a household level enumeration exercise
- Conduct GIS mapping of all households
- Analyse the data collected for each settlement
- Record existing social infrastructure and socio-economic opportunities
- Develop a database which will provide a profile of each household and each informal settlement

Process undertaken in the enumeration of Barcelona

The study was conducted by CORC. The Barcelona enumeration process unfolded over a period of three months and started with shack numbering and mapping, which was conducted in May 2016. The enumeration training occurred on 10 June 2016. Data collection occurred in two phases, namely before and after local elections. The first phase took place from 11 - 30 June 2016 and lasted for 20 days. The second phase occurred from 11 September – 4 October 2016 and lasted for 15 days. Each of the eleven settlements was exposed to the same methodology. The only difference related to the length of time required for gathering data, which was based on the settlements' varying sizes. The use of a common methodology ensured that information and data across the settlements studied could be compared. This particular report is the outcome of a community-led data collection process that will better equip the CoCT and the Province through updated information about Barcelona informal settlement pocket.

Structure numbering in Barcelona

Indicating structure numbers on a map of Barcelona

2. LOCATION AND CONTEXT OF THE SETTLEMENT

02 Location and context of the settlement

A dense layer of informal settlements is located on the N2/Settler's Way between Borcherds Quarry and Airport Approach roads. Barcelona informal settlement forms part of this layer, along with neighbouring settlements, Europe and Vukuzenzele. Barcelona is located approximately 16 km east of the Cape Town Central Business District. Its north eastern border faces the N2 highway with its south western border consisting of Klipfontein Road.

According to residents, the settlement was founded in 1990 and shares a history similar to that of Kanana informal settlement pocket, which lies to the north of Barcelona. Backyarders from Gugulethu cleared the land, which was previously a discontinued landfill site. The main reasons community leaders gave for occupying According to residents, the settlement was founded in 1990 and shares a history similar to that of Kanana informal settlement pocket, which lies to the north of Barcelona. Backyarders from Gugulethu cleared the land, which was previously a discontinued landfill site. The main reasons community leaders gave for occupying the land relate to high rental rates paid to owners of formal houses in Gugulethu and to find a settlement of their own. Initially, Barcelona and neighbouring settlement Europe were one large settlement. They split in half and the western segment became known as Barcelona, for reasons articulated below by a resident of Barcelona.

02 Location and context of the settlement

COMMUNITY VOICES

"We moved to Barcelona because we were renting in the location [township] and people were treated badly by the owners of the land. They [the owners] wanted us to share everything with them. Some were running away from the war that was happening in Crossroads back then and the halls were full. We were about six in the same room, so we decided to come here to Barcelona. This place was called Barcelona because we felt like we [are being] treated like outsiders and that we don't belong in South Africa and [that] we [are] from Barcelona. In our country, we cannot be staying in a place that is used for waste. So we called this place Barcelona because we felt rejected as South Africans."

The community has a leadership structure of 11 members:

- Chairperson – Mongami Mbili
- Deputy chairperson – Mawethu Tafana
- Secretary – Nomawethu Zondeka
- Deputy secretary – Nozibele Lugulwana
- Additional member – Mthobeli Mhlana
- Additional member – Luntu Tshangela
- Additional member – Nomakhaya Nyama
- Additional member – Nokuxola Bhokweni
- Additional member – Vuyelwa Melani
- Additional member – Vuyani Bobo
- Additional member – Themba Nqenketho

During the initial engagements with Barcelona, before the local elections, Councillor Mzwakhe Nqavashe was the Councillor for Ward 40, which incorporates the area south of the N2, east of the railway line, Hlungulu Walk and Steve Biko Drive, north of Klipfontein road. The area is also part of Sub- Council (SC) 11, where Kayise Nombakuse is the Sub-Council manager. As part of accessing the area, CORC engaged Nqavashe and Nombakuse. Nqavashe served as the critical contact to the area and was instrumental in introducing the CORC engagement team to the leadership committee mentioned above. The leadership committee meets several times a month and discusses various issues related to the informal settlement pocket. After the August 2016 local elections, Nqavashe was replaced by Councillor Bongani Ngcombolo who was instrumental in rounding off the enumeration exercise in Barcelona.

02 Location and context of the settlement

The leadership committee comprises 15 leaders, who report back to various sections of the community. During qualitative discussions, members of the leadership indicated that there is a close working relationship with leadership structures of SANCO in the local vicinity. When including the SANCO representatives, the leadership committee comprises 30 members: 15 from the community, and 15 from SANCO. The leadership committee, which reports back to various sections, deals with internal conflict, decision-making and representation to City Council structures. The SANCO committee supports the leaders in terms of problems associated with crime, service delivery and public services, in partnership with government agencies.

Qualitative discussions with Barcelona's leaders and residents

Barcelona's current dwelling structures were superimposed on historical satellite images retrieved from Google Earth, which date back to 2001. When tracing the settlement growth from 2001, it is clear that Barcelona was not as densely populated as Europe. A few open spaces existed and the informal roads were well-established and respected by newcomers. By 2007, the density of dwellings increased as open spaces were filled in by new shacks. The period 2002-2007 was therefore characterised by intensive building. Between 2008 and 2012, the widths of Barcelona's informal roads become more narrow as residents extended their structures into the roads. This could have had implications for formalising roads and reticulating bulk services to clusters of dwelling structures. By 2013, about 25 shacks were constructed on a small piece of land to the west of the settlement. From 2013 to 2016, the settlement appears stable in terms of growth and new structures being built. The ecologically sensitive land remains a challenge in terms of increasing service levels in the settlement. At present, the settlement covers 25,6ha at a density of 110 households per hectare, which is significantly higher than the average city-wide density of 5.26 dwelling units per hectare.


March 2001


August 2002


January 2004


October 2006


February 2007


June 2009


November 2010


December 2011


November 2013


August 2014


December 2015


May 2016

3. METHODOLOGY

03 Methodology

3.1 STAKEHOLDER PARTICIPATION AND ENGAGEMENT

The first phase of the study involved stakeholder engagement and developing deep participation with regards to community structures.[4] This is summarised in figure 1: Figure 1:

4 A detailed stakeholder participation and engagement plan has been prepared by CORC and contains the finer details of this phase of the project.

Figure 1: SA SDI Alliance stakeholder participation & engagement strategy

03 Methodology

3.2 PRE-IMPLEMENTATION AND FIELD WORK

This next section describes the methodology utilised in the enumeration study.[5] The following diagram connects with the previous process at engagement level. The diagram outlines the process followed once actual implementation and field work began. It must be noted that the collection of data in the field was conducted utilising the CoCT Trimble devices. Along with these devices, GPS devices were utilised for mapping. The data from these devices were uploaded directly to the CoCT's database. It meant no post-enumeration data capturing was required and that the CoCT received updated enumeration data after each upload.

5 A detailed pre-implementation and fieldwork plan has been prepared by CORC and contains the finer details of this phase of the project.

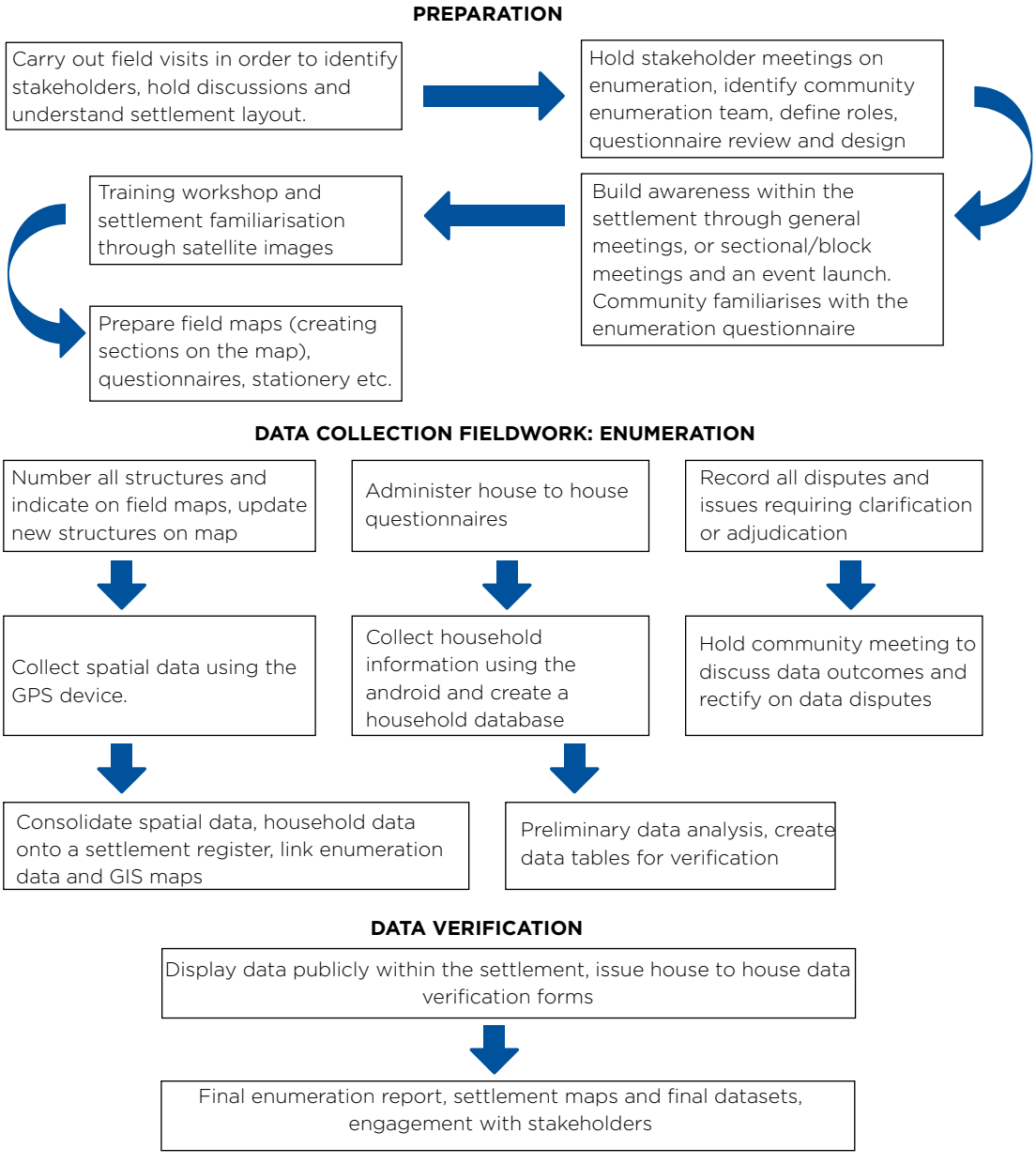


Figure 2: Pre-implementation and field work process flow chart

3.3 VALUE ADD TO THE PROJECT – EMPLOYMENT OPPORTUNITIES

COMMUNITY VOICES

"When I close and open my eyes, I want to see Barcelona beautiful and shining as if it is not Barcelona. It must look like Khayelitsha: I want to see houses, toilets and streets. We get sick by the pollution, so I don't want that in years to come. I don't have hope in upgrading this place."

A key approach by CORC and the SA SDI Alliance is that community members form the main teams for mapping, data collection, shack numbering and verification in their own settlements. This improves data accuracy and allows for wider coverage as a settlement's residents are more open to members of their own settlement. Teams were trained by skilled facilitators. In total, 109 employment opportunities of varying lengths (three to 50 days) were created in the settlement.

In order to accurately map Barcelona, all structures had to be numbered. A team of 12 residents carried out this critical process over eight days. Each numbered structure was linked to its digitised GIS data, which meant that all information collected per structure could be mapped spatially. The exercise was implemented over 35 days by a team of 25 residents who were employed by CORC and a further 80 residents employed by the CoCT through the Expanded Public Works Programme (EPWP) to handle the Trimble devices under the supervision of four CORC-employed supervisors. The verification exercise in Barcelona entailed displaying selected data at central points in the settlement over the course of six days to correct any errors. A team of 18 residents mapped the settlement.

Leaders inform residents which sections to enumerate

4. COVERAGE OF THE ENUMERATION AND RESPONSE RATES

04 **Coverage of the enumeration and response rates**

The following section details the coverage of the enumeration with respect to the estimated structure counts and population from the CoCT, compared to information that was collected in the settlement. The aim of this section is to highlight the extent of the enumeration, as well as deliver response rates on key variables. Together, this provides a descriptive picture of the enumeration as a representation of the settlement at this time. Response rates will also be reflected to provide a sense of how well, or how poorly, people responded to questions.

4.1 COVERAGE OF THE ENUMERATION

The enumeration exercise entailed the linking of data collected inside each structure to the structure's specific GPS coordinates on the ground. This means that different sets of information about the residents of each structure could be spatially mapped. Figure 3 highlights all structures that were enumerated in Barcelona.

Figure 3: Map of all structures in Barcelona, indicating the coverage of the enumeration

In total, 2606 structures were enumerated. This means that 92% of 2838 numbered structures were enumerated. The reasons that the remaining 232 structures were not enumerated include the unavailability of occupants and/or unwillingness of occupants to participate in the process. For the rest of this report, wherever structure-level data is presented, it will reference the 2606 structures identified above.

Data for each structure was collected through an interviewing process where enumerators tried to speak to the household head in order to ensure the best quality of information about the household could be collected. Figure 4 illustrates the percentage breakdown of respondents.

04 Coverage of the enumeration and response rates

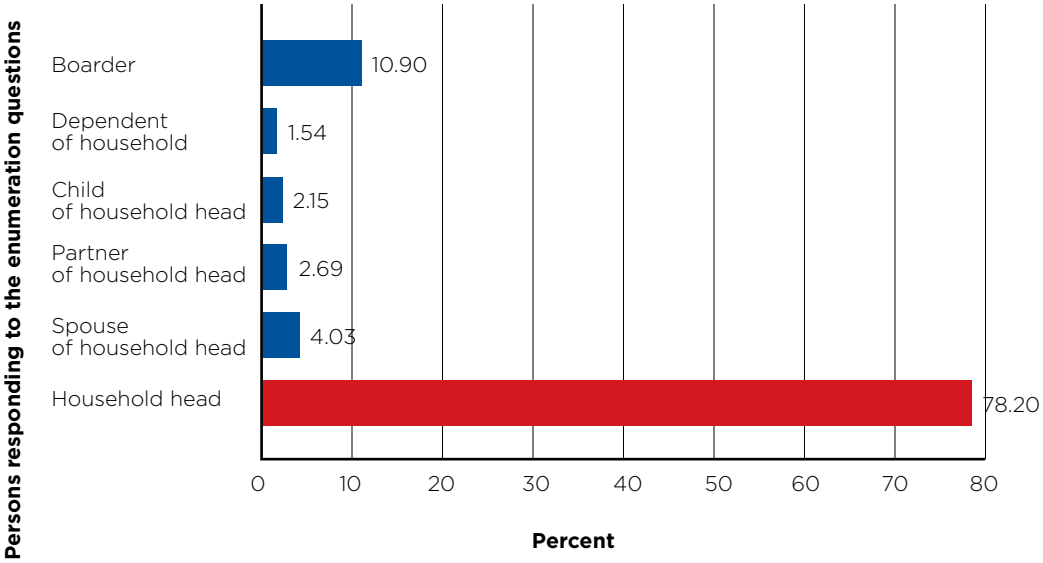


Figure 4: Percentage breakdown per respondent type for Barcelona informal settlement

The majority (78,2%) of respondents deemed themselves head of the household, as figure 4 above shows. Boarders (or tenants) accounted for 10,9% of respondents, followed by household spouses (4%) and partners of the household head (2,7%). Compared to other enumerations in the Airport Precinct project area, Barcelona ranks lower than other settlements in terms of the percentage of respondents identifying as the household head. As CORC prioritised conducting the enumeration during times when most residents were at home, the result presented here is still a good reflection of household-level dynamics. The high frequency of household heads as primary respondents to the enumeration means that the information supplied is likely to be accurate about conditions related to people living in a particular structure.

04 Coverage of the enumeration and response rates

Table 1 presents the settlement population based on respondents' accounts of how many people live inside each structure. This can be used to help estimate the population size of Barcelona based on per structure resident estimates.

People living in structure stated	Frequency count	Percent	Cumulative percent	People count
1	1011	39,37	39,37	1011
2	506	19,70	59,07	1012
3	399	15,54	74,61	1197
4	310	12,07	86,68	1240
5	197	7,67	94,35	985
6	92	3,58	97,94	552
7	28	1,09	99,03	196
8	18	0,70	99,73	144
9	4	0,16	99,88	36
10	2	0,08	99,96	20
11	1	0,04	100	11
Total	**2568**	**100**		**6404**

Table 1: Total population of Barcelona derived from stated number of people living inside each structure

Table 1 presents the settlement population based on number of people stated as residing in a structure. Based on the tabulation, the occupant count per structure varied from one person to a maximum of 11 people. Single-person households account for 39,4% of all households while 45% of households contain two to four people. By multiplying the number of occupants per structure by the frequency, the resultant "people count", or derived population count, is 6404 people living in Barcelona.

Structure numbering

04 Coverage of the enumeration and response rates

Table 2 is derived by counting the actual number of people enumerated per structure. This differs from table 1 and results in an actual population count for the settlement based on the enumeration results.

People enumerated	Frequency count	Percent	Cumulative percent	People count
1	1058	40,60	40,60	1058
2	499	19,15	59,75	998
3	390	14,97	74,71	1170
4	315	12,09	86,80	1260
5	191	7,33	94,13	955
6	93	3,57	97,70	558
7	36	1,38	99,08	252
8	15	0,58	99,65	120
9	6	0,23	99,88	54
10	2	0,08	99,96	20
11	1	0,04	100	11
Total	**2606**	**100**		**6456**

Table 2: Total population of Barcelona based on actual number of persons enumerated per structure

In table 2 the number of actual persons recorded in the enumeration is 6456. A small variance of 0.8% can be observed between the number of occupants per structure (6404) and the number of people recorded (6456). This variance can be attributed to respondents incorrectly indicating the number of occupants per structure. For the purposes of this analysis, the figures and population count reflected in table 2 will be used, which confirms the population of Barcelona to be 6456.

Each respondent was asked to indicate how many households live inside each structure. This was based on the definition of a household as a group of people who live in a structure, share one common area or eat from the same pot. This method allows for the recording of more than one household per structure. Household count is presented in table 3.

Households stated	Frequency count	Percent	Cumulative percent	Household count
1	2386	93,35	93,35	2386
2	113	4,42	97,77	226
3	37	1,45	99	111
4	20	0,78	100	80
Total	**2556**	**100**		**2723**

Table 3: Total households for Barcelona derived from stated number of households

04 Coverage of the enumeration and response rates

The enumeration data reveals that 2723 households live in 2556 dwellings. Dwellings with one household account for 93,4% of dwellings enumerated. More than one household live in 170 dwellings.

4.2 RESPONSE RATES

A vast majority of respondents during the enumeration were household heads. 78% of respondents defined themselves as household heads and a further 6,7% were closely associated with the household head (spouse or partner). Boarders accounted for 10,9% of respondents, which is relatively high compared to other settlements such as neighbouring Kanana. This suggests that the best possible data was collected at household level.

Questions about structure ownership, main reasons for moving to the settlement, main use of the structure, electricity supply, sanitation usage, access to water and health, and number of people and households recorded 98% response rates. Other questions that were not fully responded to, inlcuded:

- 78% responded to related to reasons why people have moved out of the settlement
- 95% responded to household income
- 98% responded to grants
- 98% responded to current educational enrolment
- 98% responded to marital status

Enumerating a structure used as a spaza shop

5. SUMMARY FINDINGS

This section presents a high-level summary of the findings of the enumeration study, and provides insight into the analysis to follow.

BARCELONA SUMMARY FINDINGS	
Age of settlement	Established in 1990 (27 years old)
Types of structures	Shacks built predominantly from zinc, wood and plastic
Total land occupied	25,6 hectares
Population density	110 dwelling units per hectare
Population	6456
Average household size	2,4
Total structures numbered	2838
Total structures enumerated	2606
Total males	2864
Total females	3577 (15 instances of gender not recorded)
Female household heads	43%
Total children under 18 years of age	2118
Number of toilets	117
Toilet to people ratio	1:55
Toilet to household ratio	1:23
Number of taps	56
Tap to people ratio	1:115
Tap to household ratio	1:49
Electricity coverage	62% prepaid meters, 31% connection to neighbours' meters, 7% no electricity
Unemployment rate	53% (expanded definition)
Main priorities	Housing sanitation access and waste collection
Disasters experienced by residents	Fires, flooding
South African residents	96%
Non-South African residents	2%

Residents refer to toilets in Barcelona as bucket system toilets. These are equivalent to what the City of Cape Town calls container toilets, which are installed by contractors and serviced three times a week. They are used in areas where there is no vehicle access and no scope to install waterborne infrastructure.

Ratios in this table can be read in terms of the national standard for households per toilet (5:1) and households per tap (25:1). National norms for adequate service levels must ensure the health and safety of household users and include: access to a standpipe that supplies 25 liters of potable water per person per day within 200m of a dwelling; VIP or equivalent toilets in rural or low density urban areas; waterborne or equivalent sanitation in dense urban areas; and either pre-paid or metered systems in terms of electricity.[6]

6 COGTA 2005.

6. ANALYSIS

06 Analysis

In this section, a more detailed analysis of the enumeration data for Barcelona informal settlement pocket is presented. The focus of this section is on data collected at the individual level, priorities and migration. Data on access to various basic services and ranking of priorities is also presented. Finally, the last part of this section presents data on demographics of the population and potential implications for human settlements.

6.1 STRUCTURE ANALYSIS

The study sought to determine structure ownership levels within the settlement. Each respondent was asked to indicate whether they owned the structure, paid rent or lived in it rent-free.

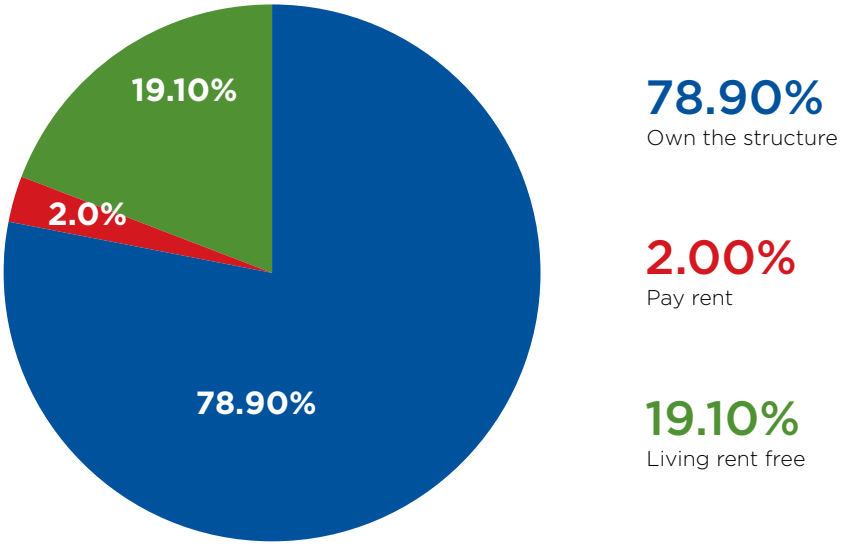


Figure 5: Percentage breakdown of structure ownership

Figure 5 illustrates that the majority of respondents (78,9%) reported that current occupants own their structures, that 2% paid rent and that 19,1% reported to live rent-free. A large proportion of Barcelona's residents (21,1% or 548 households) are therefore subordinate to a lessor, which may translate into precarious security of occupation. A similar trend was noticed in Kanana informal settlement. An alternative explanation could be that those living rent-free are dependents or members of the household head's family. Figure 10, presented later, indicates a young population. The high prevalence of residents living rent-free may indicate youth leaving their parents' homes and potentially living in a second dwelling that is owned by their parents.

06 Analysis

Figure 6 maps the location of people who claimed to own the structure, pay rent or live rent free. Where shelters were not enumerated they are marked as not having any data.

Figure 6: Map breakdown of structure ownership

To better understand the living arrangements for residents, respondents were asked to identify the number of rooms in the structure. Table 4 provides an overview of rooms per structure.

Number of rooms	Frequency count	Percent	Cumulative percent
1	732	32,71	32,71
2	667	29,80	62,51
3	467	20,87	83,38
4	293	13,09	96,47
5	79	3,53	100,00
Total	**2238**	**100**	

Table 4: Number of rooms per structure

A high variability in the composition of living spaces in shacks was reported. Table 4 above reveals that a third of Barcelona's dwellings have one room and that 50% reported to have two (29,8%) or three (20,9%) rooms. As Barcelona has a very young population, the intensification of building new structures between 2002 and 2009 could indicate that these are possibly one-room dwellings. It has been established that the remaining open spaces were occupied between 2008 and 2012. These open spaces were often located on environmentally sensitive land, such as wetlands. As the quality of space for children to play is impeded, they tend to frequent streets and informal footpaths.

06 Analysis

Based on the enumeration results, Table 5 provides a deeper insight into the total number of people living inside each structure in the settlement. It also provides the frequency count per incidence of structure population size.

People enumerated	Frequency count	Percent	Cumulative percent
1	1058	40,60	40,60
2	499	19,15	59,75
3	390	14,97	74,71
4	315	12,09	86,80
5	191	7,33	94,13
6	93	3,57	97,70
7	36	1,38	99,08
8	15	0,58	99,65
9	6	0,23	99,88
10	2	0,08	99,96
11	1	0,04	100
Total	**2606**	**100**	

Table 5: Number of people per structure

Impression of structures in Barcelona

06 Analysis

Figure 7: Map of number of people per structure

A correlation exists between single-person households (at 40,6%) shown in table 5, and one-room dwellings (at 32%) in table 4. Single-person households in one-room dwellings could indicate the growth of the settlement over the last decade. Figure 8 and table 6 also confirm that a high proportion of residents live in shacks smaller than 15 square metres. Based on the GIS map in figure 7 above, it is clear that single-person household dwellings are concentrated along informal footpaths across Barcelona. A triangulation of the analysis above, and the analysis of the open spaces occupied by 2007 (see section 2), indicates that single-person households most likely occupy these open spaces.

The competition for land in a dense, informal settlement means that single-person households often end up living in smaller one-room structures. When taking these statistics into account the implications for settlement upgrading and eventual housing provision are significant. The high frequency of small one-room dwellings occupied by single-person households in a high-density settlement requires innovative tenure arrangements and housing typologies.

The floor areas of the dwellings were calculated from GIS data following the mapping of dwellings from an aerial photograph. This is the most accurate data available in the study, but could be an overestimation of actual floor size because the overhangs of the roofs could be larger than the floor area. In order to better understand the average available floorspace per household, the net floor areas were added together and divided by the population. Table 6a below presents this data.

06 Analysis

Floor area of structure categorised	Frequency count	Percent	Cumulative percent
2sqm or less	2	0,08	0,08
2.01 - 5sqm	4	0,16	0,23
5.01 - 10sqm	82	3,21	3,44
10.01 - 15sqm	372	14,54	17,98
15.01 - 20sqm	298	11,65	29,63
20.01 - 25sqm	288	11,26	40,89
25.01 - 30sqm	250	9,77	50,66
30.01 - 35sqm	214	8,37	59,03
35.01 - 40sqm	205	8,01	67,04
40.01 - 50sqm	283	11,06	78,11
50.01 - 60sqm	220	8,60	86,71
greater than 60sqm	340	13,29	100
Total	**2558**	**100**	

Table 6a: Square metres of floor space categorised

In Barcelona, 51% of all residents live in structures smaller than 30sqm. Another 27% of households enjoy shelters of 35 to 60sqm. This data however does not take into account the number of occupants per structure, which can be a measure of overcrowding. In Figure 6, total floorspace per dwelling was divided by the number of occupants to arrive at a floorspace per person ratio.

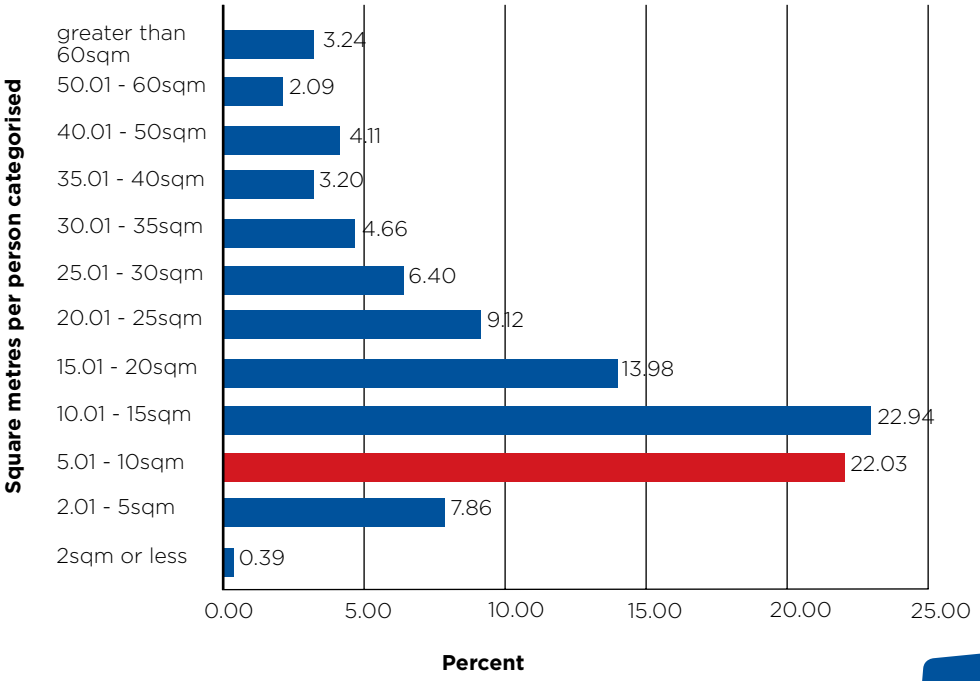


Figure 8: Percentage breakdown for square metres per person of floor area provided by a structure, categorised

06 Analysis

This analysis indicates that 53% of residents have access to less that 15sqm floorspace, and 22% of residents have access to 5 to 10sqm floorspace. Table 6b excludes structures with only one occupant to better reflect square metres per person in structures with multiple occupants.

Square metres of floor space per person categorised	Frequency count	Percent	Cumulative percent
2sqm or less	9	0,58	0,58
2.01 - 5sqm	195	12,49	13,07
5.01 - 10sqm	514	32,93	46,00
10.01 - 15sqm	375	24,02	70,02
15.01 - 20sqm	210	13,45	83,47
20.01 - 25sqm	108	6,92	90,39
25.01 - 30sqm	66	4,23	94,62
30.01 - 35sqm	32	2,05	96,67
35.01 - 40sqm	16	1,02	97,69
40.01 - 50sqm	23	1,47	99,17
50.01 - 60sqm	5	0,32	99,49
greater than 60sqm	8	0,51	100
Total	**1561**	**100**	

Table 6b: Square metres of floor space categorised available per person, excluding structures with one occupant

When the 1058 single-person household dwellings are removed from table 6a, 70% of the remaining 1561 residents have access to less than 15sqm. Hence, when the total floorspace of a dwelling is divided by the number of occupants, more than half of all residents excluding single person households have about 5 to 15 sqm to themselves. Moreover, 32.9% of residents have access to 5-10 sqm floor space. This suggests that most households – not only single-person households – have access to minimal required floor space.

06 Analysis

Respondents were asked about the main use of their structure. Where they indicated uses other than residential, this was recorded in the database but is not reflected in this analysis. Table 7 provides the breakdown of structure use.

Table 7: Main use of structures

Structure main use	Frequency count	Percent
Residential only	2404	92,78
Residential and Other	187	7,22
Total	**2591**	**100**

The majority of respondents (92,8%) in the enumeration indicated that their dwellings were used for residential purposes only. Secondary uses ranged from spaza shops, places of worship, crèches and shebeens to hairdressers.

Residents were also asked to indicate the age of dwellings, which was transposed in GIS maps. This is reflected in figure 9 below.

Figure 9: Map indicating age of structures categorised

Figure 9 indicates a high proportion of dwellings between 16 to 20 years old (26%). The oldest recorded structures are believed to be older than 30 years. This reveals that people have been residing in Barcelona as early as 1986 even though residents reported that the settlement was founded in 1990. Structures in Barcelona are made from various materials such as wood, plastic and zinc sheets. They are not in a good condition and display the effects of exposure to adverse weather, flooding and, in some cases, fire.

06 Analysis

6.2 DEMOGRAPHICS OF BARCELONA POPULATION

COMMUNITY VOICES

"When we came here, we destroyed the trees that were here and we built our shacks. As time went by, [more] people came and there were a lot of people. So we decided to split ourselves into two groups, which are Barcelona and Europe."

6.2.1 Age distribution

The enumeration data confirms that 62% of Barcelona's residents are younger than 30 years old. Figure 10 presents the split of age groups in the settlement.

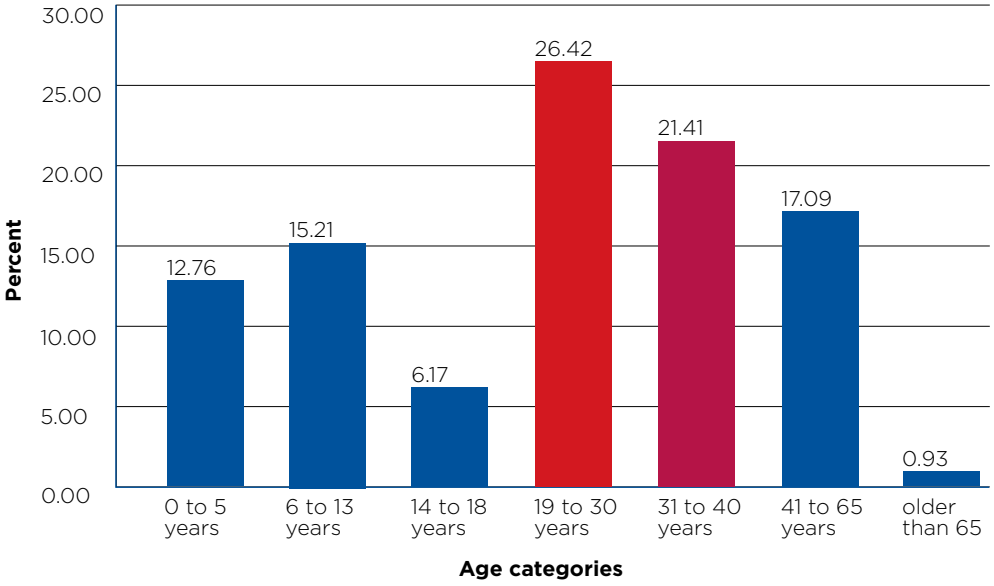


Figure 10: Age distribution of Barcelona population

The most prominent age group is made up of 19 to 30 year olds at 26,4%, followed closely by 31 to 40 year olds at 21,4%. There is also a significant grouping of children as 28% are aged between zero and 13 years old. Due to the significant number of single person households, it was necessary to examine the age distribution of this population. Table 8 below provides the age distribution of single person households categorised.

06 Analysis

Walking from the N2 highway back to Barcelona

Age Categories	Frequency count	Percent	Cumulative percent
6 to 13 years	4	0,39	0,39
14 to 18 years	13	1,27	1,66
19 to 25 years	217	21,23	22,90
26 to 30 years	246	24,07	46,97
31 to 35 years	170	16,63	63,60
36 to 40 years	123	12,04	75,64
41 to 50 years	138	13,50	89,14
51 to 60 years	82	8,02	97,16
61 to 65 years	10	0,98	98,14
older than 65 years	19	1,86	100
Total	**1022**	**100**	

Table 8: Age distribution of single person households

In table 8, the age split of single-person households is presented. The data indicates that 63% of single-person households are younger than 35 years old, 24% are aged between 26 and 30 and 21,2% are aged between 19 and 25. When considering the prevalence of young households, the next section offers more insight into the configuration of these households.

6.2.1.1 A profile of youth

Since 60% of residents are younger than 30 years old, it is necessary to examine youth in the settlement in more detail. Table 9 reflects self-assessed employment status of respondents aged 19 to 30 years old.

	Gender		
Employment status	Male	Female	Total
Employed	364	236	600
Self-employed	40	27	67
Unemployed	351	648	999
Total	**755**	**911**	**1666**

Table 9: Employment status by gender for Barcelona residents aged 19 to 30 years

Table 9 indicates that 59% of working youth aged 19 to 30 years old (who make up 26% of the settlement population), are unemployed. Women, in particular, earn low incomes, as 65% of unemployed youth are female. Only 4% of youth are reportedly self-employed. This is further examined in table 10, which reflects the income distribution of youth aged 19 to 30 years old.

Income categories	Frequency count	Percent	Cumulative percent
No income	412	39,31	39,31
R1 - R400	44	4,20	43,51
R401 - R800	74	7,06	50,57
R801 - R1500	205	19,56	70,13
R1501 - R3500	265	25,29	95,42
R3501 - R7500	46	4,39	99,81
R7501 - R15 000	2	0,19	100
Total	**1048**	**100**	

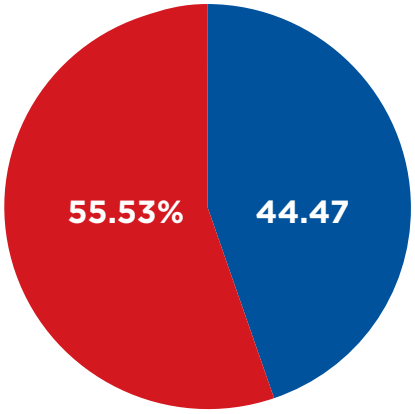
Table 10: Income distribution for age cohort 19 to 30-years-old

Table 10 shows that more than 70% of the working youth (aged 19 to 30) earn less than R1500 per month. Almost 25% of the working youth earn between R1501 and R3500 per month while 39% of youth earn no income. The correlation between a young population, high unemployment and precarious livelihoods creates conditions of vulnerability, especially for women. With only 4% of youth self-employed, this could be a focus for economic development strategies.

06 Analysis

6.2.2. Gender breakdown

The enumeration covered a broad spectrum of demographic data. Figure 11 provides the gender breakdown of the settlement's population.



55.53%
Female

44.47%
Male

Figure 11: Gender breakdown

Figure 11 illustrates that in Barcelona, 56 out of every 100 people are women, This is slightly higher than the national average of 52 women per every 100 people (StatsSA, Census 2011).

Table 11 provides important insight into the demographics associated with the settlement trend of small one-room shacks, which was established in the preceding section. In this table, gender split of the household size for all structures enumerated (2606 structures) is presented.

Number of people enumerated per structure	Gender		
	Male (%)	Female (%)	Total
1	45,12	26,86	37,25
2	17,91	20,92	19,26
3	11,74	20,92	15,66
4	11,67	13,74	12,52
5	7,73	8,87	8,27
6	3,32	4,96	4,02
7	1,42	2,13	1,72
8	0,75	0,62	0,69
9	0,2	0,44	0,31
10	0,07	0,18	0,11
11	0,07	0,35	0,19
Total	**100**	**100**	**100**
	n=2612		

Table 11: Number of people enumerated per structure by gender of household heads (column percentages)

Single-person households are predominantly male, while females make up the majority of two and three-person households.

06 Analysis

In table 9, the employment status of people between 19 and 30 was presented. Table 12 takes a wider look at settlement dynamics related to employment.

Employment status 16 years and older	Gender		
	Male	Female	Total
Employed	58,89	41,11	100
Self-employed	58,8	41,2	100
Unemployed	35,34	64,66	100
Total	**46,2**	**53,8**	**100**
n=4398			

Table 12: Employment status by gender for respondents 16 years & older (row percentages)

Table 12 above indicates that in Barcelona women are the least economically active, with a prevalence of unemployment at 64,7%. Of the respondents who identified themselves as employed, 59% were male while 41% were female.

6.2.3 Education enrolment and school attendance

In keeping with the young age profile of Barcelona residents, it is not surprising that the majority of children are currently enrolled in primary school. Table 13 provides a cross tabulation of school going age by enrolment.

Age categorised	Pre-school	Primary school	Secondary school	College	University	Not in any school	Don't know	Total
Zero to five years	364	22	0	0	0	423	1	0
Six to 13 years	50	876	26	0	0	24	1	810
14 to 18 years	3	72	277	8	2	35	0	977
Total	**417**	**970**	**303**	**8**	**2**	**482**	**2**	**2184**

Table 13: Age categorised by school enrolment for individuals aged 0 to 18-years-old

Table 13 revelas that 44% of children attend primary school while 19% attend pre-school. College and university attendance is low and 2,7% of potential school-goers (6 – 18 year olds) do not attend school.

06 Analysis

COMMUNITY VOICES

"The young children go to school from Grade 1 to Grade 12. Some of them are using transport and others are walking. My child is doing Grade 6, but they don't teach her at school. They don't get good quality education because they bring homework to us as parents. But we are sending them to school for better education and we are paying school fees. I was called by the teacher that my child must go to Claremont because he is clever. I told the teacher that I don't have money for those schools."

View of a crèche in Barcelona

6.2.4 Employment

In Barcelona, 4331 individuals would be classified as working age (19 to 64 years old) and 46,8% of residents are either employed or self-employed. Unemployment in Barcelona is double the national figure of 26.7%. Table 14 provides a cross tabulation of age by self-assessed employment status to better understand unemployment trends within different age cohorts.

Table 9 established that youth unemployment of people aged 19 to 30 years old is 62%. Table 14 above also indicates that youth (19 to 25 years old) comprise the age group with the highest unemployment (650 of 4331, or 15%). However, 31 to 35 years olds are the most economically active, followed by 41 to 50 year olds.

Age categories	Employed	Self-employed	Un-employed	Total
14 to 18 years	1	0	227	228
Row %	0,44	0	99,56	100
19 to 25 years	232	28	650	910
Row %	25,49	3,08	71,43	100
26 to 30 years	369	40	350	759
Row %	48,62	5,27	46,11	100
31 to 35 years	375	35	310	720
Row %	52,08	4,86	43,06	100
36 to 40 years	320	39	274	633
Row %	50,55	6,16	43,29	100
41 to 50 years	374	61	288	723
Row %	51,73	8,44	39,83	100
51 to 60 years	122	26	156	304
Row %	40,13	8,55	51,32	100
61 to 65 years	5	2	47	54
Row %	9,26	4	87,04	100
Total	1798	231	2302	4331
Row %	41,51	5,33	53,15	100

Table 14: Age by employment status (row frequencies & percentages)

06 Analysis

Table 12 above provided a cross tabulation of employment status by gender by looking at row percentages, thus allowing for comparison between different employment statuses. Table 15 provides the same cross tabulation but with column percentages, which enables comparison between genders.

Employment status 16 years and older	Gender		
	Male	Female	Total
Employed§	52,91	31,71	41,48
Self-employed	6,76	4,08	5,32
Unemployed	40,33	64,2	53,16
Total	**100**	**100**	**100**
n = 4323			

Table 15: Employment status by gender for respondents 16 years & older (Column percentages)

Table 15 indicates that the majority of Barcelona's residents are unemployed (53%). Women are particularly affected by low incomes and account for 64% of the unemployed category. It was established that youth unemployment (aged 19 to 30 years old) stands at 62% and that there is only a small cohort of secondary and tertiary school-goers. All residents who indicated that they worked were asked to provide their area of work as well as the main transport type used to get to work. Figure 12 provides the percentage split for different modes of transport used to travel to work.

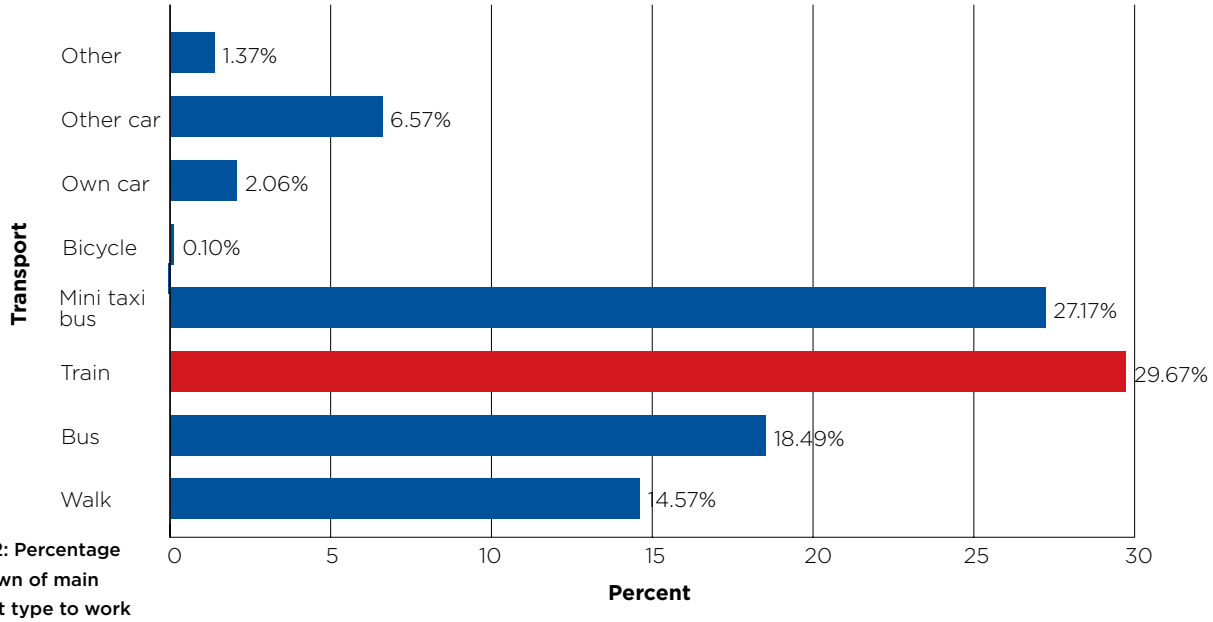


Figure 12: Percentage breakdown of main transport type to work

Figure 12 indicates that most commuters travel by train, followed by mini-bus taxi, bus or walking. Barcelona's residents work or look for employment in the industrial areas surrounding Airport Industria and Epping. Residents indicated that working within a 5-10km radius was a positive aspect of living in Barcelona.

06 Analysis

All residents who indicated that they worked were also asked to estimate the travel time to their place of employment. Table 16 provides a breakdown of this estimation.

Travel time to work	Frequency count	Percent	Cumulative percent
Work from home	7	0,34	0,34
Less than 15 minutes	240	11,78	12,13
15 to 29 minutes (just under half an hour)	796	39,08	51,20
30 to 59 minutes (just under an hour)	727	35,69	86,89
60 to 89 minutes (just under an hour-and-a-half)	176	8,64	95,53
90 minutes and more	77	3,78	99,31
Don't know	14	0,69	100
Total	**2037**	**100**	

Table 16: Travel time to work

A large proportion of commuters (39%) travel between 15 and 30 minutes while 35% travel between 30 minutes and an hour. The proportion of people who walk or cycle to work is 14,6% and 6,6% respectively.

Walking back from the N2 highway after work, towards Barcelona

06 Analysis

6.2.5 Household income and expenditure

Questions about household income were aimed primarily at the household head. In cases where the household head was not the primary respondent, persons close to the day-to-day activities, such as a spouse or partner, accounted for the questions related to income and expenditure. Boarders made up roughly 10% of the total respondents. Questions related to social security grants were directed at all household members. The response rate to these questions was 98%, thereby providing a good indication of income and expenditure trends throughout the settlement.

Household income	Frequency count	Percent	Cumulative percent
No income	655	25,34	25,34
R1 - R400	111	4,29	29,63
R401 - R800	208	8,05	37,68
R801 - R1500	687	26,58	64,26
R1501 - R3500	762	29,48	93,73
R3501 - R7500	151	5,84	99,57
R7501 - R15 000	11	0,43	100,00
Total	**2585**	**100**	

Table 17: Income distribution

Table 17 above provides information about the income levels of the settlemen and includes 2585 tabulated responses. The majority of respondents (64%) reported that they earn less than R1500 per month while 25% reported having no income. There is a dependency on government grants, which is presented below in figure 13.

Table 18 was produced using data on various expense categories for each household. This was then tallied up to produce a total household expenditure amount that was then categorised in the same way income categories were categorised in table 17.

Spaza shop in Barcelona

06 Analysis

Expenses categorised	Frequency count	Percent	Cumulative percent
No expenses	474	18,15	18,15
R1 - R400	151	5,78	23,93
R401 - R800	497	19,03	42,96
R801 - R1500	810	31,01	73,97
R1501 - R3500	612	23,43	97,40
R3501 - R7500	63	2,41	99,81
Greater than R7500	5	0,19	100
Total	**2612**	**100**	

Table 18: Monthly expenses distribution

Table 18 presents household finance, focusing on expenditure. The majority of respondents (73%) reported spending up to R1500 per month. There is a connection with the previous data set and it is likely that Barcelona's residents break even every month, with no money left for savings. The 474 households that reported having no expenses may indicate that they could be dependent on other households for basic goods. A proportion of tenants also lives rent-free (19%).

Each resident inside a strucutre was asked to provide informaiton about different grants that they might access. Figure 13 provides the distribution of grant types amongst all structure occupants.

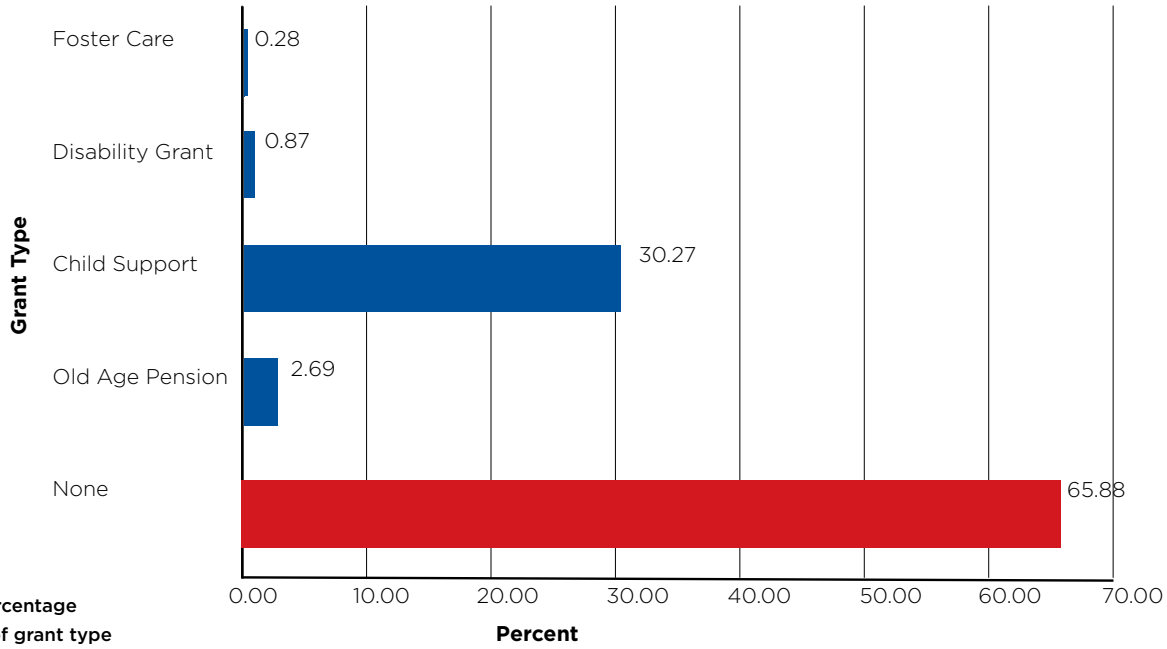


Figure 13: Percentage distribution of grant type

Figure 13 shows that a high proportion of residents receive a child support grant from government. Those receiving the child support grant numbered 1945 people, or 30% of respondents. There are 1804 children (28% of the population) younger than 13 years old. The current monthly value of the child support grant is R350, the foster child grant is R890 per month, the disability grant is up to R1500 per month and the old age pension is R1500 per month. According to the enumeration, there are only 173 pensioners (2,7% of population) who receive an old age grant and 56 residents, or 0,87%, who receive a disability grant.

06 Analysis

6.3 ACCESS TO SERVICES

This section will unpack in greater detail information related to various types of amenities in Barcelona.

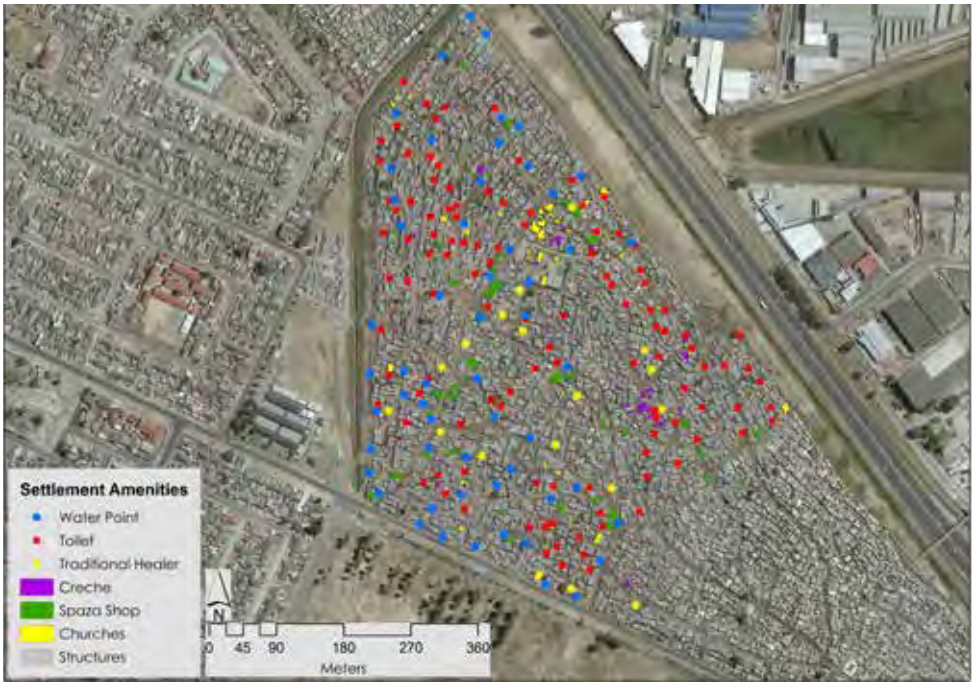


Figure 14: Barcelona amenities

Impression of water services in Barcelona

06 Analysis

6.3.1 Water access

Figure 15 depicts a 25-metre radius around each water point. This reveals which households are located within 25 metres of water.

Figure 15: Map of Barcelona water points with 25m radius

COMMUNITY VOICES

"We don't have [many] taps or canals. We only have two taps, but in Kanana there are a lot of taps. The taps that we have, don't have water. Even the one here in the hall does not have water."

The above comment indicates that access to water is a major concern in Barcelona. In total 56 taps were mapped. The mapping indicates that 49 households share a tap. The City of Cape Town has a standard of one tap for 25 households and therefore Barcelona is underserviced in terms of access to clean water. Either people need to travel far to access water, or they have problems with the quality of water service close to where they live. The distribution of services indicates that the south-eastern part of the settlement is underserviced and should be prioritised.

6.3.2 Sanitation

COMMUNITY VOICES

"We really have problems with the buckets [toilets]. I have a 10-year-old daughter and she is no longer using those buckets. She has an infection because of sharing the toilets with lots of people. Before I came here to the hall, I saw a child playing with a bucket. She was opening the lid of the bucket. She does not know it is wrong, so I called her mother and we washed the child."

In Barcelona, 117 toilets were mapped during the enumeration, which translates to 23 households sharing a toilet. This is lower than the city-wide standard of one toilet for five households, and also much lower than service standards in neighbouring Kanana, where the ratio is 1:8, according to CORC's enumeration. The majority of respondents (95%) said that their primary toilets were chemical or temporary toilets. During qualitative discussion, residents expressed concern about the delays with regard to service providers cleaning and servicing the toilets. The typology of the land and soil conditions makes it difficult to provide permanent services to all households. It remains a challenge for long-term settlement upgrading.

Impression of sanitation facilities in Barcelona

06 Analysis

Table 19 below provides insight into the usage of toilet facilities

Access to toilets	Frequency count	Percent	Cumulative percent
Communal use	1098	42,18	42,18
Household use only	740	28,43	70,61
Limited to a few families	765	29,39	100
Total	**2603**	**100**	

Table 19: Percentage distribution of sanitation access

While the majority of residents (28%) share toilets, there is a high proportion of households (29%) that have secured exclusive use to toilets. Exclusive toilet use could result in positive and negative outcomes. On the positive side, households who retain control over the use of toilets can maintain them better, while a negative outcome could result in conditions where some households are denied access to decent sanitation. This can cause considerable conflict.

The location of toilets is presented in figure 16, with the same 25m radius circles displayed. It indicates that Barcelona residents have superior access to sanitation than they have to water. There are a few areas poorly covered in the centre and the north of the settlement.

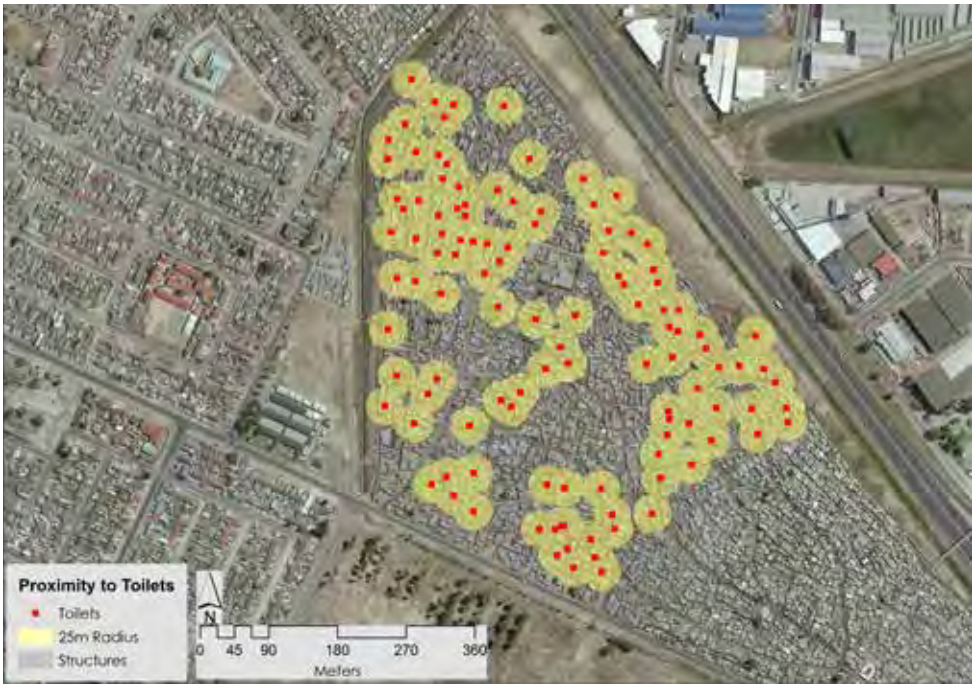


Figure 16: Map showing sanitation access with 25m radius

6.3.3 Electricity

COMMUNITY VOICES

"Electricity gives us a lot of problems because the electricity poles explode and our houses get burnt. I don't take off my clothes when I am sleeping because there is always a fire at night because of this electricity.The people connect from the neighbours to get light and so the electricity becomes weak, because there are lot of people who are connected [to one source]."

Figure 17 provides a split of access to energy.

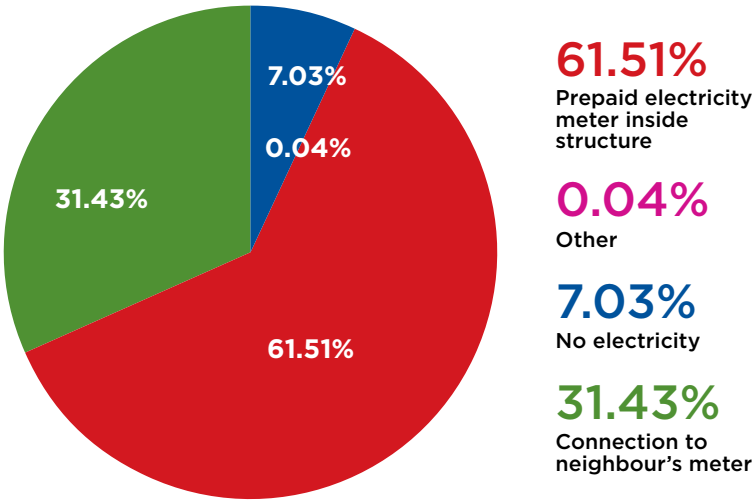


Figure 17: Percentage breakdown of electricity access

The electricity grid has been extended deep into Barcelona, as the spatial analysis in figure 18 illustrates. Some central areas reported having no access to electricity, while the proportion of those with electricity boxes and those with connections are mixed. While 61,5% of structures have access to prepaid meters, illegal connections are common and account for 31% of dwellings. The remaining 7% of structures do not have access to electricity.

06 Analysis

Figure 18: Map showing electricity access in Barcelona

Impression of electricity connections in Barcelona

6.3.4 Community services and local business

COMMUNITY VOICES

"There is a difference between weekends and weekdays because on the weekend, there are people who patrol here at night and the police are helping with patrolling the neighbourhood. The people don't get paid, but other communities are getting paid when they patrol."

COMMUNITY VOICES

"Most of us are working. Although we earn very little wages, we are working. The small business we have here are spaza shops and the big ones are the shebeens, people that are selling alcohol and the Somalian [shop owners]."

06 Analysis

The residents' comments reflect a diversity of activities in the local economy of Barcelona informal settlement pocket. Crime is a deterrent for those who wish to start small businesses, as the safety of goods and staff cannot always be assured. In figure 14 presented earlier, clear patterns of economic activity can be observed. Shops tend to be on major informal footpaths/roads, and are adequately distributed across the settlement. In the centre, there is a cluster of places of worship. Crèches are concentrated in the east of the settlement.

Small business / tuck shop in Barcelona

Shoe repair, small business in Barcelona

06 Analysis

Table 20 below reflects the distribution of services inside or near Barcelona.

Type of service accessed	Number of structures accessing	Percentage of structures
Structures with occupants accessing community halls	2163	83,00
Structures with occupants accessing creche	894	34,31
Structures with occupants accessing spaza shops	2279	87,45
Structures with occupants accessing shebeens	1682	64,54
Structures with occupants accessing sport grounds	103	3,95
Structures with occupants accessing playgrounds	140	5,37
Structures with occupants accessing religious structures	1367	52,46
Structures with occupants accessing health facilities	493	18,92

Table 20: Accessing community facilities inside or within walking distance to settlement

Table 20 above shows that access to sports and playgrounds is limited.Many respondents also said that they are not within walking distance of a church or a crèche. Most responded to be within walking distance of a community hall as well as spaza shops, which are well distributed across the settlement.

A church in Barcelona

06 Analysis

View into a spaza shop

Crèche and after care centre in Barcelona

6.4 HEALTH AND DISASTERS

COMMUNITY VOICES

"There was a flood that destroyed people's houses and it happens many times. Disaster management came to provide us with some things like blankets and food. We experience fire and it destroys everything. The fire brigade comes late when the damage is more."

06 Analysis

Impression of flooding in Barcelona

Most dense informal settlements in Cape Town like Barcelona are at risk of fire. There appears to be a need for proactive and preventative measures to be combined with the responsiveness of emergency services.

COMMUNITY VOICES

"We get sick every day and the ambulance comes late. They don't come inside [the settlement] because there are no roads. They don't care about people that are living in an informal settlement."

As indicated in table 21 below, the majority of residents (77%) access health services outside the settlement. A further 19% access a public hospital. Many informal settlements also experience a lack of access and ability to permeate the settlement along primary roads. As mentioned, an informal road structure emerged between 2001 and 2007, but single-person households tend to encroach on these areas which makes access difficult.

Accessing medical services	Frequency count	Percent	Cumulative percent
Clinic in settlement	55	2,12	2,12
Clinic outside settlement	2010	77,49	79,61
Mobile clinic	6	0,23	79,84
Public hospital	499	19,24	99,07
Private doctor	18	0,69	99,77
Sangoma	6	0,23	100,00
Total	**2594**	**100**	

Table 21: First port of call for medical assistance

06 Analysis

6.5 SETTLEMENT DYNAMICS

Figure 19 provides an overview of the number of years lived in the settlement. This question was posed to the occupant of every structure.

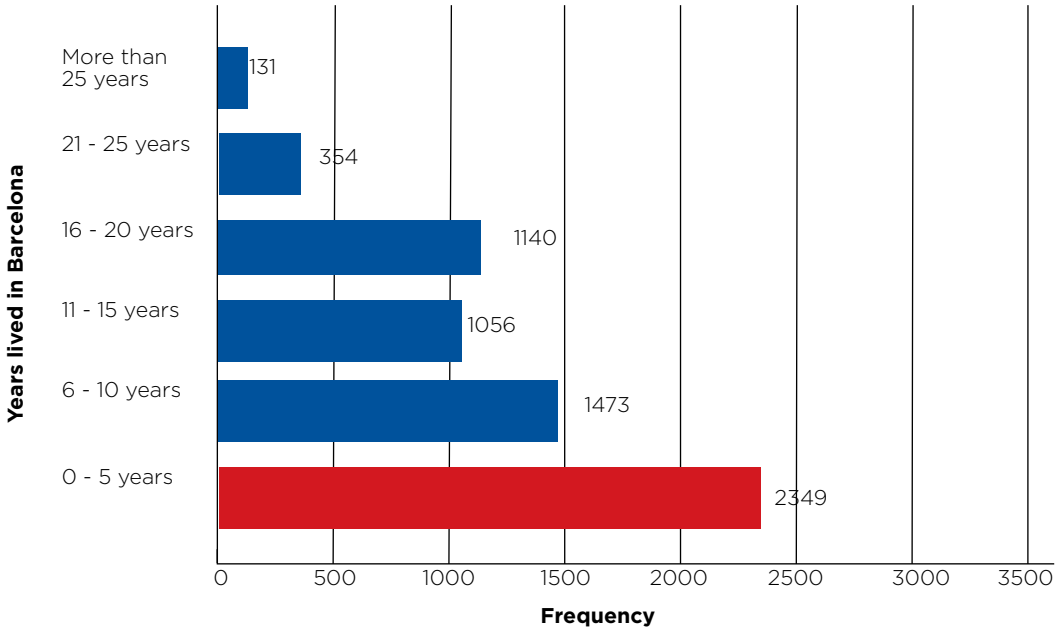


Figure 19: Number of years lived in Barcelona categorised

When analysing the number of years that households have lived in Barcelona the following emerges: young people are moving away from their parents' dwellings into small, one-roomed structures. The majority of residents indicated that they have lived in their shelters for less than five years. After Gugulethu backyarders occupied the land in 1990, their children grew up and erected new dwellings in the remaining spaces in Barcelona, at times even encroaching on road widths. A large cohort reported to have lived in the settlement for 16 to 20 years.

Young people mapping services in Barcelona

6.6 SETTLEMENT PRIORITIES

Respondents in Barcelona were asked to identify their current main priorities in relation to the settlement. They were asked to rank these priorities in order of importance to determine which factors needed to be addressed urgently as well as highlight the issues that residents value. Table 22 provides an overview of Barcelona's priorities as ranked by structure-level respondents.

Household main priorities	1	2	3	4	5	Total
Waste collection	39,00	13,98	22,05	9,20	15,78	100
Access to toilets	19,35	46,48	17,73	9,24	7,21	100
Access to formal housing	41,08	19,91	26,39	7,65	4,97	100
Access to water	9,66	16,12	27,16	39,06	8,00	100
Access to health care	5,92	9,88	13,27	30,84	40,09	100
Addressing crime	9,36	10,53	16,61	24,56	38,95	100
Access to electricity	6,23	12,24	15,24	24,81	41,49	100
Addressing flooding	4,04	12,93	13,74	25,45	43,84	100
Preventing shack fires	8,58	8,77	17,35	28,54	36,75	100
Addressing evictions	31,71	12,20	18,70	17,07	20,33	100
Total	20,47	20,12	20,24	19,56	19,62	100

Table 22: Main household priorities by ranking (row percentages)

Access to formal housing was ranked at number one 41% of the time, trailed closely by waste collection at 39% of the time. Access to improved sanitation also features highly. As established the current sanitation ratio is 23 households per toilet, which is significantly lower than the City's ideal standard of 1:5. Concerns relate to the frequency at which temporary and chemical toilets are maintained by the service provider.

Access to water featured as the third-highest priority 27% of the time. This is not surpirising when taking into account that the current water service ratio is 49 households per tap. Although crime and health care only feature as fourth and fifth priorities, they do feature consistently and are issues that need to be addressed. Concerns about evictions are also prominent.

Accessing water in Barcelona

06 Analysis

As part of the study design, questions were developed to determine under which conditions people would be willing to leave Barcelona. Respondents were asked to rank their main reasons. Table 23 indicates why residents would consider moving The ranking system employed ranged from 1 to 5 with 1 seen as the most important reason. Table 23 provides the main reasons to move out of the settlement against the ranking scored by respondents and table 24 indicates the row percentages of the same data.

Rank reasons to move out of the settlement	1	2	3	4	5	Total
To access work opportunities	1019	428	339	296	306	2388
To access better education facilities	174	771	629	394	266	2234
To access better health facilities	180	712	929	433	136	2390
To access a formal house	987	375	318	597	123	2400
Improved transport access	111	175	226	493	930	1935
Family or relationship reasons	80	56	89	165	468	858
Total	2551	2517	2530	2378	2229	12205

Table 23: Reasons to move out of settlement by ranking order

Table 23 provides the main reasons to move out of the settlement against the ranking scored by respondents. Access to work opportunities was ranked as the number one reason to move out of Barcelona at 1019 times out of a possible 2551. The next highest count was 987 respondents who ranked access to a formal house as the second most important reason.

Rank reasons to move out of the settlement	1	2	3	4	5	Total
To access work opportunities	42,67	17,92	14,20	12,40	12,81	100
To access better education facilities	7,79	34,51	28,16	17,64	11,91	100
To access better health facilities	7,53	29,79	38,87	18,12	5,69	100
To access a formal house	41,13	15,63	13,25	24,88	5,13	100
Improved transport access	5,74	9,04	11,68	25,48	48,06	100
Family or relationship reasons	9,32	6,53	10,37	19,23	54,55	100
Total	20,90	20,62	20,73	19,48	18,26	100

Table 24: Reasons to move out of settlement by ranking (row percentages)

Settlement upgrading and economic development are therefore the two most important issues that need to be addressed in the medium to long term, with improved access to services being top short-term priorities.

6.7 IMPLICATIONS OF FINDINGS FOR HUMAN SETTLEMENTS

A key objective for this enumeration study was to gather data that could affect the future planning of human settlements in the area. Respondents were asked several questions related to the housing subsidy and other human settlement factors. This section unpacks some of the information collected.

6.7.1 Planning considerations

Single-person households

Age categories	Frequency count	Percent	Cumulative percent
6 to 13 years	4	0,39	0,39
14 to 18 years	13	1,27	1,66
19 to 25 years	217	21,21	22,87
26 to 30 years	246	24,05	46,92
31 to 35 years	170	16,62	63,54
36 to 40 years	124	12,12	75,66
41 to 50 years	138	13,49	89,15
51 to 60 years	82	8,02	97,17
61 to 65 years	10	0,98	98,14
Older than 65	19	1,86	100
Total	1023	100	

Table 25: Age distribution of single-person households

It was established that 40,6% of households in Barcelona are single-person households (see table 5). Of these single households, 63% are younger than 35 years old. Young, single males with no dependents comprise the majority of households. Table 26 shows that 85% indicated that they had never been married.

Household size

Marital status	Frequency count	Percent	Cumulative percent
Married	70	6,80	6,80
Cohabitating/partners	6	0,58	7,39
Divorced or separated	29	2,82	10,20
Never married	880	85,52	95,72
Traditional/customary	21	2,04	97,76
Widow/widower	23	2,24	100
Total	**1029**	**100**	

Table 26: Marital status of single-person households

06 Analysis

In Barcelona informal settlement,approximately 2723 households live in 2556 shelters. This represents 92% of the total number of structures numbered during the enumeration exercise. When tabulating the number of people per household, the settlement population is 6456 with an average household size of 2,4 persons.

Age profile

Age categories	Frequency count	Percent	Cumulative percent
14 to 18 years	14	1	1
19 to 25 years	326	23,19	24,18
26 to 30 years	305	21,69	45,87
31 to 35 years	287	20,41	66,29
36 to 40 years	190	13,51	79,8
41 to 50 years	168	11,95	91,75
51 to 60 years	83	5,9	97,65
61 to 65 years	18	1,28	98,93
Older than 65	15	1,07	100
Total	**1406**	**100**	

Table 27: Barcelona age profile

As discussed, the age profile of Barcelona indicates a young population and 66,3% of single households are younger than 35 years.

Social cohesion

The residents of Barcelona show a strong link to the local area. Of school or college-going residents 65% attend school in Gugulethu. More than 39% of these residents reported that their commute is by foot or mini-bus taxi and that their travel time is less than 30 minutes. A cluster of churches is located in the centre of the settlement while a cluster of crèches is located to the east. Over 80% of structures have access to facilities inside or near to the settlement such as community halls, crèches, spaza shops, shebeens and religious structures. However, crime remains a deterrent for residents who wish to start businesses, access services outside the settlement and utilise toilets and taps outside of their properties at night. Similar to neighbouring Kanana residents also indicated that sports and playgrounds are not situated within walking distance and that children are forced to play on the road adjacent to the N2 motorway.

Income and expenditure

A total of 93% of households indicated monthly incomes of R3500 or less with 25% of households indicating no income. A vast majority of households (97%) indicated monthlyexpenditures of R3500 or less. This indicates a correlation between income and expenditure, which means that few households are able to save money for future development or other purposes.

06 Analysis Pathway to Qualification

6.7.2 Pathway to qualification

This section provides information about the process for subsidy qualification and highlights what criteria is considered by the Department of Human Settlements.

Subsidy qualification criteria

You qualify for a housing subsidy if:

- you are a South African citizen or have a permanent residence permit;
- you are 18 years or older;
- you are married or living with a partner;
- you are single or divorced and have proven financial dependents permanently residing with you (military veterans without any financial dependents can apply);
- your maximum monthly household income is R3500 or less before deductions (military veterans earning up to R10416 per month can apply);
- you or your partner are not current or previous property owners;
- your or your partner have never received a subsidy from the government.

Subsidy Programmes

Housing and services are delivered under subsidy programmes. Potential beneficiearies may apply directly to the Department for an Individual Subsidy or a Finance Linked Individual Subsidy (FLISP).

Subsidy Programme	Gross Monthly Household Income Category	Subsidy Amount
Individual Subsidy		
The subsidy can be used to: • Buy an existing house • Buy a house on a plot-and- • plan basis; or • To finish an incomplete house You must have been on the municipal housing demand database for a minimum period of 10 years.	R0 - R3 500 Aged, disabled or medical condition: R0 - R3 500	R160 573 Purchase price up to R160 573 plus disability variance
Finance Linked Individual Subsidy (FLISP)		
• Assists you by providing a subsidy to reduce your home loan and therefore makes your monthly instalment lower. • Please refer to the table at the end of the document for the FLISP scales.	R3 501 - R15 000	R20 000 - R87 000 on a fixed scale, depending on your income.

Potential beneficiaries cannot apply directly to the Department for subsidies for the programmes below. These programmes are used by a developer (who may either be the Municipality or the Province) to deliver houses and services. Grant funding is made available to the developer for each project. The developer will apply for a subsidy on behalf of the beneficiaries.

UPGRADING OF INFORMAL SETTLEMENTS PROGRAMME (UISP)
This programme seeks to upgrade the living conditions of poor families living in informal settlements by providing secure tenure and access to basic services and housing.

Subsidy Programme	Gross Monthly Household Income Category	Subsidy Amount
Individual Subsidy		
• It provides funding for the construction of houses on those serviced sites that were received before 1994. • You can apply for this subsidy if you already own a serviced site and wish to construct a house, or upgrade/complete a non-subsidised house. • An application must be done on a project basis via your municipality.	R0 - R3 500	R109 947
Enhanced Peoples Housing Process (EPHP)		
• Assists households who want to participate in building their own home. • The consolidation subsidy (see above) can be accessed through EPHP. • Community contribution before and during the project includes, but is not limited to sweat equity. • Technical assistance to build the house is available as facilitation and establishment grants.	R0 - R3 500	R110 947
Integrated Residential Development Programme (IRDP)		
• Provides for the acquisition of land, servicing of stands and construction of houses.	R0 – R3 500 (abled persons)	R160 573 – qualify for a serviced site and a 40 m2 house.
	R0 – R3 500 (disabled persons)	R160 573 plus disability variance– qualify for a serviced site and a 45 m2 house.
	R3 501 – R7 000	Persons who are unable to qualify for a home loan may receive a free serviced site.

Subsidy Programme	Gross Monthly Household Income Category	Subsidy Amount
Military Veterans Subsidy		
• This programme is a joint venture between the Departments of Human Settlements and Military Veterans. • You must be on the Department of Military Veterans' (DMV) database.	R0 - R10 416	R188 884 (R110 947 + DMV contribution)
Enhanced Extended Discount Benefit Scheme (EEDBS)		
Supports the transfer of pre-1994 housing stock to qualifying occupants that: • have a direct housing arrangement with the provincial department or municipality; • have not benefited from any other housing subsidy or programme; or • have an outstanding debt with the municipality or the provincial department.	R0 - R3 500 R3 501 - R7 000 R 7001 - R15 000	The entire debt is written off. R7 500 + 50% of the debit is written off. A maximum of R7 500 is written off.
Social, Institutional and Community Residential Unit Programmes		
• These programmes cater for persons opting to rent. • Institutional programme makes provision for a rent-to-buy option.	R1 501 - R7 500	Rental amount varies in terms of programme and income.

FLISP scale:	
Upper limit	R 87 000
Lower limit	R 20 000
Subsidy increment	R 1 175

Step	Increment band		
	Lower	Higher	Amount
1	3 501	3 700	87 000
2	3 701	3 900	85 825
3	3 901	4 100	84 650
4	4 101	4 300	83 475
5	4 301	4 500	82 300
6	4 501	4 700	81 125
7	4 701	4 900	79 950
8	4 901	5 100	78 775
9	5 101	5 300	77 600
10	5 301	5 500	76 425
11	5 501	5 700	75 250
12	5 701	5 900	74 075
13	5 901	6 100	72 900
14	6 101	6 300	71 725
15	6 301	6 500	70 550
16	6 501	6 700	69 375
17	6 701	6 900	68 200
18	6 901	7 100	67 025
19	7 101	7 300	65 850
20	7 301	7 500	64 675
21	7 501	7 700	63 500
22	7 701	7 900	62 325
23	7 901	8 100	61 150
24	8 101	8 300	59 975
25	8 301	8 500	58 800
26	8 501	8 700	57 625
27	8 701	8 900	56 450

Step	Increment band		
	Lower	Higher	Amount
28	8 901	9 100	55 275
29	9 101	9 300	54 100
30	9 301	9 500	52 925
31	9 501	9 700	51 750
32	9 701	9 900	50 575
33	9 901	10 00	49 400
34	10 101	10 300	48 225
35	10 301	10 500	47 050
36	10 501	10 700	45 875
37	10 701	10 900	44 700
38	10 901	11 100	43 525
39	11 101	11 300	42 350
40	11 301	11 500	41 175
41	11 501	11 700	40 000
42	11 701	11 900	38 825
43	11 901	12 100	37 650
44	12 101	12 300	36 475
45	12 301	12 500	35 300
46	12 501	12 700	34 125
47	12 701	12 900	32 950
48	12 901	13 100	31 775
49	13 101	13 300	30 600
50	13 301	13 500	29 425
51	13 501	13 700	28 250
52	13 701	13 900	27 075
53	13 901	14 100	25 900
54	14 101	14 300	24 725
55	14 301	14 500	23 550
56	14 501	14 700	22 375
57	14 701	14 900	21 200
58	14 901	15 000	20 000

7. CONCLUSION

07 Conclusion

The enumeration study of Barcelona informal settlement pocket covered 92% of all 2838 numbered structures. It reveals notable statistics and trends that could inform future planning and decision-making:

- 40% of households are single-person households, of which 62% are male, 63% are younger than 35 years old and 86% have never been married (and are potentially without dependents);
- 32% of dwellings are single rooms;
- 51% of all dwellings are less than 30 square metres in size;
- 36% of residents reported to have lived in their dwellings for less than five years;
- 79% of residents claim to own their dwellings;
- 62% of youth are unemployed;
- 96% of residents are South Africans and 144 people are Non South African residents

Barcelona was founded by backyarders from Gugulethu who sought to escape paying high rents to owners of formal houses. The settlement was founded in 1990 and an analysis of historical satellite images shows that the land was fully occupied by 2001, after which intensive building followed which laid claim to the remaining open spaces. The settlement was founded in close proximity to a discontinued landfill/dumping site. Without significant land rehabilitation.this makes prospects for long-term development difficult.

When taking the history of the settlement into account, the enumeration data potrays a young and single population that is entering adulthood and leaving the homes of their parents. This group mostly consists of young men who have constructed their dwellings in Barcelona's remaining open spaces and have encroached, to some extent, on road widths, which affects emergency vehicle access. Barcelona's residents struggle with high unemployment, small-living spaces and a low level of educational attainment. Barcelona's average household size is 2,4 people.

The implications for settlement planning and upgrading are significant. To attain the high densities of 110 dwelling units per hectare over 25,6 hectare and cause minimal disruption to the population, a upgrading strategy should cater to the needs of a highly mobile population. The high density of the settlement will require innovative tenure types and housing typologies. Economic growth is a priority. An even distribution of non-residential uses should be encouraged to ease access to vital amenities.

8. REFERENCES

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9. LIST OF CORE TEAM MEMBERS

09 List of core team members

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Mr. Kenneth Kirsten	WC Department of Human Settlements
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