

Revisiting the approach to Informal Settlement Development in South Africa, with a special focus on the impact of HIV/AIDS.

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PREFACE / ACKNOWLEDGEMENTS

At the conception of this study, I did not realise the extent to which this research would become part of my life. A feeling of gratitude and humility at the completion of this dissertation completely overwhelms me: gratitude towards so many people, friends and family for years of unconditional support and encouragement. Humility, because I have been humbled by what I saw, by the extraordinary stories of survival and the people I have met during the course of this study. With that being said, I would like to offer my sincerest gratitude to my supervisor, Prof. Calie Schoeman, who has supported me throughout my studies with his patience and knowledge whilst allowing me the room to work in my own way. I attribute the completion of my Master's degree to his encouragement and effort and without him this dissertation, would not have been seen the light. Professor, thank you for being a mentor both academically and personally throughout this research venture. Furthermore these acknowledgements will not be complete if I didn't include the real heroes of this dissertation, the Isaac's of this world. This is for you, Isaac. May this research one day, in its small part, contribute to the creation of a better life for all.

Above all of this, all the glory to God.

“Now to him who is able to do immeasurably more than all we ask or imagine, according to his power that is at work within us, to him be glory in the church and in Christ Jesus throughout all generations, for ever and ever! Amen.”

- Ephesians 3:20-

ABSTRACT

The problems associated with the informal settlements of South Africa, are not unknown, neither are they recent. Throughout the years, hundreds of initiatives have been established, aimed at addressing the disjointed spatial patterns, social and economic problems persisting in these informal settlements. Loads of programmes and projects have been implemented in order to address these challenges. However, despite all these initiatives, the challenges faced by the informal settlements persist. Taking these persisting challenges and problems faced by informal settlements in South Africa into consideration, the question arises: is it not time to **revisit the approach to Informal Settlement Development in South Africa, especially focusing on the spatial, socio-economic and psychological impacts of HIV & AIDS?** It is no secret that the prevalence of HIV & AIDS is a huge problem in South Africa. It has a vast impact on the country's demographic profile and this consequently leads to spatial as well as psychosocial impacts, especially concerning the communities living within South Africa's Informal Settlements. The growing number of maternal orphans as well as the high mortality rate amongst the adult (and economically active) population, raises cause for enormous concern regarding the impacts of these demographic changes on the socio-economic environment as well as spatial development within these areas. In order to achieve sustainable human settlement development, extensive research is needed within the spatial and psychosocial environment within which these informal settlements function. Current approaches to informal settlement development within South Africa do not take the needs of HIV & AIDS affected households into consideration. Housing and other forms of aid are provided on an ad hoc basis. This study explores the existing approaches to informal settlement development in South Africa and other selected case study areas within Africa. Based on the results of the research conducted during this study, a new perspective on informal settlement development will be proposed as well as the development of an Informal Settlement Development Model as an alternative approach to informal settlement development in South Africa.

Key terms: informal settlement development, HIV/AIDS, spatial planning, sustainable human settlements, socio-economic impacts, alternative development approach

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TABLE OF ACRONYMS

Acronym	Explanation
ABC	Abstain, Be faithful, Condomise
AIDS	Acquired Immunodeficiency Syndrome
BNG	Breaking New Ground strategy
CDM	Clean Development Mechanism
CFL	Compact Fluorescent Light
CSIR	Council for Scientific and Industrial Research
CSOs	Civil society organisations
DPLG	Department of Provincial and Local Government
FY	Fiscal Year
HIV	Human Immunodeficiency Virus
HPCA	Hospice Palliative Care Association
HSRC	Human Sciences Research Council
IDP	Integrated Development Plan
KENSUP	Kenya Slum Upgrading Programme
KKDM	Dr Kenneth Kaunda District Municipality
LED	Local Economic Development
LGA	Local Government Action
LUM	Land Use Management
MDGs	Millennium Development Goals
MLGH	Ministry of Local Government and Housing

Acronym	Explanation
NGOs	Non-Governmental Organisation
NSDP	National Spatial Development Perspective
NWP	North West Province
PAR	Participatory Action Research
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PGDS	Provincial Growth and Development Strategy
PLWHA	People living with HIV/AIDS
RDP	Reconstruction and Development Programme
SA	South Africa
SACN	South African Cities Network
SAEDF	South African Export Development Fund
SHS	Sustainable Human Settlements
SPLUMA	Spatial Planning and Land Use Management Act
SSN	SouthSouthNorth
STIs	Sexually transmitted infections
SWH	Solar Water Heaters
TB	Tuberculosis
UN	United Nations
UNAID	Joint United Nations Programme on HIV and AIDS
USAID	United States Agency for International Development
UN-HABITAT	United Nations Human Settlements Programme
WHO	World Health Organisation

LIST OF DEFINITIONS

Civil society organisations: this term according to the SACN HIV/AIDS research series report (2005:iv), include *“those organisations that designate themselves as nongovernmental (NGO), community-based (CBO), non-profit (NPO), dedicated women’s, youth or political organisations and social service clubs.”* For the purposes of this study, this term encompasses a large number of community-based AIDS initiatives, home-based care organisations, support groups, as well as hospices, women’s and men’s groups, training organisations, youth outreach groups, community centres and non-AIDS specific associations such as Black Sash, FAMSA, and mental health councils.

Empowerment: as defined by UNAIDS in their Terminology Guidelines (2011:10) is *“action taken by people to overcome the obstacles of structural inequality that have previously placed them in a disadvantaged position. Social and economic empowerment is a goal and a process aimed at mobilising people to respond to discrimination and achieve equality of welfare and equal access to resources and become involved in decision-making at the domestic, local, and national level.”*

Enabling environment: There are different kinds of enabling environments in the context of HIV/AIDS. According to UNAIDS (2011:10) an enabling legal environment is *“one in which laws and policies against discrimination on the basis of HIV status, risk behaviour, occupation, and gender are in place and are monitored and enforced.”* An enabling social environment is one in which *“social norms support healthy behaviour choices”*.

Epidemic: An epidemic is *“an unusual increase in the number of new cases of a disease in a human population.”* The population may be all the inhabitants of a given geographic area, the population of a school or similar institution, or everyone of a certain age or sex, such as the children or women of a region. Deciding whether an increase in the number of cases constitutes an epidemic is somewhat subjective, depending in part, on what the usual or expected number of cases would be in the observed population. An epidemic may be restricted to one locale (an outbreak), be more general (an epidemic), or be global (a pandemic). Common diseases that occur at a constant but relatively high rate in the population are said to be ‘endemic’. Widely known examples of epidemics include the plague of mediaeval Europe known as the Black Death, the influenza pandemic of 1918–1919, and the current HIV epidemic, which is

increasingly described as a pandemic made up of distinct types of epidemics in areas across the globe (UNAIDS. 2011:10).

Implementation vehicle: A concept not formally defined in literature, but for the purposes of this study this term refers to a management or organisational structure established or designed specifically to implement a project or various projects within a certain area in an accountable and sustainable manner.

Integrated development planning: is defined by the South African Cities Network (2004:32) as the *“development of a single development plan for an LGA, which incorporates inputs from all related sectors of government at local level, and involvement of local stakeholders. It also refers to integration of development plans from one sphere of government into the development plans of another sphere (e.g. municipal plans into district plans)”*

Informal settlement: According to the Housing Development Agency (2012:53), there is no single standard definition of an informal settlement across data sources. There is also no alignment across data sources with regard to the demarcation of settlement areas. Definitions usually incorporate a reference to both the status of the land (illegal or not officially sanctioned or documented) and the dwelling (a makeshift dwelling). Sometimes definitions make specific reference to the lack of municipal services or incorporate a geographic dimension. Occasionally, a minimum size threshold may be used (e.g. a minimum of 20 dwellings). Definitions are expected to reflect changing local conditions, and varying underlying purposes for which informal settlements data is collected. Therefore, in light of the complexity as explained above, for the purpose of this study, the definition of informal settlements as included in the Habitat III report on Informal Settlements (2015) will be used:

Informal settlements – are residential areas where 1) inhabitants have no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing, 2) the neighbourhoods usually lack, or are cut off from, basic services and city infrastructure and 3) the housing may not comply with current planning and building regulations, and is often situated in geographically and environmentally hazardous areas (UN-Habitat, 2015:2)

Land development: for the purposes of this study the definition as included in SPLUMA (2013:9) will apply: *“the erection of buildings or structures on land, or the change of use of land,*

including township establishment, the subdivision or consolidation of land or any deviation from the land use or uses permitted in terms of an applicable land use scheme”

Land use: means *“the purpose for which land is or may be used lawfully in terms of a land use scheme, existing scheme or in terms of any other authorisation, permit or consent issued by a competent authority, and includes any conditions related to such land use purposes”* (SPLUMA, 2001:4).

Land use management system: *“means the system of regulating and managing land use and conferring land use rights through the use of schemes and land development procedures”* (SPLUMA, 2013:9)

Land use planning: *“planning of human activity to ensure that land is put to the optimal use, taking into account the different effects that land-uses can have in relation to social, political, economic and environmental concerns”* (DPLA, 2001:4).

Productive age group: also known as the working-age population is the total population in a region, within a set range of ages, that is considered to be able and likely to work. The working-age population measure is used to give an estimate of the total number of potential workers within an economy. Each region may have a different range of ages, but for the purpose of this study this term refers to people between the ages of 15 to 65 (StatsSA, 2015:9).

Spatial planning: The White Paper on Spatial Planning and Land Use Management (Department of Agriculture and Land Affairs, 2001:4) defined spatial planning as: *“planning of the way in which different activities, land uses and buildings are located in relation to each other, in terms of distance between them, proximity to each other and the way in which spatial considerations influence and are influenced by economic, social, political, infrastructural and environmental considerations”*

Sustainable Human Settlements: the DPLG (2005:6) defines this as *“well-managed entities in which economic growth and social development are in balance with the carrying capacity of the natural systems on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity.”*

Socio-spatial exclusion: according to UN-HABITAT (2015:1) refers to *“the processes that contribute to the geographic marginalisation of particular individuals and groups because of where they live and who they are. It is characterised by their inability to access or effectively use*

a whole range of facilities and resources which improve well-being and position people to take advantage of available opportunities.” Particular groups and individuals often suffer a disproportionate ‘disadvantage’ because of their identity, which is physically represented in urban contexts by the presence of informal settlements and also the prevalence of HIV & AIDS.

Tenure: *“The legal and social relationship defining the rights and obligations of individuals or groups towards a specific piece of land (DPLG, 2005:6).”*

Township: according to SPLUMA (2013:11) is *“an area of land divided into erven, and may include public places and roads indicated as such on a general plan.”*

CHAPTER 1: INTRODUCTION

The purpose of this chapter is to provide the necessary introduction and background to the study. It describes the purpose of this study as well as the goals and objectives of the research. An overview of the study methodology that guided this research project is also provided. **Figure 1-1** below provides a schematic summary of this chapter.

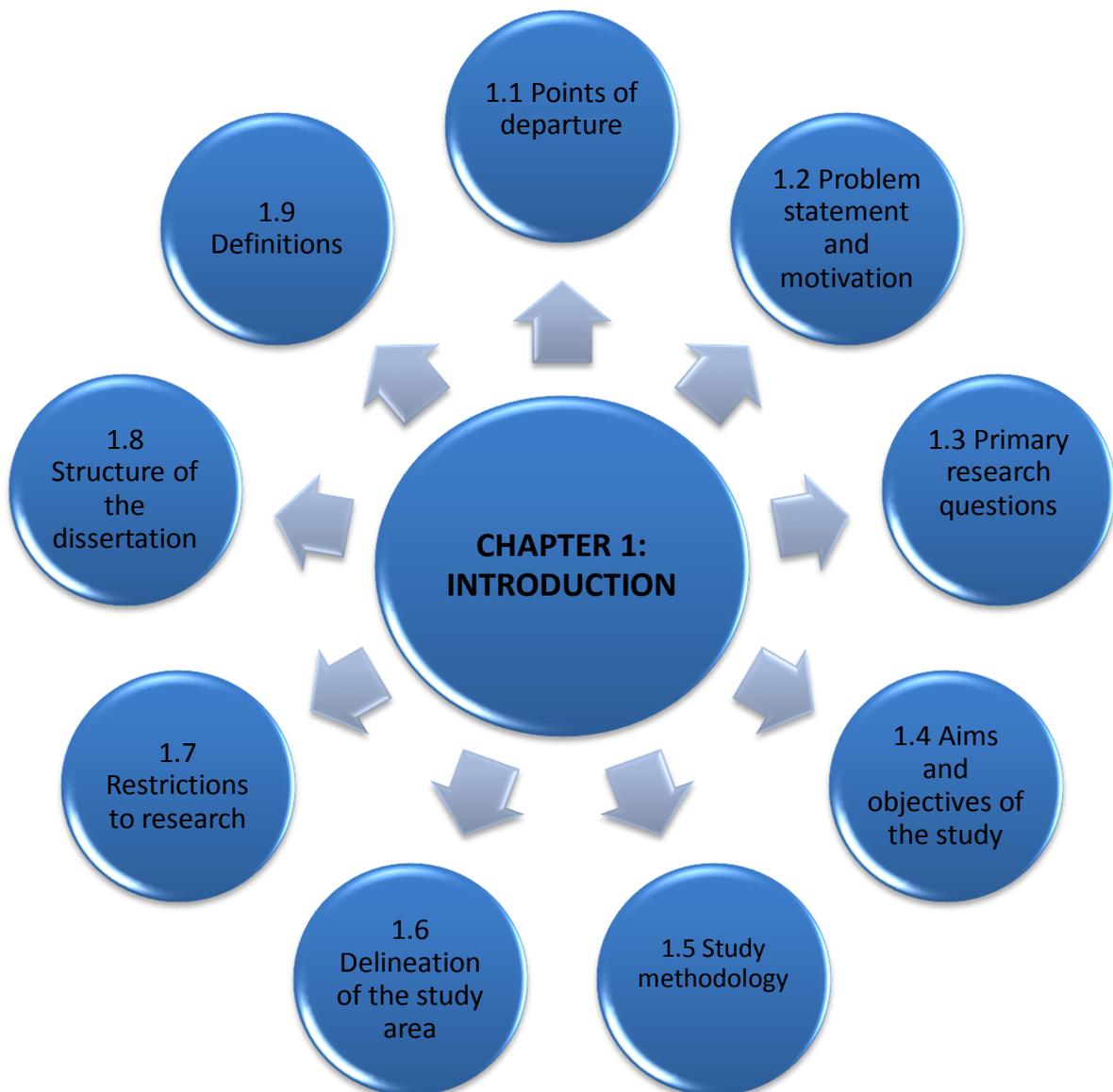


Figure 1-1: Summary of Chapter One: Introduction

Source: Own construction (2015).

1.1 Points of departure

The problems associated with the informal settlements of South Africa, are not unknown, neither are they recent. Throughout the years, hundreds of initiatives have been established, aimed at addressing the disjointed spatial patterns, social and economic problems persisting in these informal settlements. Loads of programmes and projects have been implemented in order to address these challenges. However, despite all these initiatives, the challenges faced by the informal settlements persist:

- Between 1994 and 2004, the Department of Housing facilitated the delivery of 1.6 million houses, but it is estimated that there is still a backlog of over 2.4 million households (National Department of Housing, 2008).
- After more than 10 years of democracy approximately 10 million historically disadvantaged South African still live in slums that lack basic shelter, drinking water, sanitation, solid waste disposal, electricity, safe and affordable transportation etc. (USAID, 2007).

1.2 Problem statement and motivation

The major challenge is to deliver housing in such a way as to create *Sustainable Human Settlements*. According to the Department of Housing's Resource Book, the key to plan and deliver Sustainable Human Settlements is that the *supply systems and the demand dynamics* need to be matched more effectively (National Department of Housing, 2008). It is therefore important to note that the delivery of housing within informal settlements in South Africa cannot occur in an isolated environment i.e. the ad hoc provision of housing. It should occur in a sustainable and holistic way, taking cognisance of the social as well as economic impacts on the community.

One of the major factors affecting the demand for housing in South Africa is the occurrence of HIV/AIDS. Approximately 5.6 million South Africans are living with HIV and AIDS, the largest number of individuals living with the virus in a single country (UNAIDS, 2013:10). AIDS has orphaned over 700,000 children already and as disturbing as the AIDS epidemic in South Africa is now, it will get worse. AIDS could orphan more than 3 million healthy children between 18 months and 4 years old within the next five years (Habitat for Humanity, 2008).

The prevalence of HIV/AIDS especially amongst the productive age group (15 – 64 years) is causing enormous demographic changes within the informal settlements in South Africa. These

demographic changes, i.e. communities consisting of very young (less than 15 years) or elderly people (65+), have a vast impact on the housing demand dynamics and by implication, the creation of Sustainable Human Settlements in South Africa. According to the *State of South Africa's Population Report: Population, Poverty and Vulnerability* (2000:61), "the HIV and AIDS pandemic is the single most important phenomenon that will shape future demographic and development trends in South Africa".

Up until now, the impact of HIV/AIDS on the creation of Sustainable Human Settlements, with specific reference to the provision of housing in informal settlements, has not been taken into consideration during the planning process. Demographic changes are having a vast impact on the socio-economic dynamics as well as the spatial structure of the informal settlements. These impacts include amongst others, a huge increase in child-headed households as well as elderly people without access to proper care.

Taking all of the above into consideration, the overall goal of this study is therefore to revisit the approach to Informal Settlement Development in South Africa, especially focussing on the spatial, socio-economic and psychological impacts of HIV & AIDS.

1.3 Primary research questions

The following research questions arose from the above problem statement and will be addressed during the course of this study:

1. Does the HIV & AIDS pandemic impact (spatially, economically as well as psycho-socially) on the lives of people living in informal settlements?
2. Which of the current spatial structures function well within these informal communities?
3. How can these spatial structures be improved or changed in order to accommodate HIV & AIDS affected households?
4. How can the current planning approach to informal settlement development be changed or adapted in order to accommodate the demographic changes caused by the HIV & AIDS pandemic?

1.4 Aims and objectives of the study

In order to address the aforementioned research questions, the aims and objectives of this study are:

1. To **revisit and evaluate** the current approach to Informal Settlement Development in South Africa, focussing on how it addressed the spatial, socio-economic and psychological impacts of HIV & AIDS.
2. To create a platform for a **workable and implementable** Informal Settlement Development model that makes special provision for the HIV/AIDS affected households.
3. To investigate the establishment of an **Implementation Vehicle** to guide the process of Informal Settlement Development and the implementation of the Informal Settlement Development model in such a way that households (also including HIV/AIDS affected and marginalised households) within the community would be able to utilise current supply structures in an optimal way.

1.5 Study methodology

The aim of this section is to provide an explanation of the methodological approach and specific techniques that were used during the course of this study. First of all it provides a description of the general methodology that was followed and thereafter a more detailed description of the research approach will follow.

1.5.1 General Methodology

The research method that was used for the purposes of this study constituted of a combination between the Intervention Research Model (De Vos, 2002:392) and the Participatory Action Research (PAR) model (Strydom, 2002:408). These research models are scientifically tested and proven methods of research that can be ideally applied to a study such as this.

The purpose of the Intervention Research Model is to prevent or ameliorate problems by creating and testing innovative human services approaches. The focus of the PAR model is on the involvement and participation of *all the role-players* in a specific research project, including specifically in this case, the involvement of the informal settlement communities (De Vos et al, 2002:393).

Figure 1-2 provides an overview of the methodological approach for this study. Looking at this diagram, it is important to notice that this study basically consists of two broad phases;

1. **Phase 1** is the literature research phase and consists of steps 1 – 3.1
2. **Phase 2** is the empirical research and implementation phase and includes steps 3.2 – 7

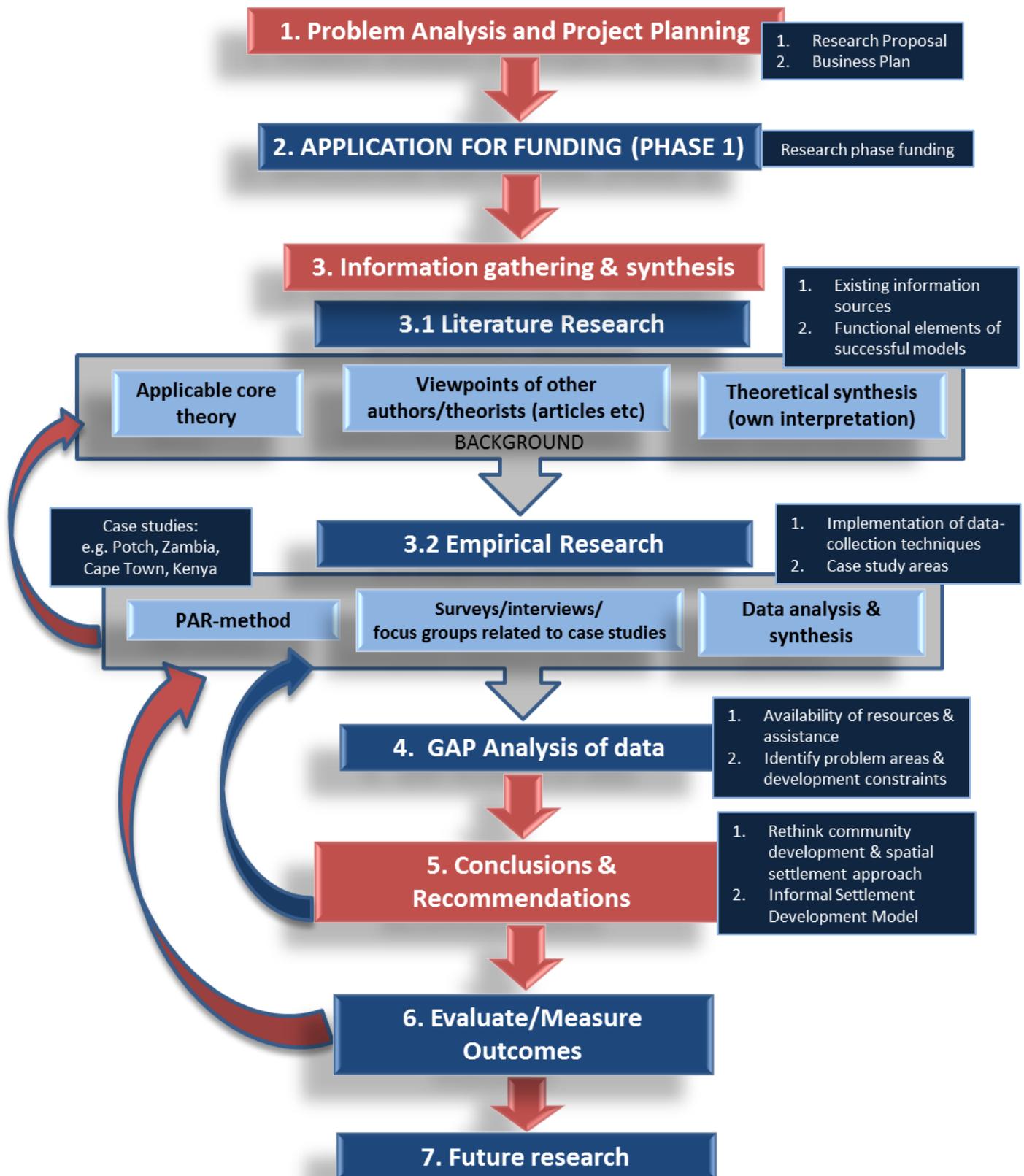


Figure 1-2: Study methodology
 Source: Own Construction (2015).

STEP 1 served as an orientation phase during which the project planning and preliminary problem analysis was completed. A research proposal as well as a comprehensive business plan for the project was created as an outcome of this step.

An early application for funding was done during **STEP 2** in order to fund the research process with the aim to market and implement the Informal Settlement Development Model after the completion of the study.

During **STEP 3** all the relevant information necessary for the research study and design of the model, was collated and synthesised. It is important to notice that applicable core theories, viewpoints of other authors and other scientific resources such as books, journals, e-publications and articles were considered during the literature study. As mentioned previously the PAR method was used during the data collection process for the empirical study as well as other surveys, interviews and focus group discussions related to the case studies.

The literature research included an analysis of existing information sources as well as the identification of functional elements of successful informal settlement development models. For the empirical research, specific case study areas were used e.g. Potchefstroom, Zambia, Cape Town and Kenya. **Section 1.5.2** provides more details on the implementation of the various data-collection techniques that were used during this step.

During **STEP 4** the data and information collated during Step 3 was analysed. A gap analysis was done in order to assess the current availability of resources and assistance to HIV/AIDS affected households as well as to identify the problem areas and development constraints experienced within the informal settlements.

After this, the platform for the development of a new Informal Settlement Development Model was designed in **STEP 5**. The outcome of this step is a comprehensive report on the research, including a summary of the results, findings, conclusions and recommendations.

In **STEP 6**, the outcomes of the study as well as the preliminary designed Informal Settlement Development Model will be tested and evaluated against the literature and empirical research backgrounds in order to test the development model's viability and to identify possible flaws or areas for improvement.

STEP 7 entails the identification of future research topics and areas related to this field of study as well as laying the foundation for a PhD study building forward on this topic.

1.5.2 Research approach

An exploratory, qualitative research approach was followed for the psychosocial and spatial components of this study, since the research had to be done in the various unique community contexts in an inductive manner. The researcher had to make sense of the experiences that emerged spontaneously when members of the various case study communities were encouraged to talk about their personal feelings and subjective experiences related to the various psychosocial and spatial aspects linked with HIV & AIDS.

The data gathering methods for this study therefore included:

1. Observations,
2. Community forum discussions,
3. Semi-structured interviews with key informants and
4. The use of the Mmogo method (to a very limited extent)

The key informant approach and the Mmogo-methods are both considered to be culturally sensitive methods for the particular target groups of participants in this study; and all the above-mentioned methods are known to produce reliable, scientifically correct data and results. **Section 6.1.2** in **chapter 6** of this study, provides a brief explanation of each of the above-mentioned research methods.

1.6 Delineation of the study area

The main case study area for this project is within the North West Province of South Africa with a special focus on a few smaller case study areas within the Dr. Kenneth Kaunda District Municipality (KKDM). Two other case studies in the Western Cape were also investigated as well as two international case studies (in Zambia and Kenya). These case study areas were included because they represent a realistic spectrum of HIV & AIDS prevalence within their areas as well as diverging ways of dealing with the HIV & AIDS pandemic. It was also crucial to look at various case studies in different parts of the country/Africa in order to identify possible patterns of development, coinciding gaps and problems, key lessons learnt, best practice

examples etc. **Table 1-1** provides a summary of the case study areas that were researched during the course of this study.

Table 1-1: Summary of case study areas

Case study location	Project name/description	Reason for including
Potchefstroom – Ikageng	Mosaic project	Project aimed specifically at HIV & AIDS affected households
Potchefstroom – Ikageng	Mamello Day Care centre	Key informants – orphans and child headed households
Western Cape – Paarl	Valcare Trust	Resource centre – best practice example
Western Cape - Khayelitsha	Kuyasa CDM project	Green low cost housing – best practice example
Western Cape – Paarl	Butterfly house project	Key informants – orphans and child headed households; best practice example
Zambia	Kabwe compound	Key informants – orphans and child headed households; best practice example
Kenya	Kibera slum upgrading project	Key informants – orphans and child headed households; example of current approaches

Source: Own Construction (2015).

It is important to note that the case studies in the Potchefstroom area were used as the main areas for data collection and related research purposes. The other case study areas as listed in the table above only provided additional information and perspective on the research topic as stated.

1.7 Restrictions to research

The following limitations to the research were identified during the research process:

1. HIV/AIDS data is sensitive data and not always easy to obtain or necessarily reliable. Data used during the course of this study were carefully obtained and evaluated for its credibility. It may however differ from other data resources.
2. Communities within various informal settlements differ and therefore this study aimed to explore a range of case study areas. However, the study by no means claims to be extensive or comprehensive in this regard.

1.8 Structure of the dissertation

This research study consists of ten chapters that include the following:

CHAPTER 1: INTRODUCTION	This chapter describes the purpose of this study as well as the goals and objectives of the research. It also provides an overview of the study methodology that guided this research project.
CHAPTER 2: CURRENT REALITY	This chapter aims to describe the current reality surrounding informal settlement development in South Africa today. This includes an overview of the prevalence of HIV & AIDS, child-headed households the impacts of the global financial crisis etc.
CHAPTER 3: SPATIAL PLANNING AND HIV/AIDS	This chapter provides an overview and background to the current reality of spatial planning in South Africa as well as to the traditional development approaches towards HIV & AIDS. It outlines the relation between HIV/AIDS, spatial planning and land use management whilst also discussing the impacts of poverty, informality and underdevelopment on the spread of the epidemic.

CHAPTER 4: SUSTAINABLE HUMAN SETTLEMENTS AND HIV & AIDS	<p>The aim of this chapter is to provide more detail on the provision of housing in informal settlements and describes the impact of HIV & AIDS on the creation of Sustainable Human Settlements (SHS). Key attributes of sustainable human settlements will be identified and defined and the integration of HIV & AIDS in SHS planning will also be discussed during the course of this chapter.</p>
CHAPTER 5: POLICY AND LEGISLATION – THE ROLE OF GOVERNMENT	<p>Chapter 5 focuses on the (anticipated) role of local government in both sustainable human settlements development and in the national response to HIV/AIDS, suggesting that the possibility of synergy exists between these two imperatives. It will discuss the importance of the role of government and also provide an overview of legislative and policy documents such as the White Paper on Housing Delivery of 1994 and the Breaking New Ground Initiative (BNG) of 2004.</p>
CHAPTER 6: BACKGROUND: CASE STUDIES AND METHODOLOGY	<p>This chapter marks the start of the empirical research on this study and aims to provide a comprehensive background on the research methodology that was used, but also to explain and motivate the identification process for all the case study areas included in the empirical research. As an introductory setting, a brief narrative of a member of an HIV/AIDS affected household is also included in this chapter.</p>
CHAPTER 7: RESEARCH RESULTS AND SYNTHESIS	<p>The aim of chapter 7 is to expand on the case studies that were briefly described in the previous chapter. It provides a more detailed discussion of each case study area, including the unpacking of information gained during semi-structured interviews, focus group discussions and community. This also includes a range of selected photographs of the respective case study areas as well as a brief description of the key observations and lessons learnt from each study area.</p>

**CHAPTER 8:
RESEARCH
ANALYSIS AND
FINDINGS**

It is the purpose of this chapter to analyse the research results in alignment with the theory discussed in the chapters preceding the empirical research part of this document. Chapter 8 therefore aims to evaluate each of the selected case studies by means of matrixes which aligns the literature and empirical parts of this study. The chapter ends with a summary of the findings and conclusions based on the empirical research of this study.

**CHAPTER 9:
PLANNING
RECOMMENDATIONS**

This chapter outlines a number of recommendations for integrating HIV/AIDS into sustainable human settlements planning and development. The final section of this study includes some concluding observations.

Additional note:

The terms spatial planning, land use management and land development have been specified in the report on White Paper on Spatial Planning and Land Use Management (Department of Agriculture and Land Affairs, 2001:4). This specification has been used to guide the scope of the study, as follows:

- Spatial planning: planning of the way in which different activities, land uses and buildings are located in relation to each other, in terms of distance between them, proximity to each other and the way in which spatial considerations influence and are influenced by economic, social, political, infrastructural and environmental considerations;
- Land-use planning: planning of human activity to ensure that land is put to the optimal use, taking into account the different effects that land-uses can have in relation to social, political, economic and environmental concerns; and
- Land development: the process of building and landscaping land in order to enhance its commercial or social value.

CHAPTER 2: CURRENT REALITY

As mentioned in **Chapter 1**, the informal settlements within South Africa have been experiencing serious spatial and socio-economic challenges as well as resulting psychological problems, for decades. Throughout the years hundreds of initiatives, programmes and projects have been established, aimed at addressing these disjointed spatial patterns and socio-economic problems. However, despite all these initiatives, the challenges faced by the informal settlements persist. **Chapter 2** aims to describe the current reality surrounding informal settlement development in South Africa. This includes an overview of the prevalence of HIV & AIDS, child-headed households the impacts of the global financial crisis etc. as summarised in

Figure 2-1.

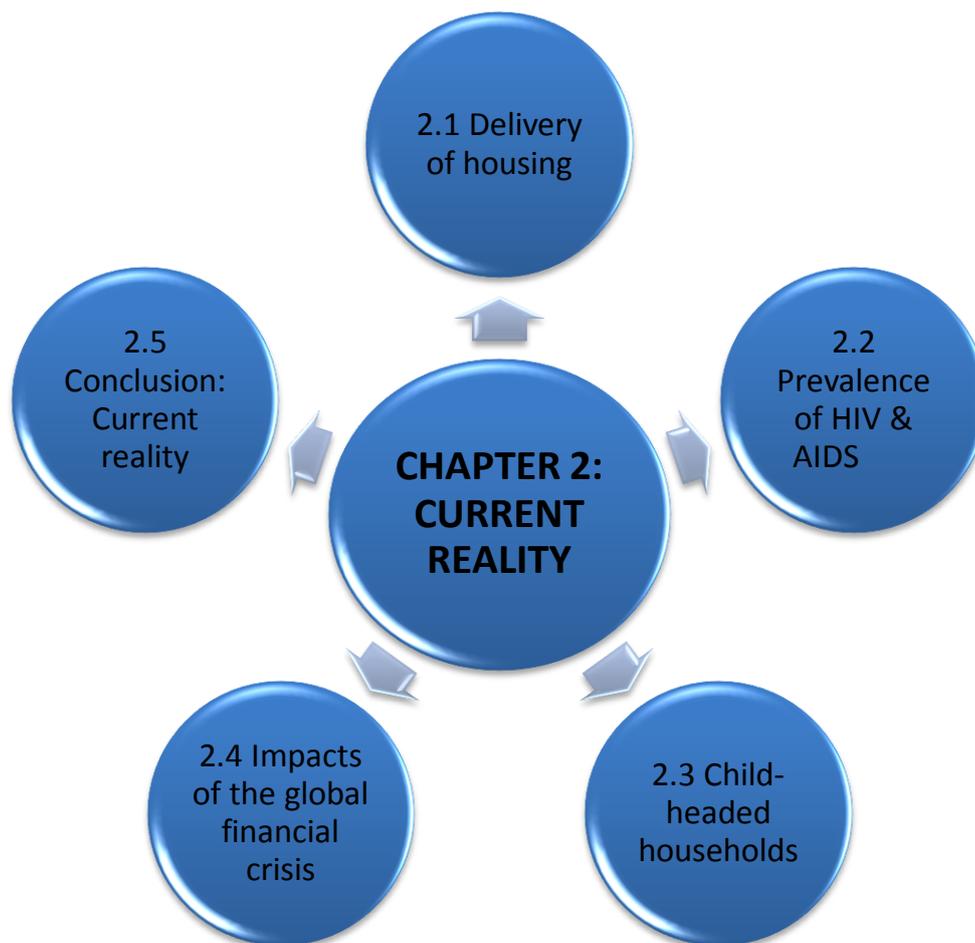


Figure 2-1: Summary of Chapter Two: Current reality

Source: Own construction (2015).

2.1 Delivery of housing

According to the National Department of Housing's Resource book on Sustainable Human Settlement planning, the delivery of housing is seen as an instrument to change the persistent lack of spatial restructuring and limited access to economic and social opportunities. It also intends to maximise significant economic growth opportunities through delivery and therefore contribute to the reduction of extensive poverty (National Department of Housing, 2008). Between 1994 and 2004, the Department facilitated the delivery of 1.6 million houses, but it is estimated that there is still a backlog of over 2.4 million households (BNG, 2004:4).

The importance and urgency of researching informal settlement development in South Africa can therefore not be emphasised enough. After more than 10 years of democracy approximately 10 million historically disadvantaged South African still live in slums that lack basic shelter, drinking water, sanitation, solid waste disposal, electricity, safe and affordable transportation etc. (USAID, 2007).

The major challenge however, is to deliver the housing in such a way as to create *Sustainable Human Settlements*. According to the Department of Housing's Resource Book, the key to plan and deliver Sustainable Human Settlements is that the *supply systems and the demand dynamics* need to be matched more effectively (National Department of Housing, 2008). **This is done through engaging in a housing planning process that defines demand (the community dynamics) and negotiates supply (assistance in the form of projects, programmes and initiatives) in relation to one another.**

It is therefore important to note that the delivery of housing within informal settlements in South Africa cannot occur in an isolated environment i.e. the ad hoc provision of housing. It should occur in a sustainable and holistic way, taking cognisance of the social as well as economic impacts on the community.

2.2 Prevalence of HIV & AIDS

One of the major factors affecting the demand for housing in South Africa is the occurrence of HIV & AIDS. According to the UNAIDS regional report (2013:10) approximately 5.6 million South Africans are living with HIV and AIDS, the largest number of individuals living with the virus in a single country. Over 700,000 children have been orphaned by AIDS already and as

disturbing as the AIDS epidemic in South Africa is now, it will get worse. More than 3 million healthy children between 18 months and 4 years old could be orphaned by AIDS in the next five years (Habitat for Humanity, 2008).

The prevalence of HIV & AIDS especially amongst the productive age group (15 – 64 years), is causing enormous demographic changes within the informal settlements in South Africa. In June 2007, Statistics South Africa published the report "Mortality and causes of death in South Africa, 2005". This report, alongside a previous edition published in May 2006, reveals that the annual number of registered deaths rose by a massive 87% between 1997 and 2005. Among those aged 25-49 years, the rise was 169% in the same nine-year period. Part of the overall increase is due to population growth. However, this does not explain the disproportionate rise in deaths among people aged 25 to 49 years. In 1997, this age group accounted for 30% of all deaths, but in 2005, it accounted for 42% (Statistics South Africa, 2007).

The South African Department of Health Study estimates that 29.1% of pregnant women were living with HIV in 2006. The provinces that recorded the highest HIV rates were KwaZulu-Natal, Mpumalanga and Free State (SA Department of Health Study, 2006).

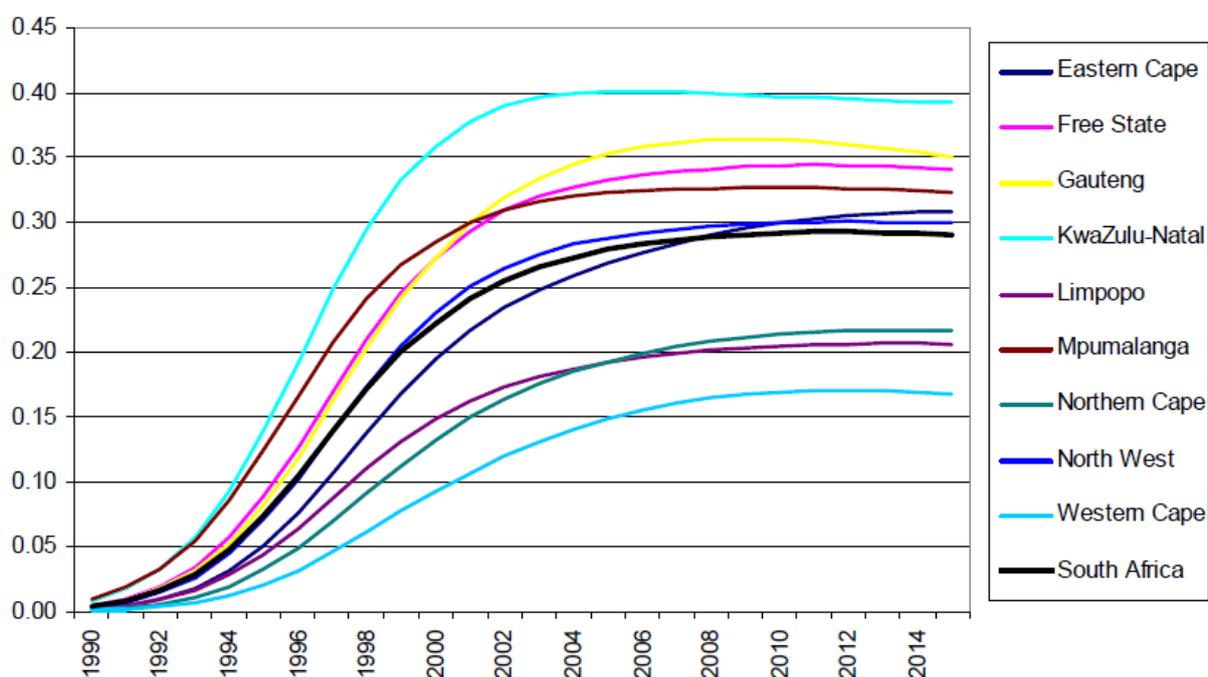
Table 2-1 provides a summary of the estimated HIV prevalence amongst antenatal clinic attendees by province. In particular, the North West Province, the case study area for this project, had the fifth highest HIV prevalence in the country (29% in 2006).

Table 2-1: Estimated HIV prevalence among antenatal clinic attendees, by province

Province	2001 prevalence %	2002 prevalence %	2003 prevalence %	2004 prevalence %	2005 prevalence %	2006 prevalence %
KwaZulu-Natal	33.5	36.5	37.5	40.7	39.1	39.1
Mpumalanga	29.2	28.6	32.6	30.8	34.8	32.1
Free State	30.1	28.8	30.1	29.5	30.3	31.1
Gauteng	29.8	31.6	29.6	33.1	32.4	30.8
North West	25.2	26.2	29.9	26.7	31.8	29.0
Eastern Cape	21.7	23.6	27.1	28.0	29.5	29.0
Limpopo	14.5	15.6	17.5	19.3	21.5	20.7
Northern Cape	15.9	15.1	16.7	17.6	18.5	15.6
Western Cape	8.6	12.4	13.1	15.4	15.7	15.2
National	24.8	26.5	27.9	29.5	30.2	29.1

Source: SA Department of Health Study, 2006

Figure 2-2 provides an illustration of the afore-mentioned percentage figures as per province in South Africa.

**Figure 2-2: Projected prevalence amongst antenatal attendees**

Source: Dorrington et al., 2006

According to population projections, about 5.4 million people out of a total of nearly 48 million South Africans were HIV positive by mid-2006, giving a total population prevalence rate of a little over 11%. Approximately 600 000 of the HIV positive population, was sick with AIDS (11% of the HIV infected) (Dorrington et al., 2006).

It is evident from **Figure 2-2** that the HIV & AIDS prevalence in South Africa has been climbing rapidly since 1990, but projections indicate that with proper health care, precautions being taken and sufficient education this rapid climb of HIV & AIDS prevalence can level off or even decrease by 2014.

However, despite this more positive outlook, the effects of the current HIV & AIDS prevalence on the demographic structure of South Africa cannot and should not be ignored. AIDS related deaths especially amongst the economically active population are very high and this will have major implications on the socio-economic environment as well as spatial development within South Africa.

Mortality indicators of 2006 also provide a grim picture, especially with regards to the demographic impact on informal settlement development in South Africa. **Table 2-2** indicates that 47% of the total deaths in the country during 2005, were AIDS related deaths. Of these AIDS related deaths, 71 % were amongst adults between the ages of 15 and 49. This has major implications on the demographic structures of the country, resulting in related impacts on the socio-economic environment as well as spatial development.

Table 2-2: Mortality Indicators in South Africa, 2006

Deaths	
Total deaths during 2005	737 000
Non-AIDS deaths during 2005	391 000
AIDS deaths during 2005	346 000
Accumulated AIDS deaths mid-year	1 814 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	71%
Adults (15+)	47%
Children (<15)	44%
Total deaths	47%

Source: Dorrington et al., 2006

These demographic changes, i.e. communities consisting of very young (less than 15 years) or elderly people (65+), have a vast impact on the housing demand dynamics and by implication, the creation of Sustainable Human Settlements in South Africa. These demographic changes and statistics will therefore be discussed in more detail for the North West Province in **section 2.2.1** below since two of the projects investigated during the empirical research of this study, fall within the North West Province, South Africa as mentioned in **section 1.6**.

2.2.1 HIV & AIDS prevalence in the North West Province

Comparing the HIV & AIDS prevalence figures as mentioned in **section 2.2**, with those of the North West Province, it is evident that the impact of AIDS deaths on the adult (and economically active) population is even worse than the country average. **Table 2-3** provides a summary of the mortality indicators for the North West Province.

Table 2-3: North West Province Mortality Indicators, 2006

Deaths	
Total deaths during 2005	61 000
Non-AIDS deaths during 2005	30 000
AIDS deaths during 2005	31 000
Accumulated AIDS deaths mid-year	160 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	75%
Adults (15+)	51%
Children (<15)	24%
Total deaths	51%

Source: Dorrington et al., 2006

It is evident from **Table 2-3** that 51% of the total deaths in the North West Province during 2005, were AIDS related deaths. Of these AIDS related deaths, 75 % were amongst adults between the ages of 15 and 49.

One of the major impacts of these structural changes to the population demographics, is a vast increase in the number of maternal orphans in the country. **Figure 2-3** illustrates a dramatic increase in the number of orphans within the North West Province due to AIDS related deaths amongst the adult population.

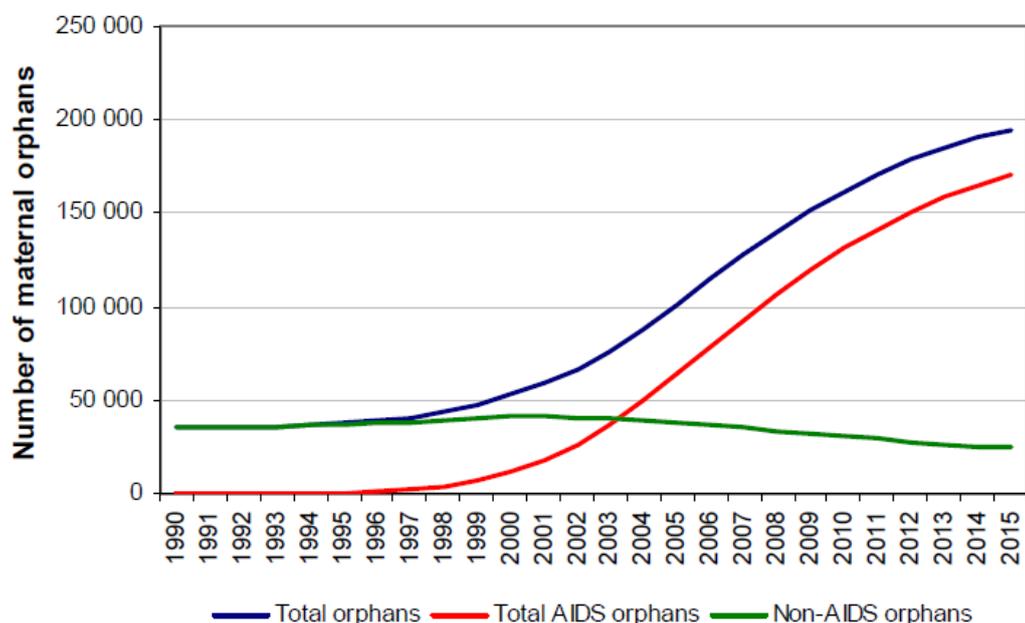


Figure 2-3: Number of Maternal orphans under 18 years within the North West Province
Source: Dorrington et al., 2006

2.3 Child-headed households

Child-headed households are one of the results of the demographic changes caused by HIV & AIDS as was discussed in the preceding section. Very little is known about the situation of children in HIV- and AIDS-affected households. However, the impacts of the demographical changes caused by HIV & AIDS on the children in informal settlements cannot be ignored.

Children are a key vulnerable group in many ways:

- Substantial numbers contract the disease from their mothers and die at a young age or during birth.
- Others are likely to grow up as maternal or paternal orphans (or both) with little support and guidance.
- Children in HIV & AIDS affected families are also likely to be compelled to move/migrate within the informal settlements. These movements usually takes three forms including: children's migration in response to low household resources due to sickness; children's migration to help sick relatives; and children's migration after the death of both parents (South African Cities Network, 2005).

This movement or migration of children within informal settlements increases their physical and psychological vulnerability. These children have to cope with challenges such as: the HIV & AIDS stigma, disrupted access to education, child labour, economic and social insecurity, physical and sexual violence, malnutrition and to becoming the targets of criminal syndicates (South African Cities Network, 2005).

Research studies within various informal settlements have shown that due to a decline in social capital and increased financial constraints on the kin, children were left to take care of their younger siblings after their parents died. The head of the household in such cases could be as young as 14 and tasked with taking care of even younger siblings. Social workers assist many of these families but access to social grants is hindered due to the lack of ID documents or birth certificates (South African Cities Network, 2005).

“These children seem to be particularly vulnerable because relatives often want to become guardians in order to access child welfare grants, resulting in a lack of care for foster children. This results in the children either running away from home and/or engaging in risky practices like drug abuse and transactional sex. Without doubt, these practices place the children at a higher risk to HIV” (South African Cities Network, 2005).

It can therefore be concluded from the above that orphaned children are more vulnerable to HIV & AIDS and the demographic changes caused by the HIV & AIDS pandemic in South Africa. These children more than often are forced to become part of child-headed households. They find it difficult to access child support grants and other forms of aid due to a lack of ID documentation and other external constraints.

It is therefore essential that mechanisms be put into place to facilitate these children’s access to child support grants and other forms of aid. This includes access to housing and shelter as well as interventions to ensure that the children can be channelled into the education system and life skills programmes in the absence of parental guidance.

2.4 Impacts of the global financial crisis

Many first world countries have invested large sums of money into African countries, including South Africa, for the upliftment of impoverished communities with emphasis on those affected

by HIV & AIDS. The recent developments in the global economy and the resulting financial crisis will however have an impact on the provision of aid to the developing countries.

A team of economic experts from the African Commission have warned that the current global financial crisis will inevitably have an impact on Africa. According to these experts, the continent's tourism sector, remittances from abroad and Aid flows will dramatically fall as a result of the global crisis (Namata, 2008). Aid budgets are under pressure because of debt problems and weak fiscal positions, e.g. in the UK and other European countries and in the USA. While the promises of increased aid at the Gleneagles summit in 2005 were already off track just three years later, aid budgets are now likely to be under increased pressure (McCulloch, 2008).

However, this does not mean that all is lost for developing countries in need of aid. There are several reasons why developed countries provide aid during an economic downturn to promote development in developing countries. This includes the need to reduce poverty in developing countries, the desire to promote global public goods and self-interest to promote the interests of the specific developed country (McCulloch, 2008).

“Reauthorized on July 30, 2008, the U.S. is continuing its commitment to global AIDS in the amount of \$39 billion for HIV & AIDS bilateral programs and contributions to the Global Fund to Fight AIDS, Tuberculosis and Malaria (USAID, 2008). According to the USAID, this initiative will support antiretroviral treatment for at least 3 million people, prevention of 12 million new HIV infections, and care and support for 12 million people, including 5 million orphans and vulnerable children

South Africa is one of PEPFAR's 15 focus countries, which collectively represent approximately 50 percent of HIV infections worldwide. Under PEPFAR, South Africa received nearly \$89.3 million in fiscal year (FY) 2004, nearly \$148.2 million in FY 2005, more than \$221.5 million in FY 2006, and \$397.8 million in FY 2007 to support comprehensive HIV & AIDS prevention, treatment and care programs. PEPFAR is providing nearly \$590.9 million in FY 2008” (USAID, 2008).

Various forms of aid will therefore still be available to South Africa, but the impacts of the global financial crisis will mean that the financial aid received should be managed much more carefully and distributed to the areas in most desperate need. **This specifically applies to Informal**

Settlement Development within the country and may call for a change in the current approach that basically entails the provision of aid and support on an ad hoc basis.

2.5 Conclusion: Current reality

According to the *State of South Africa's Population Report: Population, Poverty and Vulnerability* (2000:61), "the HIV and AIDS pandemic is the single most important phenomenon that will shape future demographic and development trends in South Africa".

Up until now, the impact of HIV & AIDS on the creation of Sustainable Human Settlements, with specific reference to the provision of housing in informal settlements, has not been taken into consideration during the Planning Process. As mentioned before, HIV & AIDS causes major changes in the demographic structure of communities within these informal settlements.

These demographic changes are having a vast impact on the socio-economic dynamics as well as the spatial structure of the informal settlements. These impacts include amongst others, a huge increase in child-headed households as well as elderly people without access to proper care. It is therefore essential to take the socio-economic as well as the psychological impacts of HIV & AIDS into consideration during the spatial planning process and the delivery of housing.

Figure 2-4 illustrates the current development scenario of informal settlements in South Africa and the relation between the highest demand (HIV & AIDS affected households) and the current focus of aid and supplies.

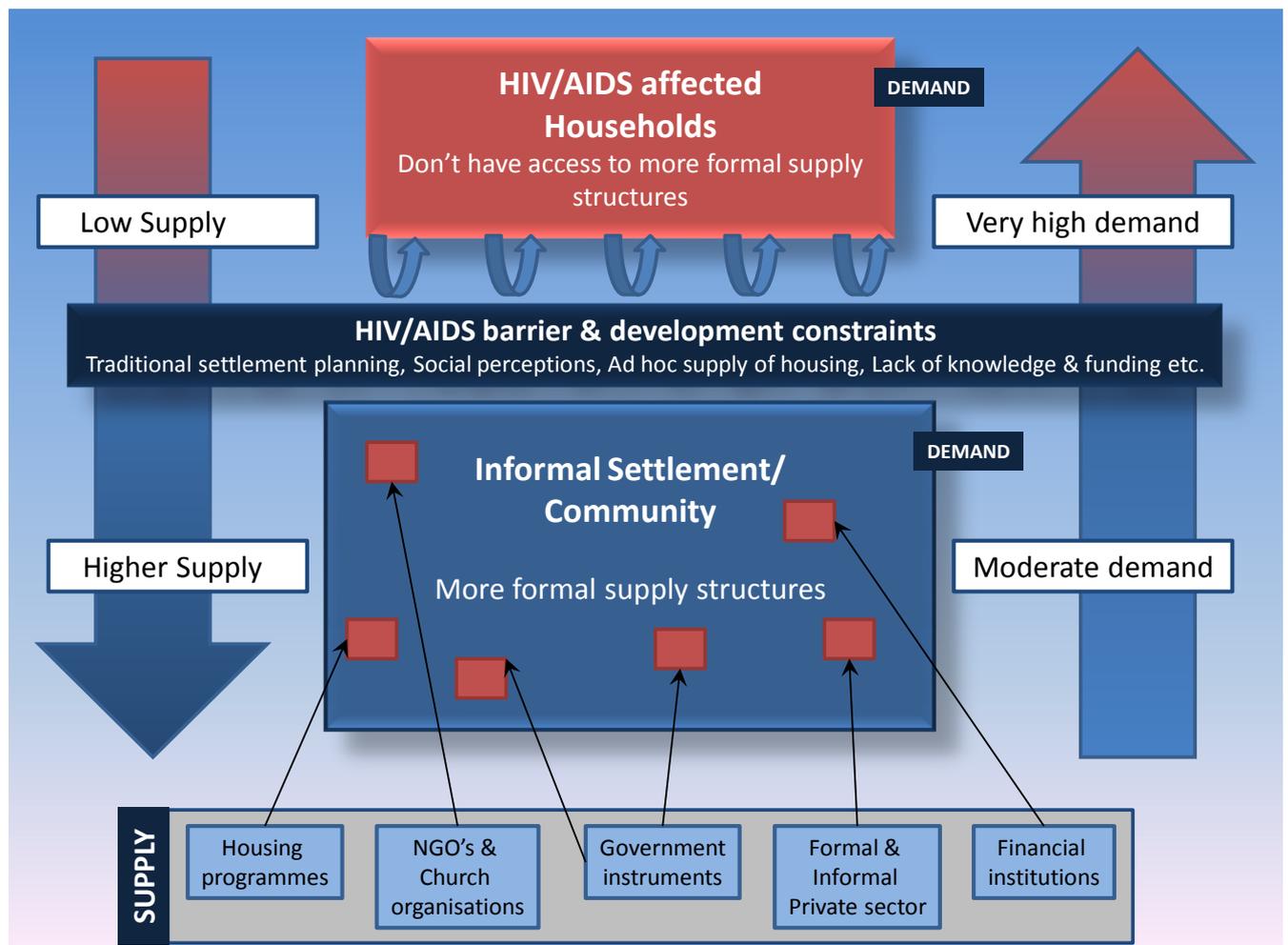


Figure 2-4: Informal Settlements: current development scenario

Source: Own construction (2015)

It is evident from **Figure 2-4** that, although there are currently various supply structures in place in the form of government instruments, assistance from NGO's and church organisations, formal and informal private sector interventions etc., the assistance from these supply organisations, is provided on an *ad hoc basis* and are usually limited to the more formal supply structures within the informal settlements. The HIV & AIDS barrier as well as other development constraints, prevents access to these supply structures, by the HIV & AIDS affected households. For example, a child-headed household will be at a disadvantage to access housing programmes or any form of financial assistance. On the basis of this understanding, the aim of this study, as mentioned earlier, is to revisit the current approaches to informal settlement development by considering strategies for development which will contribute to decreasing the rate of HIV & AIDS infection and respond to shifts in demographic and socio-economic dynamics arising from

the impacts of HIV & AIDS in society, and in turn demand and use of land. These development constraints on HIV & AIDS affected households as well as their relation to land use development and spatial planning, will be discussed in detail within the next chapter.

CHAPTER 3: SPATIAL PLANNING AND HIV/AIDS

Reflecting on the significance of the HIV & AIDS statistics as discussed during the previous chapter, it is becoming increasingly critically important for South Africa to recognise that there are numerous external factors in the socio-economic and physical environment in which people live that are fundamental to the spread of the HIV & AIDS epidemic (Isandla, 2007:2). This inevitably means that a purely medical and/or health and behaviourism orientated response to the epidemic would be deficient if the role of the physical environment (where the affected households live), are not taken into consideration. It has a direct implication on spatial planning and the spatial planning environment of South Africa. This chapter therefore provides an overview and background to the current reality of spatial planning in South Africa as well as to the traditional development approaches towards HIV & AIDS. It outlines the relation between HIV/AIDS, spatial planning and land use management whilst discussing the impacts of poverty, informality and underdevelopment on the spread of the epidemic. A number of current responses and solutions to the spatial implications of the HIV & AIDS epidemic are discussed at the end of the chapter. **Figure 3-1** outlines these main points of discussion for chapter 3.

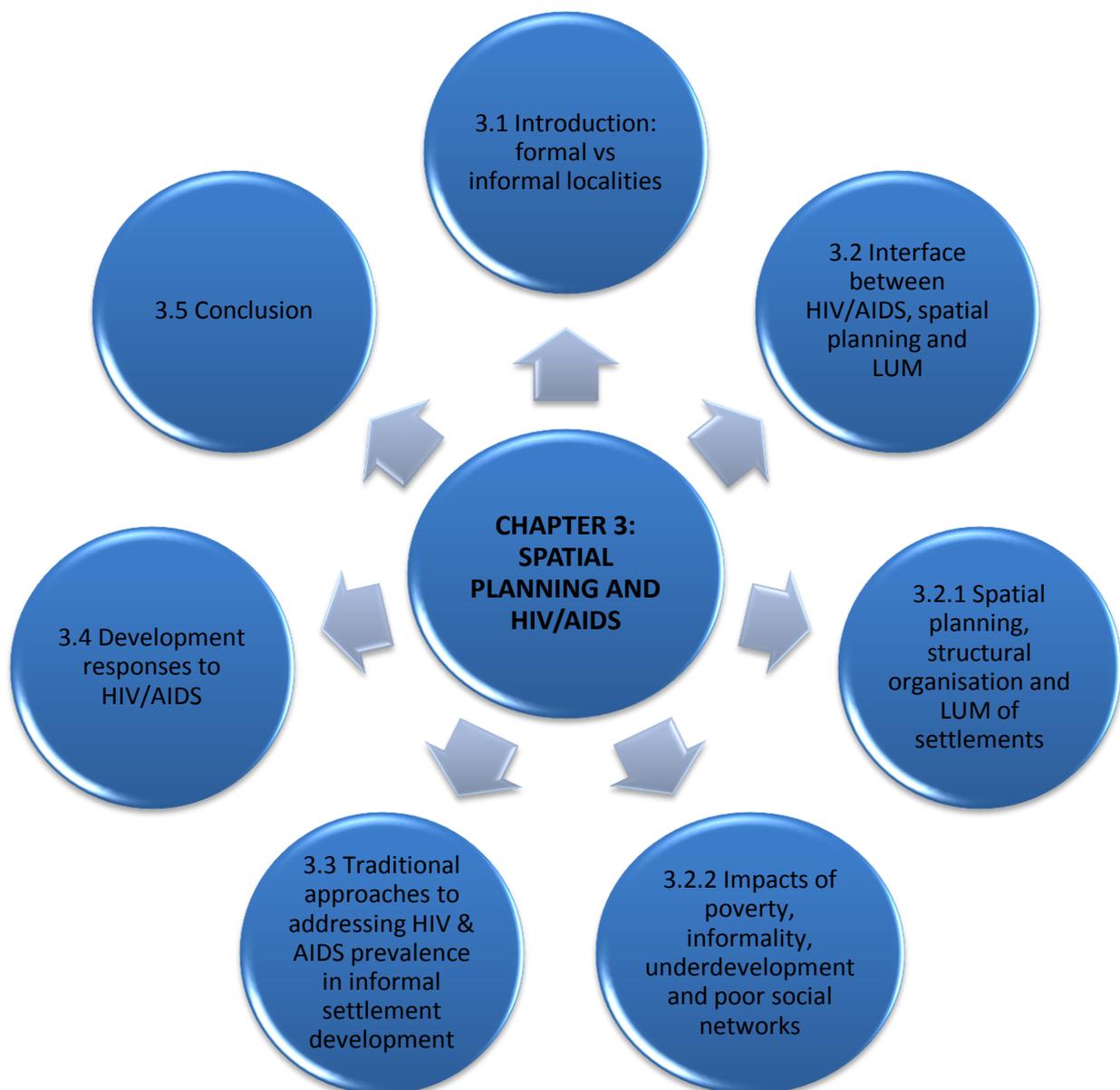


Figure 3-1: Summary of Chapter Three: Spatial Planning and HIV/AIDS

Source: Own construction (2015).

3.1 Introduction: formal vs informal localities

According to the Isandla report on Sustainable Human Settlements Development in the context of HIV/AIDS (2007:3), studies increasingly confirm that poverty, inequality and underdevelopment are central factors in increasing the risk of HIV infection. These major factors also concurrently affect the ability of individuals, households and communities to cope with the resulting health and socio-economic effects of HIV/AIDS infection. This statement confirms the viewpoint of the South African Cities Network (2005:4) declaring in a report on

Spatial Planning, that both the spread and impact of HIV & AIDS are affected by the manner in which land and space, as platforms for human activity, are structured and developed. For South Africa, this has major implications, especially in a context where large numbers of South Africans live in poverty, without adequate shelter and access to basic resources and services (Isandla, 2007:3). The UNAIDS Gap report (2014:120) estimates that approximately 6.8 million South Africans are living with HIV& AIDS of which the prevalence rate amongst adults within the “productive age group” (aged between 15-49), is 18.9%. This amounts to about 6.5 million adults (aged 15 and older) living with HIV & AIDS of which 3.9 million are women. Orphans (aged 0-17) due to HIV & AIDS are currently estimated to be around 2.3 million (Avert, 2015) which, together with the high prevalence rate amongst women, implies that the country’s demographic population is very vulnerable when future socio-economic development is concerned. Adding to this, the National Strategic Plan on HIV, STIs and TB (2012-2016:25) as well as research by the HSRC (2012:109) indicated that people living in informal settlements in urban areas have the highest HIV & AIDS prevalence of the four residential types (i.e. urban formal, urban informal, rural formal and rural informal). Collins (2000:2) and Van Donk (2006:156) confirms this and goes even further by stating that residents of urban informal settlements are especially vulnerable to HIV & AIDS infection due to their lack of access to basic services as well as the fact that they are constantly facing unfavourable conditions created as a result of high unemployment rates, informality, overcrowding and poverty.

The HSRC survey (2012:35) also noted substantial differences in HIV prevalence between people living in urban informal areas and those living in the other three locality types. Residents in the rural informal areas similarly have a significantly higher HIV prevalence when compared with those living in urban formal areas. **Table 3-1** provides a summary of these trends.

Table 3-1: Overall HIV prevalence by locality, South Africa (2012)

Locality type	HIV/AIDS prevalence %
Urban formal	10.1
Urban informal	19.9
Rural informal	13.4
Rural formal	10.4

Source: Own construction from HSRC (2012:36).

Table 3-1 highlights the fact that high HIV & AIDS prevalence in informal settlements remains a glaring issue that has been emphasised in all four of the HSRC surveys (2002, 2005, 2008 and 2012). Although some scholars have questioned this phenomenon (Hunter, 2007:690), no targeted HIV interventions have yet been developed or implemented to reduce HIV & AIDS infection in the high-risk setting of the informal settlement (HSRC, 2012:109). The South African government set itself a target in 2004 to eradicate informal settlements by 2014 (Department of Housing, 2004:12) which was evidently not met.

According to the Housing Development Agency (2012:55) approximately 1.2 million South African households reside in informal areas characterised by high levels of poverty, unemployment, inadequate shelter and inadequate access to a range of basic services. In light of these statistics, it is absolutely vital to understand why HIV/AIDS is so prevalent in informal settlements and, emanating from this, a question also arises as to what is needed to respond to the HIV & AIDS epidemic. The Isandla article (2007:3) remarks that this ultimately should lead to the creation of an enabling environment in which people are empowered to access a range of resources and services that will contribute towards improving their livelihoods. This correlates with the main goal of this study and is crucial to enable people to remain HIV negative and, where necessary, to be able to 'live positively' and cope with the consequences of HIV & AIDS.

It is also evident from the HIV & AIDS prevalence statistics as outlined in **section 2.2** of this study, that HIV & AIDS will have extensive and severe impacts, not only on the country's citizens and communities but also on spatial planning and development in general. This means that the ruling government will have to respond with innovative tactics to address the changing needs resulting from the HIV & AIDS epidemic (Isandla, 2007:3). Taking cognisance of this, **section 3.2** will discuss the interface between HIV & AIDS, spatial planning and land use management, whilst the role of government will be discussed in more detail in chapter 5 of this study.

3.2 The interface between HIV & AIDS, spatial planning and land use management

As mentioned in the previous section, the spread and impact of HIV & AIDS are affected by the way in which land and space, are structured and developed spatially. Equally, the extensive social, economic and demographic changes that arise from HIV & AIDS (refer to **section 2.2**) affects the use and spatial development of land. Therefore, as asserted by the South African Cities network (2005:4), reacting to this inter-relationship between HIV & AIDS on one hand,

and spatial planning and land use management on the other, is imperative for all municipalities. This, as mentioned in **section 3.1**, is predominantly challenging in urban informal settlements, because these are locations where land is scarce, subjected to the demands of urbanisation and also where HIV & AIDS are the most prevalent.

The interface between land use management, spatial planning and HIV & AIDS is one of a complex nature but it is vital to understand this as this forms the crux of the epidemic’s impact on informal settlement development as well as the creation of sustainable human settlements in general. The complexity of this interface relationship arises from the fact that its different facets are primarily indirectly related (SACN, 2005:4). **Figure 3-2** below, provides an illustration of the interface and resulting direct as well as indirect relationships between these three main facets.

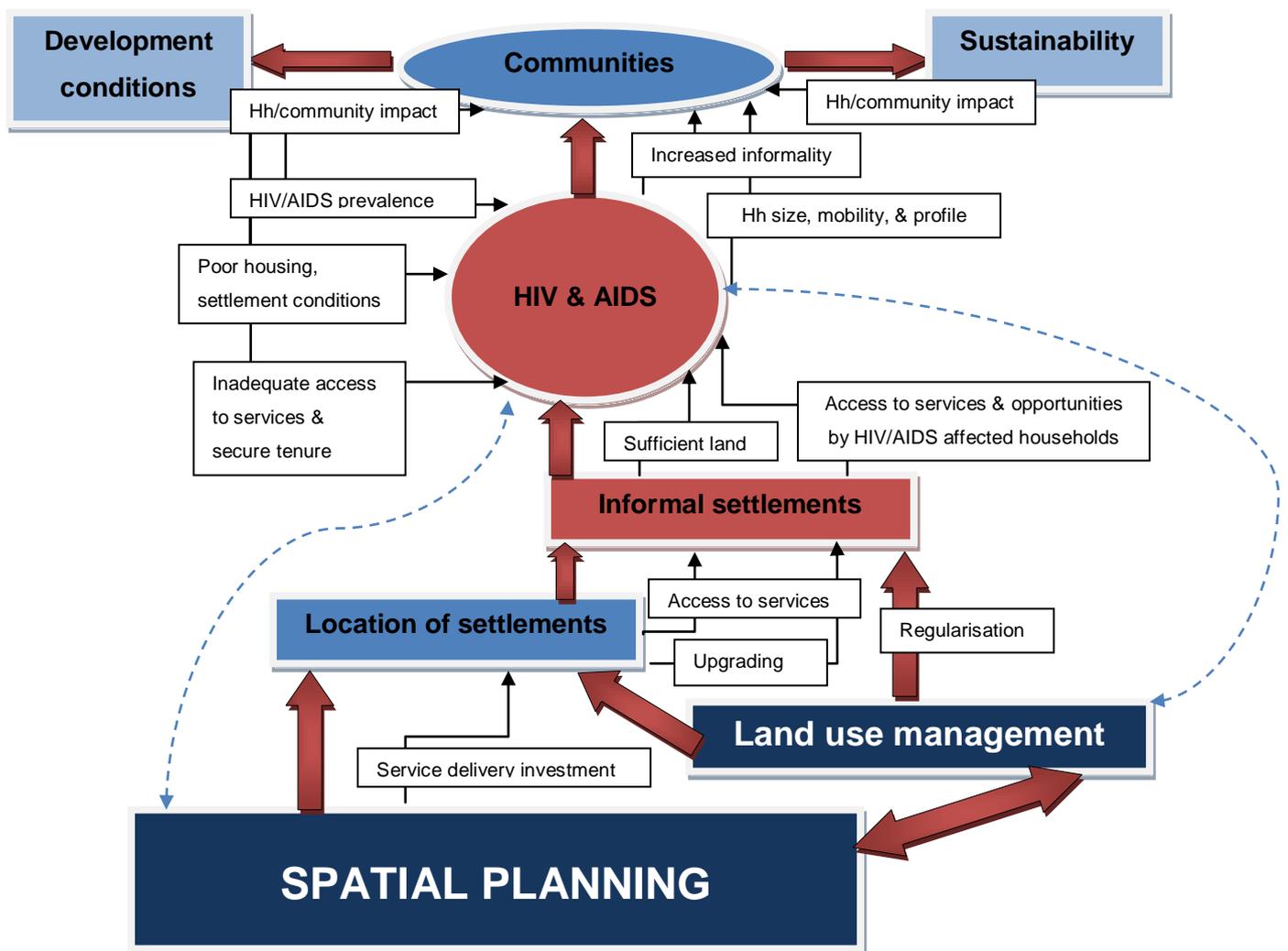


Figure 3-2: The interface between HIV/AIDS, spatial planning and land use management

Source: Own construction, 2015.

Considering **Figure 3-2** it is important to notice that HIV & AIDS impact on both the sustainability of communities as well as their development conditions. Contrariwise, these development conditions also affect HIV & AIDS prevalence and, as mentioned previously, these poor housing and settlement conditions have been associated with a higher rate of HIV/AIDS infection. Adding to this, inadequate access to services, secure tenure and housing increase the risk of HIV/AIDS infection and leave the residents of informal settlements particularly vulnerable to opportunistic infections. Poor development conditions do not provide a suitable platform for care and sustenance of the sick and frail (Tomlinson, 2003:47). **Section 3.3** of this chapter will expand more on the impacts of poverty, informality and underdevelopment on HIV & AIDS prevalence.

Furthermore, the prevalence of HIV & AIDS fuel variability in household development patterns, household size, mobility and profile, which in turn, are trends usually associated with increased informality as well as the consequent perpetuation of informal settlements (SACN, 2005:4). As indicated in **Figure 3-2**, spatial planning form the foundation on which service delivery investment decisions are made which also determines the location of new settlements and the resulting identification, regularisation and upgrading of informal settlements. Spatial planning therefore has a direct influence on the accessibility to some of the services and opportunities HIV & AIDS affected households have at their disposal to combat the spread and impacts of the epidemic (SACN, 2005:4).

Correspondingly, land use management and planning also provide fundamental guidance to spatial planning, which means that it will have an indirect effect on the spread and prevalence of HIV& AIDS. The release and provision of sufficient land to accommodate household growth in the urban settlements is one factor that is of critical importance in land use management. Failing to plan for and keep up with the release of adequate land for such development, implicates that households and individuals have little option but to turn to informality as a settlement and shelter strategy (SACN, 2005:4).

Taking all of the above into consideration, it is evident that defining and distinguishing between the terms spatial planning, land use management and land development is imperative not only for the purposes of this study, but also to guide and inform the interface between these aspects and the impacts of HIV & AIDS. The White Paper on Spatial Planning and Land Use Management (Department of Agriculture and Land Affairs, 2001:4) defined these terms as follows:

- *Spatial planning*: planning of the way in which different activities, land uses and buildings are located in relation to each other, in terms of distance between them, proximity to each other and the way in which spatial considerations influence and are influenced by economic, social, political, infrastructural and environmental considerations;
- *Land-use planning*: planning of human activity to ensure that land is put to the optimal use, taking into account the different effects that land-uses can have in relation to social, political, economic and environmental concerns;

Spatial planning as well as land use management for formal as well as informal settlements resides within the range of municipal functions and therefore the role of government in policy making and implementation will be discussed in more detail in **chapter 5**. It can be concluded from the above, however, that there are two main areas to be considered when it comes to the spatial impacts of HIV & AIDS:

- Spatial planning, structural organisation and land use management of settlements
- Impacts of poverty, informality and underdevelopment

These two overarching areas will subsequently be discussed in the following sections.

3.2.1 Spatial planning, structural organisation and land use management of settlements

The manner in which spatial and structural factors shape the geography of cities, is affecting the spread of HIV and the impacts of AIDS (SACN, 2005:8).

Considering **Table 3-1** again, the high concentration of HIV & AIDS prevalence in urban informal settlements (19,9 %) was significant in the 2012 HSRC surveys. This correlates with statistics from the HSRC (2002:34) as outlined in **Table 3-2** and also proves the fact that the prevalence of HIV & AIDS within informal settlements are location specific and has been a crucial area of concern for years. According to the SACN report (2005:8), it is estimated that between 16.2% and 26.5% (average 21.3%) of all persons living in urban informal settlements of all age groups were HIV positive in 2002. This average percentage dropped to 19,9 % in 2012, but it is still significantly higher than the comparing geotypes areas. Even more substantial, in the age group 15 to 49, average prevalence was 28.4% and ranged between 22.8% and 36% across the country. In contrast, an average 15.8% of those in the same age group living in formal urban settlements were HIV positive. In tribal areas and farms, prevalence was obviously lower at 12.4% and 11.3% respectively (HSRC, 2002:34).

Table 3-2: HIV prevalence per geotype

Locality type	HIV positive
Total	10% to 12.7%
Urban formal	10.3% to 14%
Urban informal	16.2% to 26.5%
Tribal	6.5% to 10.9%
Farms	4.8% to 11.1%

Source: HSRC (2002:34)

According to Tomlinson (2008:45) the higher prevalence of the HIV & AIDS pandemic in informal urban settlements is connected with a concentration of the predictors of HIV such as high levels of migration and prevalence of the sexually active age group among the residents of informal urban settlements. This is consistent with the contention that HIV & AIDS, like other diseases, is a symptom of rapid urbanisation (Population Action International, 2011:1).

Obviously, the factors driving the spread of HIV & AIDS are not exclusively limited to structural and spatial factors, but a lack of structural organisation and spatial planning within informal settlements increase opportunities for sexual networking and risk of HIV infection (SACN, 2005:9). Spatial planning and land use management therefore play a crucial role in the response to these factors. **Figure 3-3** provides a summary of the main spatial planning and structural organisation factors within informal settlement development which impacts the spread and prevalence of HIV & AIDS. As stated earlier, informal settlements and the subsequent poor housing conditions are spaces conducive to the prevalence of HIV & AIDS. As “unplanned” and people-driven reactions to rapid urbanisation and the increasing demand for land and housing, these settlements are places with whom the current planning system only engages with on a reactive basis (SACN, 2005:11). Considering **Figure 3-3** it is apparent that informal settlements are a symptom of the failure of the current planning system and approaches to proactively respond to the processes of urbanisation and migration, and the resulting settlement, housing and economic informality.



Figure 3-3: Spatial & structural factors impacting on HIV/AIDS prevalence

Source: Own construction from SACN (2005:4-12).

As mentioned in the introductory chapter, current approaches to informal settlement development within South Africa do not take the needs of HIV & AIDS affected households into consideration. Housing and other forms of aid are provided on an ad hoc basis. Although **Figure 3-3** highlights some of these spatial and structural issues related to the spread and prevalence of HIV & AIDS, it is not exhaustive. There are numerous more issues related to the spatial and structural organisation of informal settlements that can either directly or indirectly influence the spread and prevalence of HIV & AIDS. Many of these issues are related to transport costs, accessibility and the distribution of health care.

Expanding on the above it is necessary to note that design and layout issues may make policing particularly difficult in uncontrolled and un-developed spaces in new and existing settlements (SACN, 2005:12). This includes for example an open stretch of open land within a settlement or between two settlements. The SACN (2005:12) argues that these uncontrolled spaces affect violence levels and gender based abuse, thereby heightening residents' susceptibility to HIV & AIDS infection.

Furthermore, residents of spatially alienated informal settlements on the peripheral urban edge may not have the resources required to afford transport costs and in turn access HIV & AIDS treatment. The SACN report (2005:12) stated that government health services were the most sought after source of health care. According to another research report by Khayamandi (as quoted by the SACN, 2005:12), government hospitals are the preferred source of care for HIV & AIDS affected households, but the current health care dispensation in respect of the treatment of HIV & AIDS is endorsing home-based care as a substantial source of care. Therefore this creates another spatial planning and land use management problem as the spatial accessibility of the preferred source of health service (government hospitals), will be challenging for a considerable majority of people, in the context of urban South Africa characterised by spatial fragmentation and displacement.

Deriving from the aforementioned, it is therefore evident that the management of land use and the related structural factors, also has a major impact on the spread and prevalence of HIV & AIDS, because specific land uses and structural factors act as high transmission points. These are all summarised and discussed in **Figure 3-4** below.



Figure 3-4: Land uses and structural factors acting as HIV & AIDS transmission points

Source: Own construction from SACN (2005:4-12).

The land uses and spatial structuring elements, listed above, are forecasters of high HIV & AIDS prevalence because they create a platform for increased opportunities for sexual networking. However, it is also common knowledge that these land uses and structural elements are all essential parts of settlement development. It is therefore not wrong to accommodate and plan for these elements and land uses, but the planning approach towards the areas surrounding these land uses, is vital. This planning approach in conjunction with land use management are intrinsically relevant to strategic spatial planning and also to the main goal of this study.

Zooming in on yet a more local scale than the land uses and spatial structural organisation as discussed, research have shown that living environments within settlements (especially referring to informal settlements) can fuel the spread of HIV & AIDS. These include factors like poverty, informality, underdevelopment and poor social networks and will be discussed in the next section.

3.2.2 Impacts of poverty, informality, underdevelopment and poor social networks

It is clear from **section 3.2.1** that the HIV & AIDS epidemic is not homogeneous and, due to a number of interrelated factors, has been more prevalent in certain localities, with specific reference to urban informal settlements. Van Donk (2006:157) also confirms this in stating that HIV prevalence is highest among poor, marginalised South Africans, particularly those who live in urban informal settlements. These settlements are characterised by development issues such as poverty and inequality (particularly gender inequality), overcrowding, inadequate shelter and lack of services and infrastructure (Isandla, 2007:6). According to Collins and Rau (2000:2), these poor development conditions in informal settlements furthermore are associated with unhygienic, unhealthy and hazardous living conditions, which heighten susceptibility of people living in these areas not only to HIV & AIDS, but also to other illnesses and infections. If left untreated, these illnesses can compromise the immune system, thereby adding to the threat of HIV infection (Collins & Rau, 2000:3). **Table 3-3** summarises the impacts of these development issues on the spread and prevalence of HIV & AIDS.

Table 3-3: Impacts of poverty, informality, underdevelopment and poor social networks on HIV & AIDS

Development issue	Impacts on HIV & AIDS	Affected part of community
Poverty	<ul style="list-style-type: none"> Poverty is a very important co-determinant of HIV/AIDS infection (Van Donk, 2006:158). People living in poor circumstances are more likely to be preoccupied with day-to-day survival than with a disease like HIV/AIDS (Collins & Rau, 2000:4). Extreme poverty forces some women to engage in commercial or 	<p>Women and children (particularly girls).</p> <p>Often referred to as the feminisation of poverty (Bridge, 2001:1).</p>

Development issue	Impacts on HIV & AIDS	Affected part of community
	transactional sex, which heightens the risk and spread of HIV & AIDS (Collins and Rau, 2000:5).	
Informality	<ul style="list-style-type: none"> As discussed in section 3.2.1 overcrowded conditions and inadequate shelter result in a lack of privacy within the home, with children exposed to sexual activity and possible HIV/AIDS infection from a young age. (Van Donk, 2006:159). Informality and overcrowding also increases the risk for HIV positive people of opportunistic infections with tuberculosis (TB) which thrives in overcrowded areas (WHO, 2004:35). The HIV & AIDS epidemic is also able to thrive in informal settlements because of the lack of basic services and infrastructure (Isandla, 2007:6). In many informal settlements, water is generally provided via communal standpipes which are often located far away or in poorly lit areas where women and young girls (most likely responsible for water collection) may be at risk of being attacked or raped (Isandla, 2007:6). Similarly, access to communal sanitation facilities increases the risk of HIV infection for women and girls due to the enhanced danger of sexual violence when toilets are shared and/or located outside (Isandla, 2007:7). 	<p>HIV & AIDS affected households, especially those living in informal shacks and overcrowded conditions.</p> <p>Women and young girls isolated during communal water collection or at communal sanitation facilities.</p>
Underdevelopment	<ul style="list-style-type: none"> Unemployment and the inability to take control of one's life leads to frustration amongst people, particularly men, which at times is expressed through physical (sexual) violence against female partners or family members. This in turn increases the risk and spread of HIV & AIDS (Van Donk, 2006:158). Young girls are often taken out of school, to save money or to help with household chores and taking care of sick HIV/AIDS infected family members. Lack of education significantly decreases the opportunities of these girls/young women and increases their vulnerability towards possible HIV & AIDS infection (Isandla, 2007:7). Collins and Rau (2000:6) argue that "impoverishment often results in undernourishment and the lack of hygienic living conditions." 	<p>The HSRC (2012:108) research confirms the fact that young African women, living in poor and impoverished urban informal settlements are the most vulnerable group to HIV/AIDS infection.</p>

Development issue	Impacts on HIV & AIDS	Affected part of community
	<p>They further propose that “malnourished” and unhealthy bodies are less able to battle infection by not only HIV & AIDS but also other infections.</p> <ul style="list-style-type: none"> • Underdevelopment in the form of uncontrolled spaces, lack of design and layout affect violence levels and gender based abuse, thereby increasing residents’ vulnerability to HIV infection (SACN, 2005:12). 	
Social network & infrastructure	<ul style="list-style-type: none"> • Social networks play a crucial role in determining risk behaviour (SACN, 2005:13). • The social disruption, which characterises certain types of migration, defines vulnerability to HIV & AIDS (Van Donk, 2006:158). • Social assets such as cohesive communities, provide a platform around which to effectively engage regarding the socio-economic impacts of HIV & AIDS at the household and community level’ (SACN, 2005:13). • Informal settlements frequently lack access to social and public infrastructure (e.g. libraries, recreational facilities, parks and other gathering places). These are vital for keeping young people occupied and away from engaging in drug and alcohol abuse, which contributes to high-risk behaviour and subsequently increased possibility of HIV infection (Hunter, 2006:696). • Settlement locations with newly formed communities, such as migration reception areas and recently established RDP housing developments, have weak social networks, which heighten residents’ vulnerability to HIV & AIDS infection (SACN, 2005:13). 	Newly formed communities, such as migration reception areas and recently established RDP housing developments.

Source: Own construction, 2015.

As proposed earlier, these above-mentioned factors also affect the ability of individuals, households and communities within informal settlements particularly, to develop in a socio-economic manner. This has long-term effects for society and the country as a whole. It also has serious consequences for policy development and implementation within all spheres of government (refer to **chapter 5**). As mentioned in the **introductory chapter** of this study, the

problems associated with informal settlements in South Africa, are not unknown, neither are they recent. Throughout the years, hundreds of initiatives have been established, aimed at addressing the disjointed spatial patterns, social and economic problems persisting in these informal settlements as discussed in the preceding sections. In order to orientate oneself comprehensively on possible solutions and mitigation measures, it is crucial to have a brief look at traditional planning approaches to address HIV & AIDS prevalence in informal settlements.

3.3 Traditional approaches to addressing HIV & AIDS prevalence in informal settlement development

Traditionally, the overwhelming majority of responses to the HIV & AIDS epidemic have primarily regarded it from a bio-medical point of view. This implies that traditional approaches focus principally on the virus and treatment related matters and on individual behavioural change as the most imperative method of prevention – the ABC (Abstain, Be Faithful, Condomise) approach (Isandla, 2007:5). The importance and necessity of prevention and treatment of HIV & AIDS speaks for itself, but these approaches do not take into consideration the spatial development factors that prevent people from access to treatment or heighten the risk and spread of the epidemic. It is vital to identify and recognise the socio-economic circumstances that affect people's ability to make rational and informed decisions about their sexual experiences and relationships (Isandla, 2007:5). The **preceding sections** of this study provided a comprehensive outline of these socio-economic as well as spatial planning factors.

It is also imperative to stress that while this study will only concentrate on the spatial and structural factors that affect the spread and prevalence of HIV & AIDS, it does not deny that there are a number of behavioural factors that also affect the HIV infection rate, which highlights the constant need for traditional prevention and treatment courses.

Most of these housing, structural, land use management and informal settlement conditions as discussed in **section 3.2** have not developed because of present-day spatial planning and lack of land use management interventions. Instead, they originated from the fragmented, sprawling cities and the spatial legacy of apartheid. These traditional approaches to spatial development planning aggravated the spread and impact of HIV & AIDS (SACN, 2005:8). Furthermore, these development issues and processes are fundamentally significant to strategic spatial planning but have mainly been defined as housing-related issues, wherein planning only plays a reactive

role (SACN, 2005:9). This includes traditional town planning processes like township establishments or the monitoring and enforcement of adherence to zoning and town planning scheme provisions (SACN, 2005:9).

Up until now, urban areas in South Africa have tended to adopt a fairly traditional, rigorous and conservative stance in reaction to processes of HIV & AIDS prevalence in informal settlements, especially concerning land invasions, backyard shacking or slumming. According to the SACN report (2005:10) the *“eviction of illegal and informal residents is common-place and rationalised as acceptable in a context where the state’s responsibilities in respect of the right to housing is deemed to be upheld via the provincially administered housing subsidy programme”*. However, despite nearly 1.7 million housing subsidies being approved since the beginning of the subsidy programme (SACN, 2005:10), this control-based approach to settlement development and regulation of the spread of HIV & AIDS, in a context of insufficient supply capacity, has meant that supply remains exceeded by demand (refer to **section 2.5** of this study). This continues to perpetuate informal settlement processes (SACN, 2005:9).

Some of the other traditional approaches to addressing the impacts of HIV & AIDS on informal settlement development include:

- Provision of RDP housing to address the housing backlog and formalise the informal settlements.
- Improve access to land
- Orphanages to counter the prevalence of child-headed households
- Old age homes in order to provide care for the elderly
- Mobile clinics and other forms of mobile/home-based health care
- Welfare/local government processes
- Ad hoc implementation of various upliftment projects powered by NGO’s, the private sector and church organisations

(Interagency Coalition on AIDS and Development, 2010:5; SACN, 2005:11; Tomlinson, 2006:28 & HDA, 2012:49)

It is obvious that the provision of RDP housing on an ad hoc basis as well as providing aid to HIV & AIDS affected households in an unstructured manner, will not solve the current development issues and spatial challenges associated with the epidemic. Development responses encompassing a more holistic approach are needed. The development of integrated and sustainable human settlements is one example of an all-inclusive response to the impacts

of HIV & AIDS on informal settlement development. **Section 3.4** briefly discusses these development responses, but sustainable human settlements as a separate concept will be discussed in more detail in chapter 4 of this research study.

3.4 Development responses to HIV & AIDS?

As mentioned previously, the development of integrated and sustainable human settlements with adequate access to basic services, social and public infrastructure is crucial if South Africa is to address the HIV/AIDS epidemic successfully (Isandla, 2007:12). Within this development response, it is vital that the needs of communities in informal settlements are understood very well, as this is the only way to develop policies that will effectively address poverty, inequality, underdevelopment and HIV/AIDS. However, according to Isandla (2007:13), the needs of communities living within informal settlements are often completely disregarded and the implementation of policy has frequently been a top down approach. The Isandla report argued that this might be because informality is such a disputed matter, traditionally seen as “bad, criminal and unsavoury” and something that should be “eradicated.” Neuwirth (2006: xiv) contends that the problem involves more than finances. Developers have no interest in building for the poor and neither do local and national leaders. People living in informal settlements are neglected and disrespected by governments, politicians, the press and even much of the public. They even often neglect and disrespect themselves as well (Neuwirth, 2006: xiv).

Considering this, the logical conclusion to this development situation would be to call for the eradication of informal settlements. The South African government has identified this eradication as its ultimate goal, to be reached by 2014 (Isandla, 2007:12), which evidently did not realise. The prevalence of HIV & AIDS adds to the current development predicament but arguing for the eradication of informal settlements would be a very unrealistic and naïve response to the current situation. Some of the reasons being the following:

- The eradication of informal settlements is completely unrealistic, due to lacking government policies, marginalisation of HIV & AIDS affected households, narrow time frames for housing delivery, an increasing backlog in the provision of housing and a lack of adequate human and capital resources particularly in municipalities who are the main implementers of government policy (Isandla, 2007:13 & Sida, 2007:2).
- An eradication development approach does not take the role of the informal system into consideration. The informal sector came into existence as a result of the inadequacies

and inability of the formal sector to accommodate people who reside in informal areas into socio- economic sectors. Residents and communities within informal settlements have put many innovative strategies and mechanisms in place in order to survive, whilst facing serious challenges like the impacts of HIV & AIDS (Isandla, 2007:13 & IRR, 2015:6).

- Calling for the eradication of informal settlements as a development response, stems from a failure to understand why these settlements exist in the first place and how they function. It is essential to recognise the importance of the community networks that exist within the informal sector and how they form an essential component of people's day-to-day lives to provide both a safety net and a sense of community spirit and engagement (Isandla 2007, 13 & Neuwirth, 2006:xv).

The development response described above is an exceptionally destructive and constricted development response to informal settlements and informality in general, which indicates a failure to comprehend how such settlements have developed in reaction to a situation where the government has failed to efficiently provide for all those within its jurisdiction (Isandla, 2007:13). Isandla (2007:13) further states that policies intended to improve the plight of the poor have usually been imposed on them without a distinct and exhaustive understanding of what exactly is required to uplift them and revitalise their impoverished and marginalised positions in society. Adding to this the burden created by HIV & AIDS, it is even more imperative for government to understand the needs of the people it serves.

Over the past two decades, however, development responses have shifted from an emphasis on building houses to recognising the significance of providing access to resources and opportunities, which would enable active participation in the socio- economic milieu of South Africa (SACN, 2014:3). The general development response to informality and subsequently the prevalence of HIV & AIDS therefore moved away from the narrow conceptualisation ('housing') to a more holistic framing ('human settlements') which in turn, requires substantial conceptual, political, and practical adjustment (SACN, 2014:3).

3.5 Conclusion

It can be concluded from **chapter 3** that the interface between land use management, spatial planning and HIV & AIDS is one of a complex nature. It is, however, vital to understand this relation, as this forms the crux of the epidemic's impact on informal settlement development as

well as the creation of sustainable human settlements in general. **The spread and prevalence of HIV & AIDS is intrinsically connected to spatial planning and land use management and it would be a major error to not recognise this in the planning, and development approaches towards informal settlement development.** This especially applies to urban informal settlements, where HIV & AIDS prevalence is traditionally the highest. Development constraints like poverty, informality, underdevelopment and inequality are most certainly not features that are unique to urban areas in South Africa, but informal settlements have added factors which contribute to the spread of HIV & AIDS. These include a high level of overcrowding and population density in urban areas and particularly in informal settlements, migration to cities mostly in search of better job opportunities, the rate and depth of poverty in urban areas compared to that in rural areas, poor living conditions in crowded informal settlements, lack of basic services and infrastructure, and inadequate planning on the part of government to create integrated, sustainable human settlements in urban areas. HIV & AIDS therefore impacts on both the sustainability of communities as well as their development conditions. Inadequate access to services, secure tenure and housing increase the risk of HIV/AIDS infection and leave the residents of informal settlements particularly vulnerable to opportunistic infections. **Traditional approaches to address the prevalence of HIV & AIDS in informal settlements, is ad hoc and reactive in nature and therefore do not seem to keep up with the increasing demand for better housing and development opportunities.** It is obvious from the research in **chapter 3** that the provision of RDP housing on an ad hoc basis as well as providing aid to HIV & AIDS affected households in an unstructured manner will not solve the current development issues and spatial challenges associated with the epidemic. Development responses encompassing a more holistic approach are needed. The development of integrated and sustainable human settlements is one example of an all-inclusive response to the impacts of HIV & AIDS on informal settlement development. Subsequently **chapter 4** will focus on the discussing sustainable human settlements as a development response to HIV & AIDS.

CHAPTER 4: SUSTAINABLE HUMAN SETTLEMENTS AND HIV & AIDS

It was already mentioned in **section 2.1** of this study that one of the major challenges within informal settlement development, is to deliver the housing in such a way as to create sustainable human settlements. **Chapter 3** expanded on this by stating that development responses to informality and subsequently the prevalence of HIV & AIDS have moved away from the narrow conceptualisation ('housing') to a more holistic framing ('human settlements') which in turn, requires substantial conceptual, political, and practical adjustment (SACN, 2014:3). This chapter therefore aims to discuss the concept of sustainable human settlement development (SHS), in the context of the impacts of HIV & AIDS, in more detail. Key attributes of sustainable human settlements will be identified and defined and the integration of HIV & AIDS in SHS planning will also be discussed during the course of this chapter.

Figure 4-1 outlines the main focus points of **chapter 4**.



Figure 4-1: Summary of Chapter Four: Sustainable human settlements and HIV/AIDS

Source: Own construction (2015).

4.1 Introduction

In a rapidly changing and urbanising world, the development of informal settlements in a way that would be holistic, sustainable and resilient in the long run, is currently a widely discussed topic and an approach that seems flawless on paper, but that lacks seriously in the practical implementation thereof. Between 1994 and 2004, the National Department of Housing facilitated the delivery of 1.6 million houses, which indicates significant progress in terms of addressing one of the worst legacies of the apartheid regime. This legacy of Apartheid, left

millions of South Africans without access to adequate housing. The provision of housing to the country's poor and marginalised citizens was for South Africa's first democratic government a key step towards addressing poverty and inequality (National Department of Housing, 2008:5).

However, it became increasingly clear during these first ten years that the provision of housing within informal settlements in South Africa could not occur in an isolated environment i.e. the ad hoc provision of housing. It should occur in a sustainable and holistic way, taking cognisance of the social as well as economic impacts on the community. What was needed instead, was the creation of an enabling environment in which people are empowered to access a range of resources and services that will contribute towards creating sustainable livelihoods (Isandla, 2007:14). Sustainable housing is, however, yet to gain its due prominence in developing countries. The alleged "pro-poor housing programmes" often provide accommodation of poor standards, in remote locations, with little concern for the residents' lifestyle and livelihood strategies in many developing countries. Rapid housing developments in other developing countries generate an amplified carbon footprint and additional negative impacts on the environment. Therefore, in the settlements of most developing countries, decent, safe and sustainable housing remains a dream for the majority of the population, while government considers affordable housing as purely a social burden (UN Habitat, 2012:1).

The Breaking New Ground (BNG) strategy defines sustainable human settlements as "well managed entities in which economic growth and social development are in balance with the carrying capacity of the natural system on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity" (National Department of Housing, 2004:11). The topic of sustainable development and SHS has been extensively researched and published on, but it is not the aim of this study to expand on these themes or provide lengthy definitions of sustainability. However, the characteristics of SHS as well as the integration of HIV & AIDS within the concept of SHS is vitally important for this study and will be discussed comprehensively in the following sections. The Isandla research report (2007) has proposed eight key aspects or attributes of sustainable human settlements, which are listed in

Figure 4-2 below.



Figure 4-2: Eight typical characteristics of sustainable human settlements

Source: Own construction from Isandla (2007:14-23)

Section 4.2 will discuss these characteristics in matrix format with specific reference to the challenges presented by the HIV & AIDS epidemic.

4.2 Defining key attributes of sustainable human settlements

With reference to **Figure 4-2**, it is first and foremost of essential value to identify and describe the key attributes of SHS. A lack of understanding concerning the exact characteristics of SHS will consequently lead to poor implementation, monitoring and evaluation of the informal settlement development processes. Key attributes provide the theoretical basis for evaluating and measuring current informal settlements in order to attain SHS status. Again, these attributes of SHS have been contended in numerous research reports and SHS related studies. For the purposes of this study the key attributes of adequate housing as listed by the Urban

Sector Network (2003:12), will be used combined with the key characteristics as discussed in the Isandla (2007:14) report. This can be listed as follows and will be discussed in detail in matrix format (refer to **Table 4-1: Matrix of key attributes for SHS and the impacts of HIV & AIDS prevalence**):

- Adequate shelter/secure tenure
- Access to basic services and infrastructure
- Economic viability/ affordability
- Habitability and health standards
- Accessibility/ transport systems,
- Location, densification and compaction
- Social integration and cultural adequacy
- Environmental sustainability.

(Urban Sector Network, 2003:12 & Isandla, 2007:14)

Table 4-1: Matrix of key attributes for SHS and the impacts of HIV & AIDS prevalence

Key SHS attribute	Definition/description	Impacts on HIV/AIDS prevalence
Adequate shelter/ secure tenure	<ul style="list-style-type: none"> • Provision of housing is a primary component of sustainable human settlement planning and development. • Section 26 of the Constitution states that: (1) Everyone has the right to have access to adequate housing (Isandla, 2007:15) • Articles 60 of the Habitat Agenda (2003:22), defines adequate housing as: “more than a roof over one’s head”. It also means e.g. adequate privacy; space; accessibility; security; structural stability; basic infrastructure; environmental quality, accessible location with regard to work and basic facilities: all of which should be available at an affordable cost...” 	<ul style="list-style-type: none"> • Shelter provision is an important strategy to reduce vulnerability to HIV infection. • The nature of tenure arrangements also plays a vital role (e.g. rental or ownership), unit design and size, quality of residential units, cost/affordability, and the process whereby decisions about shelter provision are made. • HIV/AIDS challenges the government’s bias towards individual home ownership in its housing programme to broaden its approach to include other forms of housing types or tenure arrangements (Isandla, 2007:15).

Key SHS attribute	Definition/description	Impacts on HIV/AIDS prevalence
<p>Access to basic services and infrastructure</p>	<ul style="list-style-type: none"> • According to Isandla (2007:15), this refers to the availability of services, materials, facilities and infrastructure. • It includes access to adequate basic services like water, sanitation, solid waste removal and safe and reliable sources of electricity. • Social infrastructure for community and social participation like community halls, parks, libraries, sports fields, police services as well as shops, trading facilities and recreational facilities are also included as is health and educational facilities (Isandla, 2007:15). 	<ul style="list-style-type: none"> • Access to health and educational facilities are particularly important in the context of HIV/AIDS. • There has been increasing evidence that a higher disease burden exists among people with lower education levels (Shisana and Simbayi 2002). • Health and educational facilities are important in providing people with access to information on preventative health care as well as home based care. • Access to well-resourced police and protection services is vital as the rate of sexual violence against women and children is unacceptably high and promotes the spread of HIV & AIDS (Isandla, 2007:17).
<p>Economic viability/affordability</p>	<ul style="list-style-type: none"> • It is vital for SHS that they have to be economically viable and affordable for inhabitants. Affordability is absolutely key to ensure people’s right to housing and housing subsidies. • Effective measures should be in place to ensure that people are able to support themselves and that they have the required resources to maintain their shelter and security of tenure (Isandla, 2007:15). • The Urban Sector Network (2003:25) argues that it is the responsibility of the government to “provide sufficient resources to ensure that poor people would be able to secure adequate housing and be protected against losing 	<ul style="list-style-type: none"> • The financial implications of HIV/AIDS on poor households are extreme. • HIV/AIDS affected households often have to transfer resources to the needs of family members who are HIV positive, which includes spending money, and resources on medicine, hospital visits and supplies for home-based care. • Possible loss of income when the sick family member can no longer work or when the primary breadwinner dies, places a further strain on HIV affected households (Isandla, 2007:18).

Key SHS attribute	Definition/description	Impacts on HIV/AIDS prevalence
	it due to unemployment or other vulnerability”.	
Habitability and health standards	<ul style="list-style-type: none"> Habitability adds to the housing standards as outlined in Articles 60 of the Habitat Agenda. It includes adequate space, protection from cold, damp, heat, rain, wind or other threats to health, structural hazards, and disease vectors. 	<ul style="list-style-type: none"> Uninhabitable circumstances, poor quality of housing and health standards increases the possibility of falling ill (especially referring to people already infected with HIV/AIDS) due to damp and leaking walls, poor ventilation etc. (Smit, 2000:9).
Accessibility/transport systems,	<ul style="list-style-type: none"> SHS must provide access to safe, reliable and affordable transport. Accessibility therefore also refers to a reliable and affordable public transport system that would assist people to access income-generating activities to improve their livelihoods (Isandla, 2007:18). This attribute also includes access to employment options, health-care services, schools, child-care centres and other social facilities 	<ul style="list-style-type: none"> Accessibility improves the lives of those who have to access medical facilities, particularly when they are very ill and suffering from opportunistic infections (Rangaka, 2007). In addition to efficiency, affordability and reliability, an accessible transport system should also promote enhanced safety and security, especially for women and girls, to help reduce vulnerability to HIV/AIDS infection by minimising the risk of physical and sexual attack (Isandla, 2007:18). High levels of accessibility in informal settlements may provide the necessary shield that allows households to cope when household assets and income are eroded by the burden of HIV/AIDS
Location, densification and compaction	<ul style="list-style-type: none"> Low-density development has been identified as a key obstruction to creating integrated and SHS. Among the problems created by low-density development is the inconvenience and associated cost for people who have to commute long 	<ul style="list-style-type: none"> In the context of the impacts on HIV/AIDS prevalence, densification offers advantages like strengthening livelihood strategies of communities by locating them closer to social/public facilities and economic opportunities (Isandla, 2007:20).

Key SHS attribute	Definition/description	Impacts on HIV/AIDS prevalence
	<p>distances to work (Isandla, 2007:20).</p> <ul style="list-style-type: none"> Other factors include the charge to municipalities of having to provide services in distant areas to a relatively small group of people (SACN, 2005:18). 	<ul style="list-style-type: none"> By creating denser and more compact settlements, close to socio-economic opportunities, some of the most important factors that contribute to vulnerability to HIV infection would be addressed (Isandla, 2007:20).
<p>Social integration and cultural adequacy</p>	<ul style="list-style-type: none"> It is crucial that SHS provides the space for people of different cultures to perform their cultural practices and encourages cultural diversity and integration (Isandla, 2007:19). The development of SHS should also be about ensuring that people are able to exercise their democratic rights. Community participation and mobilisation is an essential feature of substantive democracy. 	<ul style="list-style-type: none"> Recognising the voice and experiences of social groups who are poor, marginalised and potentially vulnerable to HIV infection as well as households already infected or affected by HIV/AIDS, is crucial. For many residents in informal settlements social networks is a particularly important resource and for many individuals and households affected by HIV/AIDS, community support can be extremely valuable (Isandla, 2007:19). People are able to rely on their neighbours to assist with food, care and shelter in instances where families are overburdened by having to deal with HIV/AIDS (Isandla, 2007:20).
<p>Environmental sustainability</p>	<ul style="list-style-type: none"> This attribute focuses on creating environmentally sustainable human settlements that include the promotion of reusable energy sources (e.g. solar energy), recycling and water and sanitation options that are environmentally friendly. Urban sprawl undermines the prospect of sustainable cities. City compaction through land infill and higher density 	<ul style="list-style-type: none"> Where environmentally sustainable service provision options are affordable and reliable, it will serve the benefits of the poor in general and those most vulnerable to and directly affected by HIV & AIDS specifically. Inadequate housing and basic service provision (water, sanitation, waste) creates a condition of risk for the urban poor, which makes them more

Key SHS attribute	Definition/description	Impacts on HIV/AIDS prevalence
	development contributes to more effective provision and use of basic services like water and electricity and reduce time spent commuting to work, thereby reducing gas emissions from vehicles and trains (Isandla, 2007:21).	<p>susceptible to infection with HIV & AIDS and associated illnesses.</p> <ul style="list-style-type: none"> • Simultaneously HIV & AIDS aggravates the environmental health load on poor and marginalized social groups (Isandla, 2007:21).

Source: Own construction from Urban Sector Network, 2003:12 & Isandla, 2007:14-23

In order to ensure successful implementation of SHS, all of the afore-mentioned key attributes need to be studied and implemented in an integrated manner. This differs from settlement to settlement and it is therefore crucial that each informal settlement is evaluated separately according to these attributes. **Chapter 8** of this study attempts to illustrate this evaluation process as well as the unique attribute evaluation results for each varying community. This concept of integration is a crucial component of any sustainable human settlement planning and development strategy. Without ensuring that integration takes place, the government will essentially continue to create housing developments that do not meet the necessary requirements for SHS. The matrix in **Table 4-2: A critical perspective on current realities in South Africa within the context of sustainable human settlements attributes.**

Table 4-2: A critical perspective on current realities in South Africa within the context of sustainable human settlements

Key SHS attribute	Current reality: critical perspective	Summary of SHS problem areas
Adequate shelter/ secure tenure	<ul style="list-style-type: none"> • Currently, the majority of housing subsidies are project-linked which provides freestanding units with full ownership as the only tenure option. • For many poor families, the weight of taking care of a family member who is infected by HIV/AIDS means that expenditure on other items like the up keeping of a house/property is not a priority (Isandla, 2007:16) • Tomlinson (2001:651) argues that this narrow concept of shelter provision fails to provide an effective response to the situation 	<ol style="list-style-type: none"> 1. Housing subsidies 2. Severely limited tenure options 3. Maintenance costs 4. Housing policy 5. Housing expenditure

Key SHS attribute	Current reality: critical perspective	Summary of SHS problem areas
	<p>created by the HIV/AIDS epidemic.</p> <ul style="list-style-type: none"> • In the context of HIV/AIDS, which has primarily affected the poor and resulted in the marginalisation of HIV/AIDS affected households, housing policy should be less concerned with providing houses for tenure but should be more focussed on housing in a form that provides shelter and access to basic services in a way that minimises housing expenditure (Tomlinson, 2001:655). • Alternative housing options or shelter provision should be considered. It can take other forms like multi-storey blocks of flats, semi-detached houses or renovated hostel units, rental (both public and private) or rent-to-buy options (Isandla, 2007:16). • Due to the high cost of well-located land, the government has built the vast majority of its subsidised housing on the periphery, far away from markets, economic opportunities and social facilities (Isandla, 2007:16). • Government has approached housing from a mass delivery perspective resulting in the tenacious situation whereby the democratically elected government has perpetuated the apartheid style ghettos that marginalised and excluded people (Rust, 2003). • Poor quality RDP houses that were built up until 2004 might have contributed to the inability of people to cope with the effects of the HIV/AIDS epidemic e.g. many houses are poorly built, with no ceilings and inadequate insulation and are too small to accommodate large extended families (Smit, 2000:9). 	<ol style="list-style-type: none"> 6. Migrants and short term inhabitants 7. Location on the urban periphery 8. Poor quality of housing delivered 9. Inadequate ventilation and overcrowding 10. Housing not conducive to health care

Key SHS attribute	Current reality: critical perspective	Summary of SHS problem areas
Access to basic services and infrastructure	<ul style="list-style-type: none"> • Currently, many communities in South Africa, especially those located in informal settlements, experience low or basically non-existent levels of basic service delivery. • Poor access to water, sanitation and environmental health, increases the likelihood of contracting opportunistic infections such as TB and HIV/AIDS (SACN, 2005:11). • Inadequate access to water, sanitation, energy and solid waste management compromises the immune system of both HIV positive and negative alike. Contaminated wastes may carry microorganisms that can infect anyone who come in contact with the waste (WHO, 20015:15). • The rate of sexual violence against women and children is unacceptably high and there continues to be a low rate of reporting of these crimes (Isandla, 2007:16). 	<ol style="list-style-type: none"> 1. Access to clean water and sanitation 2. Lacking waste management 3. Access to health and educational facilities 4. Access to well-resourced police and protection services
Economic viability/ affordability	<ul style="list-style-type: none"> • Continuous development of settlements on the urban periphery, far removed from employment opportunities and potential markets, is a reality (Isandla, 2007:17). • Relocation to RDP homes from informal settlements and backyard shacks, has had a major impact on the residents' ability to retain employment and ensure a regular income in instances where they are relocated to areas that are far away from their workplaces or 'markets' (Smit, 2000:11). • The current limited number of tenure options is an enormous problem. Communities in informal settlements need an option of accessing "inexpensive rental housing" or accessing the type of housing that they might need or can afford at that particular time. • The current expenses associated with home ownership therefore means that major adjustments have to be made to household income and expenditure. 	<ol style="list-style-type: none"> 1. Location on the urban periphery 2. Access to workplaces 3. Severely limited tenure options
Habitability and health standards	<ul style="list-style-type: none"> • Many of the RDP houses that were provided by the South African government post 1994 did not conform to the standards of habitability and sustainability. • This increased the possibility of falling ill (especially referring to 	<ol style="list-style-type: none"> 1. Poor quality RDP housing 2. Health hazards

Key SHS attribute	Current reality: critical perspective	Summary of SHS problem areas
	<p>people already infected with HIV/AIDS) due to damp and leaking walls, poor ventilation etc. (Smit, 2000:9).</p>	
Accessibility/transport systems,	<ul style="list-style-type: none"> • Presently, in the case of most low-income settlements, business, retail, leisure and economic opportunities are located far away and poor people have to make use of public transport or non-motorised transport to access those places (Isandla, 2007:18). • SHS must have access to affordable, safe and reliable transport which is currently a major concern in South Africa with its transport system that is often neither safe nor reliable (Vanderschuren & Galaria, 2003:267). Currently the transport system does not cater effectively for people who have to make use of wheelchairs or other medical aids to move around, which has major implications for HIV/AIDS affected and infected individuals who have to access medical facilities for antiretroviral (ARV) medication. • Current high/additional transport costs forces many people to move back to informal settlements that are situated closer to their workplaces (Smit, 2000:10). 	<ol style="list-style-type: none"> 1. Expensive and inefficient public transport system 2. Transport system not accommodating towards ill or disabled people
Location, densification and compaction	<ul style="list-style-type: none"> • In South Africa, the policy (and public) preference for freestanding houses and the location of new low density, low-income housing projects on the urban periphery has contributed to urban sprawl (Isandla, 2007:20). • According to the SACN (2005:8), due to the apartheid system, South African cities are characterised by urban sprawl and have particularly low urban density levels, namely 1 560 people per square km, compared to levels of 13 346 in London, 24 439 in Paris and 23 801 in Calcutta. 	<ol style="list-style-type: none"> 1. Urban sprawl 2. Low urban density 3. Poor accessibility
Social integration and cultural adequacy	<ul style="list-style-type: none"> • According to the 2006, State of the Cities report by the SACN (2006:59) the location of housing schemes on the periphery has reinforced “the sprawling, fragmented, racially divided character of South African cities”. • This resulted in the exclusion of people from a number of social, economic and political processes. • In 2006, the South African government introduced the concept of “inclusionary housing” developments in an attempt to encourage 	<ol style="list-style-type: none"> 1. Location on the urban periphery 2. Social exclusion 3. Misconceptions about social integration

Key SHS attribute	Current reality: critical perspective	Summary of SHS problem areas
	integration of high income and low-income households (Smit and Purchase, 2006). However, this has not been met with much eagerness and could be explained by the fact that there continues to be a number of misconceptions in South Africa, particularly about the poor, that have been cultivated over years and will not be changed overnight (Isandla, 2007:19).	
Environmental sustainability	<ul style="list-style-type: none"> • Unserviced informal settlements in particular are health hazards that not only jeopardise the health and wellbeing of current residents, but the environmental sustainability of cities as a whole. • Furthermore, the lack of green spaces is one of the most striking features of post-apartheid housing schemes. This includes features such as parks and playgrounds (Isandla, 2007:21). • Currently, in many ways, new low-income housing developments look no different from informal settlements and are in stark contrast to the green leafy spaces of the middle and high-income suburbs in the urban areas. • Green public spaces can also serve as central spaces of interaction and engagement, which is likely to enhance social cohesion and integration, which are vital elements of a comprehensive response in the context of HIV & AIDS. 	<ol style="list-style-type: none"> 1. Unserviced informal settlements 2. Lack of green public spaces

Source: Own construction from Isandla, 2007:14-23

If anything, it should be evident from the complex nature of the issues outlined in the preceding matrixes, that the creation of sustainable human settlements is no small feat, neither is it a concise or simple process. Implementing the key attributes as listed before in a sustainable way, will take a considerable amount of time and extensive research. As mentioned previously, each informal settlement presents a unique set of challenges and therefore these attributes cannot be applied in an ad hoc or blueprint manner. Taking the impacts of HIV & AIDS into consideration complicates this matter even further. It is, however, imperative that the unique set of challenges presented by the HIV & AIDS epidemic be taken into careful consideration when planning for SHS, as this has a crosscutting effect on all the key attributes discussed in the preceding matrixes. **Section 4.3** provides an overview and a few practical examples of how the impacts of HIV & AIDS on SHS planning can be addressed.

4.3 Integrating HIV/AIDS in SHS planning and informal settlement development

BNG identifies a number of approaches to bring about sustainable human settlements. These include in situ upgrading, greenfields development (which is linked to the housing subsidy) and rental options, including social housing. While BNG does not explicitly mention HIV/AIDS, each of these interventions can be reviewed from the perspective of HIV/AIDS. In the following discussion (refer to the matrix in **Table 4-3**), attention is paid to if, and how, these approaches may help to reduce vulnerability to HIV infection and/or enhance the resilience of households and communities directly affected by HIV/AIDS.

Table 4-3: Current planning solutions for SHS and informal settlement development with the focus on integrating HIV/AIDS spatially.

Planning solution	Impacts on HIV/AIDS prevalence	Current reality: critical perspective
In-situ upgrading	As noted previously, informality is associated with disparate levels of HIV prevalence and a particularly worrying HIV incidence rate. This chapter thus far has sought to highlight the key factors and dynamics in the socio-economic and physical environment that may not only be associated with enhanced vulnerability to HIV infection, but also severely undermine the resilience and coping mechanisms of individuals, households and communities directly affected by HIV/AIDS (Isandla, 2007:14-23).	The principle of in situ upgrading, as it pertains to a phased in approach to service provision and support to existing informal settlements, can be seen as an imperative contribution to an effective, comprehensive response to HIV/AIDS. (Department of Housing 2004).
Social housing and other rental options	Social housing, which offers alternative tenure options (rental, instalment sale and co-operative ownership) is envisaged as responding to the shelter needs of those households who are in the lower income salary band but who	The Housing Department's social housing programme, despite its emphasis on alternative tenure options like rental and collective ownership, has not as yet responded to the need of marginalised households to gain access to housing. The

Planning solution	Impacts on HIV/AIDS prevalence	Current reality: critical perspective
	<p>do not necessarily qualify for a housing subsidy (Department of Housing, 2004). The aim of this type of housing solution is typically to address the needs of HIV & AIDS affected households. The social housing policy clearly states that one of its target groups are <i>“persons with special housing needs but who are able to live independently, such as those with disabilities living with HIV/AIDS, including orphans and children”</i> (Department of Housing 2005:14)</p>	<p>reason for this is that social housing is more costly than the current RDP houses that are provided. As a result, the current subsidy for institutional housing is inadequate. Another issue is that institutional housing projects depend on the ability of the tenants to make regular rental payments (Department of Housing, 2005:9). It is also clear from the way that the social housing policy is currently conceptualised, that the needs of particularly vulnerable groups like those infected with or affected by HIV/AIDS will not be met. Social housing institutions themselves have noted that <i>“nothing exists to accommodate households who cannot afford to continue with their rental payments as a result of their HIV status”</i> (Rust et al 2002:49).</p>
<p>Greenfields Developments</p>	<p>New (greenfields) housing developments for low-income households, commonly referred to as RDP projects, can potentially help reduce vulnerability to HIV infection and enhance the resilience of households and communities directly affected by HIV/AIDS (Isandla, 2007:14-23).</p>	<p>Whether that potential is realised in practice depends on the extent to which such developments conform to the eight characteristics of SHS discussed in section 4.2 and on the process followed. An important consideration is to avoid a situation whereby new low-income housing developments ultimately leave people more vulnerable to HIV infection through, for example, factors related to location / dislocation, cost / affordability considerations, loss of livelihood and reduced quality of life. Likewise, it is important to ensure that existing coping</p>

Planning solution	Impacts on HIV/AIDS prevalence	Current reality: critical perspective
		capabilities, however fragile, are not undermined and that people living with and households directly affected by HIV/AIDS do not lose access to vital services (such as clinics) and support (Isandla, 2007:14-23).
The Housing Subsidy	<p>According to information supplied by the National Department of Housing (2005:12), in order to qualify for a subsidy, a beneficiary has to be:</p> <ul style="list-style-type: none"> • 21 years or older • a citizen or lawful resident of South Africa • legally competent to contract • a member of a household where the gross monthly income does not exceed R3500 per month • a new applicant and not a former recipient of any state housing subsidy or a previous homeowner except in the case of people applying for the consolidation subsidy • able to make a contribution of R2 479 towards your housing or be prepared to contribute sweat equity (with some exceptions for people who are disabled or health stricken) <p>However, taking all of the above into consideration, it currently does not sufficiently cater for those directly affected by HIV/AIDS.</p>	<p>The housing subsidy instrument is currently the only funding mechanism that provides access to new housing schemes for low-income households. While it is an important element of a comprehensive human settlements response, it is not a sufficient response as not all in need of public housing provision can qualify for a housing subsidy (Isandla, 2007:14-23).</p> <p>A significant amount of research has been conducted on the way housing in South Africa is delivered and in some instances it has been criticised for being exclusionary and only catering for a sector of the population (Smit 2003; Khan 2003). Often those that have been excluded include some of the most vulnerable groups in society which includes HIV & AIDS affected households. (Isandla, 2007:14-23).</p>

Source: Own construction from Isandla, 2007:14-23

4.4 Conclusion

The following section interrogates the South African government's attempts to address issues of housing and informal settlement development through its Breaking New Ground (BNG) policy. This section primarily assesses the government's new approach to human settlements and its value and relevance in relation to the challenges associated with the HIV/AIDS epidemic. To conclude, the current informal settlement-upgrading tool does in some way respond to the challenges and dilemmas brought to the fore by HIV/AIDS. Unlike other approaches to sustainable settlement provision, where beneficiaries have to conform to certain qualification criteria (which may be discriminatory and exclusionary), the way that the settlement upgrading programme is conceived of is that communities as a whole would be recipients of improved infrastructure and services. One of the most important advantages of the programme is therefore that it does not exclude certain groups like single people without dependants or people that have previously owned a house or benefited from a housing subsidy (Huchzermeyer 2006b). However, this "blanket" upgrading is only restricted to the first three phases while phase four of the settlement upgrading programme focuses on the provision of housing as the ultimate goal of the programme. In order to access this phase, beneficiaries have to qualify for the housing subsidy, which currently does not include groups like child headed households or poor families who may have previously benefited but had to give up their houses due to the unaffordability and unsustainability of previous housing schemes.

CHAPTER 5: POLICY, LEGISLATION AND THE ROLE OF GOVERNMENT

Throughout the course of this document, quite a few references were made to various policies and legislation overseeing informal settlement development and the provision of housing within SHS in South Africa. **Chapters 3 and 4** specifically mentioned the South African government's attempts to address issues of housing and informal settlement development through its Breaking New Ground (BNG) policy. The chapter that follows will seek to better orientate the reader on the wide-ranging informal settlement development scene. It will discuss the importance of the role of government and also provide an overview of legislative and policy documents such as the White Paper on Housing Delivery of 1994 and the Breaking New Ground Initiative (BNG) of 2004. An outline of the main topics within **chapter 5** is provided by **Figure 5-1** below.

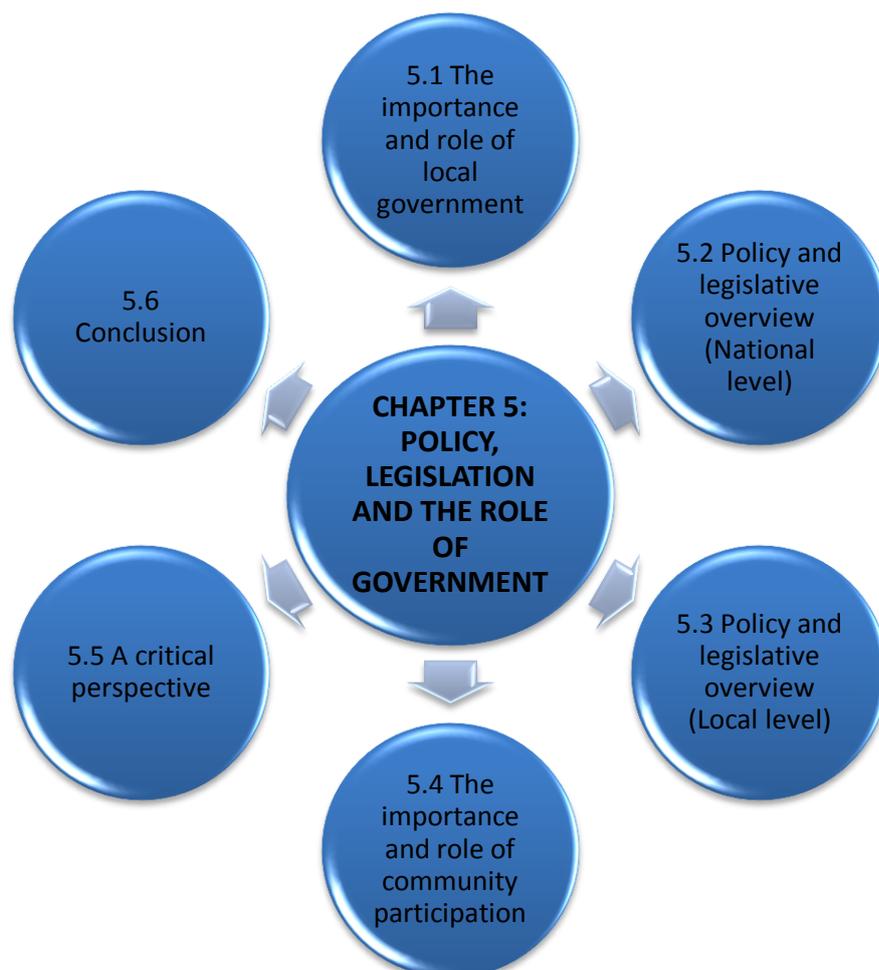


Figure 5-1: Summary of chapter five: Policy, legislation and the role of government

Source: Own construction (2015).

5.1 The importance and role of local government

This section primarily describes and assesses the government's new approach to human settlement development and its value and relevance in relation to the challenges associated with the HIV/AIDS epidemic. Only in recent times has the connection between HIV & AIDS, poverty, underdevelopment and inequality been established in official government responses. Fundamental to this is the recognition that an effective response to the prevalence of HIV & AIDS is one that involves not only the Department of Health, but also all government departments, in all spheres of government - national, provincial and local.

Local government in particular has a significant role to play as it is the level of government closest to the people living in the communities and responsible for providing basic services (Isandla, 2007:3). Adding to this, the responsibility for policy, planning and implementation of SHS is located across and between various sectors and spheres of government. South Africa's system of intergovernmental relations is multifaceted and complex and continues to progress and change. These governmental relations continuously evolve in an effort to seek greater clarity on what exactly the role of each sphere entails when spheres operate in ways that are both 'interdependent' and 'independent' (Isandla, 2007:23). It is therefore essential that each sphere understands its role and responsibilities within this complex institutional system. **Table 5-1** summarises the role and functions of local government in SHS development with a specific reference to the impediments to development, how this affects the prevalence of HIV & AIDS and an overview of the applicable supporting mechanisms.

Table 5-1: Summary of the role and responsibilities of local government in SHS development

Role/function of local government	Development constraints/impediments	Supporting mechanisms	Addressing the impacts of HIV & AIDS
Chief entities for addressing poverty and inequality and overcoming 'the apartheid city (the	Policy priorities are often not communicated effectively to officials at local government level. Insufficient understanding of how policies work and	Support and assistance of provincial and national governments	Attempts to address poverty, informality and inequality have narrowly focussed on the provision of housing on the

Role/function of local government	Development constraints/impediments	Supporting mechanisms	Addressing the impacts of HIV & AIDS
divided and fragmented city) (Mbeki, 2007).	how they should be reconciled with the need on the ground. Lack of coordination, strategic and innovative planning and implementation.		periphery.
Responsible for the promotion of sustainable human settlements (SHS) and the promotion of local economic development (LED)	Services are delivered and spatial patterns deep-rooted around current inefficient forms rather than in anticipation of a new collective vision of SHS configured around housing, transportation and economic node integration and environmental principles (Isandla, 2007:28).	Department of Provincial and Local Government (DPLG) Consolidation of a development planning system that encompasses the National Spatial Development Policy (NSDP), Provincial Growth and Development Strategies (PGDSs) and Integrated Development Plans (IDPs).	An understanding of the factors that enhance vulnerability to HIV infection and undermine coping abilities is absolutely essential if the South African government is to respond effectively to poverty and underdevelopment.
A key actor in ensuring that human settlements are integrated and	Constant confusion and debate about who is responsible for the delivery of houses. Roles	In September 2004, the South African National Department of	Responsibility confusion overshadows the need for providing

Role/function of local government	Development constraints/impediments	Supporting mechanisms	Addressing the impacts of HIV & AIDS
sustainable.	and functions between the spheres of government have in some instances been blurred and have not always been “neat and straightforward” (DPLG, 2007a:10).	Housing introduced its “Plan for the Development of Sustainable Human Settlements,” commonly referred to as “Breaking New Ground” (BNG) (National Department of Housing, 2004).	sustainable settlements, i.e. the provision of services and infrastructure that will provide poor people, particularly those infected with and affected by HIV/AIDS, with important resources that are vital for their survival and livelihood strategies.
A central actor in South Africa’s national effort to curb the spread of HIV and respond to the epidemic (DPLG, 2007b:9).	Responses should be based on a thorough understanding of the developmental needs required in different localities, by different social groups, at different points in time.	All spheres of government need to understand the developmental dimensions of HIV & AIDS and equally have a role to play in the national response to HIV & AIDS and the promotion of integrated and sustainable human settlements alike.	Local government is particularly well placed to integrate a developmental perspective on HIV & AIDS into its strategic agenda and ensure that local responses are appropriate to the various needs of households and communities dealing with HIV & AIDS.

Source: Own construction from Isandla, 2007:27.

Section 3.2 of this document provided a comprehensive discussion on developmental factors that play a role in the spread of the HIV & AIDS epidemic. However, despite clear indications like the aforementioned, and that the epidemic in turn has long term developmental implications, the South African government's response to the epidemic is largely, if not exclusively, based on the ABC (Abstain, Be faithful, Condomise) approach (Isandla, 2007:3). Considering the contents of **Table 5-1** and **section 3.2**, it is obvious that a paradigm shift is needed which will recognise that HIV & AIDS is not merely a health and behavioural concern, but intricately linked to poverty, (gender) inequality and (under)development (Isandla, 2007:28). This shift in thinking, however, does not reflect in current legislation and policymaking processes as a response to the development challenges of HIV & AIDS. In fact, the majority of municipalities have yet to develop an all-inclusive response to the localised manifestations and consequences of the epidemic. According to the Isandla report (2007:28), where municipalities have developed policies or projects on HIV & AIDS, these have tended to be limited to workplace policies, awareness raising messages and condom distribution in public facilities.

It can be concluded from the above, that there exists a serious need for policy and legislative guidelines that take a holistic approach to SHS into cognisance and make specific provision to address the impacts and implications of the HIV & AIDS epidemic. **Section 5.2** provides an overview of the major national policies and legislation applicable to the issue at hand.

5.2 Policy and legislative overview

The amount of national, provincial and local policies applicable to informal settlement development in general and SHS more specifically, is vast. Therefore, for the purposes of this study, the five policy and legislation documents, that were most commonly come across during the literature research, will subsequently be discussed in matrix format. These include the following:

- The CSIR guidelines for the provision of social facilities in South African Settlements
- The BNG (Breaking New Ground) policy
- The National Strategic Plan
- The White Papers on Housing & spatial planning and land use management
- The spatial planning and land use management act (SPLUMA)

The matrix in **Table 5-2** discusses the above-mentioned documents in brief detail with a specific focus on how each of these documents addresses the impacts of HIV & AIDS.

Table 5-2: A policy and legislative overview in the context of HIV & AIDS.

Policy / Legislative document	Goal/objective of the document	Relation to developing SHS	Addressing the impacts of HIV & AIDS
<p>The CSIR guidelines for the provision of social facilities in South African Settlements</p>	<ul style="list-style-type: none"> • A strategic guide for facilities planning at a town level. Distribution within cities or large towns at a neighbourhood, district and metropolitan scale requires more detailed local planning or GIS facility location analysis; • A working tool for forward planning with respect to a set of access standards that is informed by regular review and updating; • A yardstick for comparing towns and districts with respect to facility equity and for measuring progress on service delivery; • A starting premise for negotiation with developers and various local, provincial and government departments about land allocation and budgets; • A set of commonly acceptable rules for allocation of resources within the community/district; • A guideline for facility types that can be clustered or shared to achieve space saving and other accrued benefits; and, • An input parameter/target for measuring the accessibility of people to a range of facilities. 	<p>Sustainable human settlements cannot be achieved without adequate social facilities that are differentiated according to varying development densities, community size, mobility levels and socio-economic variation. Social facility guidelines will allow metropolitan, district, provincial and national governments to improve investment decisions about the number, size, type, location and space requirements of social facilities based on technical information rather than political advocacy. Thus, a refined set of social facility guidelines has been developed that will support all tiers of government in providing facility networks of libraries, clinics, community halls, parks, sports fields, fire stations as well as other social facilities.</p>	<p>Some of the threshold issues that were identified in the document, relates to HIV & AIDS e.g.</p> <p>Provision in terms of the development framework and population statistics regarding the aged. There may be an increasing demand in future and greater intervention required by government as the aged cannot afford private facilities and may receive less support from their families because of the impact of HIV/Aids.</p>

Policy / Legislative document	Goal/objective of the document	Relation to developing SHS	Addressing the impacts of HIV & AIDS
<p>The BNG (Breaking New Ground) policy</p>	<ul style="list-style-type: none"> • Accelerating the delivery of housing as a key strategy for poverty alleviation • Utilising provision of housing as a major job creation strategy • Ensuring property can be accessed by all as an asset for wealth creation and empowerment • Leveraging growth in the economy, combating crime, promoting social cohesion and improving quality of life for the poor • using housing development to break down barriers between the First-Economy residential property boom and the Second-Economy slump • Utilising housing as an instrument for the development of sustainable human settlements, in support of spatial restructuring. 	<p>The BNG policy, introduced in 2004, recognises the need to “move away from a housing-only approach towards the more holistic development of human settlements and the provision of social and economic infrastructure” (Department of Housing 2004:15). At the heart of this initiative is the move beyond the provision of basic shelter towards achieving the broader vision of sustainable human settlements and cities that are more efficient, towns and regions.</p> <p>The new human settlements plan reinforces the vision of the Department of Housing, to promote the achievement of a nonracial, integrated society through the development of sustainable human settlements and quality housing</p> <p>The development of sustainable human settlements must be undertaken within a broader spatial restructuring framework, incorporating the principles of the NSDP and the National Urban Strategy</p>	<p>The BNG document does not make any statements about how the impacts of HIV & AIDS on the development of SHS will be addressed.</p> <p>This is a serious gap in the compilation of the document as the impacts of HIV & AIDS are far-reaching and severe, especially when it comes to the spatial impacts on informal settlements and the development of SHS.</p>

Policy / Legislative document	Goal/objective of the document	Relation to developing SHS	Addressing the impacts of HIV & AIDS
<p>The National Strategic Plan</p>	<ul style="list-style-type: none"> • Strategic Objective 1: Address Social and Structural Drivers of HIV, STI and TB Prevention, Care and Impact • Strategic Objective 2: Prevent New HIV, STI and TB Infections • Strategic Objective 3: Sustain Health and Wellness • Strategic Objective 4: Ensure Protection of Human Rights and Improve Access to Justice 	<p>Sustainable human settlements and improved quality of household life is identified as one of the outcomes of the Medium Term Strategic Framework (MTSF) within the NSP but no other specifics are provided on the development of SHS.</p>	<p>Almost from the beginning, HIV has also been understood as a human rights issue. It is for this reason that a human rights approach has been a core principle of the HIV response. A strategic approach to the development of the NSP requires a broad understanding of national planning frameworks and priorities. This is because there is a dynamic relationship between the HIV and TB epidemics and development issues. One the one hand, HIV is a chronic, lifelong condition requiring lifelong interventions and on the other hand, the magnitude of the South African HIV and TB epidemics and the cost of the associated burden of disease may undermine some of the objectives that are articulated in the various national planning frameworks. Moreover, some of the national planning frameworks present unique opportunities to address the social drivers of the epidemic thus decreasing the burden on the overstretched health system and making it possible for the state to achieve its development goals.</p>

Policy / Legislative document	Goal/objective of the document	Relation to developing SHS	Addressing the impacts of HIV & AIDS
<p>The White Papers on Housing & spatial planning and land use management</p>	<p>This White Paper intends to show practical ways in which South Africa may move to this approach. The system should satisfy the following specific needs:</p> <ul style="list-style-type: none"> • The development of policies that will result in the best use and sustainable management of land. • Improvement and strengthening planning, management, monitoring and evaluation. • Strengthening institutions and coordinating mechanisms. • Creation of mechanisms to facilitate satisfaction of the needs and objectives of communities and people at local level 	<p>Integrated planning for sustainable management of land resources should thus ensure:</p> <ul style="list-style-type: none"> • that development and developmental programmes are holistic and comprehensive so that all factors in relation to land resources and environmental conservation are addressed and included. • that all activities and inputs are integrated and coordinated with each other, combining the inputs of all disciplines and groups. • that all actions are based on a clear understanding of the natural and legitimate objectives and needs of individual land users to obtain maximum consensus. • that institutional structures are put in place to develop, debate and carry out proposals. 	<p>The White Paper also does not make any suggestions or provide guidelines about how the impacts of HIV & AIDS on the development of SHS will be addressed. This is a serious gap in the document as the impacts of HIV & AIDS are far-reaching and severe, especially when it comes to the spatial impacts on informal settlements and the development of SHS.</p>

Source: Own construction from various sources, 2015.

The Urban Development Framework (SA, 1997:5) states that improving housing and infrastructure in South Africa is of vital importance. This involves the upgrading and construction

of housing and the extension of infrastructure. As a result of the mentioned state of housing delivery, government released a new strategy to deal with backlog and delivery problems in 2004, known as the Breaking New Ground Initiative (BNG). Isaacs and Naidu (2006) state that this document places an emphasis on the building of homes, instead of the provision of inadequate structures merely intended to house the nation. The Breaking New Ground document was not intensively covered in this report, but note must be made of governments realisation of the problem, and their attempts to rectify the situation.

5.2.1 Conclusion:

In conclusion, it becomes clear that the problems faced in delivering adequate housing in terms of qualitative and quantitative measures cannot be attributed to any singular factor. Instead the entire context of low cost housing delivery with regard to the governmental and private sphere and the socio-economic realities faced by South Africa, play a part in the enormous need for housing and the inability to comply with this need. Government literature such as the White Paper on a New Housing Policy and Strategy of 1994 and the Breaking New Ground Initiative of 2004, provide proof that government has identified weaknesses and opportunities for improvement. The practical merits of these theoretical concepts are however not easily put into practice in the diverse low cost housing landscape.

5.3 The importance of community participation

Community participation could be understood as the direct involvement of the citizenry in the affairs of planning, governance and overall development programmes at local or grassroots level. (Mafukidze, 2009:12) Public participation has become a key aspect of South African planning and is a reoccurring theme in several legislative and theoretical documents. It has become clear since the adoption of democracy that input from the communities affected by planning and housing provisions, is of immense value. The Reconstruction and Development Plan (RDP) emphasises the essential role of community participation to ensure a democratic process down to grass-roots level. (CSIR, 2002:73) Participation should also focus on community-organisations such as civic groups, labour unions, etc., which can all increase democratic participation. The White Paper of 1994 highlights the importance of gender equity, economic viability and environmental sustainability in the implementation of land-reform programmes (SA, 1994:75).

The Urban Development Framework (SA, 1997:33) states that for successful local economic development to take place the process must include the participation of the local political sphere, the community and business sector. **Figure 5-3** illustrates the role players in community participation according to Smith (1999:6).

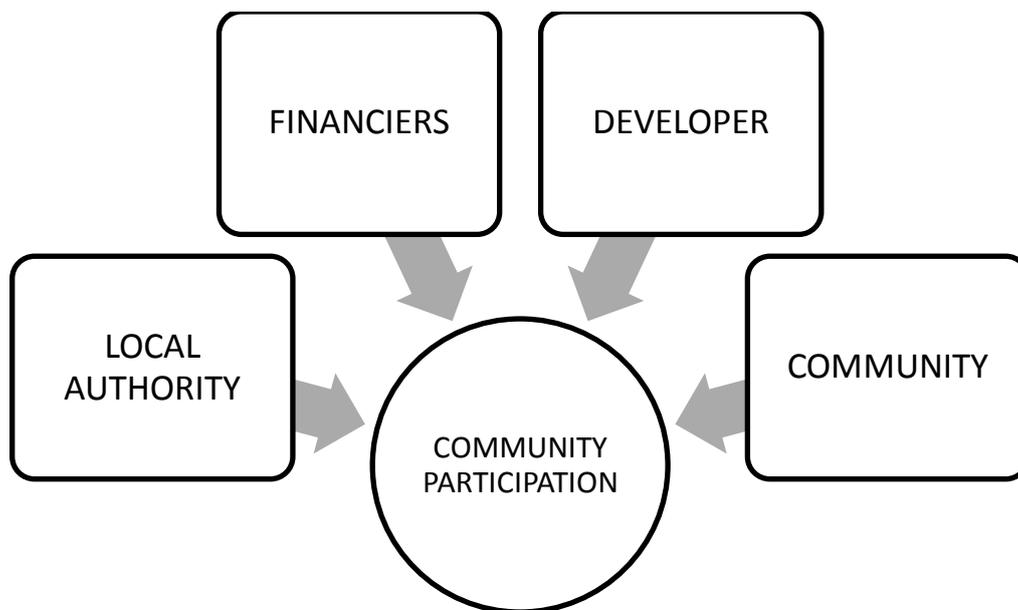


Figure 5-3: Role-players in the Community Participation Process

Source: Own Construction from Smith (1999:6)

Public participation is not only a South African objective, but is a key focus of the United Nations to ensure sustainable human settlements. The UN Habitat Agenda of 1996 states: 'We commit ourselves to the strategy of enabling all key actors in the public, private and community sectors to play an effective role - at the national, state/provincial, metropolitan and local levels – in human settlements and shelter development.' (UN, 1996:16)

The White Paper on Housing Delivery (SA, 1994:49) states that the maximum degree of public participation should be sought. Public participation is promoted because it minimises public ignorance, anger and the high level of emotion surrounding the release of land and the provision of housing. The Breaking New Ground Initiative (SA, 2004:22) states that community participation should always be a key component of the planning process. According to the White Paper (SA, 1994:80), the South African housing inheritance can be attributed to a top down ideological development approach in the past. The disadvantages of this ideology can be overcome by a more people-centred development approach.

CSIR (2002:34) states that community participation should also extend to persons with disabilities to ensure adequate planning and housing solutions, which comply with the needs of entire communities. Without sufficient community participation, self-determination cannot be achieved sufficiently and this may hamper the sustainability of human settlements in a very significant way. (CSIR 2002:73) The White Paper emphasises the importance of local participation in decision-making as one of the indicators of sustainable human settlements. (SA, 1994:17)

CSIR (2002:54) says that communities have firstly to be fully educated about newly planned developments and changes in government policy with sufficient and in depth information. Only when fully equipped with information and an understanding of said information, can public participation be of true value. With this in mind, serious consideration needs to be given to the level of education and the ability of the community to understand planning principles and elementary planning tools such as maps and planning terminology. Participation at a broader scale is much more difficult given the sheer number and often diversity of larger areas. Participation is shown to be much more successful at a projects scale (CSIR, 2002:55). The difference in education levels between people in urban and rural areas has shown that public participation is necessary in a more in-depth manner in rural areas (CSIR, 2002:63).

It is of extreme importance to establish new and innovative ways of accommodating public participation through the education of especially rural communities and communities in informal settlements. Where alternative construction materials for low-cost housing are to be introduced, it is important to educate and inform the community and its leaders as to the pros and cons of these alternatives. An example is the construction of prototype or show homes where new materials and layouts are considered. The construction of prototype homes will give uneducated members of the community the opportunity to experience the alternatives suggested and to form opinions about these new options.

The size and finishes of prototype homes have to adhere to the same quality and size as the final suggested product would. Any misguidance would prove the participation process as unsuccessful, as the product experienced and seen beforehand would guide participation. Where the building of prototypes would prove unrealistic, the alternative materials suggested have to be demonstrated in a visual and understandable manner. Out of empirical research conducted it is ascertained that only when members of the community understand the benefits

of alternatives such as mud brick homes, will they consider them as equal or better alternatives to traditional construction practices.

A change in the perception of what the right to housing entails is also needed. It is sadly practically impossible to provide every South African needing a home, with a freestanding sizeable home on a separate stand. The resources in terms of available land and the financial implications given the size of available subsidies, makes this unfeasible. Making communities realise this fact has to start with public participation processes and personal interaction with communities by authorities and political leaders.

When trying to implement alternative layouts and construction materials in low-cost housing delivery, community participation becomes of even greater importance. Residents have to understand and agree to the materials and configurations, which their home will consist of. Providing alternatives to which the community is opposed will contradict the aim of implementing alternatives: to better satisfy the needs of the people and create thriving communities in the form of sustainable human settlements.

Participation should also provide the opportunity for skill transfer to take place. The Housing Code (SA, 2000:7) states that housing should be developed in a manner that empowers communities and individual beneficiaries, through skills transfer and economic development. Low-cost housing projects should as far as possible provide the community with employment opportunities and the opportunity to practice skills learnt as a trade.

According to CSIR (2002:73), community participation has had a varied success rates. The process works well in the People's Housing Process, but has also caused the collapse of certain water projects and urban service-delivery programmes. The level and type of community participation therefore needs to be clearly defined in both policy and program planning. Mafukidze (2009:12) states that participation has the potential for negative outcomes such as entrenchment of mistrust for the government, disillusionment, conflict and fragmentation.

Lizarralde (2008:2) argues that: ‘participation has become extremely fashionable but ‘has been so widely expressed that it does not seem to mean anything clear anymore.’ According to Lizarralde participation has thus become a buzzword and a box to tick for developers wishing to receive governmental approval of their plans. **Figure 5-4** illustrates Lizarralde’s constraints to community-based approaches.

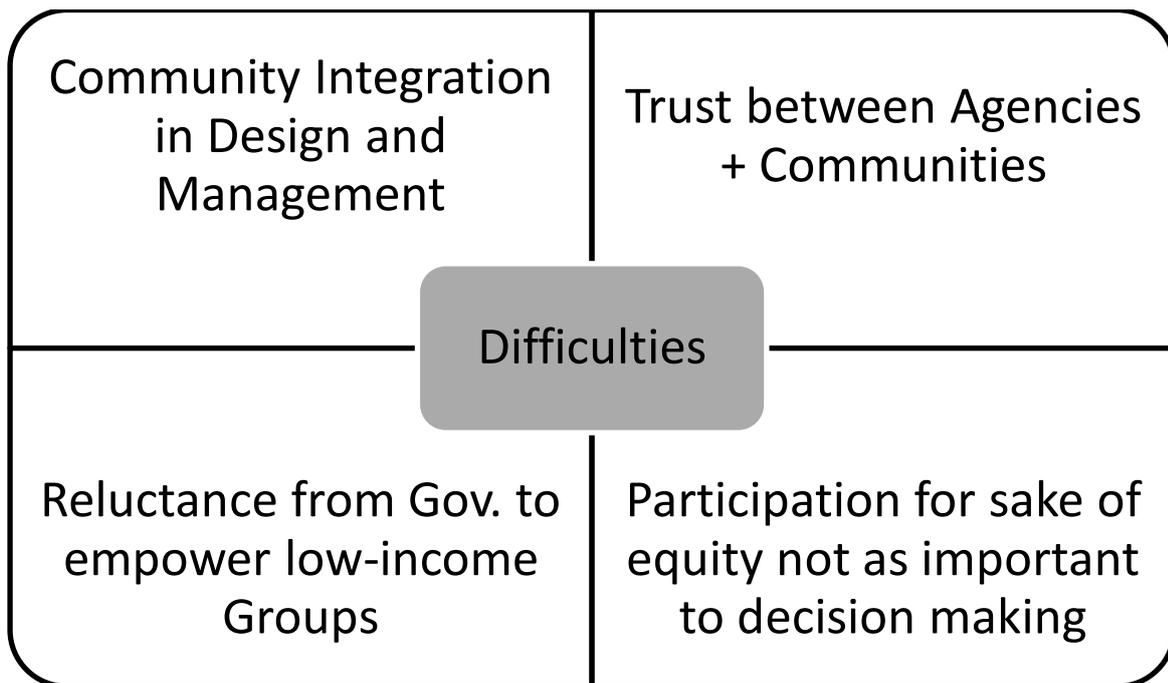


Figure 5-4: Constraints to Community Participation

Source: Own Construction from Lizarralde (2008:4)

Lizarralde (2008:6) further argues that political and administrative barriers delay community based projects when project objectives and outcomes do not sit well with authorities, leaving the needs of the community as secondary. He also argues that the public private partnerships promoted by government can often reduce the level of participation by communities by transferring large stakes in projects to non-governmental organisations (Lizarralde, 2008:11).

Community participation is a very controversial subject and in this light, many authors have expressed different opinions on the matter. **Table 5-3** summarises some of these outlooks.

Table 5-3: An Overview of different Authors' view on Participation.

DOCUMENT	QUOTE	VALUE
BNG (2004:22)	'...always be a key component of the planning process.'	Even when participation poses extreme challenges.
CSIR (2002:73)	'Participation should also focus on community-organisations such as civic groups, labour unions'	Ensuring equal participation and representation
Habitat Agenda (UN 1996:16)	'We commit ourselves to the strategy of enabling all key actors in the public, private and community sectors to play an effective role'	Sometimes difficult to comply with everyone's needs and visions
Housing Code (SA 2009:7)	'empowers communities and individual beneficiaries, through skills transfer and economic development. This is achieved through participation'	Education is an important aspect.
Lizarralde (2008:6)	'political and administrative barriers delay community based projects'	Input from communities not always first priority in planning.
Mafukidze 2009	'participation has the potential for negative outcomes... disillusionment, conflict and fragmentation'	Different opinions and backgrounds create conflict.
Smith (1999:6)	'social compact' that must be signed between key players: the community, the developer, local authorities and financiers...'	Each player should understand its role and the importance of others.
Urban Development Framework (SA, 1997:15)	For LED to be successful, the process must include the participation of local political, community...'	Politics should set community upliftment as a priority, secondary to its own agenda.
White Paper (SA, 1994:76)	'emphasises the importance of local participation in decision-making'	Can only participate when properly informed.

Source: Constructed from various sources as stated (2011)

5.3.1 Conclusion:

This chapter clearly shows the importance and relevance of community participation in a democracy such as South Africa. Care should however be taken to ensure that the processes and role players involved in participation are managed to arrive at the best possible outcome: a development, which bares the needs of the community in mind and reflects their preferences and way of life. It should also be noted that planning professionals should use their professional expertise to guide the process and to manage expectations, thereby ensuring that the often-ignorant community does not become the project leader. Care should thus be taken not to fall into the pitfalls and problems which participation can often bring, especially with regards to developing a new approach to informal settlement planning and when taking the impacts of HIV & AIDS into consideration.

CHAPTER 6: BACKGROUND: CASE STUDIES AND METHODOLOGY

This chapter marks the start of the empirical research on this study and aims to provide a comprehensive background on the research methodology that was used, but also to explain and motivate the identification process for all the case study areas included in the empirical research. As an introductory setting, a brief narrative of a member of an HIV/AIDS affected household is also included in this chapter. **Figure 6-1** below summarises the outline of this chapter.



Figure 6-1: Summary of Chapter six: background on case studies and methodology

Source: Own construction (2015).

6.1 Research methodology explained

Although the research methodology was described in detail in **section 1.5** of this document, the aim of this section is to revisit the methodological approach and provide more specific details on the research techniques that were used during the course of the empirical research.

6.1.1 General methodology

As mentioned in **chapter 1**, the research method that was used for the purposes of this study constituted of a combination between the Intervention Research Model (De Vos, 2002:392) and the Participatory Action Research (PAR) model (Strydom, 2002:408). These research models are scientifically tested and proven methods of research, which can be ideally applied to a study such as this one, which leans more towards qualitative research methods, than quantitative methods.

The purpose of the Intervention Research Model is to prevent or ameliorate problems by creating and testing innovative human services approaches - in this case it was especially relevant for the evaluation of various Informal Settlement Development approaches and case study projects. The focus of the PAR model is on the involvement and participation of *all the role-players* in a specific research project, including specifically in this case, the involvement of the informal settlement communities (De Vos et al, 2002:393).

Figure 1-2 in **chapter 1** provided an overview of the methodological approach for this study and will subsequently not be discussed in detail again. Looking at the diagram, however, it is important to notice that the empirical research was mainly focussed around the collection of qualitative data in the form of semi-structured interviews, focus group discussions/community forums and case study visits/surveys.

6.1.2 Research approach

An exploratory, qualitative research approach was followed for the psychosocial and spatial components of this study, since the research had to be done in the various unique community contexts in an inductive manner. The researcher had to make sense of the experiences that emerged spontaneously when members of the various case study communities were

encouraged to talk about their personal feelings and subjective experiences related to the various psychosocial and spatial aspects linked with HIV & AIDS.

The data gathering methods for this study therefore included:

1. Observations,
2. Community forum discussions,
3. Semi-structured interviews with key informants and
4. The use of the Mmogo method (to a very limited extent).

The key informant approach and the Mmogo- methods are both considered to be culturally sensitive methods for the two particular target groups of participants in this study; and all the above-mentioned methods are known to produce reliable, scientifically correct data and results. The following paragraphs provide a brief explanation of each of the above-mentioned research methods.

6.1.3 Observations

In order to obtain comprehensive data and information for the purposes of this project, various data gathering visits to the informal settlement communities were made. General observations were made during these visits to gather additional contextual data on the community. This data was later used to supplement other sets of data to ensure that the results of the study are context specific.

6.1.4 Community forum approach

This approach entails a series of community meetings with the aim to create awareness among the community members of the issues at hand and to develop an understanding of their perspective on the problem. These community meetings usually make provision for large groups (up to 50) of participants and are ideal to generate ideas or solutions from the community's perspective by means of techniques like brainstorming and break-away group discussions (Strydom, 2002:408). However, for the purposes of this study, the community forums were smaller focus groups, which made the collection of detailed information and follow-up interviews a little bit easier.

These community forums also created an ideal platform for the identification of key informants within the community, as well as strong leaders, which were capacitated to assist with the research process.

6.1.5 Key-informant approach

The key informant approach involves a number of in-depth interviews with selected community members. Key informants are typically 'cultural brokers' straddling two cultures. Their selection and subsequent inclusion as research participants are normally based on their knowledge of a particular community's historical, socio-cultural and political context. Contextual data is also collected from them, since they are normally attuned to their particular community's needs. In most cases, key informants also have detailed knowledge about interpersonal relationships, as well as the cultural nuances of people living in a particular community (De Vos et al, 2002).

The benefits of using an interview method are that it permits immediate follow-up questions as well as clarification and can thus be regarded as a flexible mode of data collection, which contributes to the general credibility of the study (Strydom, 2002:408).

This research method was used quite extensively during the collection of data for the empirical part of this study.

6.1.6 Mmogo method

The Mmogo-method involves the creation of visual representations, such as providing participants with clay and beads (familiar objects to their culture and surroundings) and asking them to create a model to represent their understanding of a certain concept or problem (Coetzee, 2009).

The visual representations are then analysed by means of determining the explicit and implicit meanings. Visual representations may be regarded as projections of the participants' spontaneous interactions and involve decisions and choices about how much and what kind of information is included. The information derived is also socially constructed because it defines identities, relationships and histories related to the phenomenon under investigation (Coetzee, 2009).

It is therefore a simple, but culturally sensitive method, which could be used to obtain the views and perceptions of even children or illiterate community members. For the purposes of this study, the Mmogo method was used particularly amongst children affected by the HIV & AIDS pandemic (e.g. child-headed households) in order to obtain their perceptions of the informal settlement development problem.

This is with specific reference to the Mamello Day Care centre case study where the Mmogo method was used to obtain more detailed information on the children's perspective of their current development situation. However, for the rest of the empirical study, this method was not used often.

6.2 Identification, motivation and background to case study areas

For the purpose of this study, seven various case studies from all over Southern Africa was identified and selected for further research. The reasons for the relatively large number of case studies as well as the varying locations can be listed as follows:

- All of the case studies represent a different problem related to the prevalence of HIV & AIDS in informal settlement development. This varies from fragmented settlement development, lack of access, the question around care for the elderly to child-headed households, resource based constraints and many others as listed in **Chapters 3 and 4** of this document.
- It would be narrow-minded and incomplete to study only one or two isolated case studies, as this might give a skew idea of the development problems associated with the impacts of HIV & AIDS as well as the preferred solutions.
- The selected case study areas are located in rural and urban informal settlement developments and two international case studies (in Kenya and Zambia) were also included which provides a solid platform to measure and compare results.
- The qualitative nature of the research necessitates a broad variety of information gathered during projects visits, interviews, focus group discussions etc. in order to create meaningful results.
- It was also crucial to look at various case studies in different parts of the country/Africa in order to identify possible patterns of development, coinciding gaps and problems, key lessons learnt, best practice examples etc.

It was already mentioned in **section 1.6** that the main case study area for this research study is located within the North West Province of South Africa, with a special focus on a few smaller case study areas within the Dr. Kenneth Kaunda District Municipality (KKDM). Two other case studies in the Western Cape were also investigated as well as two international case studies (in Zambia and Kenya). These case study areas were included because they represent a realistic spectrum of HIV & AIDS prevalence within their areas as well as diverging ways of dealing with the HIV & AIDS epidemic. **It is vital to take notice, however, of the fact that the main focus and the bulk of information gathered, was from the two case studies in the North West Province. The rest of the case study areas serve as control cases for added information and analysis.**

Table 1-1 in chapter 1, provided a summary of the case study areas that were researched during the course of this study as well as the reasons for including them. The rest of this section will aim to expand on the information in **Table 1-1** in order to provide a broader background on the existing knowledge and current realities within the various case study areas.

6.2.1 Case studies in the North West Province

The two case studies that were considered in the North West Province are both located in Ikageng, an informal settlement near Potchefstroom. Ikageng is a town in the Dr Kenneth Kaunda District Municipality in the North West province of South Africa. The name is Northern Sotho which means 'we built for ourselves'. The location of the two case study projects in the North West Province, can be seen in **Figure 6-2** below.

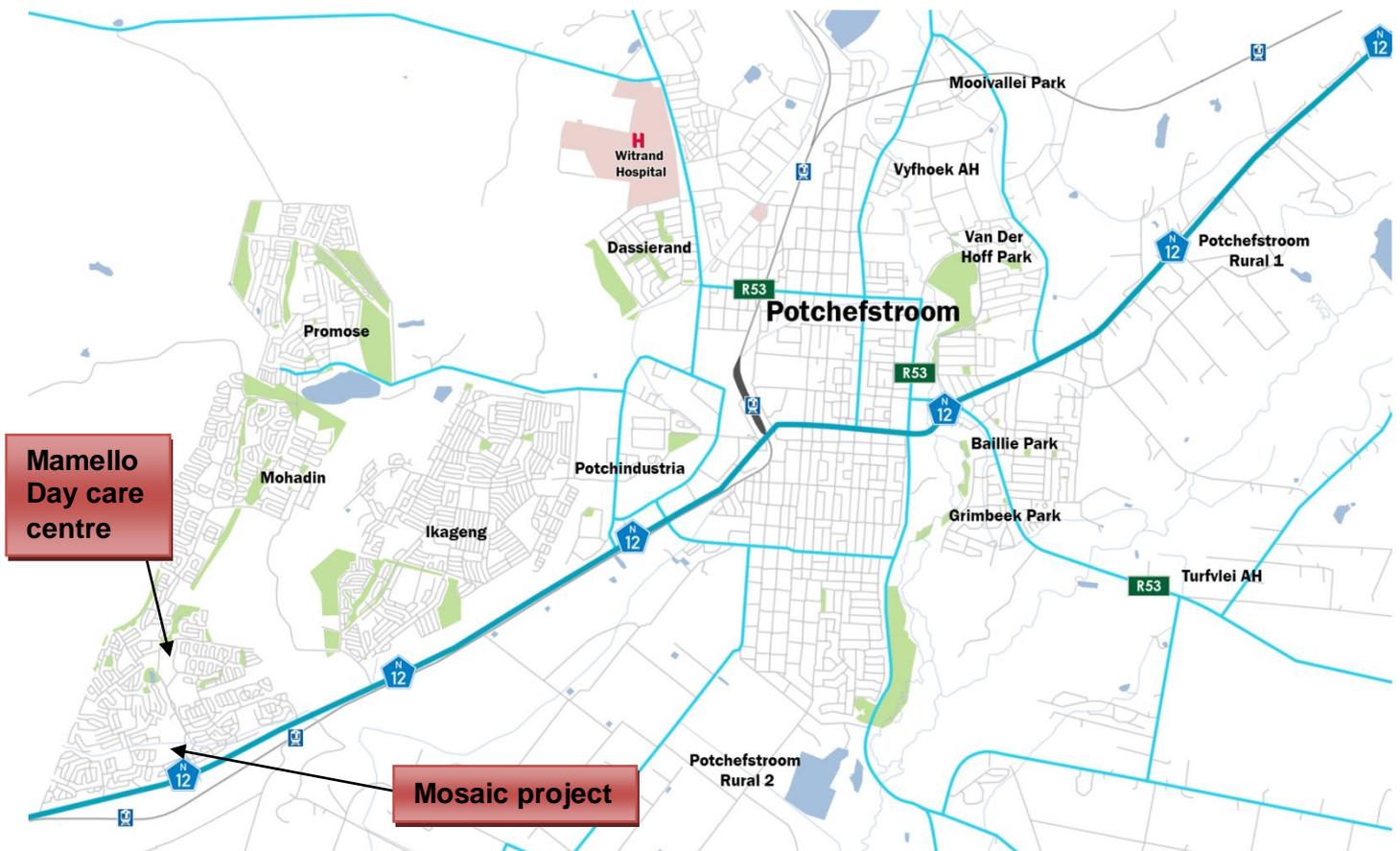


Figure 6-2: Location of Mosaic project and Mamello day care centre in Ikageng, NW

Source: Google maps, 2015.

6.2.1.1 Background to Mosaic project

Mosaic is a registered non-profit organisation that was established in 2009 and operated as Hope Village Developments for the first year of its existence (Conradie, 2011:2). Mosaic does community development and upliftment work in Ikageng Township, the informal settlement of Potchefstroom. Mosaic project's vision is to improve the living circumstances of AIDS-orphans. For Mosaic, this is attained by taking a holistic approach on sustainable development that includes ventures like:

- **Foster Home Programme:** With the help of local and international volunteers, Mosaic builds houses for women who are fostering AIDS-orphans and are still living in shacks.
- **Social development:** Mosaic has a preschool that is attended by more than 100 HIV/AIDS infected and affected children from Mondays to Fridays. Mosaic also focuses

on educating foster parents in basic life skills such as parenting skills, elementary financial management and basic hygiene.

- **Business Ventures:** Mosaic has several business ventures where jobs are created for woman fostering AIDS-orphans.

Since its commencement in 2009, Mosaic has moved four families (taking care of twenty orphans) from their shacks to proper three bedroom brick houses. The project has provided free schooling, including three meals a day to more than hundred HIV & AIDS infected and affected children on a daily basis. It has also supplied more than thirty people with jobs and introduced more than 600 volunteers, local and international, to poverty in South Africa. More than R2million was spent on enhancing the living circumstances of AIDS-orphans in the Ikageng community (Mosaic SA, 2015). Currently, Mosaic project has more than 20 homes accommodating an excess of 80 children, of whom more than 50 are orphans. The project also has a number of business ventures focused on job creation, including Made by Mosaic and Mosaic Builders, which provide jobs for more than 30 people in total. Furthermore, there is a training centre that enables and facilitates afterschool activities as well as a permanent influx of volunteers from South Africa, Germany, and the United States. The first Mosaic community is located in Ikageng (called Mosaic Ikageng), outside of Potchefstroom, but a second pilot project has been established in 2015. This project (called Mosaic Paarl Valley), is located within the Western Cape, in the Mbekweni township. Plans are in position to continue to reproduce the Mosaic model in other localities throughout Southern Africa (Mosaic SA, 2015).

Reasons for including this case study

- This project is aimed specifically at HIV & AIDS affected households which means it is a very rare and therefore extremely relevant case study
- It is a prime example of the implementation of the extended family principle in taking care of HIV & AIDS affected households
- Provides the perfect opportunity as a pilot study for evaluation, gap analysis and comparison

6.2.1.2 Background to Mamello Day Care centre

Mamello Day Care Centre was founded by Ms Gloria Mphalla in 2000 and used to accommodate the children it cared for in a little shack. Ms Gloria Mphalla, the principal, started

the day care centre in a little shack more than ten years ago, and appropriately called it “Mamello”, meaning patience (Mphalla, 2012).

She endured many hardships through the years until Bafenyi Trust came on board. The trust started as an initiative of Rev. Janneman van Wyk, who has been supporting day care centres in Ikageng for many years. The aim of the Bafenyi Trust is to help day care centres upgrade their facilities and help them qualify for government subsidy. In 2010, the Yara Outreach Foundation donated enough money to build a day care centre. The first stand to be secured was that of Mamello. Mamello’s motto, “Patience is the key to success” has proved to be true for the little school. Bafenyi Trust, with the financial help of the Yara Outreach Trust started to develop a proper building for Mamello at the end of January 2011 (Bafenyi, 2012).

The very unsafe and unhealthy shack of the Mamello Day Care Centre was replaced with a brand new 4-classroom facility as part of a community upliftment project from a local church organisation. Because of its new facility Mamello now qualifies to receive subsidy and is also used as a training facility for the Bafenyi Trust (Bafenyi, 2012).

Reasons for including this case study

- Because of its specific focus on children, this project provided access to key informants in the form of HIV/AIDS orphans and child headed households
- This case study also provided easy access to other key informants in the informal settlement community in order to facilitate focus group discussions and community forums.
- A good established long-term relationship with the school principal enabled the researcher to gain access to more detailed information.
- Provides the perfect opportunity as a pilot study to measure the impacts of external aid in the form of NGO’s or church organisations in order to alleviate the impacts of HIV & AIDS on informal settlement development

6.2.2 Case studies in the Western Cape

The three case studies that were researched in the Western Cape Province are located in the Paarl and Khayelitsha respectively. Khayelitsha is a partly informal township in the Western Cape, South Africa, located on the Cape Flats in the City of Cape Town. The name Khayelitsha

is a Xhosa word, which means “New Home” (Kuyasa, 2016). Paarl on the other hand, is a town with 191,013 inhabitants in the Western Cape province of South Africa. This is the third oldest town and European settlement in the RSA and the biggest town in the Cape Winelands. The two projects in the Paarl area, however, are located in the Mbekweni Township. Due to the growth of the Mbekweni Township, it is now for all intents and purposes, an urban unit with Wellington. It is situated approximately 60 kilometres northeast of Cape Town in the Western Cape Province and is well known for its memorable picturesque beauty and fruit-growing heritage (Kuyasa, 2016). The locations of the three case study areas in the Western Cape Province can be seen in **Figure 6-3** and **Figure 6-4** below.

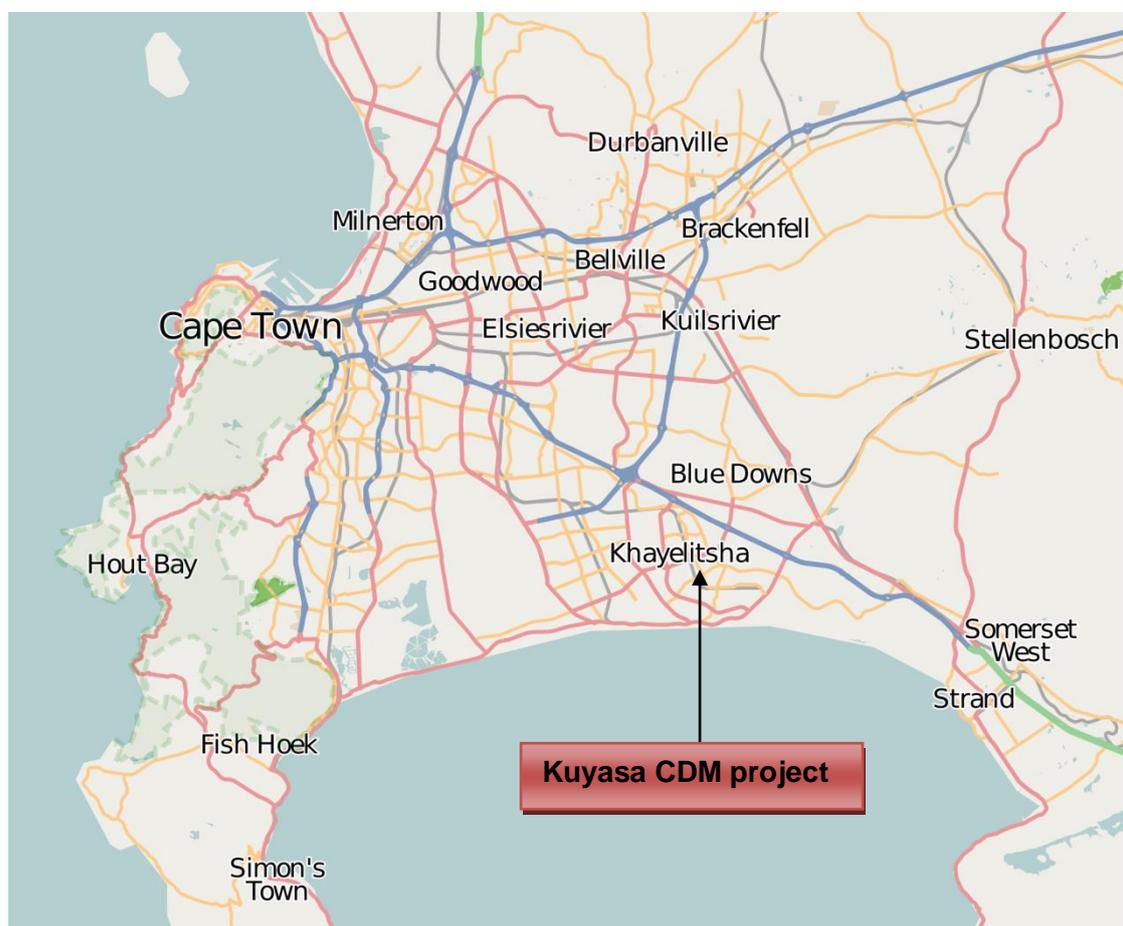


Figure 6-3: Location of the Kuyasa CDM project in the Western Cape

Source: Google maps, 2015.

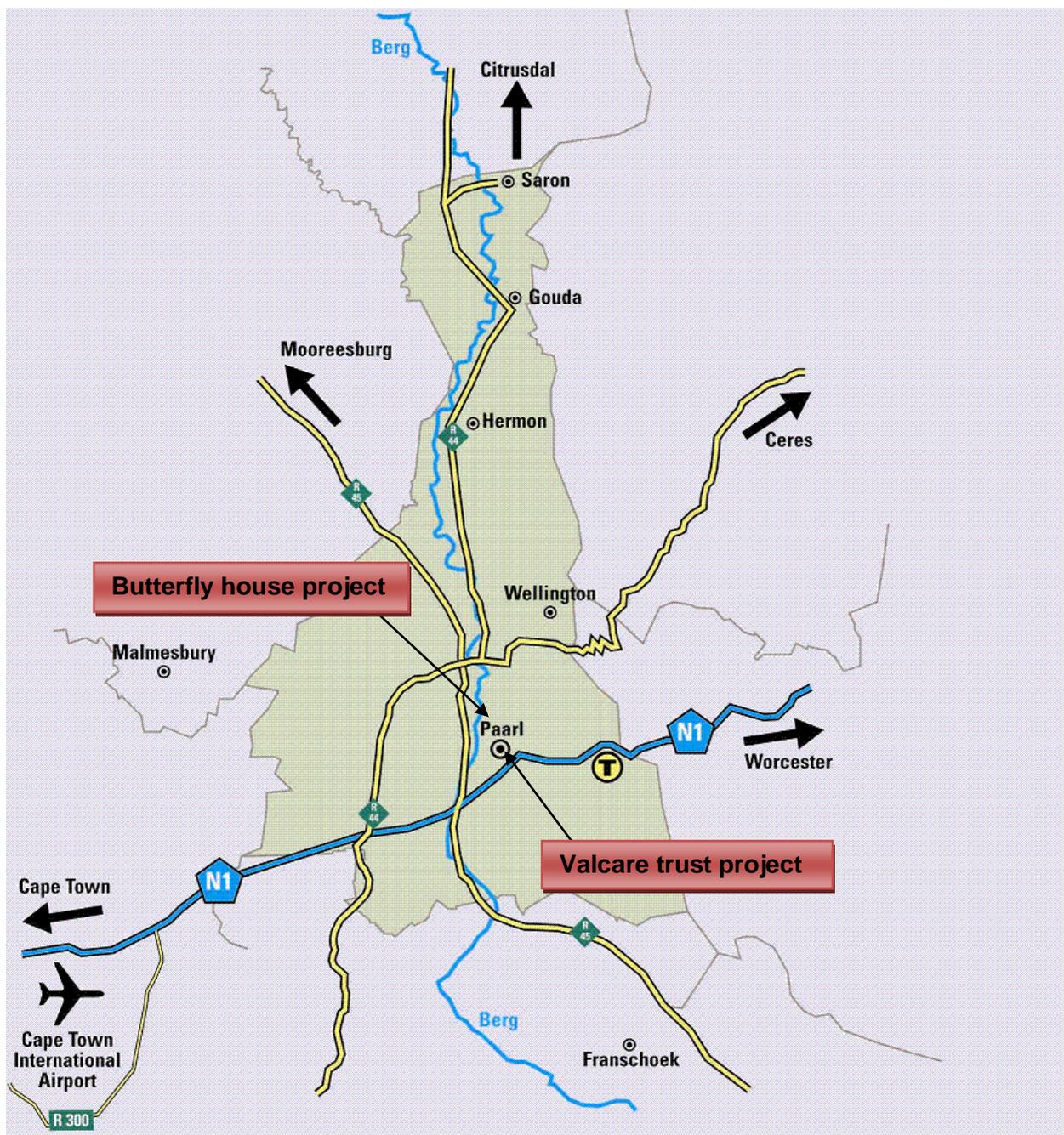


Figure 6-4: Location of the Valcare project and Butterfly house project, Western Cape
 Source: Google maps, 2015.

6.2.2.1 Background to the Kuyasa CDM project

The Kuyasa CDM project is a green low cost housing project, which was developed by the nongovernmental organisation (NGO) SouthSouthNorth (SSN) for the City of Cape Town's Environmental Resource Management Department and Urban Renewal Programme. This pilot

project entails the retrofitting of solar water heaters (SWHs), insulated ceilings and energy efficient lighting in over 2 300 low-cost homes in Khayelitsha, Cape Town, South Africa. The Kuyasa project is also South Africa's first internationally registered Clean Development Mechanism (CDM) project under the Kyoto Protocol on climate change and was the first Gold Standard Project to be registered in the world (Carbonprogrammes, 2010). The project has spawned considerable interest locally and internationally as a pilot for the energy-efficient adaptation of South African low-cost housing.

The Kyoto Protocol's Clean Development Mechanism (CDM) offered a way for South Africa to address the thermal inadequacies of low cost housing, whilst simultaneously developing energy efficient technologies as part of the CDM carbon credits facilities. The original idea was to retrofit 2,309 low-income houses in the urban township of Kuyasa, Khayelitsha, with solar water geysers, insulated ceilings and compact fluorescent light (CFL) bulbs (Kuyasa, 2016).

Even though ten demonstration installations were completed in 2003, implementation and funding model problems saw the project delayed for over two years. Noticing this, Carl Wesselink, and his brother Pieter, from the South African Export Development Fund (SAEDF), developed a funding approach for large-scale, solar-water geyser installations and were eager to employ it to complete the Kuyasa CDM project (Wesselink, 2010). Their revised business plan, which included lower solar water geyser costs, better community participation, and an innovative financing model, was accepted in late 2007. Wesselink's entrepreneurial energy and social awareness saw the installations get under way in early 2008 already. Up until 2014, the Kuyasa CDM project has created 87 jobs, completed 1,800 of the 2,309 installations, reduced the expenditure by the poor on energy, and is decreasing about 2.85 tons of greenhouse gas emissions per low-income house per year (Kuyasa, 2016). According to Wesselink (2010), the project has also provided incentive towards the development of a larger-scale 'national sustainable settlements facility' that could see solar water heaters and thermal performance improvements funded and implemented across millions of other low income houses in South Africa. Considering the background as discussed, it is furthermore important to know that the Kuyasa CDM project saw instant effects on the social, health and economic well-being of the targeted beneficiaries after its initiation.

Reasons for including this case study

- This project provides a best practice example of the role of environmental sustainability in the development of informal settlements and "green low cost housing".

- It is therefore an ideal case study to measure and evaluate the impacts of a holistic approach to SHS on the prevalence of HIV & AIDS
- The project also provided access to key informants and a platform for community forum discussions
- The principle of community participation and the importance thereof, was another important reason for the inclusion of this case study.

6.2.2.2 Background to the Valcare Trust case study

The Valcare Trust is a resource distribution centre, which facilitates networking between NGO's, churches, individuals, businesses etc. to alleviate poverty and increase the involvement in the Paarl Valley (Valcare, 2014). The Valcare trust had its origin in 1999 when spiritual leaders from different denominations and a priest of the Roman Catholic Church started working together to address the poverty issue in the Paarl and surrounding areas, which had become unmanageable for individual congregations to handle (Van der Lingen, 2010).

After initial discussions, the issue of a decent resource centre was deliberated in-depth at a seminar held in 2000 at the Dutch Reformed Church, Drakenstein (Valcare, 2014). According to Van der Lingen (2010) a need for co-ordination and the formation of support networks in the Paarl-Franschhoek community was identified, since feedback from the underprivileged community indicated that they experienced confusion about what services were offered, where and how it was available, and also by whom.

Realising that access to such information is crucial, it was subsequently decided to register Valcare as a trust, set up an office and to appoint a public relations officer. The Valcare office officially opened on April 1, 2003, and registration was finalised on July 30, 2004 (Van der Lingen, 2010). This well-connected resource centre fulfils numerous functions and services to the community including information distribution, networking and administration.

Reasons for including this case study

- This case study provided a best practice example of the role and need for a resource centre
- The networking opportunities as well as the access to a vast database, made this also an ideal case study.

6.2.2.3 Background to the Butterfly house project case study

Butterfly House is a community project that purposes to co-create and manage a palliative community resource, which centres on 'living' with HIV/AIDS and other life threatening illnesses. Butterfly House and iBhabhathane are the venues for the Drakenstein Palliative Hospice Day Care Programmes. They are located in Fairyland and Mbekweni between Paarl and Wellington (HPCA, 2015).

Butterfly House and iBhabhathane aim to provide services, often in partnership with other organisations, which will add to the quality of life of patients, their families (infected and affected) and others made vulnerable through neglect, abuse, malnutrition, substance abuse, extreme poverty and illness (Von Backström, 2010). Von Backström (2010) also stated that the purpose of the project is the mobilisation of the Drakenstein and Global community to react to the needs of all its citizens through finding answers to community challenges brought about because of the HIV/AIDS epidemic. 'It takes a village to raise a child' and a community response to support and create mutual care.

Reasons for including this case study

- Because of its specific focus on children, this project provided access to key informants in the form of HIV/AIDS orphans and child headed households
- This case study also provides opportunity as a pilot study to measure the impacts of a specific intervention (e.g. after-school care) in order to alleviate the impacts of HIV & AIDS on informal settlement development

6.2.3 International case studies

The two international case studies that were studied are located in Kenya and Zambia respectively. It is important to take note again, that the information derived from these international case studies, is mostly based on the observation research technique as discussed in **section 6.1.3**. The researcher made her own observations of various critical factors pertaining to the scope of this study, whilst visiting these two projects/case study areas. The purpose of this international case study overview, however, is not to do an in depth analysis of the respective case studies, but to make observations about a few selected factors pertaining to the outcomes of this research study. What follows therefore is a concise description and background to each of these case study areas.

6.2.3.1 Background to the case study in Kenya

The Kibera Soweto East project is situated in the Kibera slum, within the city of Nairobi. Nairobi's approximately 200 slums are amongst the most overcrowded, unsafe and unhygienic in all of Africa and specifically Kibera, in Nairobi, has the ill-fated merit of being the worst of the worst. It is often labelled as the most horrible slum on the planet and it holds anywhere between 800,000 and 1.2 million people – almost a quarter of Nairobi's population in just 255 hectares of land, situated roughly 6 kilometres from Nairobi's central business district (Mulcahy & Chu, 2008:10). The location of the Kibera slum relative to the city of Nairobi, is indicated by Figure 6-5.

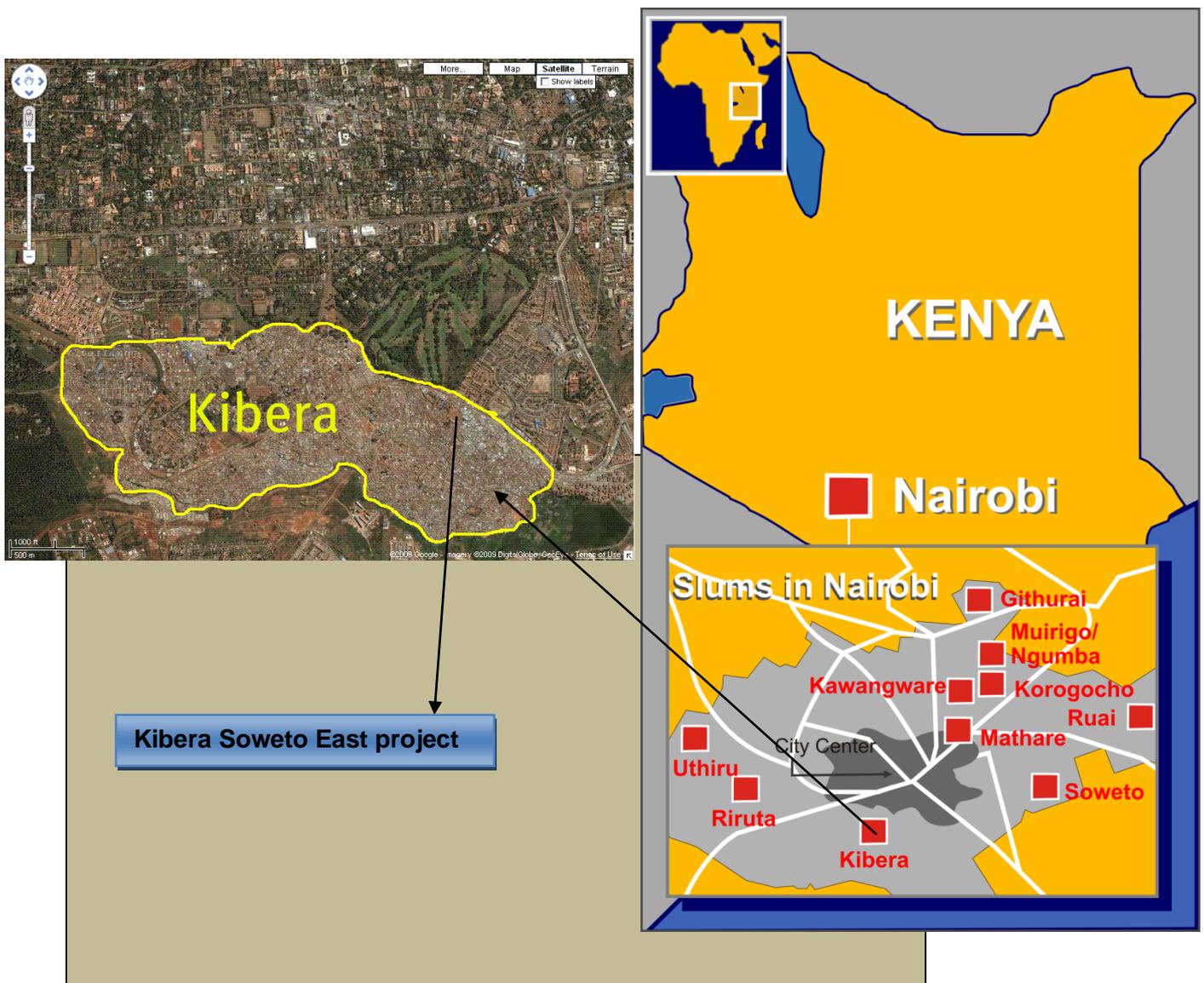


Figure 6-5: Location of the Kibera Soweto project within Kibera, Nairobi (Kenya)

Source: Wikipedia, 2015.

Over the past few decades several NGO's, many with the World Bank's assistance, have supported slum upgrading projects in Nairobi with fluctuating degrees of impact and scarcely any definite success. Eventually admitting to the problem's severity and persistence, Kenya's national government took decisive action in 2002 by creating the Kenya Slum Upgrading Programme (KENSUP). This programme of national office focuses on carrying out projects that are sustainable, inclusive, democratic, responsible, transparent and that will provide communities with better-quality housing and access to basic services, secure tenure, and prospects of income generation (Mulcahy & Chu, 2008:10).

This research studies one of KENSUP's pilot projects i.e. the Kibera Soweto East Project. This project is ultimately a combined effort between the Kenyan government and UN-HABITAT that focuses on only one of Kibera's 12 "slum villages" of 70,000 plus people.

Reasons for including this case study

- Provides the perfect opportunity as a pilot study to evaluate the impacts of current informal settlement development approaches in order to alleviate the impacts of HIV & AIDS on informal settlement development
- The principle of community participation and the importance thereof, was another important reason for the inclusion of this case study
- This case study could also be used to measure the impacts of a specific intervention (e.g. formalisation/slum upgrading) in order to alleviate the impacts of HIV & AIDS on informal settlement development

6.2.3.2 Background to the case study in Zambia

Makululu, the Zambian case study area for this research, is the biggest shanty compound in Zambia and also rumoured to be the second largest populated compound in Africa after Soweto in South Africa. It is situated within the city of Kabwe, a town that once flourished before the mining industry withered, leaving Kabwe to look more like a 'ghost town' today (Scholtz, 2010). Currently the principal economic activities comprise of trade and cyclical fishing. Inhabitants of Kabwe fight to survive amidst poverty levels that are distressingly high, and HIV & AIDS rates that are amongst the highest in Zambia (Cravenvill, 2015:3).

Figure 6-6 indicates the location of the Makululu compound within the context of Kabwe and Zambia.

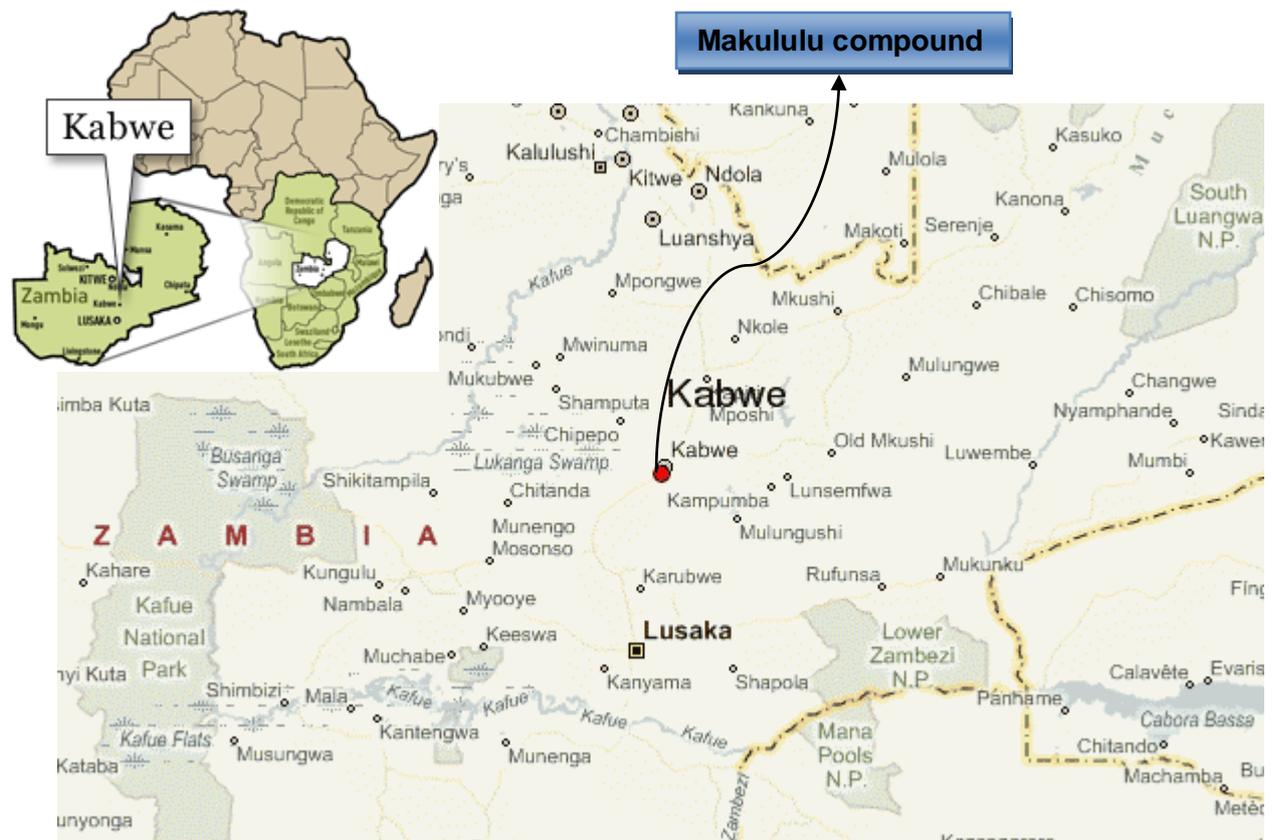


Figure 6-6: Location of the Makululu compound in Kabwe, Zambia

Source: Google maps, 2015.

In this community of approximately 60,000 people, 24% of the adults are HIV positive and over 1 in 4 children are orphaned (Cravenvill, 2015:8). Makululu also has only one health centre that services the entire community and they do not have access to appropriate treatments to deal with the HIV & AIDS epidemic. Presently there are 58 churches operational in the case study area in order to assist with upliftment projects and caring for those with AIDS, as well as the HIV & AIDS affected households e.g. orphans and widows (Scholtz, 2010).

Reasons for including this case study

- Because of its specific impact on children and the high amount of HIV/AIDS orphans in the area, this project provided access to key informants in terms of HIV/AIDS orphans and child headed households
- Provides the perfect opportunity as a pilot study to measure the impacts of external aid in the form of NGO's or church organisations in order to alleviate the impacts of HIV & AIDS on informal settlement development
- This case study could also be used to measure the impacts of a lack of government intervention in order to alleviate the impacts of HIV & AIDS on informal settlement development

Case studies like these mentioned in the preceding paragraphs, are plentiful. Even more so are the life stories of the HIV & AIDS affected households living in these areas. For the purpose of this research study and to provide decent context for the research chapters to follow, the researcher attempted to narrate the story of one of these HIV/AIDS affected households in the following section.

6.3 Isaac's story

It was a regular Sunday afternoon in Potchefstroom. I have just climbed into my car after enjoying a nice, relaxing cup of coffee at one of the coffee shops located at 'die Bult'. 'Die Bult' is a middle class neighbourhood and shopping area in Potchefstroom, thriving with smaller businesses and throbbing with the energy and the general buzz usually associated with students and the student life. The North West University is located within the same neighbourhood area and walking distance away. This also made 'die Bult' a popular hang-out for beggars and homeless street children, competing to make a living off the change and silver coins others were willing to depart of. Unfortunately, this resulted in an influx of petty crimes and drug abuse, especially a very addictive and extremely unhealthy habit of 'glue-sniffing' amongst the youngsters.

There was a knock on my window and I saw a small boy in tattered clothes standing next to my vehicle. With my relaxing cup of coffee still freshly in mind and the knowledge about money being used to buy sniffing glue overruling my opinion of this boy, I looked at him as a pang of irritation shot through me. 'Are you begging for money?' 'No ma'm, I'm hungry. My brother and I want some food please.' I felt the grip of irritation releasing just a bit, but helping him

immediately would mean that I'll be giving up my Sunday afternoon nap and in any case, helping this boy now would only be a temporary solution to his problem. 'Do you know about Thakaneng? Have you been there? Do you know that they will provide you with food and clothes?' 'Yes m'am, I know Thakaneng.' 'So why don't you go there?' 'Because I'm too small m'am, the older boys, they bully me and they take away my food and clothes.' I didn't want to believe him, and somehow it made sense. I have known the Thakaneng project for quite some time and to me, that was the only point of reference with regards to the children living on the streets in Potchefstroom. 'What is your name?' 'Isaac m'am'. 'Isaac, can I take you to Thakaneng?' 'M'am, no, I would rather that you take me home m'am.' 'Home? So you have got a home? Where do you live?' 'In Promosa m'am, with my brothers and sisters'

6.4 Conclusion

It can be concluded from **chapter 6** that the amount of case studies where people are either directly or indirectly affected by the HIV/AIDS epidemic, are plentiful and widespread. Stories like Isaac's story, are numerous and tragic and begs the question of how these HIV & AIDS affected households can be assisted in a more productive and successful way than the current approaches. It is evident that the answer to this should be a holistic one – the impacts of HIV & AIDS is not only an urban and regional planning problem, or an informal settlement development problem, but an all-encompassing problem that needs the input from cross cutting sectors like economic development, social development, the health sector, built environment, environmental specialists etc.

Chapter 6 provided an overview and background description to the selected case study areas as well as an extensive motivation of why these areas specifically were included in this study. The following chapter will expand on the specifics of these case study areas, including the unpacking of information gained during semi-structured interviews, focus group discussions and community forums.

CHAPTER 7: RESEARCH RESULTS AND SYNTHESIS

The aim of chapter 7 is to expand on the case studies that were briefly described in the previous chapter. This chapter provides a more detailed discussion of each case study area, including the unpacking of information gained during semi-structured interviews, focus group discussions and community forums as described in **section 6.1**. This also includes a range of selected photographs of the respective case study areas as well as a brief description of the key observations and lessons learnt from each study area. An outline of this chapter is provided in **Figure 7-1** below.

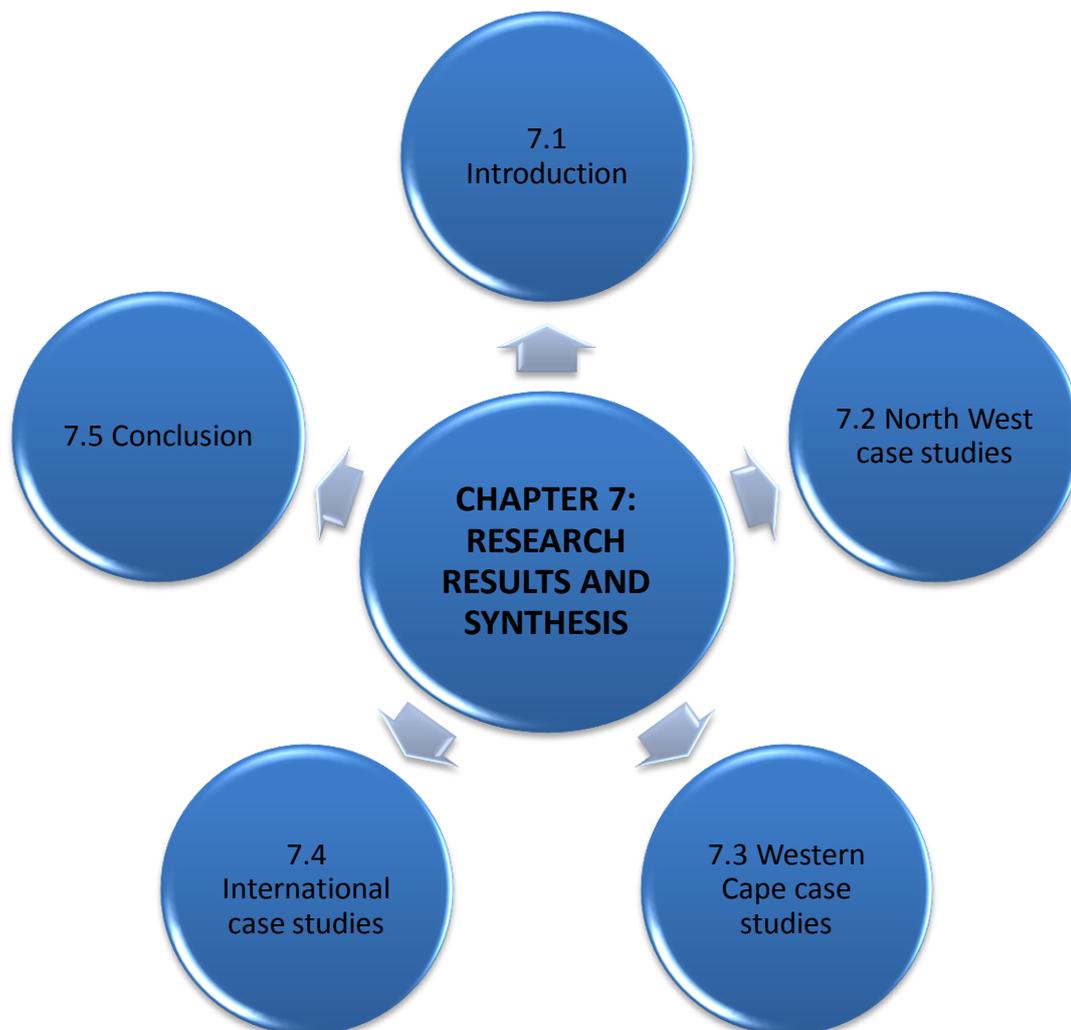


Figure 7-1: Summary of Chapter seven: research results and analysis

Source: Own construction (2015).

7.1 Introduction

As mentioned before, it is the purpose of this chapter to expand on the background description of the selected case studies areas as discussed in chapter 6. It is important to note that each case study is unique and therefore required a unique approach in order to gather information. Conventional research techniques do not always work when vulnerable communities like HIV & AIDS affected households are involved and therefore the research approach was adapted according to each unique situation.

The sections that follow will subsequently expand on the detailed case study research as outlined in the previous chapter by means of firstly discussing the results of the semi-structured interviews/focus group discussions/community forums and secondly providing more detail in the form of photographs and other information. The impact and contribution towards SHS of the various case studies is crucial in the context of HIV & AIDS and therefore the research information and results of all the interviews and discussions will be evaluated according to the list of SHS attributes as outlined in **section 4.2** of the literature in this research document. Following this, the key observations and lessons learnt at each case study area is also summarised.

7.2 Case studies in the North West Province

As mentioned in **Chapter 6**, the two case studies that were studied in the North West Province are both located in Ikageng, an informal settlement near Potchefstroom. The Mosaic project and Mamello Day Care centre will consequently be discussed in more detail.

7.2.1 The Mosaic project

Mosaic project's is a rare example of a case study taking a comprehensive and holistic approach to sustainable development. The main objective of this project is to improve the living circumstances of AIDS-orphans. **Table 7-1** is an evaluation matrix, comparing the current initiatives at the Mosaic project, with the SHS attributes as identified in **section 4.2** of this document. The table also describes the impacts of these ventures, on the prevalence of HIV & AIDS.

Table 7-1: Evaluation matrix of Mosaic project, the key attributes for SHS and the impacts on HIV & AIDS prevalence

Mosaic SA project		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants	Meyer and Louise Conradie, founders of the project Project leaders working at Mosaic Several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
<p>Shelter/shack upgrading: With the help of local and international volunteers, Mosaic builds houses for women who are fostering AIDS-orphans and are still living in shacks. Since its commencement in 2009, Mosaic has moved four families (taking care of twenty orphans) from their shacks to proper three bedroom brick houses. More than R2million was spent on enhancing the living circumstances of AIDS-orphans in the Ikageng community. Currently, Mosaic project has more than 20 homes accommodating an excess of 80 children, of whom more than 50 are orphans.</p>	<ul style="list-style-type: none"> • Adequate shelter/ secure tenure • Access to basic services and infrastructure • Habitability and health standards 	<ul style="list-style-type: none"> • Shelter provision reduces vulnerability to HIV infection. • Ownership/Tenure: Houses are rented to the families at the same price they would pay to rent a shack • Physical aspects of the houses: Families living in the Mosaic community are given a three-bedroom brick home with electricity, running water and a full bathroom (Conradie, 2011). • Access to health and educational facilities are excellent at Mosaic. • Mosaic's good quality of housing and health standards decreases the possibility of falling ill (especially referring to people already infected with HIV/AIDS) due to damp and leaking walls, poor ventilation etc.
<p>Social development: <i>Preschool:</i> Mosaic has a preschool that is attended by more than 100 HIV & AIDS infected and affected children weekly. <i>After-School Programme</i> Social Development among foster children</p>	<p>Social integration and cultural adequacy</p>	<ul style="list-style-type: none"> • Mosaic project focuses particularly on poor and marginalised social groups e.g. children from HIV/AIDS affected households, elderly women etc (Conradie, 2011). • Life skills training for foster parents ensure community support as well as the fact that these foster parents are selected

Mosaic SA project		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants	Meyer and Louise Conradie, founders of the project Project leaders working at Mosaic Several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
<p>over the age of six years is achieved through formal after-school activities that are facilitated by full-time volunteers at the Mosaic Centre. These activities include computer classes, tutoring, and English language classes as well as other recreational activities such as drama and sports.</p> <p><i>Life Skills Training</i></p> <p>Developing foster parents on a social level is done through life skills training. Life skills training for parents and foster parents of children happens on a monthly basis and covers subjects such as basic parenting, basic hygiene and basic financial literacy.</p>		<p>from the existing surrounding community (Conradie, 2011).</p> <ul style="list-style-type: none"> • The Mosaic project allows people to rely on their neighbours to assist with food, care and shelter in instances where families are overburdened by having to deal with HIV/AIDS. • Afterschool activities focus on exposing the HIV/AIDS affected children to life outside of the township. High importance is placed on offering the children opportunities to explore the world around them (field trips every year).
<p>Business Ventures: Mosaic has several business ventures where jobs are created for men and women fostering HIV/AIDS-orphans. Made by Mosaic and Mosaic Builders are two examples of these business opportunities, which provide jobs for more than 30 people in total.</p>	Economic viability/ affordability	<ul style="list-style-type: none"> • Economic development is the key to sustainable development (Conradie, 2011). • It is therefore a very high priority at Mosaic to create jobs for the foster parents who live in Mosaic homes. This is done through multiple business ventures, e.g.: • El-Gibbor Leather Manufacturers is a combined initiative by Mosaic and a private owner. El Gibbor provides jobs to 18 women and part of the profits are

Mosaic SA project		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants	Meyer and Louise Conradie, founders of the project Project leaders working at Mosaic Several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
		<p>donated to Mosaic (MosaicSA, 2015).</p> <ul style="list-style-type: none"> Mosaic Builders, a building contractor that co-ordinates all the building efforts of Mosaic as well as outside contracts. Mosaic Builders also has its own brick manufacturing operations. This business is fully owned by Mosaic; therefore, all profits are allocated to Mosaic.
Not a specific focus area of this case study	Accessibility/ transport systems,	<ul style="list-style-type: none"> Mosaic project is located on the urban periphery of Ikageng, Potchefstroom and therefore not very accessible
Not a specific focus area of this case study	Location, densification and compaction	<ul style="list-style-type: none"> Mosaic project is located on the urban periphery of Ikageng, and therefore adds to urban sprawl
Not a specific focus area of this case study	Environmental sustainability.	<ul style="list-style-type: none"> The project is not being developed with environmental sustainability as a specified priority

Source: Own construction, 2015

The Mosaic model illustrated by **Figure 7-2** is crucial to the successful implementation of all the above-mentioned measures. An in depth understanding of the community is vital, as the identification of foster families require first-hand experience and knowledge of the community. Families who already care for two or more foster children are usually identified as potential candidates to be included in the Mosaic project. After this selection process, these families are then assisted and empowered through the cycle process as illustrated in **Figure 7-2**. Illustrations of these ventures and activities at the Mosaic project, are displayed in **Figure 7-3** and **Figure 7-4** below.

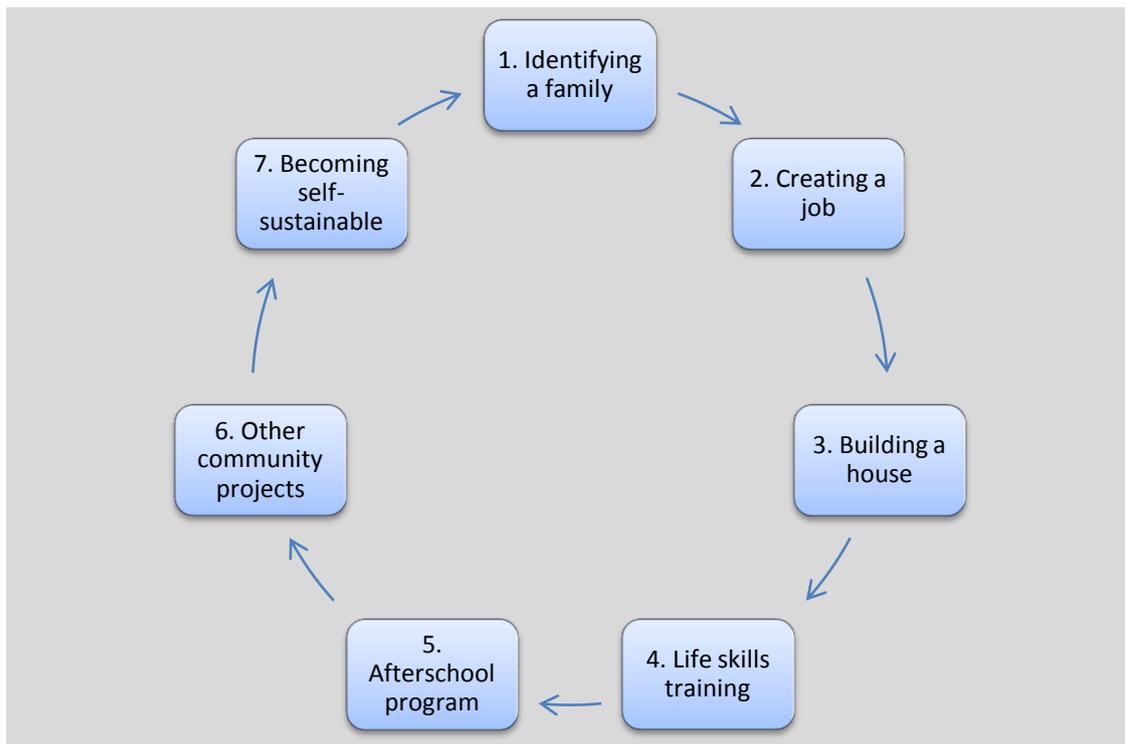


Figure 7-2: The Mosaic model

Source: Own construction, 2015.



Figure 7-3: House building and social development ventures at Mosaic project

Source: Own photographs (2014) and MosaicSA (2015).



Figure 7-4: Life skill training and business ventures at Mosaic project

Source: Own photographs (2014) and MosaicSA (2015).

The comprehensive impact of Mosaic's developmental exertions can be summarised in the following story of one of the foster families that forms part of Mosaic:

Sannah's story:

Sannah Saul (Figure 7-5) is fostering six Aids-orphans. They used to live in a shack but recently moved into a three bedroom brick house built by Mosaic. With the job Sannah now has at one of Mosaic's business ventures she can provide her foster children with food, clothing and school fees. Volunteers of Mosaic help the children with their homework and Sannah receives training from Mosaic's social worker on a weekly basis. The children who are still young enough attend Mosaic Preschool with other children from their community (MosaicSA, 2015).



Figure 7-5: The Saul family

Source: MosaicSA, 2015

In summary, the following key observations with regards to informal settlement development and the impacts of HIV/AIDS, can be derived from this case study:

Key observations and lessons learnt

- The specific aim on HIV & AIDS affected households creates opportunities to reach marginalised and vulnerable parts of the community
- In depth knowledge of the community and community engagement is crucial
- Empowering and strengthening the hands of families that already function within the extended family principle, is a success factor of this project
- The comprehensive and holistic approach to informal settlement development makes this project successful – social development as well as the creation of economic development opportunities and business ventures, is critically important

7.2.2 Mamello Day Care centre

Mamello Day Care Centre used to accommodate the children it cared for in a little shack. This very insecure and unhygienic shack was replaced with a brand new four-classroom facility as part of a community upliftment project from a local church organisation. The new facility qualifies Mamello to receive subsidy and is also used as a training facility. This project therefore serves as a pilot study to measure the impacts of external aid in the form of NGOs or church organisations in order to alleviate the impacts of HIV & AIDS on informal settlement development.

Table 7-2 is an evaluation matrix, comparing the current initiatives at the Mamello day care centre, with the SHS attributes as identified in **section 4.2** of this document. The table also describes the impacts of these ventures, on the prevalence of HIV & AIDS.

Table 7-2: Evaluation matrix of Mamello day care centre, the key attributes for SHS and the impacts on HIV & AIDS prevalence

Mamello Day Care centre		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants 3. Community forum and focus group discussions 4. Mmogo method	Numerous project visits Gloria Mphalla, Principal Other teachers working at Mamello Bafenyi trust and several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
Shelter/shack upgrading: The Day care centre used to accommodate the preschool children in a little shack. This very insecure and unhygienic shack was replaced with a brand new four-classroom facility as part of a community upliftment project from a local church organisation.	<ul style="list-style-type: none"> • Adequate shelter/ secure tenure • Access to basic services and infrastructure • Habitability and health standards 	<ul style="list-style-type: none"> • Ownership/Tenure: Gloria Mphalla was the owner of the shack and is also now the owner of the upgraded facility • Physical aspects: a four room brick building classroom facility has replaced the overcrowded, insecure shack. The day care centre is seen as a beacon in the community because of its more formalised structure. This, however, sometimes seems to be a hazard since the surrounding community expects food, care and shelter from the centre (Mphalla, 2012). • Access to health and educational facilities has significantly improved. Mamello day care centre was a health hazard before the upgrading. Previously, the children had to make use of a bucket system outside the shack as toilet facilities (Mphalla, 2012). • The better health standards now decreases the possibility of children falling ill due to damp and leaking walls, poor ventilation etc.

Mamello Day Care centre		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants 3. Community forum and focus group discussions 4. Mmogo method	Numerous project visits Gloria Mphalla, Principal Other teachers working at Mamello Bafenyi trust and several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
Social development: <i>Preschool:</i> Mamello day care centre is a preschool that is attended daily by more than 100 children from various parts of the Ikageng community. Some of these children come from HIV & AIDS affected households and extended families and quite a few of them are orphans. <i>Life Skills Training</i> The new facility qualifies Mamello to receive subsidy and to be used as a training facility for teachers	Social integration and cultural adequacy	<ul style="list-style-type: none"> Mamello day care project focuses particularly on poor and marginalised social groups e.g. children from HIV/AIDS affected households and extended families. Skills training for teachers at the day care centre ensure community support and development (Bafenyi, 2012). The Mamello day care centre is seen as a beacon in the community because of its more formalised structure. This, however, sometimes seems to be a hazard since the surrounding community expects food, care and shelter from the centre (Mphalla, 2012). The day care centre provides neutral ground / opportunity for members of marginalised HIV/AIDS affected households, to interact with the rest of the community (Bafenyi, 2012).
Business Ventures: The new facility qualifies Mamello to receive	Economic viability/ affordability	<ul style="list-style-type: none"> Mamello day care centre is a business on its own and a source of income for Gloria, the principal, as well as for the three other teachers working at the centre (Mphalla,

Mamello Day Care centre		
Research method & main informants	1. Observations, 2. Semi-structured interviews with key informants 3. Community forum and focus group discussions 4. Mmogo method	Numerous project visits Gloria Mphalla, Principal Other teachers working at Mamello Bafenyi trust and several volunteers from Germany Children as key informants
Case study focus/ special ventures	Key SHS attribute	Impacts on HIV/AIDS prevalence
subsidy and to be used as a training facility for teachers		2012). <ul style="list-style-type: none"> Gloria has more than once expressed her frustration with lack of access to funding and subsidy application processes being extremely extensive (Mphalla, 2012). Bafenyi Trust now assists Gloria with these applications for subsidies and funding (Bafenyi, 2012).
Not a specific focus area of this case study	Accessibility/ transport systems,	<ul style="list-style-type: none"> Mamello Day care centre is located on the urban periphery of Ikageng, Potchefstroom and therefore only accessible to the directly surrounding communities
Not a specific focus area of this case study	Location, densification and compaction	<ul style="list-style-type: none"> The day care centre's location on the urban periphery impacts negatively on densification and compaction, and therefore adds to urban sprawl
Not a specific focus area of this case study	Environmental sustainability.	<ul style="list-style-type: none"> Environmental sustainability is not a specified priority

Source: Own construction, 2015

Photographs of the upgrading and formalisation process of the Mamello day care centre as well as a few examples of community upliftment ventures by NGO's and church organisations at Mamello, is illustrated in **Figure 7-6** and **Figure 7-7** below



Figure 7-6: Upgrading of the Mamello Day Care Centre

Source: Own photographs (2013) and Bafenyi Trust (2015).

During numerous focus group discussions as well as interactions with the children at Mamello Day care, it became evident that the day care centre serves much more than only a preschool educational function in Ikageng. Formalisation of previously slum type structures (as Mamello was) immediately changes the community's perspective on the specific project and site development. From the community forum discussions, this was apparent – community members in some perverted way started to expect financial support as well as food and job security from the day care centre. Parents of children attending the school were also more reluctant to pay school fees and expected more and better food during lunchtime for the children. These misperceptions created by slum upgrading projects have far-reaching effects, especially concerning the impacts on the prevalence of HIV & AIDS. Essentially this implicates that ad hoc upgrading of slums/informal settlements would not be effective and will cause even more marginalisation of HIV/AIDS affected households. This, however, creates quite a predicament since the upgrading of inadequate shelters is essential in order to combat the spread of diseases like HIV & AIDS (refer to **section 3.2.2** of this document).



Figure 7-7: Social development, preschool education and NGO ventures at Mamello
Source: Own photographs (2014)

Key observations and lessons learnt

- Shack/shelter upgrading causes a bit of a “catch 22” predicament since the surrounding community suddenly expects formal support from the formalised structure
- All of the orphaned children in the school, are supported in an extended family setup
- In most cases, these extended families do not receive any kind of support
- Case studies like this one can provide relatively easy access points to other key informants in the informal settlement community in order to facilitate informal settlement development.
- Lack of funding has a direct impact on the ability of projects like these to survive the impacts of HIV/AIDS.
- Children functioning in a group setup such as this, are even more vulnerable and exposed to health hazards including HIV & AIDS
- The impacts of external aid in the form of NGO’s or church organisations in order to alleviate the impacts of HIV & AIDS on informal settlement development is vital and can bring a lot of relief.

7.2.3 Summary: North West case studies

Considering both the Mosaic project as well as the Mamello day care centre, a summative analysis was made of the correlation between the SHS criteria as identified in **Chapter 4.2** as well as the effectiveness of the projects' functioning within each of these criteria. This analysis was based on a prioritisation process where each of the SHS criteria was ranked according to the importance of that specific criterion for the projects, as identified during the focus group discussions and personal interviews with the various project experts. **Table 7-3** provides an overview of this analysis for both the North West Province projects as discussed in the above sections.

Table 7-3: Summary analysis of the effectiveness of SHS criteria within the North West Province projects

Empirical case study area	Type of HIV/AIDS intervention	Sustainable Human Settlements criteria	Prioritisation	Rank/Effectiveness for this specific project	TOTAL
North West Province	(offered directly or indirectly by the project)	As adapted from literature (Chapter 4.2)	According to interviews, focus groups etc (Rank from 8-1)	Score out of 10	Highest score = best performance
Mosaic project	Special HIV & AIDS intervention	Adequate shelter/secure tenure	8	9	72
	Using extended family system to provide access to housing, job opportunities etc specifically aimed at HIV/AIDS	Access to basic services and infrastructure	3	5	15
		Economic viability/ affordability	7	6	42
		Habitability and health standards	4	8	32
		Accessibility/ transport systems,	5	7	35
		Location, densification and compaction	6	6	36
		Social integration and cultural adequacy	2	8	16
		Environmental sustainability.	1	4	4
Mamello day care centre	Specific focus on children, HIV/AIDS orphans and child headed households	Adequate shelter/secure tenure	8	7	56
	Measuring the impacts of an external aid in the form of NGO's or church organisations on	Access to basic services and infrastructure	7	3	21
		Economic viability/ affordability	4	4	16
		Habitability and health standards	5	5	25
		Accessibility/ transport systems,	6	6	36
		Location, densification and compaction	2	2	4
		Social integration and cultural adequacy	3	6	18
		Environmental sustainability.	1	5	5

Legend	
Best performance	
Average performance	
Poor performance	

Source: Own construction, 2016

7.3 Case studies in the Western Cape

The three case studies that were researched in the Western Cape Province are the Kuyasa CDM project (in Khayelitsha), the Valcare trust resource centre (in Paarl) and the Butterfly House project (in Mbekweni, Paarl). Chapter 6 expanded on the reasons why these case studies were selected for this research; consequently, the following section will provide more detail on the research results pertaining to key informant interviews, site visits and focus group discussions.

7.3.1 The Kuyasa CDM project

The Kuyasa CDM project is a green low cost housing project that was developed by the nongovernmental organisation (NGO) SouthSouthNorth (SSN) for the City of Cape Town's Environmental Resource Management Department and Urban Renewal Programme.

An important aspect of this CDM model was the compulsory monthly financial contribution from each of the 2,309 households in Kuyasa, for which a simple and sustainable funds collection solution is still being sought. It is furthermore important to know that the Kuyasa CDM project saw instant effects on the social, health and economic well-being of the targeted beneficiaries after its initiation.

Key observations and lessons learnt

- The role of environmental sustainability in the development of informal settlements and “green low cost housing” is essential in the fight against HIV/AIDS
- An holistic approach to Sustainable Human Settlement development is needed in order to contain the prevalence of HIV & AIDS
- The project also provided access to key informants and a platform for community forum discussions
- The principle of community participation and the importance thereof, was another key factor impacting on the distribution of information with regards to HIV & AIDS
- Empowerment and income generation thorough the business ventures linked to this project is absolutely crucial to its success

7.3.2 The Valcare Trust case study

The Valcare Trust is a resource distribution centre, which facilitates networking between NGO's, churches, individuals, businesses etc. to alleviate poverty and increase the involvement in the Paarl Valley. This well-connected resource centre fulfils numerous functions and services to the community including information distribution, networking and administration.

Information Function

- Annual visits to the organizations on our data base. During these visits a questionnaire will be completed with the aim to update the organizations information
- Evaluation visits to new organizations where a questionnaire will be completed to gather information for the Valcare data base.
- Geographical mapping of all organizations listed on the Valcare database.
- Updating of photos and information on the Valcare website.
- Reflection of organization information in the Valcare News that appears 6 times per annum in the Paarl Post.
- Weekly distribution of a network newsletter. Information contained in the newsletter is subject to examination.
- Updating the donor data base.
- Monitoring the needs of organizations through the Valcare office.

Network Function

- Provide care and support to individuals involved in the organization. This care and support will be provided, as the needs exist.
- Identify partnerships and cooperation between the different role players.
- Share information, solutions and resources.
- Valcare is the link between people (individuals, churches, businesses etc.) who want to be involved in the charity function and organization or organizations with each other.

Administration Function

- Receiving, sorting and delivery of donations to organizations. The donations will be allocated to organizations according to their needs indicated on the questionnaire.
- Sending of thank you letters to donors.
- Administering of funds. This administration is subject to examination.
- Valcare has a transparent bookkeeping system, audited annually.

Key observations and lessons learnt

- The role and need for a central distribution and resource centre is vital in order to obtain decent data and information about people living with HIV & AIDS in a community
- It also contributes enormously to a more effective spread of resources and evens out the gap between the demand and supply of available help.
- The networking opportunities as well as the access to a vast database, made this case study a prime example of how municipal functions and job creation can lead to a more effective way of attending to the current HIV/AIDS crisis.

7.3.3 The Butterfly house project case study

As outlined in chapter 6, the Butterfly House and iBhabhathane projects aim to provide services, often in partnership with other organisations, which will add to the quality of life of patients, their families (infected and affected) and others made vulnerable through neglect, abuse, malnutrition, substance abuse, extreme poverty and illness. The purpose of the project is the mobilisation of the Drakenstein and Global community to react to the needs of all its citizens through finding answers to community challenges brought about because of the HIV/AIDS epidemic. 'It takes a village to raise a child' and a community response to support and create mutual care.

Key observations and lessons learnt

- After school care for HIV/AIDS affected households and children provide a good platform for community engagement and the distribution of resources to the most marginalised parts of the community.
- However, the visibility and access to these types of centres should be very clear.

7.3.4 Summary: Western Cape case studies

Considering the three Western Cape projects (Kuyasa CDM, Valcare trust and Butterfly house), a summative analysis was made of the correlation between the SHS criteria as identified in **Chapter 4.2** as well as the effectiveness of the projects' functioning within each of these criteria. This analysis was based on a prioritisation process where each of the SHS criteria was ranked according to the importance of that specific criterion for the projects, as identified during the

focus group discussions and personal interviews with the various project experts. **Table 7-4** provides an overview of this analysis for all of the Western Cape Province projects as discussed in the above sections.

Table 7-4: Summary analysis of the effectiveness of SHS criteria within the Western Cape Province projects

Empirical case study area	Type of HIV/AIDS intervention	Sustainable Human Settlements criteria	Prioritisation	Rank/Effectiveness for this specific project	TOTAL
Western Cape Province	(offered directly or indirectly by the project)	As adapted from literature (Chapter 4.2)	According to interviews, focus groups etc (Rank from 8-1)	Score out of 10	Highest score = best performance
Valcare project	Best practice example of the role and need for a resource centre, networking opportunities as well as the access to a vast database	Adequate shelter/secure tenure	2	7	14
		Access to basic services and infrastructure	4	8	32
		Economic viability/ affordability	7	7	49
		Habitability and health standards	3	5	15
		Accessibility/ transport systems,	8	4	32
		Location, densification and compaction	5	4	20
		Social integration and cultural adequacy	6	8	48
		Environmental sustainability.	1	4	4
Butterfly house project	A pilot study to measure the impacts of a specific intervention (e.g. after-school care) in order to alleviate the impacts of HIV & AIDS on informal settlement	Adequate shelter/secure tenure	7	7	49
		Access to basic services and infrastructure	6	6	36
		Economic viability/ affordability	3	4	12
		Habitability and health standards	5	8	40
		Accessibility/ transport systems,	8	6	48
		Location, densification and compaction	2	6	12
		Social integration and cultural adequacy	4	6	24
		Environmental sustainability.	1	5	5
Kuyasa CDM project	Best practice example of the role of environmental sustainability in the development of informal settlements and	Adequate shelter/secure tenure	6	9	54
		Access to basic services and infrastructure	3	8	24
		Economic viability/ affordability	8	8	64
		Habitability and health standards	1	8	8
		Accessibility/ transport systems,	4	7	28
		Location, densification and compaction	5	8	40
		Social integration and cultural adequacy	2	8	16
		Environmental sustainability.	7	9	63

Legend	
Best performance	
Average performance	
Poor performance	

Source: Own construction, 2016

7.4 International case studies

The two international case studies that were studied are located in Kenya and Zambia respectively. It is important to take note again, that the information derived from these international case studies, are mostly based on the observation research technique as discussed in **section 6.1.3**. The researcher made her own observations of various critical factors pertaining to the scope of this study, whilst visiting these two projects/case study areas. The purpose of this international case study overview, however, is not to do an in depth analysis of the respective case studies, but to make observations about a few selected factors pertaining to the outcomes of this research study. What follows therefore is a concise description and background to each of these case study areas.

7.4.1 **The Kibera Soweto East project, Kenya**

The stated objectives of the Kibera Soweto Pilot Project are to promote and facilitate the provision of (1) secure tenure, (2) improved housing, (3) income-generating activities, and (4) physical and social infrastructure (Mulcahy & Chu, 2008:12). Currently, construction crews are building a road into the village as well as off-site housing blocks intended to shelter Soweto residents temporarily while new housing is constructed within the village.

However, there are already questions concerning affordability, the appropriateness of the housing and unit type, and the community participation process. Project leaders from UN-HABITAT have worked with village leaders to establish an institutional structure and facilitate the process; this places the Nairobi City Council at the core of implementation.

Nevertheless, the council has not yet proven its capacity and ability to fulfill its responsibilities (Mulcahy & Chu, 2008:11). While the project's benefits remain to be seen, some valuable lessons have already surfaced: communities must be engaged from the program's initiation, every effort must be made to maintain affordability throughout a project, and institutional development must occur well before a project is implemented.

The living circumstances are tough and extremely unforgiving and the deprivations people face on a daily basis is enormous. This includes conditions like severe overcrowding, rotten sanitation, chronic disease, starvation, and nighttime insecurity. These conditions have evolved over decades of indifference and neglect by both municipal and national governments. Various

non-governmental organizations, many with the World Bank's help, have sponsored slum upgrading projects over the past several decades with varying degrees of impact and hardly any unqualified success. Finally acknowledging the problem's severity and persistence, Kenya's national government took definitive action in 2002 by creating the Kenya Slum Upgrading Program (KENSUP). This national office focuses on implementing projects that are sustainable, inclusive, democratic, accountable, and transparent and that will provide communities with improved housing and access to basic services, secure tenure, and opportunities to generate income.

Key observations and lessons learnt

- Current informal settlement development approaches like the upgrading of slums, including the relocation of inhabitants and access to new forms of housing, does not have a very high success rate in alleviating the impacts of HIV & AIDS on informal settlement development
- Marginalised communities like child-headed households and the elderly, are struggling to access the new housing and therefore do not necessarily benefit from slum upgrading projects like these.
- Community participation and a bottom-up approach is crucial

7.4.2 The Makululu compound, Zambia

Impassable roads – dilapidated homesteads crammed together, each breathing down the other in the struggle for space – smelly water snaking alongside houses making them popular habitats for mosquitoes, malaria and other diseases.

This is a sight in Makululu shanty in the shadows of Kabwe municipality. The sprawling informal settlement on the outskirts of Kabwe, revered as the largest township in southern Africa, has not seen much development since it was created in the 70s and residents are running out of patience in the long wait for service delivery from the local authority.

Lack of decent tap water has been a headache to most residents and to fight this problem some have dug wells near their abodes where they draw laundry and drinking water. Those insanitary conditions have grudgingly been accepted by slum dwellers, which have little means of improving their lot. The poverty and shabbiness is pitted against the wealth and luxury of high-

income communities in other areas of Kabwe. Seventy-six-year-old Chungu Mwansa, one of the displaced residents living in a tent with her grandchildren, says life in Makululu is tough.

She has been living in a tent for over two months, sharing a tent with grandchildren while her only son sleeps in another tent adjacent to hers. "We do not have toilets here. Water is also a problem. We draw water from wells and sometimes we get it from a broken pipe that supplies water to the rest of Kabwe," Ms Mwansa says. She appealed to Government to build her another house or relocate her to another land not prone to floods during the rainy season. Another resident, Kenneth Mbulo, 64, has been living in Makululu for 11 years and has no better words for the conditions in the area. "The situation for most of us here is bad. We have been experiencing floods every rainy season but we cannot move because of lack of money to build our houses elsewhere," Mr Mbulo says. He sleeps in a tent with his wife while some of his eight children make do with part of the house that collapsed.

Ms Madondo, a ward councillor said drama plays a very important role in terms of mobilising the communities to be sensitised to understand the kind of services they should expect from councils. She expressed concern that many times members of communities do not participate in decision-making to improve service delivery in their areas. *"Even when they are not happy about those services they keep quiet. We believe that through community mobilisation people can begin to demand the kind of services that they expect,"* Ms Madondo said. If people in Makululu shanty in Kabwe are to understand issues concerning their development there is need for aggressive awareness programmes for them to make decisions on what they want and it is hoped that with the implementation of the national decentralisation policy around the corner problems of service delivery in their area will be solved.

According to Cravenvill (2015:3), in 2007, the MLGH funded the upgrading of Makululu Compound, the largest unplanned settlement, with an initial amount of K100,000,000 (about \$22,200). It was the first time the local authority received such financial support to undertake an integrated settlement-upgrading project since inception of the National Policy. The study found that the project had however not recorded significant progress due in part to unclarified roles among departments internally, on the one hand and ineffective coordination from MLGH, on the other.

Key observations and lessons learnt

- The role of government is crucial in the development of a informal settlement strategy to cope with the impacts of HIV/AIDS
- Lack of government intervention leaves residents to look after themselves and create their own solutions
- The extended family concept thrives also here in the Makululu compound
- Residents create their own informal economy and informal settlement mitigation measures if left on their own by the government to do so.

7.4.3 Summary: International case studies

Considering both the international case studies (the Kibera Soweto East project in Kenya and the Makululu compound in Zambia), a summative analysis was made of the correlation between the SHS criteria as identified in **Chapter 4.2** as well as the effectiveness of the projects' functioning within each of these criteria. This analysis was based on a prioritisation process where each of the SHS criteria was ranked according to the importance of that specific criterion for the projects, as identified during the focus group discussions and personal interviews with the various project experts. **Table 7-5** provides an overview of this analysis for both the international case studies as discussed in the above sections.

Table 7-5: Summary analysis of the effectiveness of SHS criteria within the International projects

Empirical case study area	Type of HIV/AIDS intervention	Sustainable Human Settlements criteria	Prioritisation	Rank/Effectiveness for this specific project	TOTAL
International case studies	(offered directly or indirectly by the project)	As adapted from literature (Chapter 4.2)	According to interviews, focus groups etc (Rank from 8-1)	Score out of 10	Highest score = best performance
The Kibera Soweto East project, Kenya	Measure the impacts of a specific intervention (e.g. formalisation/slum upgrading) in order to alleviate the impacts of HIV & AIDS on informal settlement development	Adequate shelter/secure tenure	8	5	40
		Access to basic services and infrastructure	7	5	35
		Economic viability/ affordability	1	2	2
		Habitability and health standards	3	4	12
		Accessibility/ transport systems,	6	4	24
		Location, densification and compaction	5	5	25
		Social integration and cultural adequacy	4	3	12
		Environmental sustainability.	2	2	4
The Makululu compound, Zambia	Measure the impacts of a lack of government intervention in order to alleviate the impacts of HIV & AIDS on informal settlement development	Adequate shelter/secure tenure	7	6	42
		Access to basic services and infrastructure	8	5	40
		Economic viability/ affordability	4	5	20
		Habitability and health standards	3	3	9
		Accessibility/ transport systems,	6	4	24
		Location, densification and compaction	2	5	10
		Social integration and cultural adequacy	5	7	35
		Environmental sustainability.	1	3	3

Legend	
Best performance	
Average performance	
Poor performance	

Source: Own construction, 2016

7.5 Conclusion

It is evident that the answer to the HIV & AIDS challenge should be a holistic one – the impacts of HIV & AIDS is not only an urban and regional planning problem, or an informal settlement development problem, but an all-encompassing problem that needs the input from cross cutting sectors like economic development, social development, the health sector, built environment, environmental specialists etc.

Chapter 7 provided specifics on the case study areas, including the unpacking of information gained during semi-structured interviews, focus group discussions and community forums. The following chapter analyses these key observations and evaluates each case study area accordingly.

CHAPTER 8 FINDINGS AND CONCLUSIONS

It is the purpose of this chapter to analyse the research results as described in **chapter 7** in alignment with the theory discussed in the chapters preceding the empirical research part of this document. Chapter 8 therefore aims to evaluate each of the selected case studies by means of matrixes which align the literature and empirical parts of this study. The chapter ends with a summary of the findings and conclusions based on the empirical research of this study. An overview of this chapter is provided in

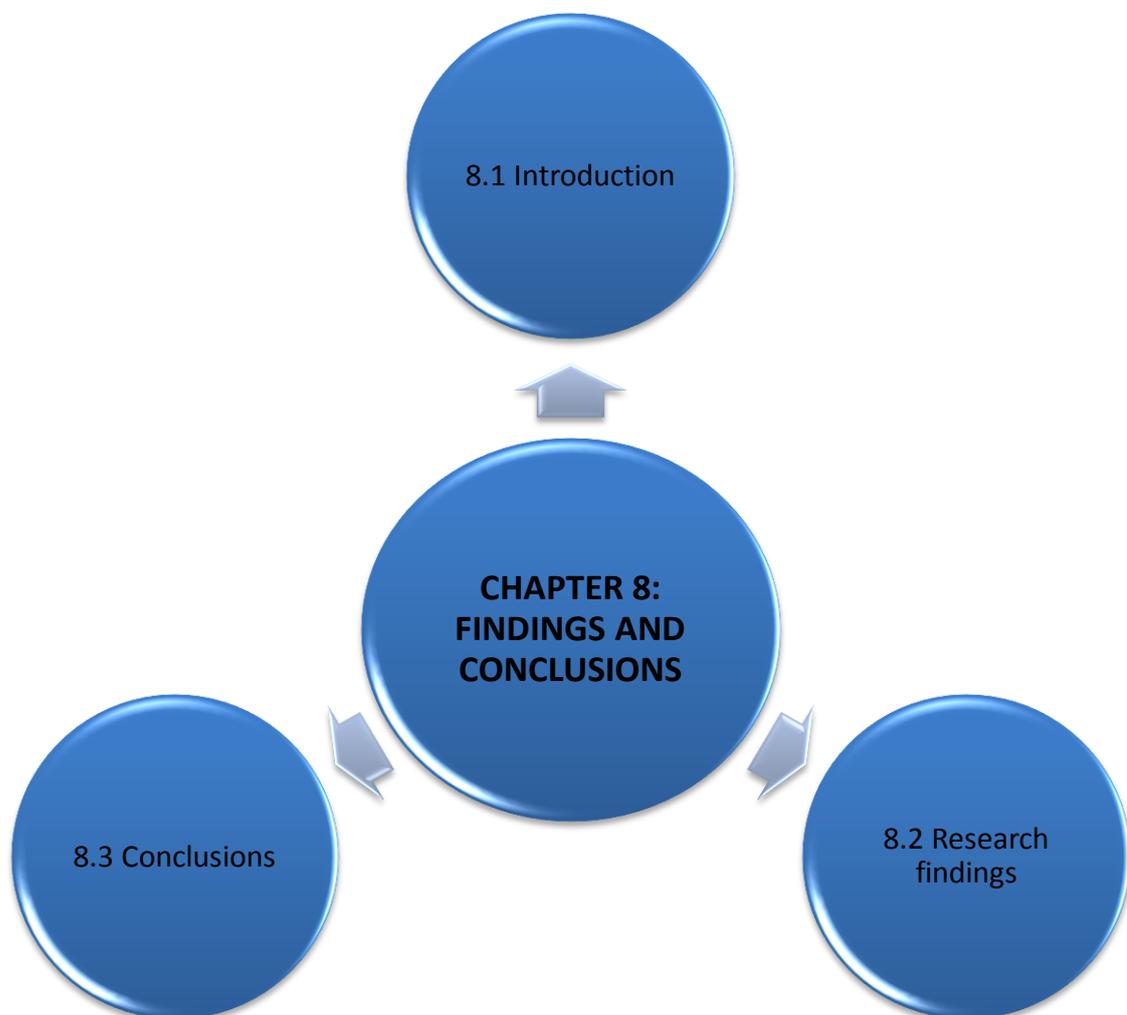


Figure 8-1 below.

Figure 8-1: Summary of Chapter eight: research findings and conclusions**Source: Own construction (2015).****8.1 Research findings**

According to the State of South Africa's Population Report: Population, Poverty and Vulnerability (2000:61), "the HIV and AIDS pandemic is the single most important phenomenon that will shape future demographic and development trends in South Africa".

Up until now, the impact of HIV & AIDS on the creation of Sustainable Human Settlements, with specific reference to the provision of housing in informal settlements, has not been taken into consideration during the Planning Process. As mentioned before, HIV & AIDS causes major changes in the demographic structure of communities within these informal settlements.

These demographic changes are having a vast impact on the socio-economic dynamics as well as the spatial structure of the informal settlements. These impacts include amongst others, a huge increase in child-headed households as well as elderly people without access to proper care. It is therefore essential to take the socio-economic as well as the psychological impacts of HIV & AIDS into consideration during the spatial planning process and the delivery of housing.

It is evident from **Figure 2-4** that, although there are currently various supply structures in place in the form of government instruments, assistance from NGO's and church organisations, formal and informal private sector interventions etc., the assistance from these supply organisations, is provided on an ad hoc basis and are usually limited to the more formal supply structures within the informal settlements. The HIV & AIDS barrier as well as other development constraints, prevents access to these supply structures, by the HIV & AIDS affected households. For example, a child-headed household will be at a disadvantage to access housing programmes or any form of financial assistance. On the basis of this understanding, the aim of this study, as mentioned earlier, is to revisit the current approaches to informal settlement development by considering strategies for development which will contribute to decreasing the rate of HIV & AIDS infection and respond to shifts in demographic and socio-economic dynamics arising from the impacts of HIV & AIDS in society, and in turn demand and use of land. These development constraints on HIV & AIDS affected households as well as their relation to land use development and spatial planning, will be discussed in detail within the next chapter.

Furthermore the interface between land use management, spatial planning and HIV & AIDS is one of a complex nature. It is, however, vital to understand this relation, as this forms the crux of the epidemic's impact on informal settlement development as well as the creation of sustainable human settlements in general.

The spread and prevalence of HIV & AIDS is intrinsically connected to spatial planning and land use management and it would be a major error to not recognise this in the planning and development approaches towards informal settlement development. This especially applies to urban informal settlements, where HIV & AIDS prevalence is traditionally the highest. Development constraints like poverty, informality, underdevelopment and inequality are most certainly not features that are unique to urban areas in South Africa, but informal settlements have added factors which contribute to the spread of HIV & AIDS. These include a high level of overcrowding and population density in urban areas and particularly in informal settlements, migration to cities mostly in search of better job opportunities, the rate and depth of poverty in urban areas compared to that in rural areas, poor living conditions in crowded informal settlements, lack of basic services and infrastructure, and inadequate planning on the part of government to create integrated, sustainable human settlements in urban areas. HIV & AIDS therefore impacts on both the sustainability of communities as well as their development conditions. Inadequate access to services, secure tenure and housing increase the risk of HIV/AIDS infection and leave the residents of informal settlements particularly vulnerable to opportunistic infections.

Traditional approaches to address the prevalence of HIV & AIDS in informal settlements, is ad hoc and reactive in nature and therefore do not seem to keep up with the increasing demand for better housing and development opportunities. It is obvious from the research in chapter 3 that the provision of RDP housing on an ad hoc basis as well as providing aid to HIV & AIDS affected households in an unstructured manner will not solve the current development issues and spatial challenges associated with the epidemic. Development responses encompassing a more holistic approach are needed. The development of integrated and sustainable human settlements is one example of an all-inclusive response to the impacts of HIV & AIDS on informal settlement development.

If anything, it should also be evident from the complex nature of the issues outlined in the preceding matrixes, that the creation of sustainable human settlements is no small feat, neither

is it a concise or simple process. Implementing the key attributes as listed before in a sustainable way, will take a considerable amount of time and extensive research. As mentioned previously, each informal settlement presents a unique set of challenges and therefore these attributes cannot be applied in an ad hoc or blueprint manner. Taking the impacts of HIV & AIDS into consideration complicates this matter even further. It is, however, imperative that the unique set of challenges presented by the HIV & AIDS epidemic be taken into careful consideration when planning for SHS, as this has a crosscutting effect on all the key attributes discussed in the preceding matrixes.

8.2 Research conclusions

Recognising how developmental factors like poverty and gender inequality relate to and interact with HIV/AIDS signifies a major step forward in understanding the South African HIV/AIDS epidemic and its consequences at individual, household, community, societal and institutional levels. By recognising how HIV/AIDS exploits and reinforces social fault lines, thereby particularly disadvantaging poor, underdeveloped and under-resourced individuals and communities, the role of government and particularly local government becomes increasingly apparent.

It is no longer sufficient for government, at all three spheres, to concentrate its interventions on traditional prevention, care and treatment and limited impact mitigation. Instead, what is required is a holistic response that takes into consideration the developmental nature and implications of HIV/AIDS.

This study has highlighted how factors like poverty, inequality, inadequate housing and inadequate access to services and infrastructure can increase vulnerability to HIV infection whilst simultaneously undermining the coping mechanisms of individuals, households and communities. More specifically, the study has highlighted the link between HIV/AIDS and the sustainable human settlement agenda as proposed by Breaking New Ground.

It has sought to interrogate the extent to which this agenda takes the context of HIV/AIDS into account and how it responds to HIV/AIDS and has pointed to a number of strengths and weaknesses in this regard. This has informed a number of recommendations to overcome some of the identified weaknesses and ensure that an HIV/ AIDS perspective is integrated into sustainable human settlements planning.

The primary conclusion that is reached is that the development and implementation of a sustainable and integrated human settlement agenda is critical in responding to HIV/AIDS and its consequences. However, in its current format the plan for implementing the sustainable human settlements agenda does not effectively take into account the changing shelter and services needs created by the epidemic. This is further exacerbated by the fact that the implementation of this agenda has to take place within a complex system of intergovernmental relations. Municipalities have to come to terms with their role as coordinators and primary service providers for sustainable human settlements, but they have to understand this role within the context of HIV/AIDS.

Without purporting to provide all the answers, the study has offered some suggestions on how sustainable human settlements planning and development can become an integral component of South Africa's national response to HIV/AIDS. As such, it has provided a basis for reflection and discussion that will hopefully assist all three spheres of government to better understand their role in responding to HIV/AIDS.

CHAPTER 9: PLANNING CONCLUSIONS AND RECOMMENDATIONS

It is evident from the preceding research analysis that, although there are various supply structures in place in the form of government instruments, assistance from NGO's and church organisations, formal and informal private sector interventions etc., the assistance from these supply organisations, is provided on an *ad hoc basis* and are usually limited to the more formal supply structures within the informal settlements. The HIV/AIDS barrier as well as other development constraints, prevents access to these supply structures, by the HIV/AIDS affected households. For example, a child-headed household will be at a disadvantage to access housing programmes or any form of financial assistance.

The challenge therefore is, to create an Informal Settlement Development Model which would coordinate these existing supply structures and redistribute the supplies in order to provide equal access and benefits to the HIV/AIDS affected households. In other words, the planning process should be more demand driven, as indicated by **Figure 9.1** Comparing this figure with the one in **section 2.4** of this study, the reason for the recommendation of a comprehensive Informal Settlement Development model, is obvious.

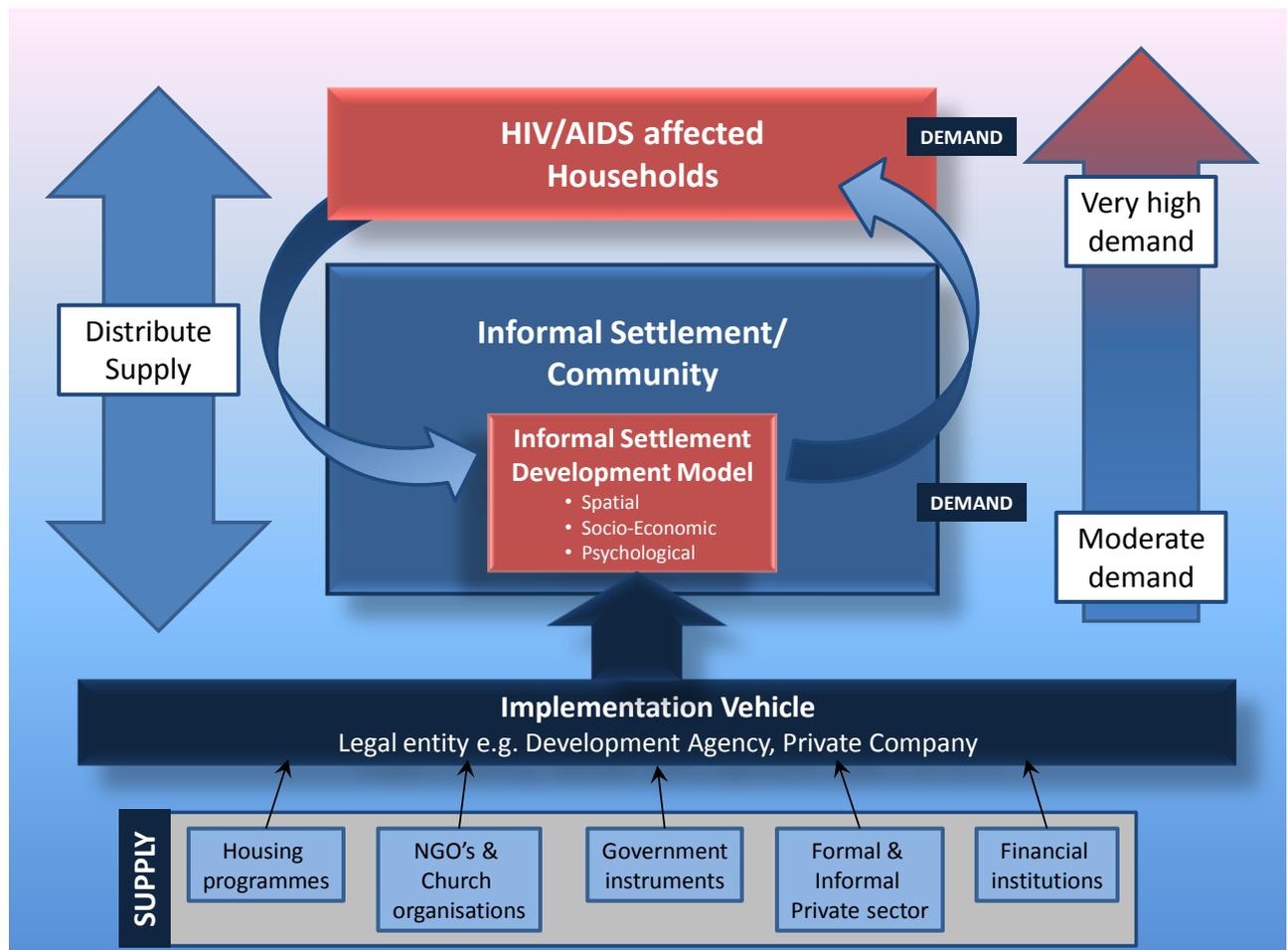


Figure 9-1: Proposed approach to informal settlement development

Source: Own construction, 2016

This holistic approach to informal settlement development should not only consider spatial development and the provision of housing, but the socio-economic as well as the psychological impacts of HIV/AIDS on these communities must be taken into consideration. The idea is to establish an Implementation Vehicle to coordinate, manage and distribute all of the current and planned aid and support within the Informal Settlement in an optimal way such as to include the HIV/AIDS affected households as well.

9.1 Recommendations in summary

Based on the preceding analysis in Chapters 7 and 8 and also taking the eight SHS characteristics as well as the current planning solutions into consideration as discussed in **sections 4.2 and 4.3** , the following recommendations are made for effectively integrating HIV/AIDS into sustainable human settlements planning and development:

Table 9-1: Planning recommendations

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
<p>Development of a comprehensive Informal Settlement Development model which will oversee / guide the establishment and development of all aspects within informal settlements.</p>	<p>As mentioned previously, the HIV/AIDS barrier as well as other development constraints, inhibits access by the HIV/AIDS affected households to the current supply structures within informal settlements, e.g. a child-headed household will be at a disadvantage to access housing programmes or any form of financial assistance. The recommendation therefore is, to develop and create an Informal Settlement Development Model, which would coordinate these existing supply structures and redistribute the supplies in order to provide equal access and benefits to the HIV/AIDS affected households. In other words, the whole planning process should be more demand driven, taking cognisance of the community's needs and involvement in all aspects of SHS development.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure • Economic viability/affordability • Accessibility/transport systems, • Location, densification and compaction • Social integration and cultural adequacy
<p>Revisit policy norms underpinning the planning of sustainable human</p>	<p>HIV & AIDS is challenging a number of norms underpinning current approaches to SHS and housing delivery in particular. With reference to Chapters 4 & 5 of this study, these include</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
settlements	<p>assumptions regarding:</p> <ul style="list-style-type: none"> • the size and structure of households (ignoring, for example, the plight of child-headed households), • the value and use of a house/residential unit (which changes in the context of ill health), and • affordability/household ability to pay (e.g. services, rates, rental). 	<p>infrastructure</p> <ul style="list-style-type: none"> • Economic viability/affordability • Social integration and cultural adequacy
Extend the scope of current planning interventions to address and eradicate the policy bias with individual home ownership and greenfields development	<p>With reference to Chapters 4 & 5, it is evident that while BNG recognises the need for supplementary and complementary approaches to greenfields developments in the promotion of SHS, this has not yet converted adequately into alternative approaches and suitable instruments to expedite this. Both in situ upgrading and social housing (as described in section 4.3), if designed and implemented fittingly, can potentially contribute to reduced vulnerability to HIV infection and enhance poor households' ability to cope with the consequences of HIV infection and AIDS-related deaths.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Economic viability/affordability • Habitability and health standards • Social integration and cultural adequacy
Vigorously involve people living with HIV/AIDS, HIV & AIDS affected households, marginalised social groups and communities that are	<p>Community participation as discussed in Chapter 5 of this document is a well-established and renowned principle of local development and municipal planning, even though in practice it is often a tense and disputed process. In the context of South Africa's severe HIV/AIDS epidemic, it is especially essential that policy</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure • Habitability and

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
<p>affected by the epidemic in the design and development of SHS.</p>	<p>makers and planners make deliberate and conscious efforts to include those most vulnerable to and most obviously affected by the HIV & AIDS epidemic in human settlements planning. A practical application of this was particularly well illustrated by the case of the Kuyasa CDM project discussed in section 7.3 of this study. This will enable the vulnerable and marginalised communities to exercise their democratic rights to express their particular needs. It will also highlight where current approaches and instruments may be insufficient to respond to the specific challenges posed by the HIV & AIDS epidemic.</p>	<p>health standards</p> <ul style="list-style-type: none"> • Social integration and cultural adequacy
<p>Proactively identify extended families currently / already involved with HIV/AIDS affected vulnerable groups and prioritise support interventions to assist these families.</p>	<p>In depth knowledge of the community and community engagement is crucial to empowering and strengthen the hands of families that already function within the extended family principle. In most cases, these extended families do not currently receive any kind of support. As mentioned in Chapter 4, a lack of funding has a direct impact on the ability of communities to survive the impacts of HIV & AIDS. It is therefore also recommended that the impacts of external aid in the form of NGO's or church organisations in order to alleviate the impacts of HIV & AIDS on informal settlement development is vital and should be enhanced, supported as well as well-coordinated.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure • Economic viability/affordability • Social integration and cultural adequacy

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
<p>Fast-track in situ upgrading in such a way that it identifies, recognises and enhances livelihood strategies as well as social support systems</p>	<p>As mentioned before, it is obvious that housing, the provision of basic services and development of infrastructure are critical interventions to address some of the developmental drivers of the HIV/AIDS epidemic. Interventions like these will also help to boost the abilities of underprivileged households and communities to better deal with the health, social and economic magnitudes of HIV/AIDS.</p> <p>In situ upgrading needs to be informed by an appreciation and careful understanding of the intricacies of informality, the strengths and weaknesses of current livelihood strategies and social support systems that local residents may (or may not) be able to draw on.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure • Economic viability/affordability • Habitability and health standards • Accessibility/transport systems
<p>Identify and recognise the repercussions that HIV/AIDS has for the institutional capacity required for SHS development, planning and implementation.</p>	<p>HIV/AIDS is not only a problem in the external environment; it may also challenge the planning and implementation capacity of the three spheres of government to uphold the development of SHS.</p>	<ul style="list-style-type: none"> • Economic viability/affordability • Location, densification and compaction • Social integration and cultural adequacy
<p>Arrange for the required supervision,</p>	<p>It is evident from discussions in Chapter 5 of this study, that local municipalities need guidance</p>	<ul style="list-style-type: none"> • Adequate shelter/secure

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
<p>guidance and support for local government institutions to integrate HIV/AIDS related factors in SHS planning, development and implementation.</p>	<p>and support from national and provincial government to implement the SHS agenda in a manner that integrates and recognises an HIV/AIDS related perspective. In order to provide this kind of supervision and support to local government, better clarity is needed on the envisioned role, capabilities and fluctuating capacities of municipalities to take a more active role in stimulating SHS development (this includes e.g. aspects of municipal planning, the delivery and maintenance of housing, provision of basic services and development of infrastructure). Intelligibility is also needed on the spatial implications of HIV & AIDS as a developmental issue and the epidemic’s further implications for municipal planning and service delivery.</p>	<p>tenure</p> <ul style="list-style-type: none"> • Access to basic services and infrastructure • Accessibility/ transport systems, • Location, densification and compaction • Social integration and cultural adequacy • Environmental sustainability
<p>Proactively and resourcefully, allow for the transfer of title deed / rental agreements in the case of a beneficiary passing away.</p>	<p>In quite a few of the cases evaluated during the course of this study, dependents of a beneficiary of a housing subsidy for home ownership / social housing lost the right to remain in the property when the original beneficiary passed away. Although there are instances where municipalities actively engage with beneficiaries to make sure that they draw up a will to enable the transfer of the house to their named beneficiary, there is currently no national policy or guideline that backs efforts like these. This also doesn’t address the housing needs of dependents in the case of a rental agreement.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
	<p>Therefore, it is recommended that the Department of Housing initiate the development of a policy / guidelines to guarantee the transfer of the title deed / rental agreement to the surviving spouse or dependents in instances where the original beneficiary has passed away. This will drastically improve the access to adequate housing by marginalised households.</p>	
<p>Identify, distinguish and support the interface between the agendas of sustainable human settlements and local economic development.</p>	<p>It is absolutely vital to elude a situation whereby municipalities pursue the establishment of SHS and (LED) local economic development as isolated and possibly conflicting agendas. While the main attribute of SHS is a more holistic and integrated development approach, that recognises the need to link housing delivery with the provision of social and economic infrastructure, this cannot and should not be separated from local economic development.</p> <p>The agenda of SHS is intricately connected with the agenda of LED. Consequently, it is critical to ensure that livelihood strategies and income generating opportunities are reinforced and improved as a fundamental part of the planning and development of SHS.</p> <p>Taking the impacts of HIV & AIDS into account, as discussed during the course of this study, this denotes that careful consideration needs to be given to increasing and improving livelihood</p>	<ul style="list-style-type: none"> • Economic viability/ affordability • Habitability and health standards • Accessibility/ transport systems, • Social integration and cultural adequacy • Environmental sustainability

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
	strategies and job opportunities that will assist in minimising the vulnerability to HIV/AIDS infection and that will provide sufficient support to HIV/AIDS affected households.	
<p>Promote the provision of housing within the context of an all-inclusive social development approach that embraces municipal indigent support.</p>	<p>As described in section 4.2, the financial anxieties and pressures that the HIV/AIDS epidemic brings to underprivileged and low income households threatens their continued ability to pay rent, rates or service charges. Resulting from this, HIV & AIDS affected households may be obligated to sacrifice their newly attained security of tenure / house.</p> <p>Consequently, it is imperative that sufficient provision is made in a municipality's indigent support policy to support HIV & AIDS affected households, especially focussing on child-headed households or households headed by elderly people without any access to funding or pension. The provision of free basic services to underprivileged households, whether or not directly affected by HIV/ AIDS, is a vital element of a holistic, all-inclusive social development approach. Another point of contemplation should be on whether the current specified quantities of services, especially regarding water, are adequate for households that have to cater for the added service demands imposed on them to ensure suitable care and hygiene in the case of HIV & AIDS infection.</p>	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Access to basic services and infrastructure • Economic viability/affordability • Habitability and health standards

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
<p>Take the impacts of HIV/AIDS into consideration in the planning and design of informal settlements.</p>	<p>Issues such as safety, urban connectivity, mobility and ease of access are especially significant when considered from the perspective of the HIV/AIDS epidemic's far reaching impacts. Therefore, vigilant consideration needs to be given to the location of a new informal / low-income settlement in relation to job opportunities, markets, social facilities and public services, including transport services. Settlement planning and design principles should be cognisant of factors such as improved safety especially for women and children, social integration, local connectivity and access to transport systems. Other factors such as the location of residential units in relation to one another and in relation to the distance from shops, community facilities, public spaces etc. should also inform the design and layout of these settlements.</p>	<ul style="list-style-type: none"> • Habitability and health standards • Accessibility/transport systems, • Location, densification and compaction • Social integration and cultural adequacy • Environmental sustainability
<p>The impacts of HIV/AIDS must be considered in the design and layout of housing units.</p>	<p>In light of the discussion of the impacts of poverty, informality, underdevelopment and poor social networks on HIV & AIDS prevalence in section 3.2 of this document, a few important factors should be considered when designing the layout of residential units in informal settlements. These include factors such as:</p> <ul style="list-style-type: none"> • Sewerage connections in the residential unit to evade physical attacks when using external toilet facilities or collecting 	<ul style="list-style-type: none"> • Adequate shelter/secure tenure • Habitability and health standards • Location, densification and compaction • Social integration

Planning recommendation	Impacts on HIV/AIDS prevalence	Key Sustainable Human Settlement attribute
	<p>water</p> <ul style="list-style-type: none"> • Partitioning in residential units to give consenting adults privacy and avoid early exposure of young children to sexual activity • Partitioning also to allow sick household members a private space, • Overall hygienic conditions and accessibility e.g. to allow for wheelchair access in later stages of HIV/AIDS-related illness • Proper insulation and ventilation in residential units to reduce the risk of spreading tuberculosis and other illnesses. 	<p>and cultural adequacy</p> <ul style="list-style-type: none"> • Environmental sustainability

Source: Own Construction, 2016.

The recommendations as outlined in **Table 9-1**: Planning recommendations offered here are not exhaustive, but are meant to be indicative of the policy and planning implications that need to be considered to integrate HIV/AIDS into sustainable human settlements planning and development.

10. AREAS OF FURTHER STUDY

The following areas require and justify further study with regard to low cost housing solutions. Many of these study areas will be investigated in the form of research for a Doctoral Degree.

These study areas include:

- The development of a new Informal Settlement Model
- Investigating the opportunities for the establishment of a resource centre
- Exploring alternative ways of implementation e.g. an implementation vehicle
- Urban design guidelines for low cost housing development.
- Layout templates for low cost housing development with a focus on cost efficiency and the improvement of quality of life.
- International case studies with reference to successful international low cost housing development.
- Possible policy changes to be considered by the South African government.
- Financial and administrative management practices to be introduced.
- An evaluation of government's backyard rental policies.

It is believed that the above mentioned study areas warrant further research in order to improve the living conditions of South Africa's HIV & AIDS affected households. It is also believed that even more areas of potential study and investigation will be uncovered through the research of the above.

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