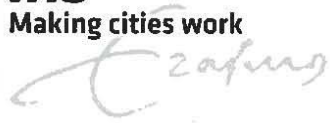**IHS**
Making cities work

IHS is the international institute of urban management
of Erasmus University Rotterdam

MSc Programme in Urban Management and Development

Rotterdam, The Netherlands

September 2012

Thesis

Understanding the Self-Help Incremental Housing Processes in
Informal Settlements as a Strategy for Providing Low-Income
Housing, a Case of Ipusukilo, Kitwe - Zambia

Idah Ethel Zulu, Zambia

Supervisor: Dr. Alonso Ayala

Specialisation: Housing Development Strategies

UMD 8

MASTER'S PROGRAMME IN URBAN MANAGEMENT AND DEVELOPMENT

(October 2011 – September 2012)

Title: Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing; *a Case of 'Ipusukilo' Kitwe- Zambia*

Name: Idah Ethel Zulu
Country: Zambia

Supervisor: Dr. Alonso Ayala

UMD 8 Report number:

Rotterdam, September 2012

Acknowledgements:

i

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Executive Summary

The world urban population has been increasing; for the first time almost half of the global population lives in urban areas. This has created the need for more urban services and housing. International laws on housing recognize the right to housing and it is also considered a basic need. This makes governments have the need to provide housing or promote an environment for providing housing for all income groups. The 'enabling approach' has been the international agenda with governments being urged to allow policies that promote private sector participation and other actors in the provision of housing. Yet, the biggest challenge in these 'enabling approaches' has been to provide housing for the low income groups. In Zambia there is an increasing demand for low cost housing as urban growth rises. The formal housing supply is by far not reaching the need. Informal housing sector has increasingly been significant in providing housing for the majority low income households through self-help and incremental efforts. Considering the magnitude of the housing problem, there is need for serious interventions in the housing sector. It is from this background that this research seeks answers to the question: "Has self-help incremental housing processes helped low income households in informal settlements to access housing and to what extend can these processes be improved on as a strategy for providing housing for low income households?"

To answer the question, this qualitative explanatory case study was carried out in Ipusukilo 'compound' in Kitwe, Zambia. The research starts by critically analyzing the conceptual and theoretical understanding of self-help housing as developed from the 1970s. These approaches recognized the significance of informal housing as people relied on their efforts and their social network in access housing. Approaches such as site and services, settlements upgrading and core housing are as seen as key approaches implemented so far. The 'unaided self-help' in informal settlements remains unsupported yet the majority of these informal settlements are 'settlements of hope' with households that continually endeavor to improve their living conditions. It is this stock that can be improved in both quality and efficiency of resources, if there was a proper understanding of the informal self-help processes and how they can best be supported that forms the niche for this research. From literature reviewed and developed, a multi-actor aided incremental housing conceptual framework has been formulated that can be used as a tool to discuss incremental housing development. In this framework, households are identified to be at the centre of the process and require to be supported with key inputs and a coordination of actors.

The analysis of the findings indicates that there is a multitude of low income households who continually access housing in informal settlements. Through informal land markets, the households acquire land, with time they develop a 'perceived secure tenure' and start to invest in the improvement of their dwellings. Mainly, these low income households practice self-help construction following the affordability and housing needs of the particular family. The availability of finance to support the construction process is the major trigger in improvements among the low income while the need for space and improving the quality of the dwelling are the main 'push factors'. Security of tenure, community efforts and government attitude towards informal settlements are identified as external factors that also influence the process. It should be noted that these informal 'people's housing processes' alone cannot provide a one off solution for all low income housing. The objective is to promote these to be seen as creative solutions which can be incorporated into the traditional housing delivery systems. The focus is to look at these self-help incremental efforts and recognizes households as primary actors in their own housing provision and placing them at the centre of their own development. With the recognition of the right to adequate housing, changes in the focus and well supported policies that are more responsive to low income changing needs, this can be realized.

TABLE OF CONTENTS

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

List of Tables

List of Figures

List of Abbreviations

CBO	Community Based Organisation
CSO	Central Statistical Office
GRZ	Government of the Republic of Zambia
KCC	Kitwe City Council
MFNP	Ministry of Finance and National Planning
MLGH	Ministry of Local Government and Housing
MMD	Movement for Multi-Party Democracy
NGO	Non Governmental Organisation
NHA	National Housing Authority
PUSH	Peri-Urban Self-Help
RDC	Residents Development Committees
PF	Patriotic Front
PPHPZ	Peoples Process on Housing and Poverty in Zambia
ZHPPF	Zambia Homeless and Poor Peoples federation

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

CHAPTER 1: BACKGROUND TO THE RESEACH PROBLEM

1.1 Introduction

The world urban population has been increasing and for the first time almost half of the global population lives in urban areas -about 3 billion people out of 6 billion (UN Habitat 2008). This has created an increasing demand for housing and urban services. Estimates show that for the next 25 years the demand will continue to rise as almost 2 billion people will be added to the urban dwellers. The UN Habitat estimate that by 2030, close to 3 billion people, or about 40% of the world's population, will need to have housing and basic infrastructure services in cities (UN Habitat 2008). However, the sad reality is that even with this growing urban population, almost 1 billion people live in slums and squatter settlements. The UN Habitat (2008) indicates that without any intervention these figures may increase to 2 billion slum dwellers by the year 2030 (see also Table 1). According to the UN Habitat (2008), housing is becoming an expensive commodity and unaffordable for most low income groups. Many low income groups in the developing countries are not able to access mortgage finance and the cost of housing remains high (ibid). With this urban reality, informal housing has been the main source of affordable housing for the majority among the poor (Hamdi 1991).

Table 1: Estimated Number of People requiring Housing and Urban Services by 2030

Urban population worldwide	Year	Number of people
Urban population	In 2003	3043 million
Estimated urban population	In 2030	4944 million
Additional urban population	2003/2030	1900 million
Population living in slums	2001	924 million
People requiring housing and urban services	2030	2824 million

Source: UN 2005 (Statistical Annex).

Nonetheless, international laws on housing still recognise that everyone has the right to adequate standard of living including adequate housing (UN Habitat, 2009a). Therefore, provision of housing or providing an environment that promotes the provision of housing is an agenda for most governments. This is because housing is considered both a need and a right. Also, as with the other basic needs; adequate housing is seen as a pre-requisite for national socio-economic development. In the Zambian case, the right to housing and right to adequate housing are both not included in the current national constitution despite the ratification to the international covenants and regional treaties. The Constitution through Articles 112 section (d) and (h) say that; the state shall;

1. Endeavour to provide clean and safe water, adequate medical and health facilities and decent shelter for all persons, and take measures to constantly improve such facilities and amenities; and
2. Strive to provide a clean and healthy environment for all.

This shows that there is no explicitly laid down bill of rights (including housing) in the current constitution and as such does not give rise to anyone to claim or enforce such rights in the courts of laws (Mwale, 2004). The constitution merely gives 'directive principles of state policy' for national development. Currently, the government of the republic of Zambia recognises the need for provision of adequate housing for all income groups through the national housing policy[1] (NHA, 1996).

---

[1] See the Zambia National Housing Policy (1996) for details

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Zambia like many other developing countries has been experiencing increasing urban population. The factors attributed to this urban population growth are mostly natural population growth as well as migration- (commonly from rural to urban and from smaller to larger cities). With this increase in urbanisation, Zambian cities are on pressure to cope with the need for growing demand for housing in both quality and quantity. Like many Sub-Saharan African countries, Zambian has seen more and more people finding housing solution in informal settlements. Currently, Zambia has a population of 13, 046, 508 persons in 2010 (CSO, 2010) more than 70% urban dwellers live in informal settlements. The National Housing Authority reported that more than 69% of the existing housing stock is in the informal settlements and poorly serviced or not serviced at all (NHA, 2001). Informal settlements in this context are defined as settlements that do not follow the formal planning regulations in land use and building regulations as well as lacking secure land tenure, and access to basic services (Ibid).

This increased demand for housing has come with it a growing phenomenon of urban dwellers to construct their own housing mostly informally and incrementally over a period of time. Incremental housing is narrowly defined as a step-by-step housing construction approach. The Global University Consortium Exploring Incremental Housing (2010) says-it goes by different names; including owner-driven housing, staged/phased development housing, core housing, pay-as-you go… and the process has been the *de facto* pattern in urban growth, particularly among the low income in developing counties. Wakely and Riley (2011) and Gattoni, et al (2011), claim that given the scale of the housing problem in many developing countries, incremental housing would be a proactive approach for managing housing for low income groups. This research is an in-depth explanatory study of the incremental housing process as practiced by the low income households in Kitwe, Zambia. The research intends to understand the incremental housing process and how the process can be improved. This chapter gives the background to the research problem in the Zambia and gives the research questions and objectives of carrying out the research.

1.2 Historical Background of the Zambian Housing Situation
Since independence in 1964, Zambia has been experiencing critical shortage of housing as urban population has increased by almost 4 times (CSO, 2010). During the first and second republic, the development of the housing sector was guided by the national development plans and the government was the major provider of housing (Makasa, 2010). The government provided institutional housing for all government employees and all state-owned companies were expected to provide housing for their employees. The government also provided conventional rental housing under the control of local municipalities. The municipalities were heavily subsidised and regulated by government. During the 1970s and 1980s the republic of Zambia like many other developing countries experienced an economic crisis and was unable to continue with such interventions (Makasa, 2010).

With the growth of population and urbanisation, the demand for housing continued to increase especially in the major urban cities. This led to development of informal settlements on government's idle land-(in the inner cities) and on formers farm of the British farmers (on the periphery of the cities) (Makasa, 2010). These informal settlements have continued to grow in numbers in most urban areas. Initially, clearance of these settlements was the official government's reaction to the growing problem of illegal settlements. It was not until mid 1970s and early 1980s that informal squatter settlements started being recognized for upgrading (Rakodi, 1989). This was done during the World Bank era of redistribution with growth and basic needs. During this period, the state with support from World Bank started

supporting home ownership through site and service programmes and informal settlements upgrading. However after the withdrawing of funding by the World Bank, these interventions were not scaled up and the few that were still implemented were inadequately funded (MFNP, 2006). Consequently the proliferation of unplanned settlements has continued. In 1991, there was change of government and the new ideology promoted privatisation and free market trade. With this, the entire housing stock owned by local municipalities/councils was sold to sitting tenants as a form of promoting home ownership. At the time, all interventions and subsidies for providing institutional housing, rent controls, employer-tied housing was withdrawn and the market oriented approaches were promoted. A comprehensive housing policy was for the first time formulated to provide guidance for the performance of the housing sector (Makasa, 2010). The 1996 national housing policy[2] is up to date the single instrument providing direction in the provision of housing in the Nation

1.3 Zambia National Performance of the Housing Sector

The National Housing Authority says the performance of the Zambian housing sector has been adversely affected by the unfavourable economic conditions affecting the macro-economic environment (NHA, 1996). Most effects in the housing market have been due to the increasing prices in building materials and housing finance which has also become expensive and unaffordable to most Zambian majority. The current interest rates are typically high (above 20% per annum) (UN Habitat, 2012). With this unfavourable micro-economic performance there have been few interventions to improve the housing stock. In 1991, the total national housing stock was estimated at 1,501,898. This increased to 2,311,988 in 2001 (see Tables 2). With the current performance of the housing sector, the National Housing Authority estimated a housing backlog of 1,300,000 housing units in 1996 if it were to reach the demand. It is equally expected that the housing demand has increased over the years[3] (See table 3 for the projected housing needs from 2011 to 2030).

Table 2: Zambian National Housing Stock

Housing Type	1991		2001
	No of Houses	% of total stock	No of Houses
Traditional	988,249	65.8	1,527,301
Squatter	160,703	10.7	242,771
Site and Service	58,574	3.9	87,743
Low cost	241,806	16.1	381,498
Medium cost	24,532	1.7	32,269
High cost	26,034	1.8	39,309
Total	1,501,898	100	2,311,988

Source: NHA 2001 Annual Report

With this dismal performance, the total national housing stock reflects that about 80 percent of the houses are informal and poorly serviced or not serviced at all (MFNP, GRZ, 2006). Even with the increase in population and urban growth the situation has not changed much. From the Zambia 2010 preliminary census report, the Zambian population has been increasing from 7,759,161 in 1990, 9,885,591 in 2000 and 13, 046, 508 persons in 2010 with an average annual growth rate of 2.8 percent between 2000 and 2010 (CSO, 2010). From these figures it can deduced that the housing needs and demand will continue to increase

---

[2] Refer to the 1996 Zambia National Housing Policy, (NHA, 1996)
[3] There is dearth data on the housing needs and demands at both National and local level and therefore the research uses the last available data of the national stock to show the increasing housing needs

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

against the national stock. With the increasing demand for housing, informal housing has 'filled the gap' for the housing needs of the majority of the low income in the country. However, there has been no clear policy on how to deal with this informal housing which is growing day by day. According to the World Bank (2002, p10), Zambia has "a sufficient policy and legislative framework regarding the legalisation of unplanned and informal settlements; additionally, both the central and local governments acknowledge the need to recognise and regularise such settlements. However, there appears to be no clear policy and strategy on how to deal with informal or unplanned settlements and much of the existing legislation needs to be modified and streamlined to ensure that it is relevant and enabling. "

Table 3: Rate of Supply Needed for New Housing 2011 to 2030

	Need/provision	per working year	per working week	per working day	per working hour	Minutes per dwelling
Need 2001-2030	1,373,770	45,792	916	153	19	3.14
Provision 2001-2011	122,100	11,100	222	37	5	12.97
New provision 2011-2030	1,251,670	65,877	1,318	220	27	2.19
Plus 45,500 shortfall in 2000	1,297,170	68,272	1,365	228	28	2.11

Source: UN Habitat (2012)

1.4 Kitwe Population and Housing Characteristics

Kitwe is located in the central part of the Copperbelt Province and is the second largest city in Zambia. It is currently the most populated district on the Copperbelt Province (CSO, 2010). The city was established in 1923 as a twin municipality to the then Nkana mine township (now Kalulushi town) (see the figure 1 for the location of Kitwe) .The city is generally an industrial and commercial city providing goods and services to the mining sector. It became a municipality in 1954 and by 1967 it attained city status (UN Habitat, 2012). During the 1960s and 1970s, the country experienced a favourable economy with an increase in copper prices. Copper which was mined in almost all towns of the Copperbelt province which include Kitwe was at that time the main foreign exchange earner for the country. Huge investments were made in the mining sector resulting into the generation of one of the most urbanized cities on the Copperbelt province. Zambia has been classified as one of the most urbanized countries in Southern Africa, with a growth rate of almost 40% (CSO, 2003). The search for job opportunities on the Copperbelt province and the city of Kitwe in particular was unstoppable. This led to a rapid increase in population through migration of younger people from the rural areas in search of jobs. It was during this period that much of the "current infrastructure and formal housing stock was developed" (UN Habitat, 2012, p.13). However in spite of this massive influx of people to Kitwe, the existing level of services such as the available formal housing could not match with the demand. Given this shortage, people resorted to settling illegally and in undesignated areas, resulting into the emergence of unplanned settlements. At one time, in the mid 1980s, Kitwe had 28 informal settlements. Currently, through interventions in settlements upgrading and site and services, the number has reduced to 18 (Kitwe City Council, 2008).

Figure 1: Map of Kitwe with A being the Research Area
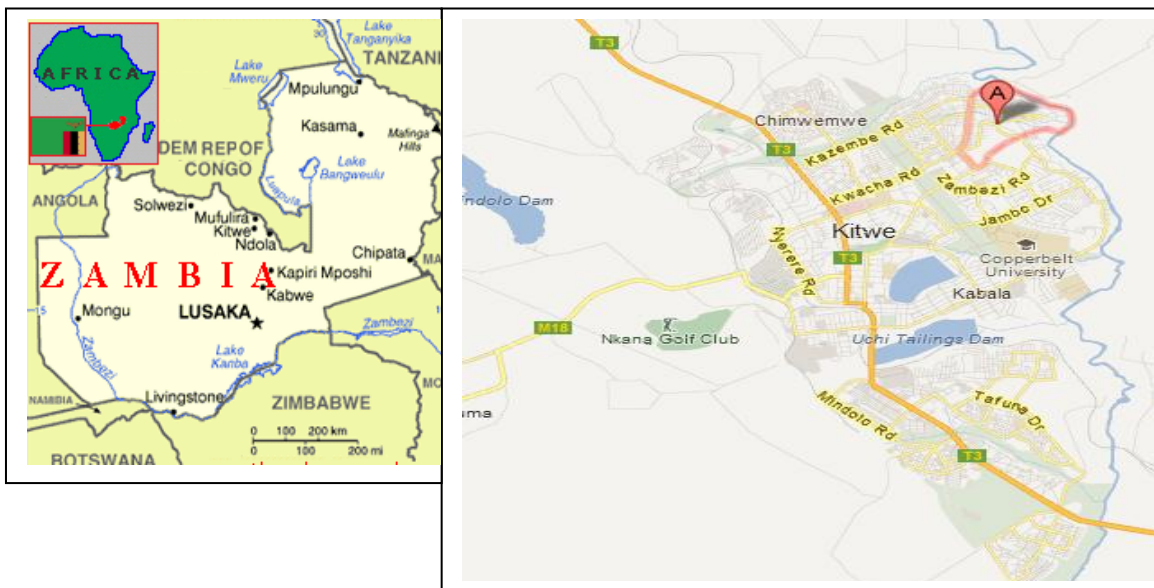
Source: http://maps.google.com/maps?hl=en&tab=wl, accessed on 8/8/2012

Currently, the city remains an industrial and mine city yet due to unfavourable economic conditions; there is low supply of the formal housing stock and high rate of unemployment and increasing informal housing development. According to the preliminary census report of 2010, Kitwe is reported to have a population of 522,092 with a growth rate of 3.0% (CSO, 2010). However, Kitwe being an industrial centre has "a day time population estimated at over 1.2 million owing to the daily inflow of people from surrounding districts" (UN Habitat, 2012, p 13). It is also the second densely population city in the nation with a population density of 671.9 persons per square kilometre (CSO, 2010). In the recent past, a lot of people have lost employment through retrenchment and these have found housing in informal settlements. In terms of housing characteristics, Kitwe has 24 formally planned settlements and 18 informal settlements. It is estimated that close to 40% of the total population in Kitwe lives in informal settlements. The largest six settlements accommodate 82 per cent of the squatters with average density being 28.6 dwellings and 211 persons per hectare" (UN Habitat, 2012,). In such settlements, physical infrastructure and services are inadequate and in poor condition. The settlements among others are characterized by overcrowding, poor sanitation, and poor drainage, uncollected solid waste and inadequate security of tenure. According to the UN Habitat (2009b) there are only 7 informal settlements that have been recognised by the municipality for upgrading[4]. In the Zambian planning regulations, urban services can only be provided in settlements that have are formally recognised. This means that for the rest of the unplanned settlements the local authority has no mandate to provide services.

---

[4] See section 4.3 for detailed explanation on the legislative instruments relating to informal settlements.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

1.5 Problem Statement

The government of the republic of Zambia in line with the global development agenda formulated the first housing policy in 1996 as a starting point towards providing "shelter for all" by the year 2010. The main goal of the policy is "to provide adequate affordable housing for all income groups in Zambia" (NHA, 1996, p.15). The policy is hinged on the promotion of home ownership and stimulating private sector participation and other actors as the leading players in the housing sector. The policy also seeks to improve productivity and efficiency in the housing sector by withdrawal of government from direct provision of housing to more of the being an 'enabler' and also allowing free market. Later, a National Housing Authority[5] was formulated to spearhead the implementation of the policy and all other activities in the housing sector. Though government has been supporting housing developments in the country through a number of schemes such as the Presidential Housing Initiative (PHI), the National Housing Authority (NHA), the National Pensions and Servings Authority (NAPSA), these housing projects are largely unaffordable to most of the Zambian majority. The National Housing Authority as the main body with the mandate of spearheading the provision of housing in the country has been construction a few houses throughout the country which are sold at market value. Most of these houses are usually very highly priced – (an average of low cost houses are sold at k200, 000,000 to K347, 500,000 equivalents to US$40,000 to US$69,500 respectively)[6] (Tembo, 2007). In the recent past, these house prices have even increased further.[7] Besides the National Housing Authority, the current housing market is characterised with private real estate developers, private constructors, few financial intermediaries and commercial banks offering construction loans to developers as well as mortgages offered to mostly the high and middle income. There is also numerous housing stock developed by owners themselves both in the formal and informal settlements. Since the introduction of the free market in the housing sector and withdrawal of government's direct provision, there have been little or no interventions targeting the low income groups. A few adaptive measures of upgrading infrastructure in informal settlements have been the most used strategy in most municipalities. Also there has been slow economic growth and as such unable to generate sufficient employment opportunities in order to increase incomes for the majority. Generally, the housing finance systems remains relatively undeveloped, only characterised with mortgages which are not accessible to majority Zambians as shown by the UN Habitat (2012). Further, the demand for housing and housing related infrastructure is increasing yet cannot keep pace with the need as urban population is on the increase .This leaves much of the efforts to the households themselves to be key actors if they have to access housing. Apart from the policy direction and legislation, there is no clear direction and strategy on how to deal with housing in the informal settlements, let alone housing the low income at large (UN Habitat 2012, Makasa 2010). Additionally, it suffices to say that prices for land for housing development in urban areas are ever increasing against the affordability of the majority poor.

In all this Zambian housing system, the low income households have lacked options that are responsive to their affordability levels and flexible to their needs. According to the National Housing Authority, (1996, p.12) the 'solution' has been self-help incremental housing mostly

---

[5] "The National Housing Authority (NHA) is a statutory body which was created by an Act of Parliament and has the mandate to advise Government on matters pertaining to housing. Currently, the National Housing Authority is the sole institution given power under the law to deal in housing matters, including housing policy". (NHA, 1996)

[6] Using an exchange rate of US$1 to ZMK5000 (July 2012)

[7] see also ZNBC news, Monday 13 September 2010, http://www.znbc.co.zm/media/news/viewnews.cgi?category=11&id=128438478 (accessed on 20 May 2012)

resulting in low quality housing units that are lacking in minimum planning standards, human settlements that have inadequate services and infrastructure and lack secure tenure". The causes of this situation as identified by the National Housing Authority (NHA, 1996) has been; "slow land delivery process for formal housing development to meet high demand for low income housing, lack of financing mechanisms targeting the low income and the lack of deliberate effort to facilitate housing development for low income groups" (NHA, 1996, p.12).The National Housing Authority further says some regulations and building by-laws do not serve the needs of the majority of the population. The trend of informal and incremental housing construction is increasing rapidly and the city managers have continued to pay a blind eye or perpetrated the situation by not adjusting the planning regulations and by-laws to meet the needs of the majority of the people. With the increase in urban growth and population the need for an increase in housing stock is inevitable. As earlier indicated, the total Zambian national housing stock has only increases from 1,501,898 in 1991 to 2,311,988 in 2001 (NHA, 2001). According to the National Housing Authority, of this stock, informal housing constitutes 69 per cent of the national housing stock resulting in a backlog of 1.3 million dwelling units (NHA, 1996). From these statistics, it can be seen that if no interventions are put in place to address the situation, the majority urban dwellers will continue to be housed in informal and inadequate housing. Therefore, the argument for this thesis is that, can this stock be improved to make it more adequate and efficient? Can the incremental construction processes be appropriately supported from the onset of the process and throughout the development of human settlements? It is worth to note that the phenomenon of building incrementally is not only confined to the informal settlements but also in the formally planned settlements. However, this research seeks to look at the process from the informal housing processes and how these can be improved upon as a solution for low income groups.

1.6 The Research Objective

Realising that there is little or no intervention for low income housing in Zambia, this study seeks to gain more insight of the growing phenomenon of incremental housing in the Zambia context. With the understanding that incremental housing takes several forms, this study looks at the informal incremental housing processes as practiced by most low income groups. The study takes a case of Ipusukilo 'compound'[8]; one of the unplanned settlements in Kitwe Zambia. The main research objective therefore is:

To understand the self-help incremental housing processes in informal settlements, factors that lead low income households to build incrementally and draw possible interventions that would support incremental housing construction as a strategy for providing housing for low income groups in Kitwe.

The sub-research objectives are:
1. To find out how the incremental housing process is done by low income households in Kitwe.
2. To gain an understanding of the factors that triggers the incremental housing process.
3. To investigate any external factors that lead low income households to opt for the informal incremental housing.
4. To find out possible interventions that would support self-help incremental housing process as a strategy for low income groups.

---

[8] 'Compound' is the general term used to refer to informal settlements in Zambia.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

1.7 Research Question

Since the development of housing incrementally seems to provide the 'solution' the research will seek to provide an answer to:

"Has self-help incremental housing processes helped low income households in informal settlements to access housing and to what extend can these processes be improved on as a strategy for providing housing for low income groups in Kitwe?"

Sub Research-questions are;
From the research problem stated above, the sub questions of the research will include;
1. How is incremental housing construction typically done by low income households in informal settlement in Kitwe?
2. What factors triggers the incremental housing process for the low income?
3. What external factors have led low income households to opt for the informal incremental housing?
4. What possible interventions would support self-help incremental housing construction as a strategy for low income groups?

1.8 Chapter Synthesis

Having outlined the objectives of the research, it is imperative to indicate how the thesis is generally organised. This thesis research is a careful description of the incremental housing processes in the informal settlements. It is divided into five main chapters. The preceding chapter outlines the theory and concepts within the school of self-help and incremental housing. The concepts that support the study are highlighted by basic themes and these form the basis for the operationalisation of this thesis through the development of key research variables and indicators. The third chapter describes the research methodology used to carry out this study in order to meet the objectives and also the analytical framework used in analysing and evaluating the research findings. A detailed analysis of the results of the field work and how these relate with theory is described in the fourth chapter. Finally, chapter five gives the conclusions and the implications of these findings.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

In the urban areas today, the problem of housing the mass population has continued to increase. The 'enabling approach' has been the international agenda with governments being urged to allow policies that promote private sector participation and other actors in the provision of housing. The biggest challenge in the 'enabling approaches' has been to provide housing for the low income groups. In the recent past, three main strategies employed by governments have included the provision of mass social housing, site and service as well as recognition and upgrading of existing informal settlements. These interventions have resulted in the recent reduction in the number of 'informal settlers' as reported by the UN Habitat, yet in absolute terms the number of informal settlements has continued to grow. The UN News Service, (18 March 2010) reported that "while more than 200 million slum dwellers worldwide have escaped their conditions in the past decade, the overall population of slums has swelled by nearly 60 million in the same period". This is generally seen as an achievement as it has doubled the target set by the Millennium Development Goals (MDGs), of improving the lives of at least 100 million slum dwellers by 2020 as agreed by world leaders. The report indicates that this has been due to interventions in settlements upgrading. Even with these efforts, trends still show that most of the settlements in the developing countries are established through the incremental process and outside the 'formal laws' (Wakely and Riley 2011). According to Hamdi (1991), progressive housing accounts for over 70% of all housing investment in developing countries. The argument is that "though there are many 'slums of despair' -seemingly hopeless neighbourhoods of poverty and environmental degradation, the majority are 'settlements of hope'-informal neighbourhoods and communities in the process of building their cities through their own endeavours and ingenuity" (Wakely and Riley 2010, p.48). It is from this argument that this thesis seeks to understand the incremental housing process and whether formal and statutory planning rules and regulations can be reformulated to adapt to the specific circumstances of informal settlements by accepting the incremental housing processes and evolving nature of low income self-help housing solutions.

2.2 The Significance of Informal Housing for the Urban Poor

Different terms are used to define informal housing by several academics and organisations. The Vienna Declaration on National Regional Policy and Programmes 2004 on Informal Settlements, defined 'informal housing or informal settlement' as "human settlements, which for a variety of reasons do not meet legal procedure (and have been built without respecting formal procedures of legal ownership, transfer of ownership, as well as urban planning regulations) prevail in their respective countries …"(Tsenkova 2009).The declaration acknowledges that there is regional diversity in terms of the manifestation of informal housing , yet they are mainly characterized by informal or insecure land tenure, inadequate access to basic services, lacking both social and physical infrastructure and housing finance. The UN-Habitat uses the term "slum" to refer to housing that is lacking one or more of the following conditions; security of tenure, structural quality and durability, access to improved water, access to improved sanitation and sufficient living area. According to Angel (2000, p 327) 'unauthorised' housing is defined to be "housing that is not in compliance with the current regulations concerning land ownership, land use and zoning, or construction, while squatter housing relates to housing that is occupying land illegally". This thesis will use the term 'unauthorised' housing defined by Angel (2000) to refer to informal housing.

Informal housing continues to account for the highest housing stock in most developing countries. Ferguson and Smets, (2009) say that, up to 50 to 90% of all residential development in most developing countries is done informally and incrementally. According to Mathéy (1992), this is due to the failure of both exclusively government led and exclusively market oriented housing provision approaches. These approaches often leave the low income with no alternative solution than self-help approaches in the informal sector. In Zambia, the informal housing accounts for 69% of the total national stock (NHA, 1996). From this evidence, it can be seen that informal housing contributes the largest stock to the national housing stock. This research believes this stock can be improved in both quality and efficiency of resources used if these informal processes were supported. Table 4 highlights some of the quantitative importance of informal housing supply from different countries.

Table 4: The Quantitative Importance of Informal Housing Supply

The quantitative importance of informal housing supply may be shown from a wide variety of different national contexts,

- 70% of all investments in housing in the majority of developing countries were done by households, realizing 'progressive housing' or 'incremental shelter' (UN-Habitat, 2005b: XLI).
- In Latin America, less than 30% of dwellings are produced by the formal mode of housing production (UN-Habitat, 2005b: XXXVIII).
- In Mexico City an estimated 9.5 million people or 60% of the total population lived in 1990/91 in houses constructed by self-help. At about the same time 1.7 million or 61% of the residents of Caracas were to be found in such shelter (Potter & Lloyd-Evans, 1998: 137).
- According to De Soto (2000) 53% of urban residents and 81% of rural residents in Peru lived in houses being built by the informal mode of production.
- In Nicaragua, 85% of the actual housing production is being built by self-finance and self-help housing (Nicaragua Government, 2005
- In Indonesia, more than 90% of all housing units constructed each year are built without support from Perum-Perumnas, BIN, or from private banks (Perum- Perumnas is the National Urban Housing Development organization and BIN is the State Savings Bank, both in Indonesia. The vast majority of low- and lowest-income group households receive very little assistance from formal-sector housing institutions.). (UNCHS-Habitat, 1993).

Source: Jan Bredenoord and Paul van Lindert, (2010)

2.3 The Formal versus the Informal Housing Development Process

Wakely and Rely (2011), claim that practically all housing development in both the formal and informal settlements is developed incrementally over a period of time. However, what differs is the sequence. The sequences of housing development in the formal and informal process usually happen in reverse of each other. In the formal processes, the development follows planning regulations and land development procedures. Turner (1986) in *future directions in housing policies* points out that the housing development in the modern formal processes follow a sequence of 'land to works to people' where land is developed-including provision of services and infrastructure (without knowledge of who would be the end user), then allocated to intended user with title of ownership. In this modern land development order, all housing is developed in accordance with the planning guidelines and regulations. The final sequence is the occupation of the house by the user. This sequence of development is claimed to be unrealistic in a "situation where land delivery for formal housing development is slow, and where not much deliberate effort is put in place to facilitate housing development" (NHA, 1996, p.12).

On the other hand, the informal housing development follows a reverse of the formal land development sequence. In the informal development process the sequence is from 'people to land to works' with people occupying land first and the land development and connection to

services follows with time (Turner, 1986, Barros 1987). In this order, the acquisition of title of land ownership is the last in the sequence. Table 5 shows the reverse forms of land development in formal and informal housing development.

Table 5: Formal versus Informal Housing Development Processes

Formal Processes	Informal Processes
1. Cadastre	1. Occupation
2. Land allocation with title to land	2. Construction
3. Settlement Planning	3. Provision of services and infrastructure
4. Provision of services and infrastructure	4. Settlement upgrading and planning
5. Construction	5. Regularisation and obtaining title to land
6. Occupation	6. Legalisation

Source: Reformulated from Mcleod and Mullard (2006)

The Zambia National Housing Policy claims that the "informal housing has been the inevitable vacuum filler with perhaps a more positive than negative impact on the housing stock" (NHA, 1996, p.12). Greene and Rojas (2008) support this by indicating that the incremental housing process begins immediately after acquiring land with the household constructing shelter temporally to meet their immediate needs such as protection from the wind, sun and rain and also privacy. With time and resources, the households are able to start consolidation of their dwellings. Mostly low income households consolidate their dwellings from personal savings, micro loans, self-help and community assistance. This process of consolidating the dwellings may take several years and is revolving depending on the needs and priorities of the households. From this argument, self-help and incremental housing development process is seen as a viable option for low income and can be enhanced with adequate technical and financial support (Greene and Rojas, 2008).

2.4 The Origins of Incremental Housing in Self-Help Housing Concepts
The 1970s-1980s saw the rise in the incremental housing concepts. These started being recognised as a logical way in which low income households' access housing. Particularly, John F. C. Turner (1976) and William Mangin (1967) analysed the informal urban housing strategies practiced by low income households in Peru. Turner observed what he called 'progressive development' in Lima, Peru. His observation was that there was a correlation between the social process of households and the gradual improvement and expansion of the shelters (i.e. 'consolidation') which people built by themselves. Since this period, there has been theoretical development of the concepts of self-help. Several developing countries developed housing programmes that employed the self-housing concept as advanced by Turner (1976). Turner was arguing that as much choice and freedom should be granted to the occupants of urban housing both in formal and informal housing development as this would make housing provision affordable and responsive. The rise of Turner's ideas in the 1960s and 1970s however, did not mark the beginning of self-help housing as Harris notes that the aided self-help housing was practised, long before (Harris, 1998, 1999, 2003).

This thesis, borrows the concepts of self-help housing from the works of John .F.C Turner as developed from his observations in Peru. The theoretical concept of incremental housing is also based on Turners (1976) observations that low income household were able to consolidate their dwellings over a period of time. Turner's arguments for self-help housing

was that the provision of mass housing by governments had limitations especially for low income groups and such the low income had no option but to find their own housing solutions (Turner, 1976). The low income households are not able to afford the institutional housing because of the standards and planning regulations (Turner and Fichter, 1972). Therefore, Turner advocates that the household's should be given the freedom to be able to control the investments in housing. He says that this requires that minimum standards and the bureaucracy associated with planning be lowered to meet the affordability of the low income households. Turner's arguments for dweller control means that the low households should be part of the housing actors in providing their own housing. He suggests that if households are given the 'freedom to control their dwellings' they would be able to provide housing according to their needs and also contribute to the reduction in cost of investment in housing. He further claims that the enforcement of the minimum standards worsens housing conditions for the poor who are not able to make an investment for the whole house at once (Turner and Fichter, 1972).

In support of this argument, Gilbert and Gurgler (1992), in their observation associates the failure by governments to provide housing for low income groups to the spontaneous development of unregulated informal settlements in most urban areas of developing countries (Gilbert and Gugler, 1992). They indicate that the development of informal settlements is because the low income groups lack options that they can afford. Further, cardinal to the development of the incremental housing concept is Turners concept of 'housing as a verb'. According to Turner in his concept of 'housing as a verb' housing means more than just 'a house' especially for the low income groups (Turner and Fichter, 1972). He argues that "housing is more than a just a commodity but rather a process or an activity" (Turner, 1972, p.151) through which families meet their other human ends. From this concept Turner defines incremental housing as "an integral urban development process"...He says "it is not quick, immediate or complete, but choice remains with the owner" (Turner, 1986, p.20). Often, the process of incremental housing starts with a starter wet core shelter unit or a bare lot with provision for utility for consolidation and utility connection. Often recommended is a multi-purpose room with basic kitchen/bath facilities. Turner says if the owners are given the mandate to control the development of their housing they would control the consolidation process depending on the household needs and resource priorities (Turner, 1976). His argument is that as families grow, the households would be able to consolidate their dwellings. Wakely, and Rely (2010) further show that incremental housing is responsive, flexible to the needs of the urban poor and can be controlled by the end users themselves. Additionally, Napier (2002) contributes to the theory and defines incremental housing as a form which takes a step-by-step approach. Meanwhile, the Global University Consortium Exploring Incremental Housing (2010), says that it goes by different names; "starter house, phased-development house, owner-driven house.

2.5 Forms of Self- help Housing
Since the 1970 and 1980s, self-help housing as a solution for low income groups has been a seen as a controversial issue by different interest groups (Harms, 1992). The concept was promoted and supported by many practitioners and academics mostly following the works of Charles Abrams (1964), William Mangin (1967) and Turner (1967, 1972). Harms (1992) indicate that the conceptual definition of self-help housing varies in two aspects. Firstly, self-help is narrowly defined as "an individual household or group providing they own housing and relates more to the technical aspects of the house construction" (Harms, 1992, p.34). A wider definition of self-help relates to "the collective actions around housing, organisational and political actions to improve living conditions beyond housing" (ibid, p.34). However, in

practice these distinctions in the conceptualisation are not clear cut as the approaches for implementing self-help housing often overlap.

The concept of incremental housing has been used widely in three different forms such as site and service schemes, self-help settlements upgrading and core-housing. During the 1970s and 1980s this was seen as a mechanism for providing housing for low income groups in developing countries and hence was supported by several international organisations (IHC, 2008). Notably the World Bank launched a series of site and service projects in most developing countries and later shifted to squatter-settlement-upgrading programmes. The Inter-American Development Bank (IDB) and other multilateral lenders and donors also funded site and service projects in Central America. In Asia, the programmes were supported and funded by Asian Development Bank (ADB). Also, the United States Agency for International Development (USAID) was heavily involved in funding site and service and later slum-upgrading projects in Africa and the Middle East (IHC, 2008). Broadly, the self-help housing approaches are distinguished in three forms including; users initiated (without state aid), state supported (settlements upgrading) and state initiated housing programmes (Harms, 1992). These three main distinctions are looked at in detail.

2.5.1 Unaided Self-Help Housing

This form of self-help usually starts with the household acquiring a piece of land legally or through illegally squatting of land or un-registered sub subdivisions (Harms, 1992). In this form of self-help process, the users who are mostly low income households initiate the process and slowly consolidate their dwellings outside any government programmes. Often this form is associated with low quality housing and illegality in both land acquisition procedures and building outside the building regulations and permit (Harms, 1992). This form of self-help housing is the most prominent in Zambia and this research seeks to look at the aspects of informal incremental housing processes and how it would be supported to improve housing quality and resources for both the households and for sustainable settlement development.

2.5.2 State Supported Self-Help (settlements upgrading)

The process starts spontaneously by the end users and the local municipality or state offers support to upgrade the settlements to minimum standards. Aid is usually in form of infrastructure provision, technical assistance, and finance for upgrading (Harms, 1992). This form of self-help requires a community participation mechanism and as such, the initiatives may be from Community Based Organisations (CBOs) and Non-Governmental organisations (NGO's). According to Harms (1992), this method requires special working relations between professional and non professionals. Support may also be through policy that supports secure land tenure systems for low income household. Recently there has been a 'resurrection' of state supported self-help housing with the UN-Habitat arguing that assisted self-help housing is the most affordable and intelligent way of providing sustainable shelter for low income groups This is because;

- it is based on minimum standards
- It incorporates a substantive amount of 'sweat equity'
- It is useful because individuals and communities engaged in it acquire skills-building skills
- It responds to people's actual need and levels of affordability.
- It is flexible because dwelling units are often designed to be able to expand over time.
- However, incremental housing requires a suitable supply of building materials, components and fittings (UN-Habitat 2005b, p.166)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Although this approach is supported for the positive aspects that it improves the living conditions of settlements, it is seen as an adaptive measure and does not have much to offer for proactive solutions of low income housing.

2.5.3   State Initiated Self-Help Housing

This form is normally initiated at the local, national government or even international agencies .The mechanism of implementation of the programmes requires participation of the beneficiaries. Notably of these is the concept of core housing and site and service housing promoted by the World Bank and other international organisations during the 1970s and 1980s (Harms, 1992). The programmes of this nature are often initiated, planned and regulated by the implementing organisations or even the multilateral organisations (Napier, 2005). This section looks at the concepts of core housing and site and service in detail to draw lessons from the states initiatives in supporting self-help housing approaches.

1.   *The Concept of Core Housing*

Important to mention is that in this thesis, the concept of core housing is used as part of the broader concept of incremental housing processes. Considering the advantages and limitations of self-help housing and informal housing, Abrams and Koenigsberger developed the practical way of implementing incremental self-help housing solutions by developing the core housing concept (Napier, 2002). Napier observes that the original intentions of the core housing concept as advanced by Abrams intended to take the strengths of formal mass housing and integrate with self–help concept. From this concept, Abrams (1964) suggested that the informal processes can be improved upon with support from both the public and private sectors. As written by Mark Napier (2002), in *the origins of core housing*, Abrams refers to core housing as 'instalment construction' or 'building serially' (Abrams, 1964).

Abrams argument is that the majority poor lacked access to finance and as such opted to instalment construction. Abrams observes that most low income households would start the process of building sections of their houses as they could afford building materials after the acquisition of land either legally or illegally (Abrams 1964, cited in Napier, 2002). He however observes that the process of incremental housing construction was not confined to developing countries only-"simple shelters have been built in all parts of the world and then expanded room by room or floor by floor until the house met the families' ultimate needs". His observation is that "squatters alike have put up 'shacks' and later extended them over time" (Abrams1964, p, .175). Napier (2002) indicates that Abrams interpretation for this mode of construction was the lack of access to sufficient amounts of funds to sponsor construction of the whole house. This is so because low income families often lack regular personal savings or lack access to appropriate finance to be able to build at once. According to Abram (1964), incremental housing may take the form of starter houses with one or two rooms which can later be extended horizontally or vertically. He indicates several options of 'starter houses' such as "...the one room core for small families in very poor countries; the two room core to be expanded horizontally for the growing family; the core that can be added to vertically; the row house core, the front and rear of which is expandable; and the core built as part of a compound" (Abrams, 1964, p., 177) Some of the principles of core housing as advanced by Abrams are indicated in Table 6. Following these principles several developing countries developed core housing projects mostly with financial support from multilateral organisation. A good example in the sub Saharan Africa is South Africa.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

> **Table 6:Basic Principles of Core Housing**
> - Should be of a size to accommodate the typical family from the outset,
> - Should be designed to be extended by the household (with training available if requested) or more likely by locally settled small contractors,
> - Should be owned by the resident household with loans being made available in instalments to finance both the original core and the extensions,
> - Should be on a plot of sufficient size to accommodate expansion according to several alternative plans, show houses being built to demonstrate the alternatives,
> - Should be constructed from materials that allow expansion and which could be supplied through local material suppliers and producers who should also be assisted to develop in the area,
> - Should be designed to be comfortable given local climatic conditions, and
> - Must have access to water and sanitation from the time of occupation
>
> *Source: (Abrams 1964, 176-177).*

2. *Concept of Site and Service*

The concepts of site and service schemes come about from the realization that governments were not able to provide 'complete' serviced house and that most of government-led housing programmes tended to be relatively expensive and not affordable for most low-income families (Srinivas, no date, Van der Linden, 1986). This caused the change in focusing from supplying complete fully serviced house to providing serviced land. This approach was supported by most international donor organisations as indicated earlier. The approach also required that beneficiaries contribute in the housing development through 'sweat equity' (Srinivas, no date). Many countries in South America, Asia and Africa took up this concept, and with the World Bank strongly supported the approach through financing a number of projects. The beneficiaries were also to contribute in the actual construction and through contribution of resources-(community, financial and so on…) (Rakodi, 1989). Site and service were seen as a way of solving the problem of squatter settlements that were mushrooming at the time.

With this concept of site and service households were supported to construct their own houses through making serviced land available (Gattoni, 2009).The key components of a housing scheme was that governments were to provide a plot of land, infrastructure (like roads, water supply, drainage, electricity or a sanitary network), while the households contributed in building the houses. These approaches were implemented in various forms of schemes from mere subdivision of plots to providing serviced plots with a 'core house'- case of South Africa (Landman & Napier, 2009). Though financed by donor organisations, the financial mechanisms employed for most of these projects required beneficiaries to repay the money in terms of service charges. In this approach the key players were the implementing agencies either local governments or housing boards and the intended beneficiaries. Notably, a positive aspect of this approach is that it recognised the ability of low income households to contribute to providing their own housing in the face of little support (Srinivas, no date). With this, governments were able to share the responsibility of providing housing with the beneficiaries and therefore changed the role of government from being 'provider' to 'enabler'. The approach was also recommended for using the community structures and support in the implementation mechanism. However, these were mainly developed on cheap land on the periphery of cities making it inefficient for local governments to provide infrastructure and services while at the same time away from the employment opportunities for most low income. This is seen by most scholars as the major setback for site and services.

2.6 Critics of the Self-Help Approaches

Worth to note is that the concepts of self-help housing has received criticisms by other scholars e.g. Burgess (1982), Ward (1982) and Mathéy (1992). These scholars claim that self-help housing is often associated with low quality housing as the household do not have the skills to build quality housing by themselves and others are very poor to finance the housing construction. Burgess Rod in "*Self-Help Housing; a Critique*" (1982), argues that that the self-help approaches looks at "a one-sided identification of the housing process without the use-value activity" (Burgess, 1982, p.86).The argument is that, the informal housing development processes, do not indicate that housing problems happen in a market environment. In a capitalist market environment, commodities are produced not merely for own consumption but in search for profits (Burgess, 1982).Therefore, Burgess sees the "problem of housing more as a political and economic problem" (Burgess, 1982, p.86), than that of technical and organisational systems as Turner puts it in advocating for self-help housing. Also, Burgess indicates that the housing problem cannot be done in isolation; therefore as long as the interventions such as finance, land tenure, building materials and building standards provided … "do not go beyond the capitalistic interests of profits" (Burgess, 1982, p.86) then the systems would not provide a solution for lower income groups. Another critique of Turners ideas of owner built housing is what Burgess calls the "petty commodity housing" (Burgess, 1982, p.86). He sees the use of self-help construction as the duplication of the capitalist mode of production at the informal level (Burgess, 1982, p.86).

Another author, Marcuse Peter in his article "*Why Conventional Self-Help Projects Won't Work*", (Marcuse, 1992), says the problems of self-help housing concept is that it cannot substitute resources in the housing sector. Generally "land, materials, expertise, infrastructure must all still be provided" (Marcuse, 1992, p.16). He further points out that, self-help housing as advocated for by Turner "violates sound and necessary planning principals" and can only produce "temporary solutions to immediate housing problems" (ibid, p.16). He further argues that, the call for communities and households to manage their own housing development without professional involvement, usually results in lowering of standards and informality. According to Bredenoord and Lindert, (2010), the problem is not whether it is self-help or government-led mass housing but that governments have limitations in resources for purchasing and develop land to satisfy the massive demand of low income housing. However, Napier (2002) indicates that the benefits of incremental housing are often overshadowed by the stigma of illegality associated with it. He however sees the earlier implementation of core housing to have been "highly managed and a limited form of assisted self-help" (Napier 2002, p.11). Greene and Rojas (2008, p.91) observe that "many politicians and technicians associate self-help and incrementally built housing units with illegal land settlement". This is because they often view incrementally built houses as units that are built on "land that is inadequate for residential use, located in unauthorised land sub-divisions, also lacking any form of secure tenure and fail to meet the construction standards that ensure safely and sanitation in the dwellings and settlements" (ibid, p.91). Greene and Rojas (2008) argue for a shift towards integration the informal housing processes which also imply overcoming the stigma that has overshadowed incremental housing construction (ibid). Finally Soliman (2011) conclusively identifies the concept of self-housing in three main perspectives - (the Marxist view, the Non-Marxist and the 'Positive Views'). The key ingredients of the different views are explained Table 7.

Table 7: Key Ingredients of the Three Views of Self-Help Housing

Key policies	Marxist (Burgess)	Non-Marxist (Turner)	Positive views
Cost recovery	-Housing as a commodity of human labour and incorporating a determined labour-time. - In a capitalist social formation, housing not only has a use value but also an exchange value. - The element of wage labour is eliminated or drastically reduced.	-The rights and capacities of the urban poor are essential for housing production. - Improve access to finance for housing and infrastructure. - Allocate resources for people to organize their own house building	-Housing as a component of socioeconomic process - Use house building to fuel economy and industry. - Housing microfinance, community-based finance savings and loan groups, and consumer credit for building materials are keys elements for cost recovery.
Incremental process	-Fragment building production and support small builders. - A house consumes commercially-supplied products -labour-time spent on their manufacture	-Manage resources to increase housing production - Multitudes of poor people practice incremental self-help housing because they lack options	-Housing is a Verb not a Noun, -'informal settlement' should be understood as adverb and verb as these settlements are in a process of constant change. - It emerged as a demand making movement
Community-based organization	-The strong link exists between the capitalist forms of housing production and the social division of labour	-People relied on their efforts and their social network. - Building organizations that facilitate central initiatives.	-Involvement of private sector, NGOs and contractors companies in housing production is crucial. - Community-based organizations play a major role in negotiating for communities.
Security of tenure	-Centralize resources to facilitate management and control. - Land cannot be reproduced at will; it is a scarce commodity and rights to land and its use are enshrined in legal rights to property.	-Access to use of and satisfaction with goods and services. - Decentralized resources to support local enterprise and home building. - Security of tenure is attempts to control the Status quo of the urban sprawl. - Changing self-help housing from use value into exchange value with legalized title would benefit the urban poor.	-Security of tenure in low-income housing settlements depends less on legal status and more on the occupants' perceptions of the probability of eviction, the availability of services, and the passage of time. - Land titling often fails to increase access to credit and it does not necessarily improve infrastructure and services provision
Government attitude	-Self-help articulated by the dominant capitalist mode of production and exchange as well as by its broader ideological and political structures.	-Self-help housing as an ideological means for political demands of the poor. - Privatization the public resources to build infrastructure - Attract the mass of population to support the regime.	-Equilibrate the various strata of the society. - Integrate development activities and link housing to larger urban systems of employment and production

Source: Reformulated from Soliman (2011, p.229)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

2.7 The Concepts of Incremental Housing "back on the International Agenda"

Recently, the case for incremental housing has been brought back on the international agenda. During the World Urban Forum 5 in Rio de Janeiro, the *Global University Consortium Exploring Incremental Housing* supported the case for incremental housing saying that, "incremental housing is a urban proactive strategy for meeting the challenges of urban growth for the next 20 years" (Wakely, 2010). The argument is that in recent years with the challenges of enormous urban growth, proactive measures are required in order to provide solutions that meet both housing backlog and needs of the growing urban population. Sheuya (2007) indicates that nearly "70 to 95% of all new housing built in developing countries in the last 30-40 years is in informal settlements and usually built by the low-income households with little or no financial support from government". The argument is that this is due to lack of housing options that are responsive, flexible and affordable to the poor that there has been enormous growth of the informal settlements in cities of developing countries. According to Wakely and Riley (2011), the incremental construction process would be a viable housing development strategy as most families would afford and is flexible to the social needs yet has inefficiencies and insecurities of its informality which is generally equated to illegality. Greene and Rojas (2008) further suggest that the incremental strategy would facilitate a possibility of increasing access to housing for low income groups.

According to Gattoni, Goethert, and Chavez (2011), self-help and incremental housing is the 'likely direction for future housing policy'. This is so because incremental housing development has become a common practice across settlements- i.e. (illegal, legal and those programmes designed to support incremental housing such as the site and service) (ibid). In support for incremental housing, Gattoni et al., (2011), hypotheses that, if incremental housing processes would be supported; to improve the quality of construction, it would benefit both the households and the cities. They indicate that supporting "the incremental housing programmes is an effective proactive approach in terms of costs, administration, inputs and technical assistance as this could help to increase affordability of housing for low income households and be more efficient for governments" (Gattoni et al., 2011, p.1). Informal, incremental housing processes are said to be household driven, enabling low-income people to acquire, extend, improve, and service their dwellings and neighbourhoods over time.

2.7.1 The Evolving Housing Needs and Logic for Incremental Housing

In order to understand the phenomenon of incremental housing there is need for an understanding of the logical reasons that triggers the incremental growth. Tipple (2000) indicates that cities as well as households experience 'housing stress' and this triggers the need for them to expand their dwellings. The form and way the incremental process is done however, depends much on the needs of the particular households. From the research analyses of the Global Consortium for Incremental Housing (2010) and Gattoni et al., (2011), some of the triggers include:

1. *Change in Household sizes*

As households grow the need for space becomes more important- with this the households tend to start extending their dwellings. Also other household characteristics such as household type weather-(single family, nuclei family, extended family) households, as well as the ages of the members of the households and the age of head of household affects the incremental process. According to Tipple (2000), motivations for low income households to increase the living space is due to cultural codes for hierarchy of space-from private to public space, space needs for cultural-religious needs and male-female codes.

2. Change in Household Incomes

Incomes play an important role in the ability of households to improve and expand dwellings. An increase in levels of income creates an 'effective demand' for households to improve their dwellings to higher value housing units. In relation to household incomes, Gattoni et al., 2011 indicates that if low income households have access to stable livelihoods activities it improves their ability to consolidate their dwellings. With additional incomes households invest in upgrading the services to a fully expanded house and the needs in level of services (water, sanitation, and electricity... e.t.c) also come into play. However, this varies among household priorities and over time.

3. Strategies and Priorities in Space

The strategies for improving and extending the dwellings vary too; some households expand rooms and amenities to meet their needs in space, functional priorities, and cultural requirements. According to Global Consortium for Incremental Housing (2010) and Gattoni et al., 2011 formal site and service programmes give the initial starting point for incremental housing. Site and service schemes that offer a plot in a suitable location and has options of construction credits, technical assistance offers the start up for the incremental process. Further, they observe that informal settlements that lack these tend to have longer incremental process and the houses tend to be of lower quality (ibid). Typical composite charts of the main triggers of incremental construction in different three different types of settlements are indicated in the figure 2 below. Also, it is observed that during the incremental process the low income are pragmatic and managing the housing investment alongside other family priorities "balancing household expenditure, accumulating savings and working on the construction over time" (Gattoni et al., 2011., p 3).

Figure 2: Composite Charts of Triggers of the Incremental Process

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

| Composite chart for independently developed housing | Combined Composite Chart for the three approaches |
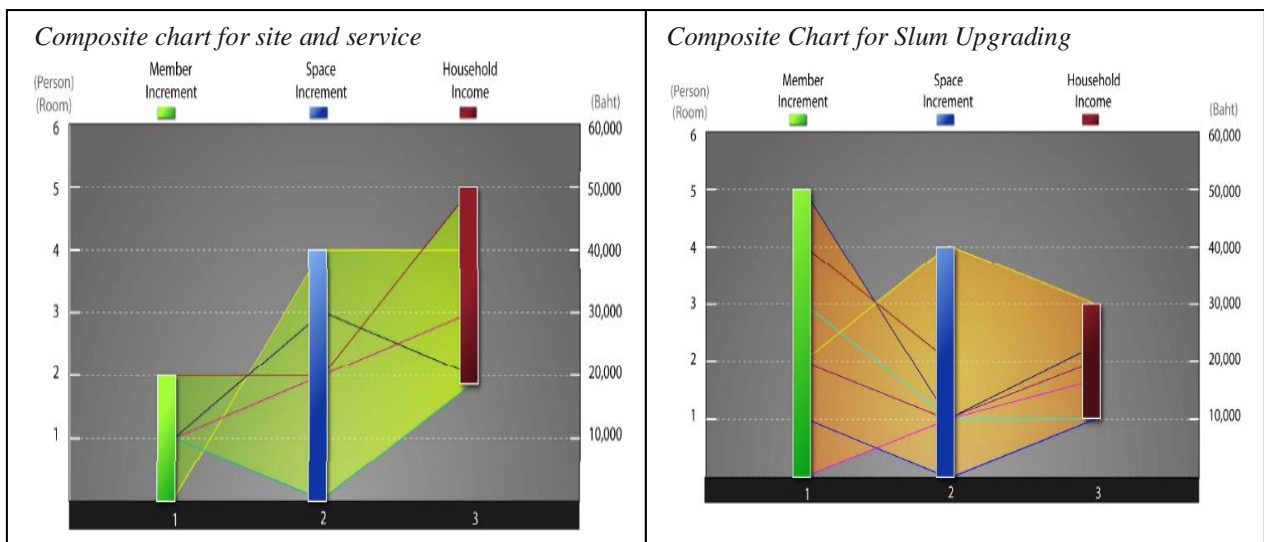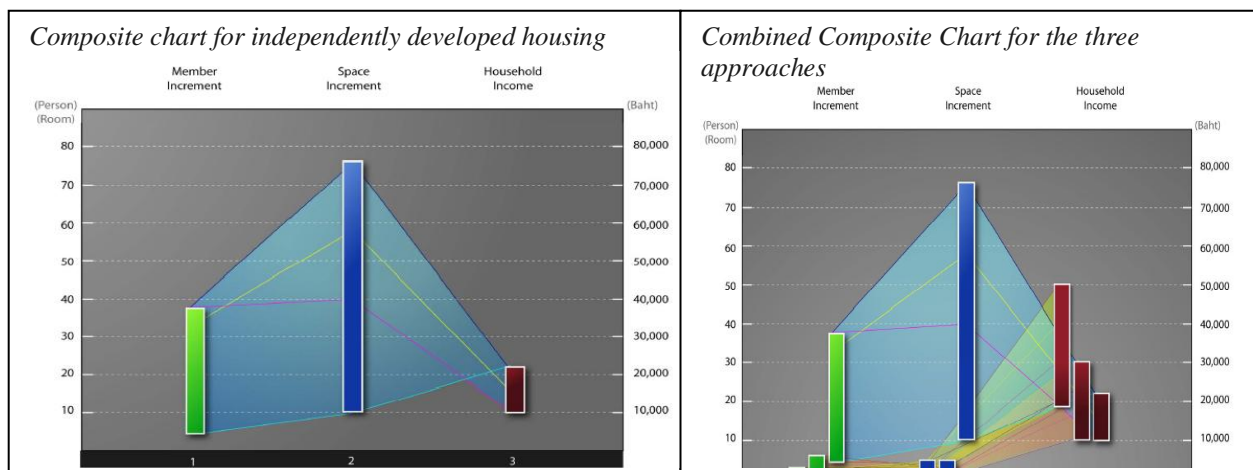
Source, Marome, & Rittironk, (2010), Global Consortium for Incremental Housing

2.7.2   The Process Based Nature of Incremental Housing

In this thesis, incremental housing construction is defined as a process in which dwellings are built and expanded over time by residents themselves-either in formal or informal settlements (Breimer, 2011). Greene and Rojas (2008) believe that governments have already been paying attention to the informal housing processes of solving the housing deficits. Interventions such as the offering of secure titles and improving the sanitary conditions of the informal settlements are some of the interventions towards the integrating of the informal housing development processes. However, these interventions can be improved to address the limitations of self-help and incremental housing. Greene and Rojas (2008), suggests that programmes that are developed to support the gradual process of construction, extension and upgrading of dwellings should be supported and incorporated in housing policies if interventions of meeting the housing needs of the urban poor are to be adequate. One feature of the incremental housing is the process based nature that the technocrats and other actors in housing development ought to understand. Greene and Rojas (2008), described the incremental process as one which the families work on the improvement and extension of their homes throughout an entire family cycle with first priority being obtaining the minimum standards in size and quality, and later to accommodate changes in family structure or to get income from their investment. The incremental housing process is normally done serially in basic phases which start from access to land to construction of a basic housing nucleus and lastly the incremental improvement of the house to meet the desired quality (ibid).

2.7.3   Components of Support for Incremental Housing

Acioly (1994, 2003), defined the inputs that support a well functioning housing system- (See Figure 3). According to Acioly, building materials, land, labour, finance, and infrastructure are supposed to be in equilibrium in order for a housing system to be well functioning. It is worth to note that the term input in this thesis is used synonymously to mean components. Policy, legal and regulatory framework that promotes these inputs should also be in place. Supporting incremental housing processes is no different. With the argument that incremental housing will continue to be the way how low income households will build their dwellings, the type of support required would need to be responsive to the evolving needs of the low income (Gattoni, 2009).   Therefore, these various inputs would still need to be well functioning but in a different form to suit the affordability and needs of the low income households. Supporting incremental settlements further requires the "promoting of safe, good quality construction practices and encouraging provision and maintenance of basic services" (Goethert, 2010 p.25). Gattoni (2009) in support of incremental housing remarks that;

building incrementally would make providing housing affordable (for households, local governments and service providers) by reducing up-front and future costs. From the framework of the housing diamond of perfect equilibrium of inputs in figure 3, this section discusses some of the inputs/components that would support the incremental housing processes. The inputs in the framework i.e., building materials, labour, land, infrastructure, and labour have been discussed and further included planning standards, technical support, community participation and private sector participation as key in the support for incremental housing development.

Figure 3: The Housing Diamond of Perfect Equilibrium of Inputs

Source: Acioly, C. (1994; 2003)
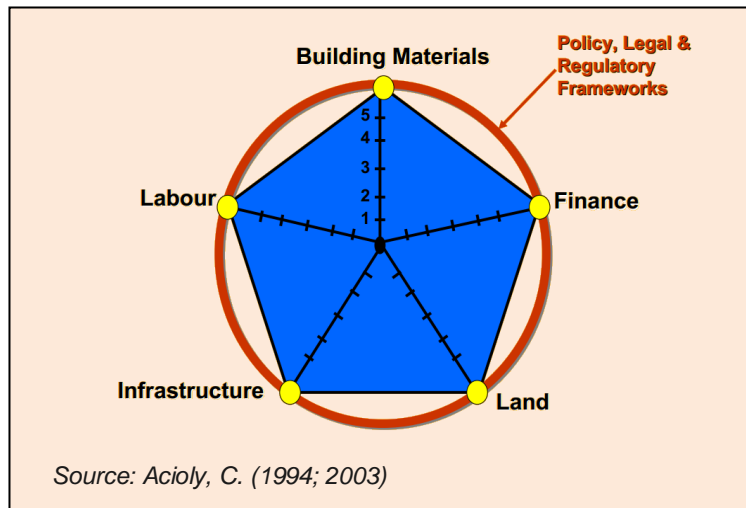
1. Land, Tenure and Location

The selection of right location of land is crucial for the development of low income housing, if the policy or project is to be successful. The main critic of the site and service programmes of the 1970s and 1980s was that they were developed on peri-urban land because it was cheaper to acquire by the governments yet these locations lacked affordable transport links to city centre where there are employment opportunities for the low income groups (Gattoni, 2009). This made the low income opt not to stay in their houses because transport cost to the sources on livelihoods was higher. On the part of the local governments, the site and service proved to be inefficient in service provision, as in the long run the cost of extending infrastructure and services was relatively high. According to the findings of El Salvador, FUSAU-Integral[9], the main constraints to scaling up its work in incremental solutions were; the lack of suitable and affordable land, the high cost of basic services, and the distance of available land from employment sources (SIDA, 2007).

Identification of land to develop for low income housing requires a rigorous analysis to determine the costs and benefits- beyond the initial cost of land and services. Strategies have to be developed to utilise existing built up land- normally owned privately or government land and land that has been 'squatted' by low income households. In most cases, purchasing such prime land normally goes beyond the means of the local governments. Therefore, developing attractive incentives and strategies such as 'land sharing and re-blocking' that allow the private owners to develop commercially marketable land and develop the other part for low cost housing development would be viable options (Wakely and Riley 2011). A case of Bangkok, Thailand, in the early 1980s (Angel and Chirathamkijkul, 1983) saw successful

---

[9] El Salvador, FUSAU-Integral - is a Company working in integrated housing solutions for low income in El Salvador

land sharing programs and have also been employed in Chennai, India, among other places (Wakely and Riley, 2011).

Wakely and Riley (2011), say that local authorities should be able to plan for the future housing needs. In many cases local authorities lack proactive planning and budgeting for low income housing. Many land reforms are complicated, bureaucratic and inequitable (Wakely and Riley, 2011). The low income households need not only drive the incremental housing construction process but also the land reforms and negotiations for tenure on land which they occupy or new site on which to build. In these processes the Non-Governmental Organisations and Community Based Organisation play an important role of mediating and advocating. In order to protect the low income groups from land market forces Payne et al, (2009) advances the need for alternative forms of land tenure and collective management unlike the freehold system only. The UN Habitat & Cities Alliance (2011a) suggests a continuum of land rights- see figure 4 and propose that development of land reforms that may start from informal land rights and allow several tenure systems such as collective group tenure like housing associations, and cooperatives among others, may be viable. Another critic of the 1970s site and service programmes was that, beneficiaries sold their plots after acquiring titles at higher value and went back to informal settlements. Therefore, collective ownership for low income groups can improve affordability, offer protection from market forces and support the building of a community (Payne et al, 2009)

Figure 4: Continuum of Land Rights
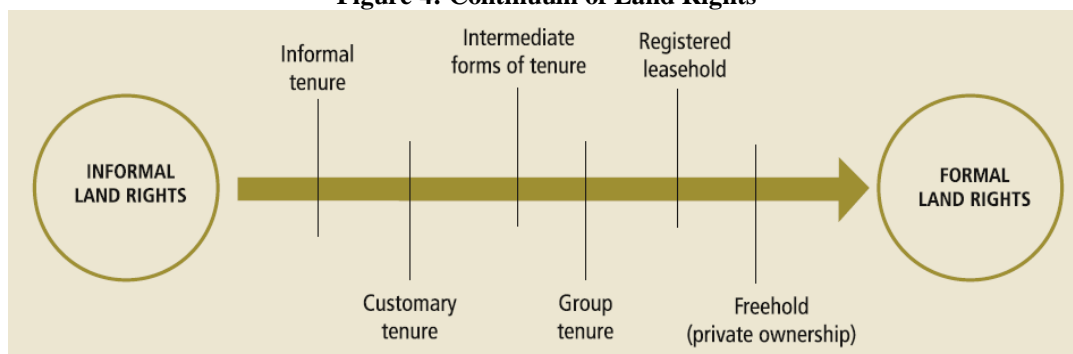
Source; UN Habitat and Cities Alliance (2011a)

2. Housing Finance

The earlier site and service were generally criticised because they were delayed and one of the blames for this was that programmes were developed without housing construction finance. Adequate finance is one of the critical factors in housing supply-it is important for procuring land, off site infrastructure and services, building materials as well as construction costs (UNCHS, 1996). With the 'enabling approach agenda', market intermediaries are the main providers of housing finance to the households. The housing finance systems are mostly made up of the family savings, the public subsidies and mortgage loans. In most mortgage systems the households are expected to save upfront in order for them to be able to obtain the loan. In cases where low income subsidies are not part of the housing systems the low income families are unable to access mortgages. According to Wakely and Riley (2011, p.1), "only a minute segment of any society- that is, the very wealthy- has the resources to purchase outright or construct their dwellings as a one-off event". They further say that only the "upper and middle income households who have regular incomes and collateral can have access to long-term credit such as housing loans and mortgages" (Wakely and Riley, 2011, p.1).

The credit needs of low-income households engaged in the incremental construction differ significantly from those seeking a mortgage in conventional supply-driven housing (Sheuya, 2007). The low income households often, lack regular and stable incomes to make regular savings and repayments for mortgages. Further, low income households often lack 'formally recognised collateral' that can enable them acquire mortgages or housing loans from financial intermediaries. Because of this, the large financial intermediaries are not providing housing finance for the low income household-as they are generally considered a high risk. Gough, (1998) and Kellett (1995) notes that, very few low income families have access to loans or willing to take one because of the irregularities in their sources of income. According to Wakely (2010), incremental construction requires relative small short-term incremental loans that are demand-driven depending on the changing needs and priorities of the households. Similar case has been applied in the Sri Lanka Million Houses Programme, were credits for flexible conditions (foundations and floor slab, structure and eaves, and the roof) were given that would cover the cost of a basic dwelling (Government of Sri Lanka, 1983).

Microfinance for shelter and community fund is slowly becoming a viable option (Sheuya, 2007). SIDA has been supporting micro- credit programmes managed by Non Governmental Organisations in Central America in providing credit tailored to housing and infrastructure needs (Stein and Vance, 2008). Housing micro finance targeting low income households and community groups are generally based on the concepts of savings and credit cooperatives (SACCO) or the rotating savings and the credit associations (ROSCAs). These are relatively new initiatives and mostly offering informal source of finance (Sheuya, 2007). However, although referred to as 'informal', UN Habitat (2011a) notes that this is the "dominant form of housing finance for most parts of the housing system in most African countries -with less than 15% of the population able to access mortgage finance" (UN Habitat, 2011a,.p.14). When compared to the mortgage loans, the housing micro-finance loans are relatively small amounts and are based on the client's capacity to repay, however larger than microloans. (UN Habitat, 2011a). In incremental housing process, the development of housing is usually financed in separate steps. The development of the ultimate house has several multiple financing stages-see figure 5 and "each step adds to the value of the ultimate housing product" (UN Habitat, 2011a, p.38). In this process the government has a role to play in facilitating city investment in the development of the human settlements. According to UN Habitat, (2011a) and Stein and Castillo (2005), in all this progressive housing development process, a combination of sources of housing finance may be used. These may range from household savings, informal loans from friends and family, remittances from families working aboard, rotating savings groups, as well as income from businesses, sale of household assets and informal loan providers. UN Habitat, (2011a, .p.38) further claims that, "housing microfinance can make the process more efficient, allowing the household to realise adequate housing that meets its needs, more quickly and often more affordably".

Figure 5: Multiple Financing Stages
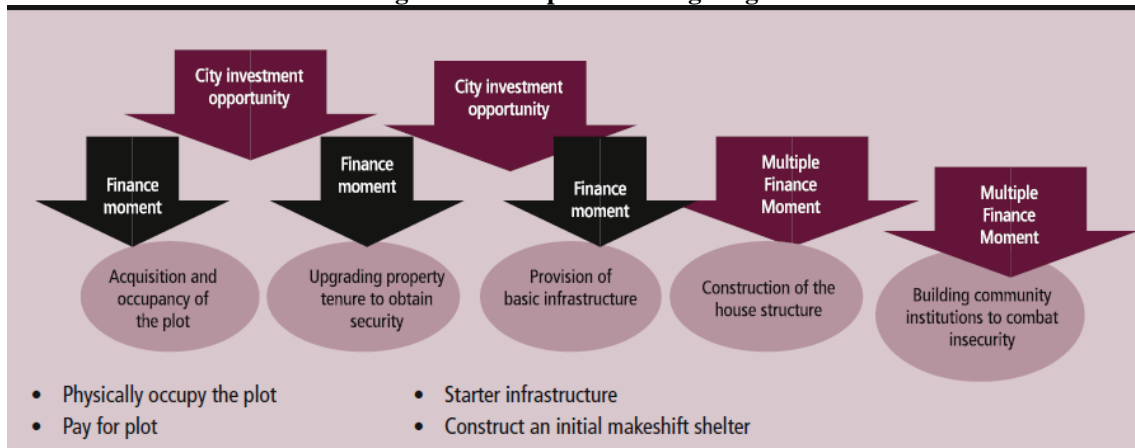
Source; UN Habitat and Cities Alliance (2011b)

3. Infrastructure and Services

The timing, standards and level of infrastructure and service provision determine the success of incremental housing initiatives. Higher levels of standards for infrastructure and services in site and service programmes have proved to be unaffordable to the low income households, yet other programmes have lowered the standards too low. Therefore, this requires that there is a careful balance between quality of service/infrastructure and affordability (Wakely, 2010). According to Wakely and Riley (2011), creating this balance would best be done if low income communities are engaged in establishing priorities and setting standards for infrastructure and services. This requires a thorough understanding of the trade off -costs and benefits (Hamdi and Goethert, 1997).

4. Planning Standards and Technical Support

Planning regulations and standards normally determine the plot sizes, access layouts and general land use. When planning for low income housing, planning guidelines that are locally administered should still maintain health and safety. According to Turner (1972), most of the planning regulations and building standards in the developing countries were copied from the European standards without any modifications to suit the contexts and therefore tend to be unrealistic. Therefore he suggests that in order to provide affordable housing for the low income the standards have to be lowered. However, Wakely and Riley (2011) claim that, it is not necessarily about lowering the standards but rather providing standards that are responsive to the needs low income groups. According to Greene and Rojas (2008), building designs should be able to facilitate incremental construction from the initial stages of settlements planning as this would support low income to access housing affordably.

Further, reforms in planning standards that encourage densification of land would reduce costs of servicing land and promote access of land by the low income groups. High rise incremental construction is also a possibility- see a demonstration case of Bogota, Columbia (Wakely and Riley, 2011). Also, many scholars advocate for planning mixed use neighbourhoods from the onset and with a consideration of future development and growth of the settlements. Tipple, (2004) identifies the need for the inclusion of home-based enterprises in neighbourhood planning for the low income groups. His argument is that majority of low-income groups depend on home-base enterprises for their livelihoods. In contrast, some neighbourhood planning standards even prohibited income-generating activities on residential plots, including the renting of rooms, thereby limiting the opportunities for residents to earn additional income. Thus, the strong argument is to establish planning and building advisory

services (which provide technical guidance on good practices specific to incremental housing) and shift from the concept of official development control (Wakely and Riley, 2011). It is however observed that there would still be need for development control to police the illegal development and unsafe building. Many critiques of the self-help and incremental construction process base their arguments on the lack of technical assistance and guidance in informal settlements (Tokeshi, 2001, Ward, 2001).

5. *Community Participation*

Erguden (2001) claims that government-led practices and policies of provision complete housing units for low income households have failed almost everywhere. These approaches were not able to reach the scale and hence seen as unsustainable. The argument is that the poor, if well assisted have demonstrated the potential to effectively participate in the housing process (Erguden, 2001, Lizarralde, 2010). However, self-help and community participation does not develop by itself- it requires support from the public sector through provision of training, credit and technical assistance (Erguden, 2001). From past lessons of incremental housing such as site and service, most programs rely upon community organizations and community leadership to support projects implementation. Gattoni (2009) indicates that, community organizations have important roles in the incremental housing process as they articulate collective concerns and needs. Also, they can mobilise resources for community projects, and maintenance of common public spaces. It is expected that the more the community participates in the incremental stages of development, the more successful the outcome will be. These community organisations would also be supported by high level Non Governmental Organisations.

6. *Private Sector Participation*

The private sector has a potential role to play in the incremental housing process. According to Wakely and Riley (2011), private sector participation is normally hindered due to the perception of high risk of working in informal settlements. However, they advise that the incremental housing process offers an opportunity for small private business to participate in the low income housing development. Notably of the ways to support are in the installation of infrastructure and provision of services to settlements where the local authorities are not providing. Also innovations of supporting the incremental housing process through providing building materials and local building technologies. According to Erguden (2001), the largest input in housing construction is building materials -this makes up to 70 per cent of formally built low cost housing unit. In supporting incremental housing development, private enterprises would supply building materials as well as micro-housing finance in instalment-supply modes as this would be more responsive to the need of the urban poor. Further development and promotion of local building materials may also be another aspect of support from the private sector (Erguden, 2001)

2.7.4 Actors and Roles in Incremental Housing Process

In order to make incremental housing affordable and adequate for low income households, Greene and Rojas (2008) indicate that there are various actors to be involved in the incremental development process. These actors also have activities to perform in supporting low income households throughout the incremental housing developments (See Table 8)

Table 8: Actor and Roles in the Incremental Housing Process

Actor	Activities
Households **Family and friends**	• Use the houses • Expand houses through self-help • Repay micro-credits and loans for land and building materials • Assist with labour for the construction process • Provide financing
Community organizations/ **Civil Society Organizations**	• Supply labour for incremental construction through community help • Organize the demand for land purchase, building materials and access to microcredit • Represent households' interests with government agencies • Manage building materials banks • Support community organizations • Provide technical assistance to incremental builders • Manage building materials banks
Developers/Building materials retailers **Financial institutions/Small construction Companies** **Construction industry**	• Supply land for residential uses • Sell building materials • Provide loans for purchasing building materials • Lend to households • Execute complex operations under individual or community contracts • Produce building materials • Develop new materials
Universities and Research Centres	• Undertake social, architectural, urban and engineering studies on incremental housing construction
Local Governments	• Provide technical assistance • Facilitate the supply of land for residential uses • Supervise compliance with land use and building regulations • Provide health, education and social services to households • Manage sanitation services (directly or through concessions)
Central government **International Technical Cooperation organizations/ Multilateral development banks**	• Define the regulatory framework for the housing and financial sectors • Provide financing to municipalities to improve infrastructure and urban services • Provide direct subsidies to low-income households • Study and disseminate good practices in incremental house building • Undertake comparative housing sector studies • Provide loans to finance public programmes in support of incremental housing construction • Provide technical assistance for the reform and of the housing sector • Provide technical assistance and resources for the development of microcredit for housing

Source: Greene and Rojas, (2008)

2.8 Conceptual Framework

In theory, the concept of self-help housing is mainly practiced in three different forms; unaided self-help, state supported self- help as well as state initiated as discussed in section 2.4. There forms have specific strengths yet if practiced in isolation all these models seem to be lacking in some of the most important components required to make housing affordable and adequate for low income households. For this study a multi-actor aided incremental housing conceptual framework has been formulated (See figure 6).

Figure 6: Conceptual Framework for a Multi-Actor Aided Incremental Housing

Source: Formulated by Author, 2012

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia
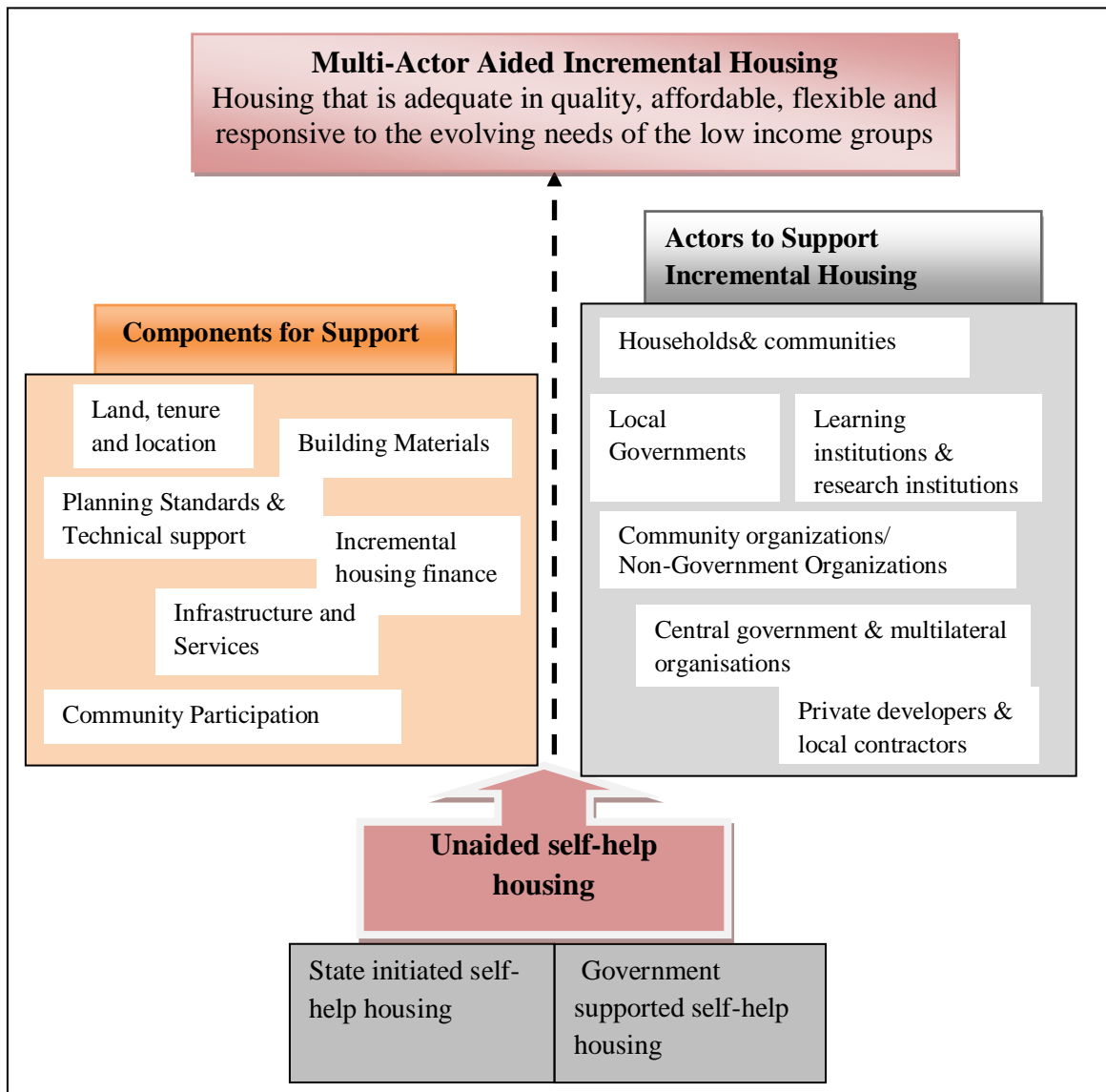
2.9 Summary

Several elements have been identified in literature and have been intergraded into the conceptual framework (see figure 6), that can be used as a tool to discuss incremental housing development for the low income groups. The starting point of this multi actor aided self-help housing conceptual framework is that there are mainly three forms of incremental developments. The prominent and the niche for this research is the unaided self-help. From literature, various actors and components that would support unaided self-help were identified. In this conceptual framework, incremental housing solutions would have to be supported by actors ranging from the households themselves who are the initiators of housing development. The local governments/municipalities have a key role in the control of building permits and making land available for residential development. The central governments often have an indirect role to play in the incremental housing process of offering policy direction for sector. Other players key in the process are the community based organisations and higher level non-governmental organisations, the private sector parties as well as the research institutions. The approach creates synergies among all these players and must ensure that all inputs are available as needed. In this framework, if these actors are able to support the incremental processes with necessary inputs (see figure 6), the incremental process would be able to produce housing that is adequate in quality, affordable, flexible and responsive to the evolving needs of the low income groups. According to Greene and Rojas, (2008), these actors would have several roles to play in the incremental housing process (See table 8).

Mathéy (1992) precisely concludes the self-help housing debates and says "generally speaking, self-help housing has become an accepted strategy as one among several elements to temper the shelter problem of the poor - even if most of its assumed positive attributes, like cost reduction, self-financing, social upgrading and better use values, could not be realised in the day-to-day practice of state-supported projects. Given the present economic and political conditions these programmes are still the best alternative available, and have something to offer not only for a few of the many homeless or badly housed, but also for the more powerful forces in society, including the state and capital"(Mathéy 1992.,p.389).

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research Framework

The chapter presents the methodology and process for conducting this research. The start of this study gives the background and rationale for conducting the research. The research goal, main research question and sub questions have been clearly stipulated in the previous chapters (see chapter 1, sections 1.5, 1.6). In the process of understanding the incremental housing processes the study begins with drawing in-depth knowledge in literature. This has been done through an extensive literature review and study of concepts that have emerged over the years (See Chapter 2).This formed the basis for shaping an empirical research and developing of variables and indicators that can be used to operationalise this research. The detailed explanation of how this research is conducted is outlines in this chapter. Figure 7 outlines the figurative framework with the sub research questions and the method of collecting data to answer the questions.

Figure 7: Figurative Summary of the Research Framework

Source; Formulated by Author, 2012

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia
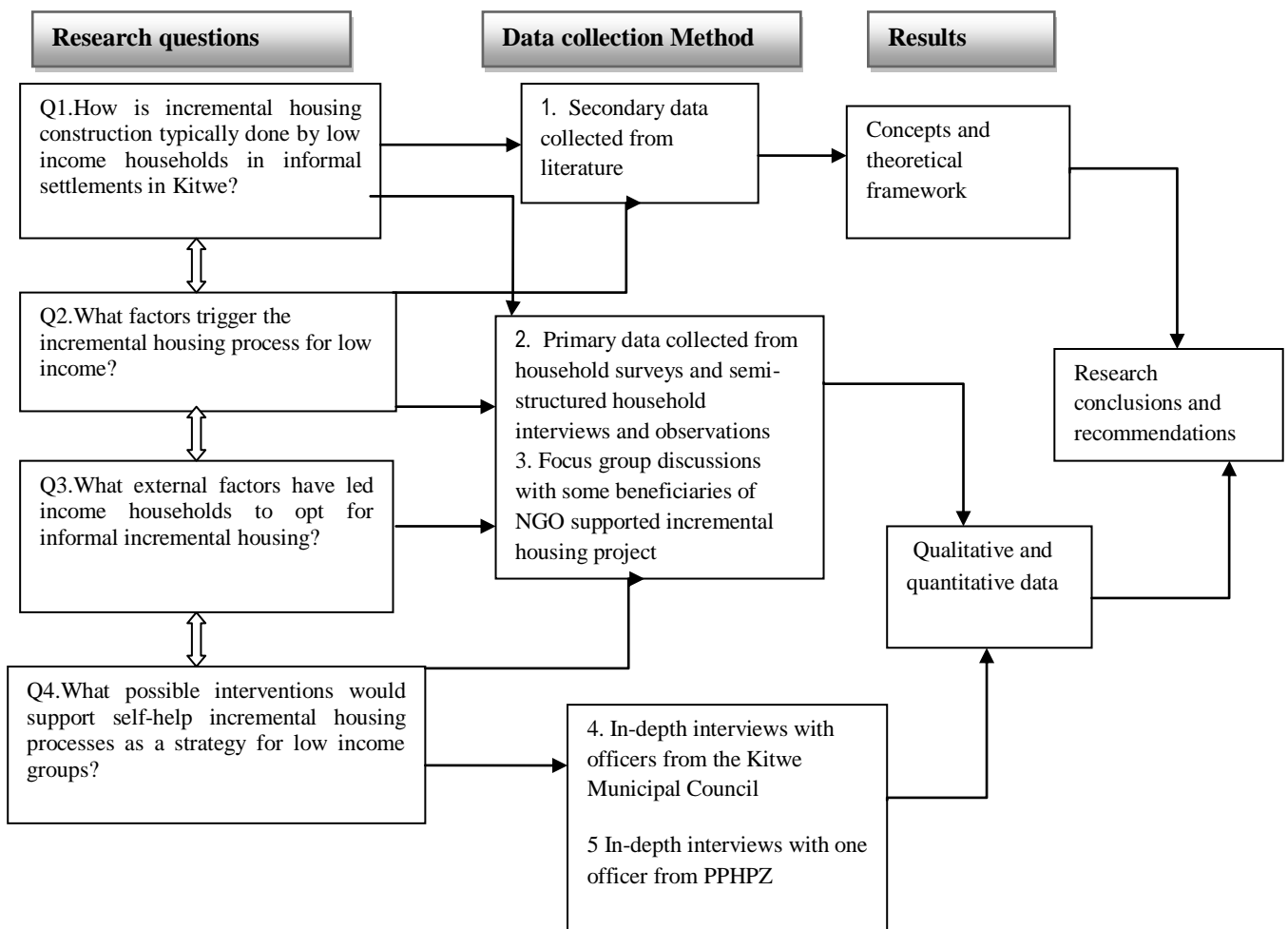
3.2 Type of Research

The type of research is generally a qualitative explanatory research, carried out on a single embedded case study. The research generally seeks to understand the phenomenon of incremental housing and this is a detailed descriptive analysis of the incremental housing patterns. It however, will also include basic quantitative data such as household income, household's sizes, and other data relevant to the research. From the literature review and study, it is clear that a lot has been written about self-help housing and incremental solutions by several authors and researchers. As such, this research is building on the knowledge and giving in-depth knowledge of the experiences of the low income households in the Zambian context. In order to understand the phenomenon better, the research uses the single embedded case study method as a research method. The reasons for selecting the case study research method is that the research seeks to bring out an understanding of the incremental housing processes and add to the knowledge with the experience of the low income households who are accessing housing through self-help incremental approaches. This research uses the case study to add to the knowledge and strength what has already been developed through previous studies. This case study will emphasize detailed analysis of the incremental process according to the Zambian context and Kitwe in particular. Case study approaches have been used as research methods by several researchers for many years and across a variety of disciplines. The case study research method is defined by Researcher Robert K. Yin "as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1984, p. 23). This definition well explains the methodology for this type of research as it seeks to draw an understanding of a phenomenon of incremental housing in a real-life context of the low income households in Kitwe. In this case study, multiple sources of data are also used for validation of the findings.

3.3 Data Collection Methods and Research Sample

Having drawn knowledge from literature, the second part of this research entails going out into the field to carry out data collection. The case study data collection is undertaken in the researcher's home country, Zambia and in particular, Kitwe city. Kitwe is the second largest city in Zambia and city of residence of the researcher and like many others growing cities in Africa currently faced with serious challenges in housing the low income groups. The main goal of this research is to learn from the incremental processes in informal settlements therefore, the research was purposely done in an informal settlement that has been in existence for a long period of time. This is so because it was expected that such settlements would have greater levels of incremental consolidation. '*Ipusukilo compound*'- (which means salvation in the local language) was selected for this research because it's the one of the largest settlements in Kitwe too. In 2008 Ipusukilo it had a total population of 33,019 inhabitants and 4,717 housing units (Kitwe City Council, 2008). This study used several key data collection methods including; observation, measurements and sketching, photography and most importantly semi-structured interviews with heads of households, also in-depth interviews with the officials at Kitwe City council and Non Government Organisation. The beginning of the field work was surveys and observations along main roads and paths in the settlements to identify and locate houses that have been consolidated and general patterns of the settlement. The survey was done with help of two research assistances who were resident in Ipusukilo and some local leaders from the Resident Development Committees (RDCs). The research involved selecting a sample from these total housing units. A sample of fifty (50) household respondents was randomly selected from one section of the settlement. From these fifty (50) respondents, a basic survey was carried out to establish the basic characteristics and patterns, household characteristics, basic characteristics of the settlement

and incremental development patterns. The next step was the categorizing of the housing types considering the level of consolidation. With the limitation of time, the housing types were mainly categorised into two; the first fifteen households who had consolidated their dwelling units. These were referred to in this research as 'good quality informal housing' to mean housing that was built with permanent building materials, and with a considerable level of standards. The other ten households were referred to as none consolidated to mean 'basic temporal structure' built with none permanent materials. It is worth to note that the definition of the good quality informal housing can have different conceptual definitions; however, this research seeks to use it to mean basic standard housing built with permanent durable materials. Having categorised the dwelling types, semi structured interviews were conducted with twenty five households; fifteen who have consolidated over the years and ten who were not able to consolidate. The respondents for the semi structured interviews were purposively selected to include only the ones that owned the plots and not renters/loggers as owner were more expected to consolidate than renter or loggers. Since the objective of the research is to understand the incremental self-help housing processes from the experiences of the households and also find out the possible interventions that would support the processes as such a comparative study between the consolidators and none consolidators was essential. The interviews were semi-structured as this is more relevant in explanatory qualitative research if both facts and perceptions are to be captured. Beside these, further interviews were done with the city authorities at the Kitwe City Council were the Director of Planning was the key informant as well as a technical consultant from German Aid, GIZ (formerly GTZ) to validate the findings. In addition to this, a focus group discussion was conducted with six project beneficiaries from the Zambian Homeless and Poor Peoples Federation (ZHPPF) and an interview with an officer from Peoples Process on Housing and Poverty in Zambia[10].These were to help in answering the research question of the relevant support for incremental housing learning from formal incremental housing projects that the organisation does.

3.4 Research Validity and Reliability

This research started with establishing a clear research design. From this research design variables and indicators that are clear and unambiguous were developed. This was to make the research more reliable. Further, data was collected from different sources i.e. semi-structured interviews with households, in-depth interviews with local authority, and secondary records from the municipality, non government organisations, and also local leaders thereby enhancing its reliability. The household interviews were the key informants in providing data regarding the process of incremental housing. With the use of semi-structured interviews, the research questions were asked in order to obtain facts as well as the perceptions of the low income people in Ipusukilo in their quest to access adequate housing. To ensure validity, this research did triangulation of data through having several informants, analysis of secondary data, semi-structured interviews, and surveys. Also conducting a pre-survey was used to determine the level of understanding of the research operational terms in the household semi-structured interviews. Key information was collected through semi-structured interviews therefore, making it easier to correct any misunderstanding during the interviews.

---

[10] Peoples Process on Housing and Poverty in Zambia was registered in 2005 as a Non Governmental Organisation, with an objective to provide technical assistance to the Zambia Homeless and Poor People's Federation in housing, housing related infrastructure and poverty issues. PPHPZ also facilitates in developing linkages and partnerships with central Government, local authorities, CBOs, NGOs, and other relevant stakeholders for the urban poor.

3.5 Research Scope and Limitations

This research acknowledges the inability to be comprehensive as a lot has been researched on the subject of self-help housing. Also the research acknowledges that housing is a multi-dimensional process that involves several actors making it impossible to capture all of them in this research. Additionally, incremental housing has for a long time been explored in literature, and there is a broad understanding on the concepts and approaches varying from formally owner-built housing, programmes designed to implement incremental housing such as site and service as well as informal incremental housing processes. Also, the phenomenon of building incrementally is not only practiced by low income groups in Zambia, it is a common phenomenon across income groups. Because of this, the focus for this research was on the self-help incremental housing processes in the informal settlements. This is because the main aim of this research is to understand these informal housing processes and how best they can be supported in order to meet the housing needs of the low income groups more efficiently and adequately.

Conducting such studies as incremental housing is not easy given the short time frame. This is because the incremental processes happen over a long period and generally requires a longitudinal study if the changes over time are to be captured. Since this was not possible within the four weeks of field work research, the research uses the general characteristics in the settlement as the baseline for the incremental processes. Further, this is noted as the major limitation in the research.

3.6 Relevance and Motivation for the Research

I have personally worked with low income households in their quest to access housing particular in Zambia. The experiences made me realise and observe trends in the way households have continued to access housing. Most of the households have continued to construct their houses step-by-step. Housing has continued to the single biggest investment that a household can make in their lifetime. Among the high, middle and low-middle income households, the process takes shorter time and better quality of housing. Among the low income mostly in informal settlements the process is done amidst several challenges and as such the process of incremental housing takes longer time and much resource if an adequate quality in housing is to be achieved. What motivates this research is how then can these approaches be supported? How can the urban managers, research institutions/universities, planners, architects, engineers and other professionals play a role in supporting the incremental housing processes? I believe the starting point in this journey is by understanding the self-help incremental solutions as practiced by the low income households themselves.

Several studies have been done on concepts of incremental housing. This become a popular approach for providing housing for low income households during the 1970s and 1980s but along the years, the approaches were not supported and the efforts were not scaled up in Zambia particularly and several other developing countries. Also, like Napier (2005) indicates, the evaluations of incremental projects such as site and service were done too early before most settlements had consolidated and as such the benefits of incremental and self-help approaches were not clearly seen and as such received negative criticisms. Despite this, the self-help practice has continued and is the major way low income households have to access housing. This research is relevant as it contributes to bringing the incremental housing back on the agenda. The findings of this research would also be relevant for municipalities and urban managers who wish to incorporate incremental housing approaches into the traditional housing delivery systems. With this, the professionals, technocrats and policy makers are able to develop interventions that would be responsive to the low income groups.

3.7 Operationalisation of the Research

From literature review in chapter 2 key variables were identified that form the basis for this research. The table 9 is the operationalisation of the research indicating these variables and indicators to guide the research in answering each sub-research question. The indicators form the basis for the questions in the household semi structured interviews; in-depth interviews with the local municipality as well as the focus group discussion with 6 beneficiaries from ZHPPF.[11]

Table 9: Research Operationalisation Table

Research questions	Variables	Indicators	Method of data collection	Source
How is incremental housing construction typically done by low income households in Kitwe?	Time	-Period of consolidation -Phases of consolidation	-Household survey, observations, sketching	-Primary data from households
	Resources	-Costs for land acquisition -Construction costs -Sources of finance -Type of labour		Visualisation and photography, observations
	Quality of houses	-Type of building materials -Type of skills -Minimum floor space index	- Household semi-structured interviews	
	Household consolidation patterns	-House expansion patterns -Room increments patterns -Phases of access to services -Type of services		
What triggers the incremental improvements of the houses for low income households?	Need for to improve house quality	-Improvement of building materials -Improvement of services	- Household semi-structured interviews	-Primary data from households
	Household incomes	-Changes in household income -Sources of incomes		
	Household space needs	-Changes in household size -Number of new households formation -Backyard houses and home enterprises		
What external factors have led income households to opt for informal incremental housing?	Government attitudes	-Legality and tenure - Provision of services and amenities	-In-depth interviews with Director of planning at Kitwe City Council	-Local Municipality
	Land tenure and security	-Household land ownership -Type of tenure -Land acquisition procedures -Prices for land acquisition	- Semi-structured household interviews	-Primary data from households
	Community participation	-Community efforts in mobilising services -NGO Supported efforts		
What possible interventions would support informal incremental housing processes as a strategy for low income groups?	Financial	-Forms of support -Ways of administering	-Focus group discussion with ZHPPF	-Project beneficiaries
	Community	-Form of community support	-In-depth household interview	-Primary data from households
	Technical	-Type of technical support - Period of support		

Source: Formulated by Author, 2012

---

[11] A network of community savings groups implementing a formal incremental housing project with technical support by a Non Government Organisation

CHAPTER 4: RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

This chapter discusses the data analysis and findings. It is a detailed descriptive analysis of the single embedded case study of the incremental housing processes in Kitwe, particular, Ipusukilo settlement. The analysis of the case study seeks to provide answers to the research questions posed in Chapter 1. The first part starts with a general description of housing characteristics of the low income housing sector in Kitwe, the legislative framework in relation to informal housing and some of the approaches that have been employed to address low income housing so far. A detail analysis of the case for incremental housing development in Ipusukilo 'compound' follows thereafter. This discusses the major trends that were captured in field work in the incremental self-help approaches. Lastly a summary of key findings is highlighted.

4.2 Low Income Housing Conditions in Kitwe

Kitwe is located on the Copperbelt province in Zambia and covers an area of approximately 777 square kilometres. The city was established in the early 1900s after discovery of large copper deposits and is mainly a mining industrial city. At the time of independence in 1964, the county experienced rapid rural-urban migration and most of the migrants lacked housing in the formal sector. The majority of these immigrants settled on unoccupied land on the periphery of the city and these have grown to form the main informal settlements (Makasa, 2010). At one time in the 1980s, Kitwe had twenty eight (28) unplanned settlements which were supposed to be demolished as there was no law that supported the existence of informal settlements (Kitwe City Council, 2008). However, in 1972 the government of Zambia started to recognise the need to regularise some of the informal settlements and the Government issued directives (Circular reference number PLG/101/93/1A)[12], Kitwe City Council, (2009b), where local authorities in collaboration with the National Housing Authority (NHA) were directed to jointly facilitate and undertake upgrading of some informal settlements as opposed to demolishing (Kitwe City Council, (2009b). From that time, efforts have been made to relocate some of the informal settlements through site and service schemes and settlements upgrading. The city profile indicates that at least ten settlements have currently been upgraded to improvement area[13] and currently the city has eighteen informal settlements (Kitwe City Council, 2008). As the main goal of this research is learn from these informal incremental processes, the research was purposely done in one of the oldest and largest informal settlements as it was expected that such settlements would have greater levels of incremental consolidation. Ipusukilo settlement has a total population of 33,019 inhabitants and 4,717 housing units (Kitwe City Council, 2008). The figures in Table 10 show the number of informal settlements and the population that is habited in these settlements. It is evident that there are a high number of people who have continued to access housing through informal self-help and this is the niche for this research.

---

[12] An extract from the secondary data from the records of Kitwe City Council
[13] 'Improvement area' refers to an upgraded informal settlements following the Housing (Statutory and Improvement Areas) Act, 1974, of the Laws of Zambia

Table 10: Number of unplanned Settlements in Kitwe

No	Settlement Name	Number of Housing Units	Population in 2008	Year of formation
1	Mufuchani	323	2,582	1950
2.	Mwaiseni	545	4,360	1957
3.	Kamakonde	465	3,720	1962
4.	Salamano	276	2,126	1962
5.	St Antony	542	4,036	1963
6.	Chipata	739	6,012	1966
7.	Mugala	387	3,096	1967
8.	Kamatipa	2,500	15,000	1968
9.	Chankalamo	376	3,008	1969
10.	Itimpi	1,800	11,000	1969
11.	Zamtan	900	6,000	1969
12.	Ipusukilo	4,717	33,019	1970
13	Malembeka	1,200	7,000	1970
14	Kakolo	235	1,880	1970
15	Racecourse	2,700	15,000	1972
16	Kandabwe	907	7,256	1973
17	Robert	415	3,100	1973
18	Mulenga	3,000	18,000	1975

Source: Kitwe city council, 2008

4.3 Legislative and Legal Framework Relating to Informal Settlements

Informal settlements have been increasing. High levels of poverty, unrealistic regulatory frameworks, ill-conceived policies, inadequate urban planning, weak institutional capacity, and the large macroeconomic framework where housing is part, have been blamed as factors that have contributed. In Zambia, the World Bank (2002) recognises that there is sufficient policy and legislative framework with regards to unplanned and informal settlements. The problem however is that, there appears to be no clear strategy that is relevant and enabling in dealing with these informal settlements. At national level, the government has made some steps in this regard through developing a peri-urban housing strategy (UN Habitat, 2012). In 1999, the department of Physical Planning and Housing at the Ministry of Local Government and Housing (MLGH) started drawing up a strategy for working in high population density settlements (whether informal or formal) that lacked basic services such as water supply, sewerage, roads, storm water drainage and solid waste disposal (UN Habitat, 2012). Drawing up of this strategy was finally completed in 2001 but whether the strategy has been implemented or not is out of the scope of this research.

The interviews with the Kitwe local authority (in-depth interview with Director of Planning, July, 2012) indicated that the legislation that provides for the development of low income housing in Zambia at the moment is the Housing (Statutory and Improvements Areas) Act, 1974[14]. The Act provides for control and improvement of housing mainly in former council owned housing areas and also in improved areas (upgraded informal settlements). Since 1974, municipalities in Zambia were given the mandate to declare areas such as site and service settlements as statutory areas and also unplanned settlements that meet particular criteria were to be declared improvement areas. The provision of this Act marked the beginning of the shift from the demolishing of informal settlements to more of the

---

[14] See the Housing (Statutory and Improvements Areas) Act, 1974, of the laws of Zambia for the details

regularisation and subsequently upgrading. In the statutory areas, the occupants are offered ninety nine (99) year leases as certificate of ownership. On the other hand, in the improvement areas, once it was declared, it allowed for rezoning and upgrading with the provision of basic services. Once the procedures of declaring the settlement were done, the municipality was given a block title from the Ministry of Lands[15] and the municipality would subsequently grant occupancy licences to the residents of the settlement (in-depth interview with Director of Planning, July, 2012). An occupancy license is a document issued to residents in improvement areas showing that the holder is the owner of the stated land thereby giving security of tenure and is valid for thirty (30) years. These forms of titling were introduced and promoted more during the World Bank's era of redistribution and growth following De Soto's theories[16]. Whether this theory holds or not is not part of this research to prove. From the findings of this research, it was also evident that, these procedure of declaring settlements as improvement areas and subsequent upgrading, often took long period before it came to fruition. In Ipusukilo, for instance, the municipality resolved through council resolution to upgrade the settlement in 1990 yet the settlement has not yet been upgraded up to date. This means therefore, that while these procedures are underway, a lot of residents who have stayed in the settlement for a long time would have started making personal efforts in improving their housing conditions through self-help and mutual efforts. The residents would also have made steps to acquire basic infrastructure and services through community driven efforts. According to the municipality, (in-depth interview with Director of Planning, 2012), the reason for the delay in upgrading programmes was the lack of sufficient finances to undertake a comprehensive upgrading program. Another respondent from the municipality (GIS technical consultant, GIZ, in-depth interview, 2012) indicated the complexity of undertaking such a programme would include demolishing some of the structures and also resettlement. The fact that the settlement is densely populated there is the high risk of resettling a high number of households. It appears that due to these complexities, it has created a reluctant attitude among the city managers towards upgrading. The in-depth interview with the Director of Planning (July, 2012) however, revealed that to date, the municipality has made head way towards upgrading the settlement as rezoned layout plans have already been made and negotiations[17] were underway with residents who would be affected by the upgrading programme. Notable from the findings is that there is no legislation that provides for any local level special building codes that would be responsive to the low income settlements. Further, the UN Habitat (2012) notes that, in order to easy the procedure for the development in these informal areas, other pieces of legislation such as; the Lands and Deeds Act, the Land and Surveys Act, the Rent Act, and the Town and Country Planning Act do not apply in these settlements.

4.4 Kitwe City Responses to Addressing Low Income Housing

The Zambian Government recognises the need for providing shelter for all income groups through the National housing policy. Kitwe like other cities, have the eminent need to improve the housing situation of the massive low income groups. Through this research (in-depth interview with Director of Planning, 2012), it was evident that more than 50 percent of the urban dwellers in Kitwe lived in the unplanned settlements. Therefore, the city managers

---

[15] Generally, the Ministry of Lands in the sole body mandated by law to spearhead land offers in the statutory areas and the local authorities act as agencies

[16] By now several researches have argued De Soto's theories of land titling that believed that once low income groups were empowered with land titles, they could invest in better housing and also use the licenses to borrow money from banks and other financial institutions.

[17] This was confirmed by the field work were I personally attended one of the negotiation meetings with the residents.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

considered this as a fundamental issue. Equally, adequate and affordable shelter was seen as paramount in reducing poverty. Notwithstanding this, efforts have been made to address this challenge. The Kitwe City Council, (in-depth interview with Director of Planning, 2012) have in past made efforts and are still making efforts in improving the housing conditions of the low income groups. From the interviews and municipal secondary data, some of the interventions that the local authority has since undertaken include:

1. *The Site and Service programme*

It was revealed that, in an attempt to address the issue of inadequate housing and basic services, a site and service programme was introduced in the early 1970s with support from the World Bank. Under this programme selected areas were planned and basic urban services and infrastructure such as access roads and water were made available. Plots were then offered to low income households who were expected to develop them. Some of the early beneficiaries were able to access some loan in form of building materials to help them get started. However not many people benefitted from this programme as expected, due to the fact that after the withdrawal of the World Bank funding, the programme was not well funded coupled with the poor repayment culture by those that had managed to access the loans. Kitwe has three such settlements that were established under this programme. These are Bulangililo, Luangwa stage 1, and Kawama site and service (Kitwe City council, 2009b). The basic urban services in these settlements continue to be inadequate and even the little that was provided has also deteriorated considerably over time. In the case of Kawama where a total of 4000 plots were planned less than half of the planned plots were created and allocated. The rest have not been created due to the huge costs associated with the provision of the required basic urban services. An immediate challenge that arose from this has been the invading of this land illegally by various groups of people as supported by site observation during field work.

2. *Squatter Settlement Upgrading*

The interview further revealed that the enactment of the Housing (Statutory and Improvement Areas) Act 1974 provided for the upgrading of unplanned settlements as opposed to outright demolition. This became an option for the low income households in most of the cities where there is not enough affordable housing. With this piece of legislature in place, Kitwe City Council proceeded to identify some informal settlements for upgrading. To date a total of nine settlements have been selected for upgrading through council resolutions under minute number(s) 30/2/90, CEH/09/01/08[18] (Kitwe City Council, 2009b), Ipusukilo 'compound' (the settlement where this research was undertaken) is one of them among others. The findings indicate that despite the desire by municipality to undertake full scale upgrading, efforts have been hampered by the non availability of finances that would allow the provision of basic urban services such as road infrastructure, safe drinking water and public amenities. To this end the community has taken it up themselves to mobilise for the provision of basic services. Ipusukilo residents have been participating actively in providing few basic services and infrastructure such as the opening up of access roads. It was also revealed that in the 1990s, through support from a Non Governmental Organisation called Peri-Urban Self-Help (PUSH), the residents of Ipusukilo implemented a self-help project by constructing access roads and drainage within the settlements. The other goal of the project was poverty reduction and as such the construction was almost 100% labour based. The project mechanism was arranged in such a way that the financial resources were provided by PUSH while Kitwe City Council provided technical support. On the other hand, the communities

---

[18] Minutes of the council meeting were the resolutions were made

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

participated in the actual road making and were rewarded with some food rations. From the field work surveys and observations, it was evident that after implementation, these roads and drainages have deteriorated due to lack of maintenance as the incentive to do such work are no longer there.

These are the two main approaches that the municipality has been using to address housing for low income groups. However there is a question as to whether these efforts are adequate looking at the high number of people that are still finding housing in informal settlements.

4.5 Characteristics of Ipusukilo
4.5.1   Location of the Study Area
Ipusukilo settlement is one of the oldest (approximately more than 50 years) and densely populated informal settlement in Kitwe. It is located on the Kafue river side basin and shares boundaries with another informal settlement namely Musonda on the south, Riverside (a high-cost formal residential area) on the south West, East of Kwacha (medium–cost formal residential area) North West, Bulangililo (low-cost formal settlement) in the North and the Nkana Water Sewerage Ponds in the North-East (Kitwe City Council, 2008). The households lying closest to the sewerage ponds and the Kafue River have the highest risks in terms of health hazards. The settlement is located at a distance of 7 kilometres from the Central Business District. In 2008, the population of Ipusukilo was 33,019 inhabitants with 4,717 housing units (Kitwe city council, 2009b). Ipusukilo was selected for this study from among eighteen informal settlements because it is the largest and oldest settlement with over 4717 housing units and would be expected that it would have more incremental and consolidation patterns when compared with other informal settlement that were formed recently. The researcher also believes that it is in these 'settlements of hope' that improving quality of housing through incremental interventions would be more relevant. Figure 8 shows the map of Ipusukilo.

Figure 8: Map of Ipusukilo Settlement
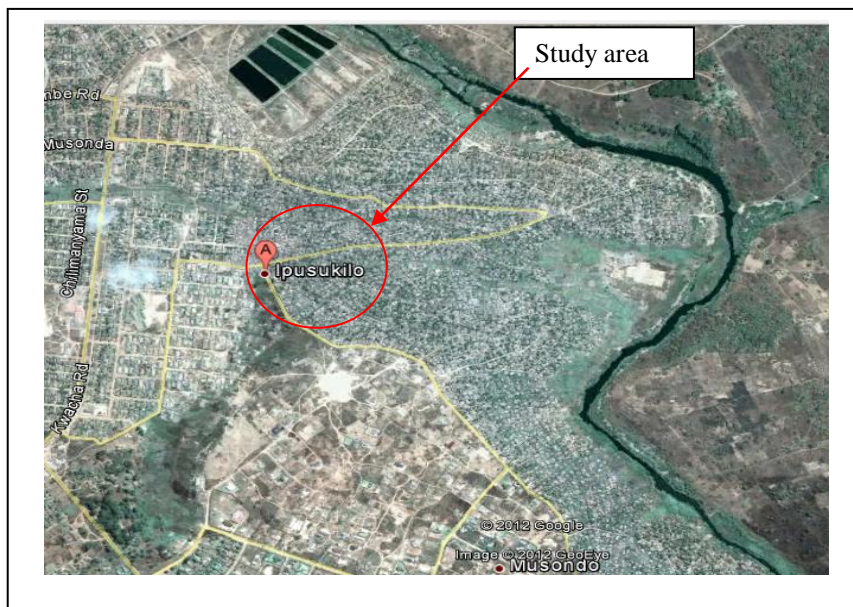
Source; http://maps.google.com/maps?hl=en&tab=wl, accessed on 8/8/2012

From the informal interviews with older residents and secondary data from the local municipality, it was revealed that Ipusukilo informal settlement started as a result of the relaxation of movement laws by the Government after independence (after1964). At that

time, formal housing was mainly provided by the local authorities and the available housing stock could not sustain the population due to rapid rural-urban migration brought about by employment opportunities especially in the mining sector. As a result of the inadequate formal housing, people had to seek alternative forms of housing mainly in the peripheral of the city such as Ipusukilo were local party leaders took it upon themselves to allocate land illegally. Since then Ipusukilo has remained an illegal and unplanned settlement despite the resolution by the local authority to have it legalised.

4.5.2 Housing and Housing Related Infrastructure

Housing has been defined to mean not just shelter 'walls and roof', but encompasses different components making up the living environment. The housing characteristics are different as human settlements are dynamic. From surveys and observation, the general impression of Ipusukilo is that it is densely populated (yet the housing density is relatively low) with the housing units mostly built without building plans and not following any defined boundaries. Generally the average plot sizes are 15mx20m (300m^2), but the plots are built up with more than one structure. Mostly commonly used building material in the construction of these houses is 'adobe' (unburnt bricks) or mud bricks (Refer to figures 9-12). The surveys also established that there has been uncontrolled subdivision of plots and rampant construction of housing structures without due regard to issues of water and sanitation, for example, building of several structures in one plot and pit latrines dug next to shallow wells. From the local authority (GIS technical consultant, GIZ, in-depth interview, 2012), this had made it difficult for service providers to provide services. From the observations, the area is not serviced by a proper road network and drainage system. Due to the fact that the area is informal; it has a few undesignated roads which are mainly gravel and without proper drainage system. Most of the roads can simply be classified as foot paths which make it difficult for service providers to access the area if such services as refuse collection, fire and ambulance services were to be provided. From the household respondents, it was indicated that during the rainy season, the area is flooded with some parts being cut off due to impassable roads[19]. Many critiques of the self-help and incremental construction process base their arguments on the lack of technical assistance and guidance in informal housing development (Tokeshi, 2001; Ward, 2001).

Figure 9: Prototype of Water Kiosks   **Figure 10: Typical Basic Mud Brick House**

---

[19] This was a general complaint by the majority of respondents during field work

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Figure 11: Typical Latrine and Bath Structures   Figure 12: Dug Shallow Wells within the Plots

Source: Field Work Surveys (2012)

The majority of residents depend on water drawn from shallow wells that are usually dug within the plots. According to the municipality (in-depth interview with Director of Planning, 2012), attempts have also been made in the past to provide some communal water stand pipes but these were inadequate to carter for the high demand. The findings from the secondary data[20] revealed that the water utility company-Nkana Water and Sewerage Company supplies clean piped water to the settlement through twenty two (22) Water Kiosks that are scattered around the settlement (Kitwe City Council, 2009b). The households are charged at K50.00 (US$0.01)[21] per 20 litres container of water. Despite this, the study revealed the majority of the respondents had a dug shallow well within their plots and only bought clean drinking water from the kiosks. Further, it was seen that water kiosks were installed as opposed to house connections because the area is not planned to allow the lying of water supply reticulation system. However few households have managed to connect to the main piped water through their own efforts or communally with neighbours-after paying connection fees to the water utility company. Generally, it was observed that, the settlement is not serviced by waterborne sanitation services, no solid waste facilities (waste is indiscriminately disposed along roadsides and open spaces), (Kitwe City Council, (2009a). The local authority blames this on the settlement being illegal as such it remains with no mandate to provide services even if such services as water are key human needs. Simply, the form of self-help development in Ipusukilo is 'unaided self-help'. This is the form identified in the conceptual framework[22] as the aspect that requires support if housing developed by the low income groups in informal settlements is to be both adequate and efficient in resource use for households and cities.

4.5.3   Household Characteristics of the Respondents

As explained in Chapter 3 of the research methodology, the field work research involved surveys and observation, sketching, photography and most importantly, semi-structured interviews with heads of households. Firstly, a basic survey was done with fifty (50) randomly selected households where basic information such as; type of households, household sizes, period of occupation, and whether they had improved the dwelling before was captured. These were generally informative surveys from which twenty five households

---

[20] Information obtained from   Baseline Survey Report "Establishment of a Decentralised and Integrated Land Administration System in Kitwe, Baseline Survey Report"(Kitwe City Council, 2008)

[21]   Using an exchange rate of 1US$ to ZMK5000 (July, 2012)

[22]   Refer to the conceptual framework in chapter 2, section 2.8 for the detailed understanding of the conceptual framework

were purposely selected for semi structured interviews. The twenty five sampled household's had various household characteristics; however the research only included households that owned the houses and not renters. It was a combination of fifteen households that have improved and/or consolidated their dwellings and ten others who have not consolidated.

Looking at the household characteristics the findings revealed that the majority of the households lived as extended family households with two to three generations staying in the same house. Out of the twenty five sampled, ten were extended family households, with the other six being nuclear family and the seven were multi-family households and only two were single family (these respondents were generally very old). See in figure 13. Among the multi-family households, there were generally one or two other households living with the main household[23] and these were non family related but renters of some rooms in the main house or backyard houses. The largest household had twenty two members (an extended family living in a three bed roomed house) with single family household being the lowest. In relation with all other households, the median family size was 12 family members while the mean household size was 8.6 members per household. (Refer to appendices for details). Applying the UN Habitat standards for acceptable habitable space per person, these would seem like very high levels of overcrowding. However, in a culture where living with extended family members is generally an acceptable norm it is not clear the same standards of defining overcrowding would apply. Looking at the lengths of occupation of the house, on average the majority of the respondents had stayed in the settlement for more than twenty years and this characteristic indicated low levels of mobility which would be one of the factors that encourages households to be able to invest in improving their dwellings. From the sampled households, the longest household had been occupying that same plot since 1974 meaning they had stayed in the settlement for thirty eight (38 years) (generally, such households had at least two to three generations staying together) and the earliest moved into the settlement in 2007. Among these twenty five households, only eight were female headed with the remaining seventeen being male headed and this research did not find any child headed household.

Figure 13: Household Characteristics
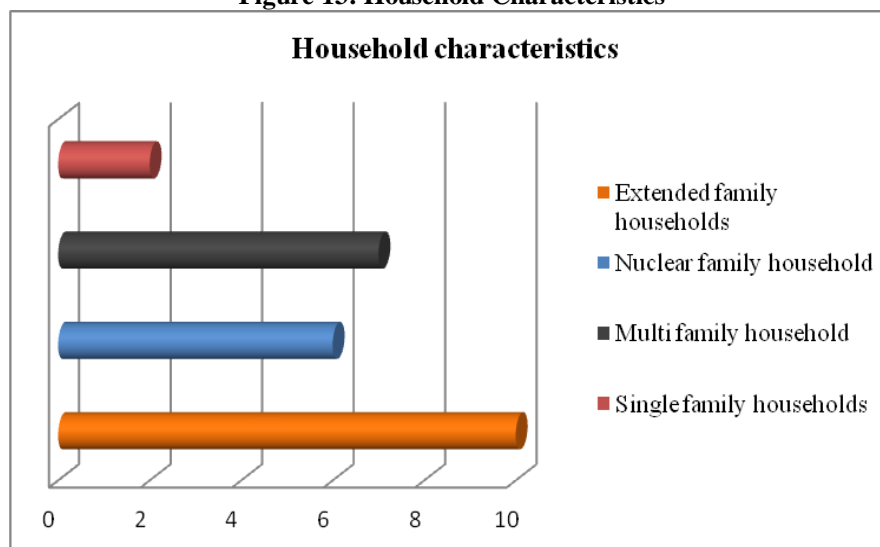
Source: Household semi-structured interviews, (2012)

---

[23] When analysing the household sizes, the research only looked at the households sizes of the main household excluding the non family renters/loggers

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

4.6 Typical Incremental Housing Development Patterns

Having looked at the general characteristics of the settlement and respondents included in the research, this section looks at the description of the self-help and incremental process from the perspective of the respondents. The analysis follows a sequential description of the different aspects and trends in the incremental process. The descriptive sequence follows the informal order of development as articulated by Baross (1987), Mcleod and Mullard (2006), that in informal housing development, the sequence is; occupy-build-service-plan.

4.6.1   Trend 1: Informal Land Acquisition

The beginning of the life time incremental housing process starts with acquiring a piece of land. From the findings, it was clear that while it is essential for governments to provide affordable serviced land for housing development yet there exist informal land markets that are mostly affordable to the low income households. From the responses of all the respondents, the households acquired plots of land through local informal processes such as buying from the local politicians who subdivided the plots while others bought from individual households who were the initial owners of the plots in the informal settlement. These local politicians[24] were constantly being referred to by the respondents as 'the council'[25] even if there are not technocrats at the local municipality. Majority of households built temporal houses immediately after land acquisition mostly it could be because of fear of forced evictions[26]. All twenty five respondents claimed having bought the piece of land/plot in one way or the other, even though this was not the real value for land as the whole process happens in the informal unregistered way. Others further claimed that during this process of the buying land there were given a title which they locally referred to as 'cards'. Verifying this from the interviews with the officers from the municipality, shows that local authority does not offer plots or parcels of land in informal settlements. The main actors in informal land subdivisions are mainly the political party cadres who sale plots through unregistered subdivision. The municipality (in-depth interview with Director of Planning, 2012) also indicated that with such informal land markets the municipality losses a lot of revenue which could otherwise be generated through land rates if the transactions were registered.

These informal land titles referred to as 'cards' can generally be regard as the *de facto* security of tenure. The legal; *de jure* land titling procedures, in as much as is an important aspect in home ownership, was not seen as a prerequisite for owning land in Ipusukilo. This finding supports what with the UN Habitat and Cities Alliance (2011a) argue for a continuum of land rights from informal to formal. Another key finding was that theses informal land market were highly politicised[27]. The UN Habitat (2012) even claims that residents of Ipusukilo were offered occupancy licenses during last year's general elections campaigns. Whether these titles can be regarded as legal or not is another aspect. When asked about the 'cards', the local authority indicated that for as long as the settlement was not declared an improvement area, it did not have the mandate to provide titles to residents. According to the Zambian decentralisation policy, the Wards/Resident Development Committees are seen as the lowest level in the local governance structure. These committees were formed to create a link with the local authorities and the communities and such are seen by residents as part of the local authority. These however, do not have the mandate of carrying out any subdivision of land. Nonetheless, in the perception of most residents, they were regarded as part of the

---

[24] These are part of the local Ward/Resident Development Committees
[25] Council is the general term to mean the Local authority
[26] Forced evictions although not carried out on a large scale are a major trend in these informal settlements in Zambia
[27] It was a major trend during elections campaigns to have unofficial subdivision of land by political cadres

council. Therefore, when offered the 'cards' the local residents deemed them as with approval from the municipality.

4.6.2   Trend 2: Typical Systems of Incremental Construction

From the findings and the observations in Ipusukilo, the self-help construction systems identified can basically be categorised into two. The majority of household's normally started with a 'temporal house'[28] structure that 'was made with basic mud brick walls and pieces of iron sheet for roofing. These houses did not follow any basic building standards, often built without building plans and foundation. However, these basic 'temporal houses 'were often improved to better quality in the quest to meeting the household needs and preferences. From the fifteen sampled households, (who had consolidated), ten households started by building a 'temporary house' with mud bricks at the time of occupying the plot. This finding agree with Greene and Rojas (2008) who claim that incremental housing process begins immediately after acquiring land with the household constructing shelter temporally to meet their immediate needs such as protection from the wind, sun and rain and also privacy. Alternatively, others started with permanent building materials from the initial stage and increased the space by adding room by room. The findings agree with Abrams claims that "squatters alike have put up 'shacks' and later extended them over time" (Abrams1964, p. 175).

Generally, in the first construction system, before the incremental processes started, basic starter structures made without any building plans, made of mud (adobe) or unburnt bricks and roofing with pieces of iron sheets and covered with plastic. The basic houses were generally, two roomed or three roomed. These were homes for the majority of the respondents before any consolidation process started and often for many years. Unlike in core housing projects were starter structures offer the initial starting point for incremental consolidation, in informal settlement this 'push factor' is often not there. From the fifteen consolidators sampled, it took households an average of more than ten years before starting any improvements or extensions to their dwelling. This can be interpreted that due to the fact that the settlement is illegal, households were not keen to make huge investment in the initial years with the uncertainty of the ownership and forced evictions. Another factor that would relate to this is the high poverty levels-until household were able to have extra incomes they were not able to consolidate. The cases are however not the same with all respondents. For some, it took them even longer-more than twenty years before consolidation while others (ten sampled in this research), did not consolidate at all. The household interview below supports this finding.

"...we came to stay here in Kitwe 1985, and since then we have been staying on this same plot. At the beginning we had a large family and resources were not enough to be able to meet the basic needs, take the children to schools and improve our house. We only started improving in 2009 to 2011 (after 24 years). This is because now I have a son abroad who was able to send me money to finance the construction of the whole house. We have changed the whole house from a 4 roomed mud house to an 8 roomed house with 4 bed rooms. The house was built within two years..." (Household Respondent, Fieldwork Interviews, 2012)

In the alternative system, the household started building a permanent structure from the beginning of the process. Five households out of fifteen sampled agreed to have started building the whole house structure from foundation, they erected two rooms and this was later increased room by room up to the level of accessing of basic services. Normally, they

---

[28] This temporal house is referred to mean a house basically built with non permanent building materials

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

constructed the outer walls of the house first, as the household lived in the 'temporal structure' inside. Once the outer walls were constructed, the inner partitioning walls are also constructed. Often there is an intermediate stage, where one part of the house is in brick with the other still in mud walls (Figures 14 show some of the houses at intermediate stage).This was a prominent form of incremental system as observed from the surveys. It was observed that, there were also a considerable number of 'good quality houses' that have been improved through this system. Sometimes the standards reached were comparable to formal middle class housing. The most prominent room increments were the habitable bedrooms, seconded by kitchens, then sitting rooms, dinning and baths and toilets in some cases. Non habitable rooms such as veranda, store rooms, were mentioned as not being a priority for some households. Among the low income groups, this self-help construction is considered the only way through which the households can become home owners in most developing countries.

Another noticeable feature was that there was prominent construction of backyard houses for rent- locally known as 'cabin'. Out of all the respondents, only four households did not have backyard houses within their plots and the remaining twenty one had. This additional space was not only used for renting but also by members of the main household as was in the case for two respondents. It is worth to note that there is no liaison with the local authority for any technical support during this whole process. As already indicated the local authority does not have the mandate to provide urban services in unplanned settlements and as such are also not able to carry out planning and development controls even on safety and health building as such this backyard rental housing is relatively overcrowded.

Figure 14: Typical Brick House under Construction as Family Lives Inside

Source: Author 2012, Fieldwork Surveys

4.6.3 Trend 3: Shift in Building Materials towards Permanent- Conventional Materials

Typically, building materials constitute the largest inputs into housing construction after the land acquisition related costs. From the interviews, it was confirmed that building materials was the single most factor that constrained most households in improving their dwellings. At the initial stage, households built with non permanent materials, but with time and an increased level of security, they often wanted to improve the quality of their houses through building with conventional building materials. Building with conventional building materials was seen as the goal for most households. These are usually deemed to be expensive to acquire at once and as such households could only manage to buy them in stages following the phases of the house development. Availability of finance to purchase these building materials was the most determining factor in the phased-development of the dwellings for most of the respondents. Two of the respondents indicated having bought iron roofing sheets

way in advance before starting the consolidation process as these were seen as the most expensive of all the required building materials. Normally, the cost of building materials doubles in relation to the household consumable goods. This means therefore that the years that households have to work in order for them to afford the building materials also increases-resulting in the years of not building for some households. This was the single most response given by the respondents delaying their home improvements. In as much as the development in informal settlements is not regulated by the local governments building codes and regulations, it was clear from the responses that households deemed conventional building materials to be more superior than the local traditional building materials such as mud. The households with better incomes opted to even plaster the outer walls of their dwellings and also with iron or asbestos roofing sheets. With the phased way of construction, the local building suppliers were the main sources of building materials according to the responses of all the households surveyed. The households were also the major contributors of the locally available building materials such as sand and stone. The improved houses were also often made of burnt brick which was locally made.

From the general characteristic of the settlement, the general building materials used at the initial stages are mud (adobe) or unburnt brick walls with roofs of tins. Ten respondents included in the survey agreed having started with these building materials and they subsequently improved the buildings materials through each stage. The improved houses were all built with burnt brick or concrete blocks and cement, with most of them being plastered and even painted. Often this was done amidst several other household challenges and low income group tend to be pragmatic in making careful investment. This was supported by one of household respondent's views:

 "…as you can see we have not been able to plaster the walls on the other side ...we have not also finished the house inside as well. One of my children has been sick for a long time and we currently do not have enough money required for health care and to finish our home improvement…" (Household Respondent, Fieldwork Interviews, 2012)

Some of the houses were in the process of being improved from the mud walls to the brick walls. The most common roofing material was iron sheets and asbestos, which was used to cover all or part of the roof by generally all of the fifteen household respondents. One respondent indicated improving the roof of their house by changing the roofing sheets one-by-one.

"...Each time we were able to buy few new roofing sheets, we removed the old ones and replaced with the new ones...until when we will finish the whole house…"(Household Respondent, Fieldwork Interviews, 2012).

At the time of the research the household had improved the materials for the walls and waiting to improve the floor of the house. Seven of the households sampled had not improved their floors to have concrete floors as most of them considered this the last part of their house improvement process. However, at least part of the house would have concrete floors. An interesting observation was that the majority of the respondents had made their floors with mud and clay using traditional and indigenous knowledge and skills. Except for two households, the rest had wooden doors, with the ones with better quality consolidated houses having first grade hard wood doors- and this was generally considered a sign of better incomes and associated with prestige. The majority had wooden doors that were often second-hand or were roughly made by the households. Almost half, eight of the houses had glass windows, including some protective metal bars (these bars increased security) and the

other half had used wooden windows. See figure 15 for pictures of some of the consolidated dwellings in Ipusukilo. Interesting observation was that some houses appeared consolidated from the front, complete with wooden doors and glass window with bars, whilst the back and inside were often still in the process of improvement. In all this consolidation process, the majority low income tend to buy building materials in small quantities from local building-materials producers as and when the households can afford them. In relation to the construction industry, the self-help builders consequently tend to be disadvantaged on the market as they can rarely buy directly from large building-materials producers, and so unable to take advantage of the discounts offered for bulk purchase.

Figure 15: Examples of Improved Dwellings in Ipusukilo

Source: Fieldwork Surveys, 2012

4.6.4   Trend 4: Use of Small Scale Local Builders for Construction Skills

By now a lot of research has been done in terms of self-help housing. Most commonly, when used in relation to housing, self-help is often considered synonymous with self-build, i.e. low-income households building their own houses by themselves. In this case the households are both the total producers and the consumers of housing. However, this assumption that self-help housing equals self-build, has been increasingly challenged by several research. By now, the debates around the subject agree that the main principle that defines self-help is the fact that the households are the 'main actor' involved in construction of the dwelling and not necessary self-builders. The majority of households in self-help engage hired skilled labour during the construction process of their dwellings. The findings of this research are not showing any different trends as all respondents included in the sample confirmed this principle. From the research findings, all the fifteen households interviewed hired labour from local builders for most parts of the house construction process. During the construction however, the local builders worked jointly with some members of the household or employed their own team of workers commonly referred to as 'helpers' locally. This showed a dependency of the local informal contactors for the labour force in the consolidation processes. Interestingly, two respondents were also construction workers when asked if they built their dwellings alone, they both indicated not having enough time for them to be able to build their own houses especially that their construction jobs were the main sources of incomes for the household and for financing the consolidation of their dwellings, as such they also rather employ someone else. Except from few construction aspects such as fittings and fixtures, the whole consolidation processes in Ipusukilo were driven by labour from local builders. The interviews also indicated that these were not necessarily people that were within the social network of the households but any local builders that had reputation among the neighbours. Nine out of fifteen respondents did not know the local builders from their social network while six did. The other interesting aspect of the incremental construction is that the

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

'construction finance' is also spread over a longer period as the local builders are equally paid in piece-meal (in relation to the increments done to the dwelling). This seemed to be because of affordability issues as most of the low income households did not have enough funds for one off payment as is the case in formal developers housing or mortgages.

Evidently also is that the unpaid help of unskilled family and friends still continues to be an important aspect of self-help house construction; several respondents reported that they received some unpaid help from family and friends. None of the households in this sampled population constructed their dwelling entirely themselves, but almost half of households participated at some point in the construction of their homes in one way or the other. In most instances, the household members worked alongside hired builders performing the unskilled tasks as instructed, hence saving the expense of employing building assistants. A wide range of household members had several roles to play in the construction process, from young boys to older women.

4.6.5   Trend 5: Progressive Financing Mechanisms

Affordability is the critical factor in accessing housing i.e. affordability is not just the price of the house but the cost of housing finance as well. Housing finance being one of the most important inputs in housing production is equally cardinal in the incremental developments of informal settlements. From the responses of the sampled households, financing of the dwellings is one of the major challenges they faced. Household savings was the main source of financing for all the fifteen respondents. Mostly this finance was needed at several stages; for acquiring of plot (as all the respondents indicated that they bought the plot although through illegal procedures), for the improvement of the dwelling, for paying hired labour and also for accessing services such as water and electricity. The most important aspect indicated by these respondents that needed housing finance during the actual dwelling improvement was for building materials and also for payment of labour. Although these processes happens in the informal sector there is no much difference with the financing needs when compared to formal developer housing. The difference is that in the informal sector, the financing mechanisms follow the people's logical needs. From the findings, eleven respondents used solely the household incomes for the consolidation process except only two who indicated getting a loan from work and one who revealed using the pension fund and another one who used remittances as the main source of housing finance. These have been represented in percentage form in the figure16.

Figure 16: Sources of Financing the Consolidation Process

Source: Household Interviews, 2012

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia
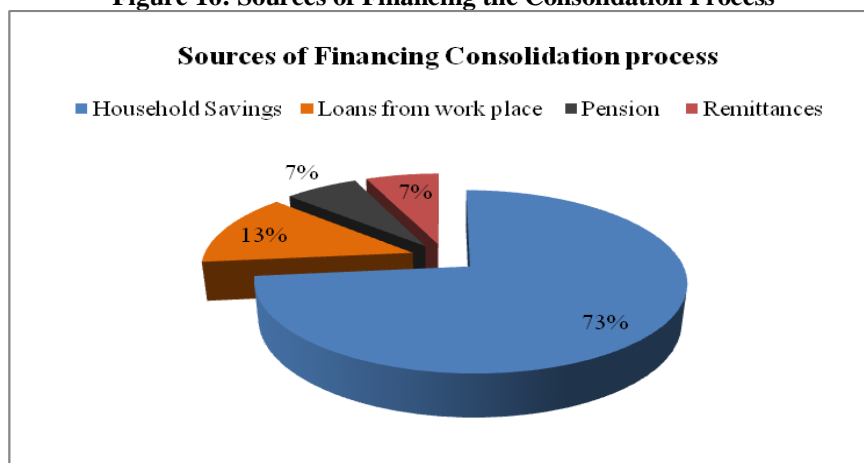
Lack of access to housing finance was indicated as the major constraint to the consolidation process by all respondents. From the ten respondents who were not able to consolidate their basic dwellings even after staying on the plots for relatively the same lengths like other households, the lack of housing finance to support the process was their main constraining factor. In a system where the housing finance is not well developed even for the middle income, it is not accessible to poor low income households. From the findings, there have been no any other innovations for micro housing finance in the settlement yet. The respondents only indicated the presence of funds for community level development. These funds however are not meant for individual house improvements but rather for community level amenities such as health and social facilities. When requested whether there were any other financing mechanisms such as micro loans, the respondents indicated the presence of micro-credit but these were mainly for business development and not housing improvement. Both formal and informal credit schemes locally called 'kaloba' were available. However the majority of the respondents were sceptical with borrowing especially for home improvement because most of them lacked steady flow of incomes. The incomes of most of these respondents were irregular and from informal small scale businesses, as such not willing to make huge commitments such as borrowing for home improvement.

When asked if there were other informal housing financing mechanisms such as rotating daily savings groups (ROSCAs), locally referred to as 'chilimba' for the house improvement, all the respondents indicated there was no such with an exception of one female respondent who agreed that there were informal savings groups. However, this exception was a church based savings group with an objective of helping low income families looking after orphan children. In recent years, rotating daily savings has emerged as one of the informal means in which low income households are financing housing yet in Zambia, it is still not well developed as it was portrayed in these research finding.

4.7 Periods of Incremental Consolidation

Building incrementally and through self-help often means investment for low income households. Majority of households spend their time and labour during the whole period of construction. From this research, the average period taken by households to consolidate was ten years yet the 'house' in itself cannot be deemed to have reached the adequate household quality and preference. Even with considerable level of consolidation, the majority of the households were still consolidating. Only six out of fifteen respondents had connected to both water and electricity into their dwellings at the time of research. This means that for most of these consolidators, the process is still ongoing. These processes remain very dynamic, following the affordability of the households, yet changing the development patterns of the whole settlement. These processes seemed to take long periods and sometimes never ending as the low income strive to achieve an adequate level in housing. Gattoni et al., (2011) also observed that informal settlements that lack support for a plot in a suitable location and has no options of construction credits, technical assistance tend to have longer incremental processes. Table 11 below show some of the trajectories of five households who were part of the sample.

Plot	Year of moving in	Year of start of consolidation	Type of dwelling at move in time	Current type of dwelling	Length of consolidation
IP 1963	2000	2000 to date	2 roomed house with brick walls and permanent building materials	5 bed roomed, kitchen, sitting room, baths and toilets, veranda, built with burnt brick walls, cement and iron sheets for roofing, with electricity but no piped water, household using communal water kiosks	12 years still not finished the floors
IP 4068	2003	2003 to 2011	3 roomed mud brick house	3 bed roomed, kitchen, sitting room, dining room, veranda, with concrete plastered walls and iron sheet roofing, with electricity and no water using dug shallow well	8 years
IP 604	1985	2009- 2011	Lived in 2 roomed mud brick since 1985, started consolidation in 2009	3 bed roomed, kitchen, sitting room, dining room, veranda, with concrete plastered walls and painted, with electricity and water connection	2 year financed with remittance from one of the sons who is abroad
IP 1907	1975	1998 to date	3 roomed mud brick house, in 1998 did first improvement, 2009 second improvement to date	3 bed roomed kitchen, 2 sitting rooms, dining room, veranda, 2 other rooms for rent also with permanent materials, electricity and water connected	14 years
1535 IP	1996	1994 to date	2 rooms and only boys used to stay there, the whole household was staying in nearby settlement	3 bed roomed, kitchen, sitting room, with permanent materials, no electricity and water yet	18 years

Source: Formulated by Author, Fieldwork Interviews (2012)

4.8 Triggers/Motivations for Incremental Development

Several reasons have been identified in literature that triggers the incremental growth of human settlements. From this research these factors have been discussed as 'pull and push factors' that enabled households to consolidate their dwellings. From the household semi-structured interviews these can generally be identified as; the availability of finance, the need to improve the quality of the dwelling and the need for additional space. Some of these are similar with the research findings of Gattoni et al (2011) and partly the triggers as analysed by Marome and Rittironk (2010).

1. Availability of Finances

In all this processes, the availability of income seemed to be the 'pull factor' and main trigger for improving. Generally, it was evident that household with better incomes or financing mechanisms were able to improve their dwellings unlike the others. On average the sources of incomes for the respondents sampled were small scale businesses- a small business from the main town market, the market within the settlement and also prominent were home based enterprises-locally called 'Sido'. The majority also had jobs mainly in the informal sector. This is not to generalise as some respondents worked some formal jobs in the construction and mining sector, as security officers, house helps in the neighbouring high cost residential

49

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

area. When asked the average incomes, most respondents were unable to give precise figures. This could mostly be because the incomes were mainly irregular and a pool of incomes by several household members. From the twenty five (25) households sampled, eight respondents revealed that they had an income in the ranging below K500, 000 (USD 100), eleven between K500, 000 to K1, 000,000 (USD 100 to USD 200 equivalent)[29]. The other seven respondents had incomes above K 1,000,000 (USD 200) per month (This is illustrated in figure 17). Interestingly from observation the households with higher incomes also seemed to have better quality of housing when compared to the earlier income groups. However this data on income levels when compared with the expenditures levels given by the same households, they were expected to be higher. In comparison, the UN Habitat (2012) reveals an average monthly expenditure of 1,345,456 (USD 269) in informal settlements in Kitwe. Apart from the incomes from the businesses and work, the majority of the households also had additional incomes from backyard houses locally referred to as 'cabin'. From the findings eleven out of fifteen respondents had at least two or three rooms used for backyard renting. The backyard rentals were relatively small with an average of K100, 000 ($20) per room/month yet it contributed to most household incomes and was a very prominent feature of Ipusukilo settlement.

Figure 17: Average Household Incomes
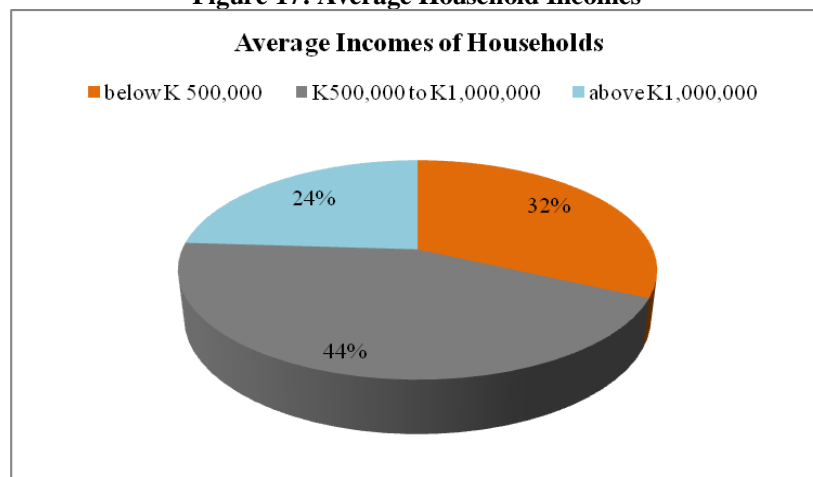
Source: Household Interviews, 2012

From this analysis it is evident that other triggers motivate the whole incremental housing process, yet the availability of incomes to support the incremental construction process is very cardinal. Generally households that were relatively poor; with little incomes did not manage to consolidate despite having stayed in the settlement for the same time with consolidators. Even when the household grew in sizes yet without enough finance, some households were unable to improve. This instance was revealed by almost all the ten households that had not consolidated. A finding from one of the household respondents is described here;

"...I came here in Ipusukilo in 1974, and managed to find this plot on which we have been living since then. I cannot remember well how much I bought the plot for but it was cheap that time. I remember when we just moved here, Ipusukilo was still very small and they were few houses and not crowed. Now I am 67 year and I am staying with two of my children and seven grand children and dependents after I stopped working...I have not been able to improve our house because I have lost all my children who would have helped me with money to build the house" (Household Respondent, Fieldwork Interviews, 2012).

---

[29] Using an exchange rate of US$1 to ZMK5000, (July 2012)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

At the time of research, the household had stayed the longest period (38 years) in the settlement amongst the research sample, yet were still living in a three roomed house with mud walls and iron pieces for the roof.

2. Need To Improve Quality of the Dwelling
From the findings of this research, the need to improve the quality of the dwelling was the most prominent 'pull factor' and response given by respondents. This may be so mainly because unlike in site and service schemes and core housing schemes were the initial house development starts with permanent structures, in informal settlements most of the dwellings started as 'temporal dwellings' that are improved over time. Out of the fifteen respondents that improved housing, eleven revealed that the need to improve the quality of their houses was the primary motivation for the process. It suffices to mention that some of these households had sometimes improved their dwellings more than once. It was clearly seen that although there are different factors at play in incremental housing, households tend to do several improvements to their dwellings in their life time as they desire to reach their preferred quality in housing. This was supported by views by one of the respondents;

"...When we came here, we bought a plot and there was a 2 roomed small house which was in a poor state. We stayed in the same house from 1986 with my whole family... by then we only had 2 children with my husband. In 1988 we started making the first improvement to the house by addition one more room because then we had more children. At that time, my husband did not have a proper job so we only built the house without a foundation and with mud bricks and without cement. Having stayed for a long time, in 1994, my husband started working from town and we decided to improve the whole house. We started building the outer wall of the house while we lived inside the small house. This time, we built with burnt bricks and cement to make the house more durable. Since then we have been improving our house and now it has 4 bedrooms, a kitchen, sitting room and a passage..." *(Household Respondent Fieldwork Interviews, 2012)*

Consolidation triggered by the need for an improved quality of the dwellings however, does not follow the same pattern for all the households. Another respondent, had improved their dwellings outside but the inside of the house did not have concrete floors and without internal doors. The household regarded the interior part of the dwelling as the last part of the whole process. It would suffice to say that these improvements do not happen in isolation as all other factors altogether influence the pace and decisions that household's make.

3. Need for Additional Space
Thirdly, the other well elaborated trigger for improvement in literature is the change in household sizes. Unlike this, in this research, the need for space did not necessary follow the changes in the household sizes. The analyses of the household sizes show that the median household in this research area was 12 twelve members in a household while the mean family size was 8.6 member per family. These households generally, started with fewer members at the time of moving into the settlement and with the course of time the members increased and the household felt the need for additional space. For instance, the highest household in this research had twenty two members (household was female headed as the husband had died). The family consisted of adult children who were married, also grand children as well as dependent children that had been orphaned. The household bought the piece of land in 2003 and a built a three roomed house with permanent material. Since then they have only increased the dwelling size to the current three bed roomed house, with kitchen, dining room, sitting room and veranda. With such numbers of the household, it would be expected that the household would increase the spaces to meet the space needs of all the twenty two family members yet this was not the case. It must be noted that even if this is usually a 'push factor'

the amount of space that is added does not grow in relation to the growth in the family size. Further, most observable was that habitable spaces were the main prioritised and added in the majority of the consolidation process in Ipusukilo. All the fifteen respondents that had consolidated added the number of bed rooms. Additionally, spaces such as sitting rooms and kitchens were also added in almost all the households sampled. Almost half of the respondents did not include non habitable space such as toilets and baths, verandas or store rooms, while the other half had. The households with no toilet and baths used outside pit latrines and baths. Apart from the six respondents who had tap water, the majority used dug shallow wells or otherwise bought water from the kiosks. As earlier alluded to, the settlement now has electricity lines and the household had access to electricity. Thirteen respondents out of fifteen were connected to electricity with only two who had not yet but had plans. From observation most of the electricity connections were illegal tapping although the respondents were very reluctant to mention this during interviews.

The findings of the research confirm the logic in the informal housing development. Households started basically with occupying the plots, followed by incremental construction which was constantly changing and dynamic and happened over long periods and then the access to services. By the time the settlements are upgraded and regularised, low income households and community would have already invested in the consolidation process. Regularisation and obtaining of title to land in as much as is an important prerequisite in housing development seems to be the last that households in informal settlements strive to achieve for as long as they have a perceived level of security from evictions. See Table 12[30] for the timeline developed from the field work interviews.

---

[30] Formulated from, Eduardo Rojas (no date), presentation on the "Scaling up of housing programs for the poor in Latin America-public support for incremental housing construction" (Inter-American Development Bank, Washington DC)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Table 12: General Timeline of the Progressive Housing Developement in Informal Settlements

Process	Attributes	Years →											
		1	2	3	4	5	6	7	8	9	10		
Land acquisition through illegal subdivision or squatting	Location	■	■	■	■	■	■	■	■	■	■	■	■
Temporal house	Protection	■	■	■	■	■	■	■	■	■	■	■	■
	Privacy	■	■	■	■	■	■	■	■	■	■	■	■
	Use of latrines	■	■	■	■	■	■	■	■	■	■	■	■
	Dug wells for water	■	■	■	■	■	■	■	■	■	■	■	■
	Perceived security					▦	▦	▦	▦	▦	▦	▦	▦
House improvement	Improved building quality						▦	▦	▦	▦	▦	▦	▦
	Conventional materials						▦	▦	▦	▦	▦	▦	▦
	In house tap water								▦	▦	▦	▦	▦
	Access to electricity									▦	▦	▦	▦
	Adequate living space										▦	▦	▦
	Additional space for home enterprises										▦	▦	▦
Neighbourhood development	Access roads											▨	▨
	Drainage											▨	▨
	Waste disposal											▨	▨
	Health facilities											▨	▨
	Educational facilities											▨	▨
	Community facilities											▨	▨
	Markets											▨	▨
Security of tenure	Regularisation												▣
	Formal titles												▣

Source: Formulated by Author, Fieldwork Interviews (2012)

4.8 Settlement Level External Factors

Apart from the internal factors that are at household level, several other factors may affect the pace and form which shape incremental housing development. This section discusses three key aspects that were discovered in field work to have possibly influenced the process whether positively or negatively. These three key aspects are drawn from Soliman (2011, p.229), who discusses the key ingredients in self-help housing (see also Table 7).

4.8.1 Governments Attitude towards Informal Settlements

Several reasons could perpetuate the development of the informal settlements. It has been established that Ipusukilo has not been declared an improvement area and as such not the mandate of the local authority to provide basic urban services such as water supply and sanitation, roads, schools and health facilities by the local authority and other service providers. This means the settlement remained with no basic facilities for a long time thereby impending negatively on the pace of incremental developments. However, with time the local authorities started providing basic services. This coupled with the reluctance by local governments to carry out evictions and resettlements in the earlier years created a perceived level of acceptance for informal settlements. This seemed to negatively affect the incremental processes in the initial stages but over the years, households started to invest in improving their dwellings. Most evident was from the residents who have been in the settlement for a long period. As seen from the analysis, the average year that the respondents had stayed in the settlement was twenty years (refer to appendices). What would otherwise be discussed as

a factor that perpetrated the informal processes are the attitudes of politicians. For most politicians, informal settlements are seen as a source of votes during elections. This perpetuated illegal land subdivision during the election periods. This was a response of several respondents in the settlement.

4.8.2 Land Tenure and Legality

It has been established that Ipusukilo is an illegal settlement. The illegality of the settlement also means that the residents have no titles deeds or occupancy license for security of tenure. From the interviews with the local authority; the council started a process of recognizing the illegal settlement as provided for in the Housing (Statutory and Improvement Areas) Act 1974 in 1989. Despite the plans to legalise the settlement, twenty years have passed and nothing has been done to upgrade the settlement. This fact seemed to could affect the pace of incremental development for most households who feared evictions in the initial stage. At the time of research, another piece of land close to the sewerage ponds[31] was illegally subdivided. Newer occupants had been allocated plots in the past five years. These were still having negotiations with the local authorities to have them reallocated due to the health hazards and high risks in the area. It would be expected that such families would not start to invest in the improvement of their dwelling until they have perceived security from forced evictions. However, from the findings, there seem to be no correlation with having legal titles and the incremental consolidation in informal settlements. The majority of households managed to improve the quality of the building materials used in their houses over time which would suggest that despite the absence of land tenure that affected the processes of consolidation in the initial construction stage, it did not influence subsequent consolidation once the household had a preserved level of security from forced evictions.

4.8.3 Community Based Initiatives

From the informal interviews with the local leaders and secondary information from the municipality, the research showed that since 1988, the local authority has had a presence in the area through a multi-disciplinary field team which was charged with the responsibility to undertake community participation activities in the settlement. Resulting from this intervention, the municipality has since facilitated the formation of successive Residents Development Committees (RDCs) and Zone Development Committees whose role is to mobilise the communities and coordinate community development activities and liaise with the service providers (Kitwe City Council, 2008). However, the local authority does not have site office in the area and this was alluded to by most respondents as delinked the people from the local authority as well as all the services providers. The other striking comments of the respondents were the politicised manner in which the Resident Development Committees (RDCs) operated. The level of RDC was formed following the adoption of the decentralisation policy which recognised the ward/resident committees as the first level of government. One respondent observed that the committees were seen more as a political organ that a liaison for community development as indicted in the views below;

"…Last year when we had the Movement for Multi-party Democracy (MMD) in power, all the committee members in the Resident Development Committees (RDCs) were from the MMD and now that we have Patriotic Front (PF) in power, the committee had to automatically change to the party of the day…therefore it seems like it is more for politics than bringing development to us the people. If you are not a member of the ruling party, they generally don't involve you in the activities of the RDC…" (Household respondents, Fieldwork Interviews, 2012)

---

[31] Refer to figure 8 for the map of Ipusukilo settlement

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Nonetheless, through these same community-based-organisations and other higher level NGOs, several facilities have been developed in the settlement. Residents with the help from other organisations have made several initiatives in improving the living conditions in the settlement through community participated projects. The surveys revealed that one clinic was constructed through community efforts and it carters for all residents of Ipusukilo and surrounding areas. This clinic was constructed by the Catholic Church and later handed over to the Government for the running and operation. Yet, other facilities and support from central and local governments is still lacking. In a settlement which inhabits a population of over 33,019 residents, (and has been in existence for over 50 years) you would expect that by now the government has made efforts in providing social amenities for the population. There research established that the settlement has no government/public school but has four well established community schools that are run by Non- Governmental Organisations (NGOs) and Churches which offer primary education.

4.9   Possible Intervention and Support for Incremental Construction

Having understood the incremental processes, this research seeks to provide ways of possible interventions that would support the informal self-help processes. The initial part of capturing the main support required for intervention was from the twenty five households sampled. From field work, the households were able to mention some of the key aspects that they felt would support them during the improvement of their dwellings. From the responses, housing finance was seen to be the most challenging aspect as all twenty five respondents mentioned it as one of the main aspect that delayed the process. This was followed by the need of affordable building materials. Generally, it was deemed from the field work that conventional building materials were relatively expensive for most households even if most of them acquired them from local dealers. Other aspects for support were in accessing services and infrastructure (mostly water and sanitation facilities and access roads) and lastly in land acquisition. The responses have been represented in figure 18. From these aspects captured in the semi-structured interviews, there was need for an in-depth understanding of how some of these aspects would be supported.

Figure 18: Required Support from Respondents
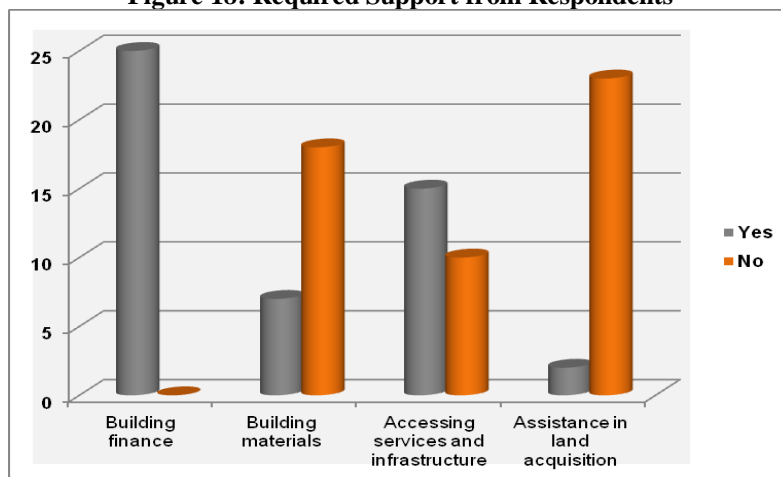
Source: Household Interviews, 2012

This section highlights key aspects that were captured from a focus group discussion with six benefiting members of the Zambia Homeless and Poor People's Federation (ZHPPF) housing projects in Kawama, Kitwe. The purpose was to establish possible ways that can support the implementation of incremental housing construction that would meet the housing needs of low income groups. The ZHPPF is a network of low income families from informal

settlements who have come together to form savings groups throughout the country and work together in addressing challenges in housing, land and infrastructure and poverty. ZHPPF works with an NGO called People's Process on Housing and Poverty in Zambia which offers technical support. The work of the ZHPPF/PPHPZ is rooted on the principle that the poor have to be at the centre of strategies and processes that address housing, land reforms and poverty. Therefore the resources that the poor are able to argument on their own through self-help or mutual help is cardinal to the process of providing housing for low income. The alliance of ZHPPF and PPHPZ is part of the network of the Slum Dwellers International (SDI). From the focus group discussion, main themes captured have been highlighted.

1.   Land Acquisition

Acquiring suitable serviced land for low income housing is usually the main challenge in low income housing development. Land in the periphery of cities is unserviced and usually far from employment opportunities for low income. Yet in the prime city area, the land values are usually high and not affordable to low income. Therefore, if land is to be provided that meets both the needs of the poor and is efficient to provide services by the local authorities, several initiatives have to be put in place. From the focus group discussion with the Zambia Homeless and Poor people's Federation, It was revealed that land acquisition procedures were done through community driven effort where communities mobilised themselves through savings groups with support from PPHPZ to pressure the local authority in giving them land to build low income housing. This is similar with what Greene and Rojas (2008) suggest as an 'organised community collective approach'. The quest to acquire land according to the discussion was long as it started years before and initially the local authority showed resistance. The main fear for the authority was the idea of building incrementally would produce low quality housing and as such it would also perpetuate the development of informal settlements. It therefore took them several years before the land was given to them. With support from the support NGO, the local authority gave the Kitwe Federation a parcel of land with 200 plots, (with average dimensions of (12mx27m) equivalent to (324m2) per plot to build low cost housing. Although the land was not bought at market value, the organisation had to pay for land to the local authority. It can be deduced from this approach that the procedure does not only benefit the low income (as land is not illegally squatted), but also the city authorities who will be able to acquire land rates in turn.

2.   Services and Infrastructure

It was revealed from the focus group discussion that, having acquired the land from the local authority, the community members of ZHPPF partnered with other service providers in providing infrastructure such as access roads, tap water and electricity. The installation of these services was done through community participatory efforts who worked alongside the technical staff from the utility companies. This can generally be seen as a form of 'sweat equity' thereby reducing costs for service connections. Besides, the community members acting collectively (through savings groups) had to mobilise resources in terms of funds to pay for the grading of the roads and connection costs. At the time of the research, the settlement has acquired piped water, gravel access roads and electricity and was in process of acquiring sanitation and sewerage facilities.

3.   *Financing through a Progressive 'Materials Bank'*

Housing finance being one of the most important inputs in the production of housing, the discussion revealed that the households have their houses financed through building materials loans which the benefiting families acquire from a form of a 'building materials bank'[32] (see also Gough, 1996, and Williams, 2000). These building materials are acquired through community mobilised savings with further financial support from the funding partners such as the Slum Dwellers International and Homeless International. With the collected household savings and financial support from the funding partners, the community members acquire building materials in bulk. Once the materials are bought, they are administered to members of the savings groups (community members) in instalments depending on the level of construction that the household is on house. The building materials they acquire are to support the households to construct a starter basic house with one room and bath and toilet. As the household's acquire the building material loan, they also start to make monthly repayments to the collective fund. With the supported one roomed house in form of a "core house or starter house", families are able to move on site and start staying in the house as they extend their dwelling. The loan repayment period is normally eight years making it more responsive to low income households. The ultimate complete house can therefore be developed incrementally by households themselves room-by-room depending on the available incomes and space needs of the household. (See figures 19 and 20, for some of the incrementally built houses by the ZHPPF in Kawama). It may be argued that this is very similar to the core housing approaches, yet most of the core housing projects implemented during the 1970s and 1980s were government initiated or even by multilateral organisations such as the World Bank. In contrast, these are implemented through community driven collective efforts. Therefore it is expected that the households would be able be key actors in the whole process of developing their dwelling other than just offering labour in self-help construction.

Figure 19: One Roomed Starter House for ZHPPF   Figure 20: Incrementally Built 3 Bed Roomed House

Source: Fieldwork Surveys, 2012

---

[32] Several Latin American governments have established building materials centres with an aim of reducing costs for self help builders

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

4.10 Summary of Main Findings

Having looked at the research analysis, the main findings have been highlighted here. Nonetheless, this is not to generalise the findings as there are many factors that may influence self-help processes depending on the context of the case under study.

- There is a multitude of low income households that continually access informal housing. This is because there are no options in the formal housing systems that are responsive to the affordability of the low income
- These poor people in informal settlements practice incremental self-help housing following the affordability of the particular family
- Household savings remains a key financing source for the self-help incremental construction in informal settlements.
- Majority of these households rely on their efforts and their social network to access housing.
- The availability of finance to support the construction process is the major trigger in improvements among the low income while the need for improving the quality of the dwelling and space are the main 'push factors'.
- Majority of the household engage local skilled labour in the consolidation process and this is highly driven by the small scale local builders.
- Security of tenure in low-income housing settlements depends less on legal status and more on the occupants' perceptions of the probability of eviction, the availability of services, and the passage of time.
- Community efforts with support from higher level Non Governmental Organisations play a key role in providing services and amenities that local governments are not providing in informal settlements.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

CHAPTER 5: RESEARCH CONCLUSIONS

5.1 The Need to Support Self-Help Incremental Housing Processes

In the introduction to this study, the housing need at global level has been highlighted. At international level, growing concern has been the need to provide 'enabling approaches' that promotes the provision of shelter for all income groups. Nonetheless, meeting the housing needs for low income groups has been highlighted as still challenging. Shelter remains a basic need after food and clothing. It also remains the single most important and biggest investment households make in their life time. Also, because of the many benefits that the housing sector accrues at household, local and national level, it is equally regarded as a 'merit good'. This makes governments have the need to provide shelter for its citizenry and also the need to intervene in low income housing provision. Policies, regulations and legislative framework and many actors in the housing sector influence the performance of the sector. The research has highlighted the increasing need for low cost housing in Zambia and particularly Kitwe. Informal housing sector has increasingly become significant in providing housing for the majority low income through self-help and incremental efforts. In-as-much as the benefits of developing 'enabling approaches' that promote private sector as the main actors in the delivery of housing are not over looked, the reality revealed through this research is that there is a prominent informal housing sector which has been the 'solution' for majority low income households. With this, governments should be able to focus their attention on supporting these informal activities (the aspects that are generally considered not in compliance with the regulations and the informality) if the interventions for providing low income housing are to be responsive and efficient. Greene and Rojas (2008) observe that at most, the incorporating of aspects of the low income housing has been through the site and services and the settlements upgrading. Still missing in all these approaches is incorporating support for incremental housing approaches- "the way in which the majority of the population will continue to build their homes" (Greene and Rojas, 2008, P.91). It should be noted that it is not the aim of this thesis to romanticise these informal 'people's process housing' as them alone cannot provide a one off solution for all low income housing. However, it is to promote these solutions to be seen as creative solutions which can be incorporated into the traditional housing delivery systems if housing is to be responsive and flexible to the needs of low income families.

5.2 Key Research Answers and Implications

Having presented the research analysis in the previous chapter, this section seeks to provide a summary of key findings and links this with literature review as developed in Chapter 2. The discussion is specific and focuses on providing the answers to each sub-research question.

5.2.1 Housing of the Poor typically develops incrementally

A key finding for this research is that housing for the low income typically develops incrementally through household self-help efforts for most of the time, which may later be supported by community efforts and local authorities and utility providers. This result confirms Turner's ideas (1967, 1972, 1986), in advocating for the 'peoples processes'. It was evident from the findings of this research that households are key and active players in the production of housing. In these approaches, the members of the households, friends and people in the social network contribute significantly through offering labour and management of the whole construction process. This self-help housing is based on an ongoing process unlike an end product. Generally, informal settlements start as illegal subdivision by local political leaders in this case, and squatting of vacant land that was available in the periphery of the city. The households start their quest in accessing housing through erecting simple

temporal house structures using mud walls and pieces of sheets for the roofing. In contrast to formal housing development, in the informal construction process, the starter house is acquired with only the most basic features to provide shelter, protection and privacy as the initial objective and this is upgraded later. (See the timeline for progressive housing development in table 12). The pace and timing is more dependent on the financing capacities of the families and mostly through household savings as observed in this research. It would be expected that the process starts with fewer families at the initial stage of squatting on the land, yet with time, the numbers of housing units continue to grow. These households invest in the improvement of their dwellings to achieve housing units that can generally be considered as 'good quality housing'. With support from the community based organisations, Non Government Organisations, the community members are able to mobilise for support for services from the city authorities.

Usually informal settlements are seen with a negative connotation to only refer to dilapidated and very poor housing conditions, yet it was evident from this research that this is not entirely true. Even if generally informal settlements lacked services and characterised with poor quality housing, yet some households have continually been making efforts in improving the housing conditions. The majority of the residents hoped for a better future as they were ready to invest their meagre savings in the improvement of their house. This is more alike with what Lloyd (1980) refers to as 'slums of hope' than 'slums of despair'. The understanding of the logic of these incremental housing processes among professionals, technocrats and policy makers is cardinal if components of the process are to be incorporated in designing and planning of sustainable low income human settlements.

5.2.2 Availability of Finance is the Main Trigger in the Incremental Process

It was clear from the research findings that the decisions that households make are pragmatic following their immediate needs. However, household needs alone did not seem to influence household investment. The main trigger for the incremental process was the availability of finances. This coupled with the need for a better quality dwelling and 'perceived security of tenure' achieved over time, influenced the decisions to consolidate. Unlike what Turner (1972) proposed that as families increase in size, families would invest in housing; this study did not find this completely true. According to findings, there is no direct relationship between housing investments, different levels of housing development and family size. These are surely the 'push factors' but generally availability of finance was the main trigger. The focus for most households was on addressing immediate family needs. The spaces to increase and the sizes also remained entirely household decisions depending on their affordability.

5.2.3 Security of Tenure is a Core External Factor in the Incremental Process

Ownership of land with formal title deeds is expected to influence the level of investment that a household would make in their housing development. However, it was revealed from this research that legal titles though important but security of tenure is more important. The core problem that seemed to affect the incremental process was the insecurity of tenure because the residents in informal settlements occupied land illegally or through illegal subdivision and at the initial stages of occupying land, feared evictions from the city authorities or land owner. It was discovered that the threat of eviction caused a major reluctance in residents of the informal settlements before they were able to make investments in improving their dwellings. The insecure tenure also seemed to affect the decisions of service providers and utility companies such as water and electricity in providing services in informal settlements. It was evident too that with an increased level of 'perceived security', residents were able to start making investments in the improvement of their dwellings. This would suggest that

despite the absence of land tenure that affected the processes of consolidation in the initial construction stage, it did not influence subsequent consolidation once the household had a perceived level of security from forced evictions.

5.2.4 Self-Help Incremental Housing Requires Support

It is worth to note that self-help housing although is a household issue, it requires higher level support through different components and inputs if it is to produce durable housing that is adequate and sustainable. From the research findings this intervention would have to be at two levels; firstly, at settlement level through provision of land with secure tenure, infrastructure and services and secondly at household level during the construction process through technical guidance and housing financing that is affordable to low income households.

1. *Support for Land Acquisition and Secure Tenure*

It was evident that the land acquisition procedures in the informal settlements remain illegal and unregistered. This could be because there are no any other procedures that are responsive to the needs of the poor. For as long as these settlements remain illegal, the municipality is unable to acquire any revenue through land rates while settlements remain unserviced or poorly serviced for many years. In a system where there no any other intermediate tenure systems, there is need for new land reforms adjusting the expectations to the reality; the reality of informal settlements and how best these can be improved. Provision of secure intermediate land ownership rights that may not necessary be formal title deeds would be a possible way to support. (See figure 4 for the continuum of land rights). Also occupancy licences would be seen in a way as a form of intermediate tenure however this is still characterised with inadequacies as these can only be offered once settlements are upgraded and regularised. This generally takes a long time as revealed in the findings. Further interventions, would be through providing serviced land that is in good location for new low income housing development.

2. *Provision of Infrastructure and Services by Local Authorities*

As portrayed in the analysis, households make efforts to improve their own dwellings; yet they are not able to access basic services and infrastructure. This requires mobilisation at settlement level. Community efforts with support from Non Governmental Organisations remain a key aspect that supports the provision of basic services and amenities in low income settlements (see section 3.9.2). However certain services and infrastructure still requires the intervention of local authorities. Basic services such as water, sanitation facilities, garbage collection, access roads, and electricity are basic needs if a settlement is to be a sustainable. This aspect entails collaborating of efforts among the local authorities, utility companies as well as the NGOs.

3. *Technical Support to Improve Quality*

Most of the housing units in informal settlements are regarded as 'poor quality' by majority of technocrats and city authorities. This could be true because the houses are built with no technical advice and maybe with less skilled local builders. This research showed that much of this informal housing stock could be improved if support was offered at different stages of development. What is required in these informal settlements is the development of basic building standards that can be responsive to low income. Technical support and guidance is cardinal in the whole process especially on the complex aspects of house construction if the human settlements are to be sustainable, healthy and safe.

4. *Housing Finance Instruments that are Affordable to Low Income*

Household savings remains the single most important source of finances in housing improvements since very few families have access to loans or are willing to obtain a loan (Gough, 1998 and Kellett, 1995). Clearly from research, if these households had proper housing finance to obtain complete houses, they would, but due to the lack of options, self-help fills in the gap. This supports Abrams argument that the majority poor lacked access to finance and as such opted to instalment construction (Abrams, 1964). Housing finance in the incremental process is generally required for two things; to finance the building materials being the major aspect and for paying hired labour. Learning from the focus group discussion[33] (see section 4.9), adequate support would be given to low income households through 'buildings materials banks'. If building materials are acquired from the large scale industry, low income household would be able to access these materials on loan at relatively lower prices and also increase the pace of construction. This aspect requires the development of the small scale building materials industry. Also, Stein and Vance, (2008) suggests support through providing credit tailored to housing and infrastructure needs. The fact that low income households build stage-by-stage; they generally require housing finance loans that are relatively smaller and based on the households capacities to repay. The UN Habitat (2005c) notes that most of low income households' only require small progressive loans that are commensurate with their incomes for them to make investments in improving their dwellings.

5.3 Conclusion

Having analysed the key findings, it is imperative to conclude that self-help housing requires support through multi-actors. The multi-actor aided incremental housing framework as developed in chapter 3 requires coordinated efforts of actors if it has to be incorporated into the traditional housing delivery systems. This implies enhancing the positive aspects of the self-help approaches while on the other hand addressing the limitations and inefficiencies (Greene and Rojas, 2008). Programmes that promote gradual development, 'phased house development'-would much of it take the advantages of the potential displayed by the low household households and mutual community efforts in the self-help approaches. Looking at the scale of the housing problem revealed through this research, it is expected that such creative solutions would not only help with the current housing stock but in meeting future needs for low income groups. From the findings, this research advocates for ways of incorporating support for incremental through newer approaches that are based on the household savings, and demand driven subsidies. Progressive financing mechanisms are also one of the new initiatives that need to be developed if housing is to become affordable to low income households. Also, it involves reforms in the land regulations and procedures towards incorporating approaches that benefit both the local authorities and the households. Unlike the current informal systems which are mainly illegal and unregistered subdivisions and the local authority is not able to obtain any revenue in land rates, a compromise of land reforms that can be efficient for both the households and the local authorities is required.

The most challenging aspect of all this process is the ability to coordinate the implementation of these local level approaches yet which require higher level support. Aspects such a land reforms and housing finance to support low income housing requires interventions usually formulated at national level. Local level support in these approaches would be through providing of local basic building standards and infrastructure and services that the households are not able to provide through their own efforts. Supporting these 'people's processes'

---

[33] Refer to section 4.9 for detailed explanation on the findings of the focus group discussion with beneficiaries of a formal incremental housing project on the forms of support.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

would potentially reduce resource in both finances and time spent by household in the long term incremental process and 'the wait' to reach their desired and preferred housing. Precisely, the UN Habitat (2005c) concludes by saying that, intelligent policies that are capable of reducing costs for land, infrastructure, building materials, as well as promotion of appropriate standards and design, location and modes of production are required in order for all this to be affordable.

Reference list

Abrams, C., (1964), Mans Struggle for shelter in an urbanising world, MIT press, Cambridge Massachusetts, USA

Acioly C, (1994; 2003), Adequate Housing in a Global Perspective; Working Towards a Global Housing strategy, Class Presentation, Housing Development Strategies Specialisation, IHS, Rotterdam, 24 February, 2012, Chief Housing Policy UN-HABITAT.

Angel, S., (2000), Housing Policy Matters, A global Analysis, Oxford University press, New York

Angel, S., and Chirathamijkul, T. (1983), "Slum reconstruction: land sharing as an alternative to eviction in Bangkok", in Angel, S., and others, Land for Housing the Poor. Singapore, Select Books

Baross, P., (1987), Land supply for low-Income housing: issues and approaches, Regional Development Dialogue 8(4):29-45

Bredenoord, J., & Lindert, P, (2010), Pro-poor housing policies: rethinking the potential of assisted self-help housing, Habitat International, 34, 278-287

Breimer, T, (2011), Open Building for more Effective Core-Housing Implementation? An exploration, Unpublished Master Thesis, IHS, Rotterdam, the Netherlands

Burgess, R. (1982), Self-help housing advocacy: a curious form of radicalism. A critique of the work of John F.C. Turner, in Ward, P. (Ed.), Self-help housing, A critique (pp. 55-97) London: Mansell

CSO (Central Statistical Office), (2010), Zambia 2010 Census of Population and Housing; Preliminary Report, Central Statistical Office, Lusaka, Zambia

Erguden S., (2001), Low-cost Housing: Policies and Constraints in Developing Countries, International Conference on Spatial Information for Sustainable Development, Nairobi, Kenya

Ferguson, B., & Smets, P. (2009), Finance for incremental housing; current status and prospects for expansion. Habitat International, 34(3), 288-298.

Gattoni, G. 2009, "A Case for the Incremental Housing in Sites-and-Services Programs." Paper presented at the IDB conference, Washington D.C, http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM-2062811, (Accessed on 1 February 2012)

Gattoni, G., Goethert, R., Chavez, R, (2011), El, Salvador, Self-Help Housing; Likely Directions for Future Policy, ongoing Research Report, FUNDASAL, El Salvador

Gilbert, A.G., & Gugler, J. (1992), Cities, poverty and development: Urbanization in the Third World (2nd edn.) Oxford: Oxford University Press

Goethert, R. (2010), Incremental Housing; a Proactive Urban Strategy, September 2010 Monday Developments), SIGUS (Special Interest Group in Urban Settlement), School of Architecture and Planning, MIT

Gough, K, V (1996) Self-help Housing in Urban Colombia; Alternatives for the Production and Distribution of Building Materials, Habitat International, Volume 20, Issue 4, 635-651

Gough, K, V (1998) House for sale? The self-help housing market in Pereira, Colombia, Housing Studies 13(2), 149-160

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Greene, M. and Rojas, E., (2008), Incremental Construction: A Strategy to Facilitate Access to Housing, Environment and Urbanization 20: 8

Hamdi, N. (1991). Housing without houses—participation, flexibility, enablement. New York: Van Nostrand Reinhold.

Hamdi, N., and Goethert R. (1997), Action Planning for Cities: A Guide to Community Practice. Chichester:John Wiley & Sons

Harms, H, (1992), Self -Help Housing in Developed and Third world countries, in Beyond Self-help housing, Mathéy, K. (ed.), London, Mansell

Harris, R. (1998). The silence of the experts: aided self-help housing, 1939-1954. Habitat International, 22(2), 165-189.

Harris, R. (1999), Slipping through the cracks: the origins of aided self-help housing, 1918-53. Housing Studies, 14(3), 281-309

Harris, R. (2003). A double irony: the originality and influence of John F.C. Turner.
Habitat International, 27(2), 245-269.

IHC (International Housing Coalition), (2008), Multilateral and Bilateral Funding for Housing and Slum Upgrading Development in Developing Countries, Washington, D.C.: IHC

Kellett, P (1995) Constructing home: production and consumption of popular housing in northern Colombia. PhD thesis, University of Newcastle upon Tyne

Kitwe City Council, (2008), 'Establishment of a Decentralised and Integrated Land Administration System in Kitwe'- Baseline Survey Report, unpublished Kitwe City council Documents

Kitwe City Council, (2009a), Solid Waste Management in a low income Area, Ipusukilo Compound, unpublished Kitwe City council Documents

Kitwe City Council, (2009b), The Status of Urban Upgrading in Kitwe urbanization in Kitwe, unpublished Kitwe City council Documents

Landman, K & Napier, M (2009), Waiting for a house or building your own? Reconsidering state provision, aided and unaided self-help in South Africa, Habitat International 34 (2010) 299-305

Lizarralde, G., (2010), Stakeholder participation and incremental housing in subsidized housing projects in Colombia and South Africa, Habitat International 35 (2011) 175-187

Lloyd, P. (1980). The "Young Towns" of Lima: Aspects of Urbanization in Peru. Cambridge, England: Cambridge University Press.

Makasa, P., (2010), The 1996 Zambia National Housing Policy, PhD Thesis. Delft University of Technology, Delft, Netherlands

Mangin,W., (1967), Latin American squatter settlements: a problem and a solution.
Latin American Research Review, 2, 67-98

Marcuse, P., (1992), Why Conventional Self-Help Projects Won't Work", in Beyond Self-Help Housing Mathéy, K. (ed.), London, Mansell

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Marome, W, A and Rittironk, S, (2010), Thailand Incremental Housing Experience, Faculty of Architecture and Planning, Thammasat University (Bangkok, Thailand) http://web.mit.edu/incrementalhousing/WUFRio/pdfs/networkSessionThailand_Marome.pdf, (accessed on 31 May 2012)

Mathéy, K. (ed.), (1992), Beyond Self-Help Housing, London, Mansell

McLeod, R., and K. Mullard., (2006), Bridging the Finance Gap in Housing and Infrastructure. London: ITDG Publishing

MFNP (Ministry of Finance and National Planning), (2006), Fifth National Development Plan, Ministry of Finance and National Planning, Government of Zambia, Lusaka, Zambia

Mwale, S. (2004), Zambia's Economic, Social and Cultural Rights: Why should they be in the New Constitution? Social Conditions Research Project, Jesuit Centre for Theological Reflection, Lusaka, Zambia

Napier, M., (2002), Core Housing, Enablement And Urban Poverty: The Consolidation Paths Of Households Living In Two South African Settlements. PhD Thesis, University of Newcastle upon Tyne

Napier, M., (2005), Core housing and subsidies in South Africa: addressing the unintended outcomes. In: Core housing and subsidies in South Africa: addressing the unintended outcomes

NHA (National Housing Authority), (1996), The Zambia National Housing Policy, Government Printers, Lusaka, Zambia

Nicaragua Government, (2005), Plan Nacional de la Vivienda. Nicaragua 2005-2025

Payne, G., A. Durand-Lasserve, and C. Rakodi., (2009), "The Limits to Land Titling and Home Ownership," Environment and Urbanization 21 (2), London, pp.443–462

Rakodi, C. (1989), Self-Help Housing: The Debate and Examples; Upgrading in Lusaka, Zambia and Hyderabad, India. Habitat International, Vol. 13, No.4.

Sheuya, S. A. (2007), Reconceptualizing housing finance in informal settlements: the case of Dar Es Salaam, Tanzania. Environment and Urbanization, 19(2), 441-456.

SIDA (Swedish International Development Agency), (2007), "Increasing Access to Housing and Financial Services: SIDA Experiences in Central America."1st Asia-Pacific Housing Forum, 24–26 November, Singapore.

Soliman, A. M. (2011), The Egyptian Episode of Self-Build Housing, Habitat International, 36, (2012), 226-236

Srinivas, H. "Sites and Services." Global Development Research Centre http://www.gdrc.org/uem/squatters/s-and-s.html (Accessed on 20 may 2012)

Stein, A and L Castillo, (2005), Innovative financing for low-income housing improvement: lessons from programmes in Central America, Environment & Urbanization Vol 17, No 1, April, pages 47–67

Stein, A., and Vance, I, (2008), The Role of Housing Finance in Addressing the Needs of the Urban Poor: Lessons from Central America. Environment and Urbanization 20 (1) (London) pp.13–30

Tokeshi, J. (2001). Sembrando huellas: Criterios tecnicos para el crecimiento de la vivienda.

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Lima: Sencico

Tembo, M., (2007), Redefining the "Enabling Environment": Reform in Housing Production for the Low-Moderate Income Market a Case of Commercial Developers in Lusaka, Zambia, Unpublished Master Thesis, IHS, Rotterdam, the Netherlands

The Government of the Republic of Zambia, (1969) National Constitution Articles 112 section (d) and (h), Government Printers, Lusaka, Zambia

Tipple, A. G., (1993), Shelter as a workplace: a review of home-based enterprise in developing Countries, International Labour Review 132 (4), 521-539.

Tipple, A. G., (2000), Extending Themselves: User Initiated Transformations of Government Built Housing in Developing Countries, Liverpool: Liverpool University Press.

Tipple, G., (2004) "Settlement Upgrading and Home- Based Enterprises: Discussions from Empirical Data." Cities 21 (5): 371–79.

Turner, F.C., (1972), 'Housing as a Verb', Turner F.C & Ficher, R., in Freedom to Build; Dweller Control of the Housing Process. The Macmillan Company, New York (USA) and Collier-Macmillan Limited London (UK)

Turner F.C., (1976), Housing by People; Toward Autonomy in Building Environments, Marion Boyards publishers ltd, London (UK)

Turner F.C., (1986), Future Directions in Housing Policy, Habitat International, Vol 10. No 3 p 7-25

Senkova, S (2009), Housing Policy Reforms in Post Socialist Europe, Vienna Declaration on National Regional Policy and Programmes 2004 on Informal Settlements, , Physica-Verlag Heidelberg, Vienna, http://www.springerlink.com/content/mg02753733513471/fulltext.pdf (accessed on 20th May 2012)

UN Habitat (2012), Zambia Urban Housing Sector Profile, United Nations Human Settlements Programme, Nairobi, Kenya

UN Habitat and Cities Alliance (2011a), Land: a crucial element in Housing the Urban poor, Housing the Poor in African cities, Quick Guide 3 for Policy Makers: United Nations Human Settlements Programme, Nairobi, Kenya

UN Habitat and Cities Alliance (2011b), Housing Finance: Ways to Help the Poor Pay for Housing, Housing the Poor in African cities, Quick Guide 5 for Policy Makers: United Nations Human Settlements Programme, Nairobi, Kenya

UN-Habitat (2009a), The Right to Adequate Housing, Office of the United Nations High Commissioner for Human Rights, Fact sheet No 21(Rev1), United Nations, Geneva

UN-Habitat., (2009b), Zambia; Kitwe Urban Profile, United Nations Human Settlements Programme (UN-Habitat), Nairobi, Kenya

UN-Habitat (2008), Financing for Affordable Housing, Finance and Resources Challenges for Sustainable Housing and Urban Development, 2nd African Ministerial Conference on Housing and Urban Development 28-30 July 2008, Abuja, Nigeria

UN-Habitat (2005a), Land Tenure, Housing Rights and Gender - National and Urban Framework: Zambia, United Nations Human Settlements Programme (UN-Habitat), Nairobi, Kenya

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

UN-Habitat (2005b), Financing Urban Shelter, Global Report on Human Settlements, London: Earthscan

Un Habitat (2005c), Bringing Down the Cost: Realistic Standards for Shelter, United Nations Human Settlements Programme (UN-Habitat), Nairobi, Kenya

UNCHS (1996), An Urbanizing World—Global Report on Human Settlements. Oxford: Oxford University Press

UN News Service Urban (18, March 2010), Trends: 227 Million Escape Slums state of the Worlds cities, bridging the urban Divide, 2010/2011, 18, March 2010

Van der Linden, J. (1986), The Sites and Services approach Reviewed. Aldershot: Gower.

Wakely, P., (2010), Sites & Services And Core Housing Déjà Vu?, Incremental Housing – An Urban Proactive Strategy To Meet The Growth Challenges Of The Next 20 Years http://web.mit.edu/incrementalhousing/articlesPhotographs/index.html (accessed on 1st February2012)

Wakely, P and Riley, E., (2011), The Case for Incremental Housing, Cities Alliance Policy Research and Working Papers Series No. 1 | June 2011, Cities without Slums

Ward, P. (Ed.), (1982), Self-help housing. A critique. London: Mansell

Ward, P. (2001). The Rehabilitation of Consolidated Irregular Settlements in Latin American Cities: Towards a Third Generation of Public Policy Housing Analysis and Development. ESF Workshop: Coping with Informality and Illegality in Human Settlements in developing countries

Williams S. M, (2005), Young Town Growing Up, Four decades later: self-help housing and upgrading lessons from a squatter neighbourhood in Lima, Master Thesis in City Planning and Master of Science in Architecture Studies, University of Kansas

World Bank (2002), Upgrading Low Income Urban Settlements: Country Assessment Report-Zambia, Washington DC, the World Bank African Technical Unit 1&2

Yin, R. K. (1984), Case study research: Design and methods. Newbury Park, CA: Sage

ZNBC News, (2010, Monday 13 September), NAPSA houses on sale, Read full article: http://www.znbc.co.zm/media/news/viewnews.cgi?category=11&id=128438478 (accessed on 20 May 2012)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing - a Case of Ipusukilo, Kitwe-Zambia

Appendices
Appendix 1:   Household Data and Support Information

General Household Characteristics of all 25 Respondents

Plot number of interviewee	Head of Household	Type of household	Additional households (within main house)	Year of occupation	Type of occupants
Characteristics of 15 Consolidators					
1854	Female	Multi- family household	2	1986	Second occupants
1849	Male	Multi- family household	2	1994	Second occupants
1907	Male	Extended family household	1	1975	Second occupants
1903	Male	Nuclear family		1982	Second occupants
4723	Male	Nuclear family		1978	First occupants
1278	Male	Nuclear family		2009	First occupants
604	Female	Nuclear family		1985	Second occupants
4068	Female	Extended family household		2003	First occupants
4103	Female	Multi- family household	1	1986	Second occupants
394	Male	Nuclear family		2000	First occupants
3971	Male	Extended family household		2005	First occupants
1622	Female	Multi- family household		2004	First occupants
1632	Female	Multi- family household	1	2007	Second occupants
1963	Male	Nuclear family		2000	First occupants
1535	Male	Multi- family household	2	1996	Second occupants
Characteristics of 10 None-Consolidators					
1090	Female	Multi- family household	2	1997	Second occupants
1055	Male	Nuclear family		1975	First occupants
111	Male	Multi- family household	1	1991	First occupants
1142	Female	Nuclear family		1989	Second occupants
1059	Male	Nuclear family		2000	Second occupants
1050	Female	Nuclear family		2003	Second occupants
716	Male	Multi- family household	2	1974	First occupants
1087	Female	Multi- family household	1	2000	Second occupants
6805	Male	Multi- family household	2	1991	Second occupants
1962	Female	Multi- family household	1	1975	First occupants

Source: Household interviews, 2012

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

Characteristics of the 15 Household Respondents in Relation to Additional Spaces

Plot number of interviewee	Type of household	Way of acquiring land/plot	Type of improvements	Added spaces within main house	Other additional space	Use of additional rooms
1854	Extended family household	Bought house from previous owner	Addition of rooms	3 Bedrooms, kitchen	2 backyard rooms	renting
1849	Multi- family household	Bought plot from local politicians	Addition of rooms	4 Bedrooms, kitchen, sitting rooms, dinning, toilet &bath	no backyard rooms	nil
1907	Extended family household	Bought plot from local politicians	Addition of rooms	3 Bedrooms, kitchen, 2 sitting rooms, dinning, toilet &bath	2 backyard rooms	renting
1903	Extended family household	Bought plot from local politicians	Whole house improvement of materials	3 Bedrooms, kitchen	3 backyard rooms	renting and home business
4723	Nuclear family	Bought house from previous owner	Addition of rooms	2 Bedrooms, kitchen, sitting room	no backyard rooms	nil
1278	Extended family household	Bought plot from local politicians	Whole house improvement of materials	4 Bedrooms, kitchen, sitting rooms, dinning, toilet &bath	no backyard rooms	nil
604	Nuclear family	Bought house from previous owner	Addition of rooms	3 Bedrooms, kitchen	3 backyard rooms	renting
4068	Extended family household	Bought plot from local politicians	Whole house improvement of materials	2 Bedrooms, kitchen, sitting rooms	2 backyard rooms	Used by household
4103	Extended family household	Bought plot from local politicians	Whole house improvement of materials	3 Bedrooms, kitchen	3 backyard rooms	renting
394	Nuclear family	Bought house from previous owner	Addition of rooms	3 Bedrooms, kitchen, sitting rooms	no backyard rooms	nil
3971	Extended family household	Bought plot from local politicians	Whole house improvement of materials	3 Bedrooms, kitchen, sitting room	2 backyard rooms	Used by household
1622	Multi- family household	Inherited from family	Whole house improvement of materials	3 Bedrooms, kitchen, sitting room	2 backyard rooms	Renting
1632	Single family household	Bought house from previous owner	Whole house improvement of materials	2 Bedrooms, kitchen, sitting room	3 backyard rooms	renting and home business
1963	Nuclear family	Bought plot from local politicians	Addition of rooms	5 Bedrooms, kitchen, sitting rooms, dinning, toilet &bath, verandas	4 backyard rooms	renting and home business
1535	Multi- family household	Bought house from previous owner	Whole house improvement of materials	4 Bedrooms, kitchen, sitting rooms, dinning, toilet &bath	3 backyard rooms	renting and home business

Source: Household interviews, 2012

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

Characteristics of the All 25 Respondents in Relation to Incomes, Changes of Family Sizes and Length of Habitation

Plot number of interviewee	Type of household	Household 'poll of incomes'	Year of occupation plot/house	Length of habitation (years)	Original household size	Current household size
Characteristics of 15 Consolidators						
1854	Extended family household	Above K1,000, 000	1986	26	4	12
1849	Multi- family household	K500,000 to K1,000,000	1994	18	3	10
1907	Extended family household	Above K1,000,000	1975	37	7	14
1903	Extended family household	Above K1,000,000	1982	30	5	11
4723	Nuclear family	Below K500,000	1978	34	8	15
1278	Extended family household	K500,000 to K1,000,000	2009	3	6	22
604	Nuclear family	Above 1,000,000	1985	27	8	2
4068	Extended family household	K500,000 to K1,000,000	2003	9	6	5
4103	Extended family household	K500,000 to K1,000,000	1986	26	4	8
394	Nuclear family	Above 1,000,000	2000	12	7	12
3971	Extended family household	Below K500, 000	2005	7	4	9
1622	Multi- family household	K500,000 to K1,000,000	2004	8	3	7
1632	Single family household	Below K500,000	2007	5	4	1
1963	Nuclear family	above 1,000,000	2000	12	10	12
1535	Multi- family household	K500,000 to K1,000,000	1996	16	6	12
Characteristics of 10 None Consolidators						
1090	Multi- family household	K500,000 to K1,000,000	1997	15	3	10
1055	Nuclear family	below K500, 000	1975	37	5	9
111	Multi- family household	K500,000 to K1,000,000	1991	21	6	8
1142	Nuclear family	below K500, 000	1989	23	4	6
1059	Single family household	below K500, 000	2000	12	7	1
1050	Extended family household	below K500, 000	2003	9	4	6
716	Multi- family household	K500,000 to K1,000,000	1974	38	5	8
1087	multi- family household	below K500, 000	2000	12	6	10
6805	Extended family household	K500,000 to K1,000,000	1991	21	1	6
1962	Extended family household	K500,000 to K1,000,000	1975	37	3	7
Averages	**Median family was 10 extended families**	**Median Income Range (K500,000 to K1,000,000)**		**Average length of stay on the plot 19.8**	**Average of original family sizes 5.15**	**Average of current family sizes 8.6**

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

Photos of the General Housing Conditions in Ipusukilo Compound

Some of the Improved Housing Units

General housing conditions in the settlement

Basis mud brick house   **Drainage system**

Source: Field Work Surveys (2012)

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

Network of Water Kiosks

	KITWE CITY COUNCIL
	Ipusukilo Blocks
Waterkiosks	
●	no data
●	closed
●	open
Distance in m	
	under 100
	101 - 200
	201 - 300
	301 - 400

Water supply throught Waterkiosks in dependence of the Distance to the next Waterkiosk

distance	area	area %
100	305209.37	21.39
200	526867.34	36.92
300	261003.80	18.29
400	137710.81	9.65
covered	1230791.31	86.25
not covered	196259.67	13.75
complete	1427050.98	100.00

0 3060 120 180 240
Meters

Kitwe City Council
Date 29/10/2009

Source: Kitwe City Council

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

Proposed Rezoning Plots Plan Overlaying Existing Structures

Source: Kitwe City Council

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia
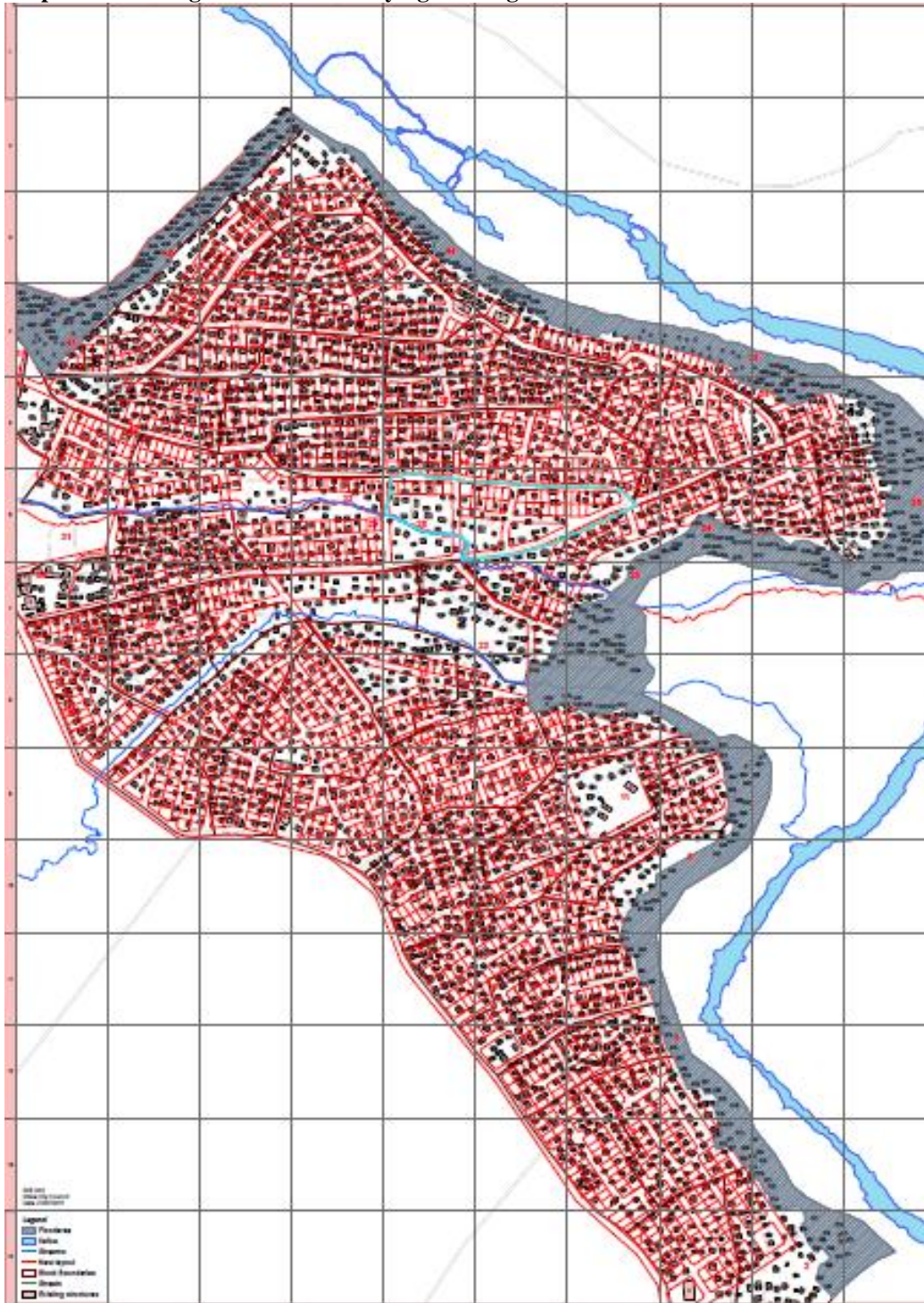
Proposed Phases for Upgrading and Reallocation

Legend
- New Plot Layout
- Floodline
- Kafue
- Streams
- Existing Structures
- Phase 1
- Phase 2
- Phase 3

GIS Unit - DDP
Date 16/08/2011

Source: Kitwe City Council

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia
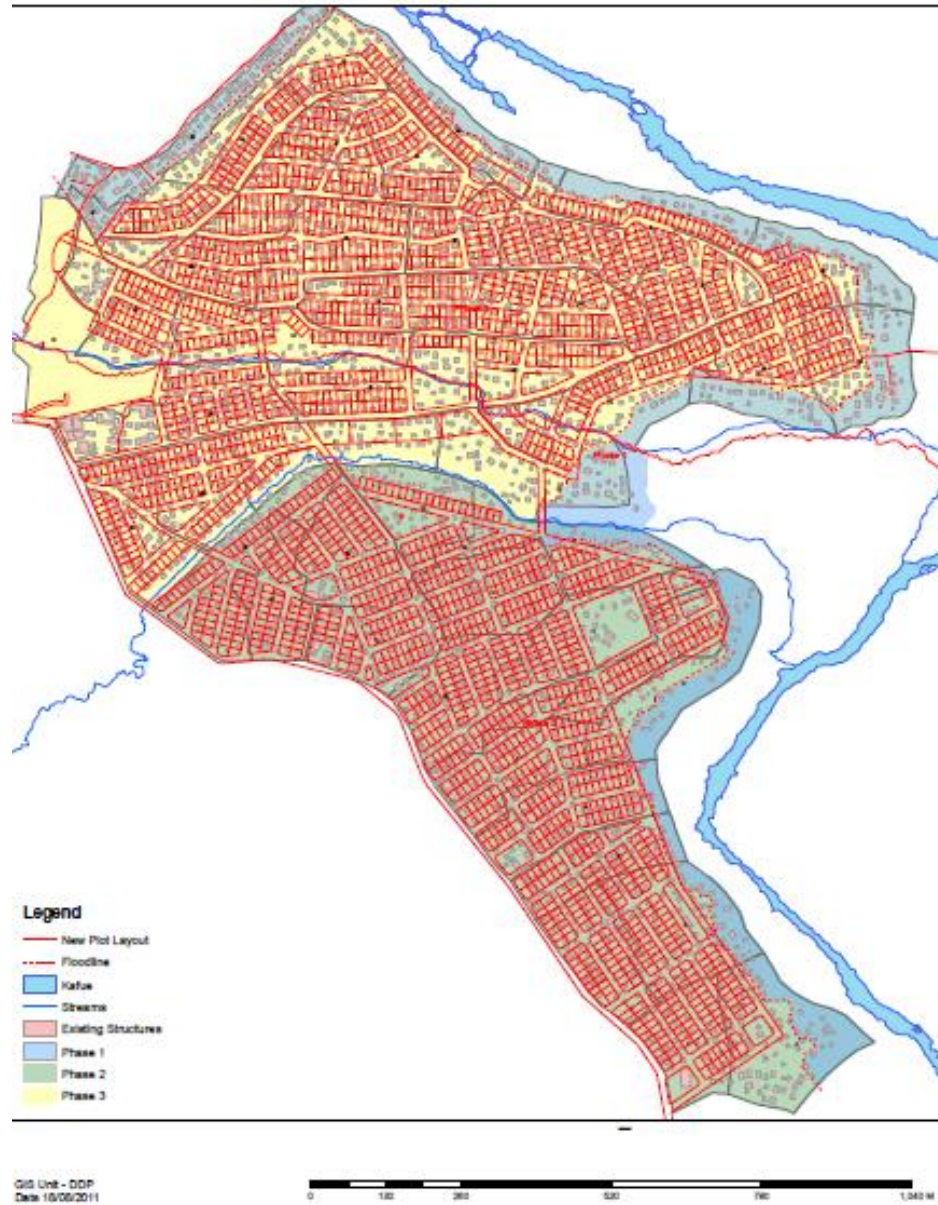
Appendix 2: Research Instruments

Household Semi structured interview guide

Dear Respondent,

This survey/interview is for the purpose of collecting data for an academic research entitled "Understanding the self-help Incremental Housing Process in Informal Settlements- a Case of Ipusukilo Compound, Kitwe-Zambia". The information provided is purely for academic purposes. Please be assured that the information given will be treated with complete confidentiality and no name will be reflected in the study. Your time in responding to this interview would be highly appreciated.

Part 1: Household Characteristics
1. Address of Respondent
    a. House Number…………………………Street ……………………… Section…
2. Type of Household
    a. Single
    b. Nuclear
    c. Extended
    d. Multi- family household………………………………
3. Year of occupation
4. Type of occupants
    a. First
    b. Second
    c. Others (specify)……………………………………………………..
5. Type of ownership
    a. owner
    b. renter
    c. non paying lodgers
    d. Family member
    e. Other (specify)…………………………………………
6. Head of household
    a. Female
    b. Male
    c. Single
    d. Others…………………………………………………………
7. Age of the head of the household……………………………….
8. House improvement/expansion over the last ten years (researcher to take note of any basic improvement/extensions of the house)
    a. No
    b. If yes (the researcher to specify)………

Part 2: Triggers/Motivations for extensions/improvements
9. What is the average household income in relation to incremental processes?
    a. Average household incomes………………………………………………
    b. Average household expenditures …………………………………………………
    c. Sources of household incomes……………………………………………………
    d. How much was spent in housing related costs
    i. Renovations…………………………………………………
    ii. Construction……………………………………………………………
    iii. Maintenance……………………………………………………………
    iv. Services…………………………………………………
10. What was your original family size when you came? ....
11. What is the current family size? …………………………………………………
12. Are there any other households living with you apart from your nuclear family?
    a. No
    b. Yes (specify)…………………………………………………

Part 3: Description of House Incremental Patterns

13. How did you get this parcel/plot of land at time of moving into the settlement?
    a. Bought Land
    b. Bought a House
    c. Rented the plot
    d. Inherited
    e. Others (specify)…………………………………………… …………………………
14. How long have you been improving/extending your house? (Describe here and researcher to make sketches of the description of the original house and the current)
    a. When started……………………………………………………………………………
    b. Original state of the house…………………………………………………………..
    c. Phases that you start with ………………………………………….…………………
    d. Current state……………………………………………………………………………
15. How did you finance your house improvements? (Describe here)………………………
16. What type of building materials did you use? (The researcher to note and observe the materials)
    a. Conventional (Modern)………………………………………………. ……………...
    b. Traditional……………………………………………………………………………….
    c. Mix of materials specify…………………………………………………………………..
    d. Others specify…………………………………………………………………………...
17. Where did you get the needed building materials?
18. What type of construction skills/ labour did you use?
    a. Family labour…………………………………………………………………………..
    b. Community supported labour (among people you know)……………….............. …………
    c. Local Contractors (that you do not know)…………………………………… …………...
    d. Others specify………………………………………………………………………
19. How would you describe the phases of house improvement/expansion? (The researcher to take measurements the areas of additional rooms)……………………………………………
    a. Location of additions rooms ……………………………………………………………
    b. Which rooms started additions……………………………………………………………
    c. Why did you priorities these rooms? ……………………………………………………
20. What are the uses of additional spaces?
    a. Habitable
    b. Non habitable rooms
21. Any backyard houses for home enterprises? ....
    a. No
    b. If yes specify type of enterprises……………………………………………………
22. What services are available in the house (water, sanitation, electricity, waste collection, telecommunications, and postal service?)
    a. Services at the beginning…………………………………………………………………
    b. Current of services………………………………………………………………………
23. What was your sequence or priority in access to services?
    a. Water
    b. Sanitation
    c. Electricity
    d. Others
24. Why did you prioritise these services? ....
25. How did you acquire these services? ....
26. Quality of the services provided? E.g.is water supplied constantly or just certain days of the week?
    a. Water……………………………………………………………………………………….
    b. Electricity………………………………………………………………………………...
    c. Solid waste………………………………………………………………………………
    d. Any other ………………………………………………………………………………...
27. Construction details (The researcher to take note)
    a. Ventilation …………………………………………………………………
    b. Orientation…………………………………………………………………………………
    c. Lighting ……………………………………………………………………………………
    d. Floor space index……………………………………………………………………………
    e. Finishes……………………………………………………………………………………
28. What are some of the constraints/problems you encountered during construction/improvement process? (Describe here).

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia

      a.   funds
      b.   labour
      c.   technical
      d.   Others specify ……………………………………………………………………………

29.   Do you have plans for future expansion/ improvement?
      a.   No
      b.   If Yes (specify which)……………………………………………….
30.   Do you have titles of ownership to the land?
      a.   No
      b.   Yes
31.   If yes what type of titles and how did you get them? Describe…………………
32.   What social amenities/services are within this settlement?

Part 4: Possible Interventions and Support
33.   Any suggestions for support in house construction/improvement (describe here)
      a.   Financial
      b.   Community
      c.   Technical
      d.   Others describe here…………………………………………………
34.   How should this support be given if any? Describe…………………………………………
35.   Who do you think would best offer this support?
      a.   Local Authority/council
      b.   Community based organisation
      c.   Non Governmental organisations
      d.   Others (specify)…………... ……………………………………………………

Thank you for participating in this research

In-depth Interview Guides with the Municipality
1.   What are some of the programmes that you have for providing low income housing?
2.   Have you ever carried out site and service programmes or settlements upgrading?
3.   How have these programmes worked to meet the housing needs of low income?
4.   How many informal settlements do you have within your municipality?
5.   What is the legislative framework in relation to informal settlements?
6.   What are the tenure systems that are available in these informal settlements?
7.   What assistance do you provide in informal settlement?
8.   What other organisation work in these informal settlements?
9.   What other interventional support have you offered in Ipusukilo settlement to better the living conditions?

In-depth interviews done with two officers from Kitwe Municipal Council; firstly with the director of planning and the GIS technical consultant from GIZ in July 2012

Focus group discussion with beneficiaries of the ZHPPF in Kawama
Discuss some of the support that you receive during construction and how it is given to you………………………………………………………………………………………
Apart from PPHPZ who else supports your efforts? ....

Focus group discussion carried out with 6 benefiting families of the ZHPPF at Kawama housing project, July 2012

Thank you for participating in this research

Understanding the Self-Help Incremental Housing Processes in Informal Settlements as a Strategy for Providing Low-Income Housing- a Case of Ipusukilo, Kitwe-Zambia