EVALUATION OF SLUM UPGRADING AND REDEVELOPMENT IN PROMOTING SUSTAINABLE URBAN HUMAN SETTLEMENTS: A CASE STUDY OF PUMWANI-MAJENGO HOUSING PROJECT, NAIROBI COUNTY

BY

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JUNE 2014
DECLARATION

This research project is my original work and has not been presented for any degree or academic award in any other university or institution of higher learning.

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This report has been submitted for examination with our approval as university supervisors.

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Signature ........................................ Date........................................

Kenyatta University
DEDICATION
In honor of God Almighty for granting me the strength, will and capacity to undertake my studies and dedicated to my parents, siblings, nephews and nieces for their love and unwavering support.
ACKNOWLEDGEMENT

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ABSTRACT

The existence of slums has posed a huge problem for achievement of sustainable urban development in most ACP countries. Slum upgrading and redevelopment measures have been adopted worldwide as key components of the Millennium Development Goals (MDGs) under goal number seven which emphasizes the need to tackle the problems posed by slums. In the Kenyan context, slum upgrading and redevelopment as intervention measures are critical to the attainment of both Vision 2030 and Millennium Development Goals (MDGs) priorities. The Pumwani-Majengo informal settlement was chosen owing to its unique history of being among the first areas to benefit from the above slum rehabilitation measures in 1987. The study was conceptualized on the need to evaluate the effectiveness of slum upgrading and redevelopment in promoting sustainable urban human settlements in relation to Kenya’s progress towards the attainment of MDG 7, targets 10 and 11 which seek to combat urban poverty and improve the livelihoods of 100 million slum dwellers by the year 2020. It also set to evaluate the attainment of the goals concerning housing and urbanization as envisioned in our development blueprint vision 2030. The evaluation was done based on measurable objectives which formed the intended goal of the slum rehabilitation programme against the target indicators set in MDG goal 7 and Vision 2030. The study adopted a case study design combining both qualitative and quantitative methods that involved pre-field work, field work, data collection and analysis utilizing a variety of relevant scientific methods and tools. The sample size consisted of 100 respondents determined using scientific formulae and was drawn from a target population that consisted of households, resource persons, businesses, institutions and NGO/CBOs operating in the study area. Emphasis was on analyzing the policy, legal and institutional framework governing slum upgrading and redevelopment projects in Kenya, ascertaining the level to which the Pumwani-Majengo project has achieved its main intended objective of fostering transition of the beneficiaries from the slum to the redeveloped housing units, assessing the adequacy and affordability of the housing typologies implemented by the developer in relation to the living styles of the beneficiaries and investigating the perceptions of the beneficiaries towards the slum upgrading and redevelopment approach used in the project. The study established that the slum redevelopment programme implemented by the developers in the Pumwani-Majengo project has had varying degrees of both successes and setbacks in as far as Kenya’s achievement of both MDG goal 7, targets 10 and 11 and Vision 2030 targets on housing and urbanization are concerned. The study established that even though most of the beneficiaries cited improved living standards in form of better sanitation, water supply and infrastructure as benefits originating from the slum redevelopment project, an overwhelming majority nevertheless faulted the lack of the redevelopment approach to sufficiently address community economic empowerment aspects to enable the project beneficiaries have a means of sustaining better livelihoods after being relocated to the Highrises and the total lack of direct involvement by the government to subsidize the economic burden borne by the beneficiaries in paying the monthly rents/mortgages. The findings of the research were used to prepare a participatory slum upgrading and redevelopment planning matrix for promoting sustainable urban human settlements in Pumwani-Majengo. The output plan indicates the major issues, how they can be addressed and who should address what issue.
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<th>Full Form</th>
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<tbody>
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<td>ACP</td>
<td>African, Caribbean and Pacific</td>
</tr>
<tr>
<td>CBOs</td>
<td>Community Based Organizations</td>
</tr>
<tr>
<td>DRSRS</td>
<td>Department of Resource Surveys and Remote Sensing</td>
</tr>
<tr>
<td>ERDAS</td>
<td>Earth Resources Data Analysis System</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information System</td>
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<tr>
<td>KENSUP</td>
<td>Kenya Slum Upgrading Programme</td>
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<tr>
<td>KISIP</td>
<td>Kenya Informal Settlement Improvement Project</td>
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<td>Millennium Development Goals</td>
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<td>Non Governmental Organizations</td>
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<td>National Housing Corporation</td>
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<td>PSUP</td>
<td>Participatory Slum Upgrading Programme</td>
</tr>
<tr>
<td>RCMRD</td>
<td>Regional Centre for Mapping of Resources for Development</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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CHAPTER ONE: INTRODUCTION

1.1 Background

In many cities in the African, Caribbean and Pacific (ACP) countries, a majority of the urban poor live in slums. UN-HABITAT defines a slum household as a group of individuals living under the same roof in an urban area who lack one or more of the following: Durable housing (a permanent structure providing protection from extreme climatic conditions); Sufficient living area (no more than three people sharing a room); Access to improved water (water that is sufficient, affordable and can be obtained without extreme effort); Access to improved sanitation facilities (a private or public toilet shared with a reasonable number of people); and Secure tenure (de facto or de jure secure tenure status and protection against forced eviction).

According to the UN-Habitat, slum upgrading refers to the in-situ improvement of slum households’ living conditions which can be achieved through better water supply, sanitation and other basic urban services; housing improvements; and provision of tenure security. Slum redevelopment on the other hand is based on clearance of slums and requires the resettlement of residents to temporary decanting sites while new housing units are developed. The UN-HABITAT officially supports the policy of slum upgrading and redevelopment therefore making it one of the principal intervention measures of achieving sustainable urban human settlements based on the known indicators of sustainable development (UN-Habitat, 2003a).

The United Nations Conference on Human Settlements (Habitat II), held in Istanbul in June 1996 adopted the Habitat Agenda as a global response to the urban housing crisis. The Habitat Agenda enshrines an enabling approach to shelter with a focus on principles such as sustainable urban development, adequate shelter for all, access to safe water and sanitation, social inclusion, environmental protection, gender equality, capacity building, broad-based partnerships, decentralization and good urban governance. The above, together with the millennium development goals (MDGs), adopted by world governments in September 2000, commit to actualize the pledge of combating urban poverty with an objective of making major improvements in the lives of 100 million slum dwellers by the year 2020 (UN-Habitat, 2003b).
Goal 7 concerns ‘Ensuring Environmental Sustainability’, and its related Targets 10 and 11 are particularly relevant to slum upgrading and redevelopment initiatives worldwide. Target 10 aims to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation, and Target 11 aims to have achieved a significant improvement in the lives of at least 100 million slum dwellers by the year 2020. These targets emerged in response to some of the most pressing challenges of the millennium namely; increased urbanization of poverty evidenced by the fact that as at 2010, 1 billion of the world’s population lived in slums with many of them lacking access to adequate housing, water and sanitation (UN-Habitat, 2003b).

Worldwide, the World Bank in partnership with respective national governments has undertaken many major slum upgrading and redevelopment projects since the 1980s, but fundamentally, this has not solved the problem of slums but rather simply helped fix the problems with existing slums since the interventions have not affected the mass migration of the rural poor to the cities (Syagga, 2010). Globally, successful slum upgrading and redevelopment projects have been undertaken in Brazil, India and Salvador through government partnerships with Cities Alliance, the Italian Government and the World Bank but they have fell short of meeting the target indicators of MDG goal 7, targets 10 and 11 respectively (Ruster, 2003). Despite the above fact, slum upgrading and redevelopment remain the most viable interventions in improving minimum living conditions experienced in slums to acceptable standards as evidenced by successful projects implemented in Colombia, Chile and Cuba (Kremer, 2006).

According to the 2006/2007 UN-HABITAT State of the World's Cities Report, the African Countries of Egypt, South Africa, Tunisia, and Morocco stand out in their efforts towards slum upgrading and redevelopment. The slum growth rates have fallen markedly in the mentioned countries though the fact that the growth rate of informal settlements is still positive speaks to the fact that slums are not going away or even shrinking. The report went on to say that in order to stem (or at least slow) the growth of slums in the African cities, countries were going to have to make some hard choices and major financial commitments (with the help of the World Bank, a major player in the worldwide effort to promote slum upgrading and redevelopment) in order to accomplish the Millennium Development Goal towards lifting significant amounts of slum dwellers out of poverty (UN-Habitat, 2007).
Kenya, like other countries, has witnessed an unprecedented increase in its urban population since independence. This has posed a great challenge to urban economies which have been unable to cope with the increasing demand for essential services such as housing, health and education. As a result, more urban dwellers in Kenya live in poverty and reside in overcrowded slums that lack basic amenities to sustain a minimum level of living (Munier, 2007). To reverse this trend, the Government of Kenya, in collaboration with other stakeholders, has carried out major slum upgrading and redevelopment initiatives through the Kenya Slum Upgrading Programme (KENSUP) established in 2000 and the Kenya Informal Settlement Improvement Project (KISIP) established in June 2011 but the problems of unsustainable slum settlements still persist (Angel, 2003).

In Nairobi, an estimated 1.8 million people live in informal settlements, roughly 60% of the city’s official census population of 3.1 million as at 2009. Slum upgrading and redevelopment programmes have been intensively undertaken in Kibera, Mathare, Korogocho, Huruma and Mukuru slums under the KENSUP/KISIP and UN-Habitat partner funded programs but there is very little if any tangible improvements in slum dwellers lives mainly due to complexities that have resulted in other people of middle income status benefitting at the expense of the intended slum target population earmarked at the project conception stage (Espriella, 2007).

In Pumwani-Majengo informal settlement, the overall approach was to redevelop the slum area without displacing or disrupting the lives of the residents. Fortunately for this scenario, there were pockets of disused land in the area on which the first units could be developed. It was decided to construct flats to maximize the land use. The big issue however was how to identify the people to benefit from this 1st phase of the project as the units could only accommodate a portion of the slum population. The project experienced delays due to unclear methodologies used in identifying the first lot of beneficiaries and thereafter, owing to funding complexities, the project was staggered into Phase II which was concluded in 2005 and Phase III which is yet to kick off (NHC, 2007). The project has had varying degrees of both successes and setbacks in as far as meeting the intended project objectives of improving the livelihoods of the Pumwani-Majengo residents and meeting MDG goal 7 is concerned (Gulyani et al., 2006).
1.2 Problem Statement

The continued existence of slums in Pumwani-Majengo twenty five years since the Kenyan government adopted slum upgrading and redevelopment as a strategy for dealing with informal settlements, is a matter of serious concern. Despite various approaches ranging from service provision (water, electricity, and sanitation), housing improvement, construction of High rises to land tenure security, having been used as entry points to improving the lives of slum dwellers in the Pumwani-Majengo housing project, the same have only resulted in permanent slums. On the whole, the slum problem in Pumwani-Majengo continues much as it was and unless steps are taken to make it impossible for new slums to come into existence, the problem will become even larger.

Lack of the redevelopment approach to sufficiently address community economic empowerment aspects to enable the project beneficiaries have a means of sustaining better livelihoods after being relocated, lack of direct involvement by the government to subsidize the economic burden borne by the beneficiaries in paying the monthly rents/ mortgages, the top-down approach used by the government to define the needs of the community and settle on the redevelopment approach and lack of a clear policy, legal and institutional framework to coordinate slum upgrading and redevelopment efforts within the national housing framework are all factors that could have resulted in the interventions failing to meet its desired objectives.

Therefore, this research seeks to evaluate the extent to which the slum upgrading and redevelopment project has been successful in improving the social, economic and environmental quality of human settlements in Pumwani-Majengo and uplifting the living and working conditions of the beneficiaries through adopting an enabling approach to shelter development that is consistent with principles that promote Kenya’ progress towards realization of MDG 7, targets 10 and 11 and Vision 2030 objectives and goals on housing and urbanization.
1.3 Research Questions

The research aimed to answer the following key questions:

1. What is the policy, legal and institutional framework governing slum upgrading and redevelopment programmes in informal settlements in Kenya?

2. To what extent has the Pumwani-Majengo housing project realized its intended main objective of fostering transition of the beneficiaries from the slums to the new developed units?

3. How adequate and affordable are the housing typologies implemented by the developer in the Pumwani-Majengo project in relation to the living styles of the beneficiaries?

4. What is the perception of the intended beneficiaries towards the slum upgrading and redevelopment approach used in the Pumwani-Majengo housing project?

1.4 Research Objectives

The objectives of this study were:

1. To analyze the policy, legal and institutional framework governing slum upgrading and redevelopment programmes in informal settlements in Kenya.

2. To ascertain the extent to which the Pumwani-Majengo housing project has realized its intended main objective of fostering transition of the beneficiaries from the slums to the redeveloped units.

3. To assess the adequacy and affordability of the housing typologies implemented by the developer in the Pumwani-Majengo project in relation to the living styles of the beneficiaries.

4. To investigate the perception of the intended beneficiaries towards the slum upgrading and redevelopment approach used in the Pumwani-Majengo housing project?
5. To prepare a participatory slum upgrading and redevelopment planning matrix for promoting sustainable urban human settlements in Pumwani-Majengo?

1.5 Research Premises

The study was based on the following research premises:-

1. There is lack of a clear policy, legal and institutional framework governing slum upgrading and redevelopment programmes in informal settlements in Kenya.

2. The intended main objective of the Pumwani-Majengo housing project of fostering transition of the beneficiaries from the slums to the new develop units has not been fully realized.

3. The new housing typologies implemented in the Pumwani-Majengo project are both spatially inadequate and economically unaffordable in relation to the living styles of the beneficiaries.

4. The societal perception of the intended beneficiaries towards the slum upgrading and redevelopment model/approach used in the Pumwani-Majengo housing project is negative.

1.6 Justification of the Study

Past studies on slum upgrading and redevelopment had majorly focused on assessing the success or failure of the above initiatives in terms of urban service provision of adequate shelter for the residents, improved human settlement management, promoting integrated provision of environmental infrastructure including water, sanitation, drainage and solid waste management, but none had established a direct linkage between the above improvements and Kenya’s progress towards attainment of MDG 7 targets 10 and 11, which provided the research gap for this study. In this regard, the study sought to ascertain a direct relationship between slum upgrading and redevelopment programmes with improved livelihoods of slum dwellers and established supporting linkages that could lead to such initiatives promoting the achievement of Millennium Development Goal 7 through promoting sustainable urban human settlements.
The study also sought to discern the gap between paper policy and practice in the operationalization of the Constitution of Kenya (2010) chapter on land and environment, Vision 2030 objectives on housing and urbanization and finally the National Housing Policy, which all outlined the overall objective of slum upgrading and redevelopment as improving the social, economic and environmental quality of human settlements and the living environments of all people, particularly the urban poor through adopting an enabling approach to shelter development and improvement which is environmentally sound.

1.7 Significance of the Study

The findings of the study identified research gaps that require further studies in order to establish strategies that consider slum upgrading and redevelopment as much more than the provision of housing and physical services but also about incorporation of issues dealing with governance, ownership, land rights, social capital and community empowerment. The study highlighted the level and importance of public participation in slum rehabilitation and generated findings which provide critical baseline data to the National Housing Corporation on issues of proper urban planning, coordination and developing partnerships with the private sector for low-cost affordable housing provision. Finally, the output of the study is available to various entities such as the Government, educational institutions, housing developers, international donor organizations, non-governmental organizations and other stakeholders to make use of in terms of the research findings and recommendations.

1.8 Scope of the Study

The scope of the study was limited to the Pumwani-Majengo settlement area that has been upgraded or redeveloped. This was due to the fact that the study objectives were based on measurable variables that drew inference on the extent to which slum upgrading and redevelopment projects had contributed towards promoting sustainable urban human settlements. The target sample population included households, businesses, government institutions and NGOs/CBOs in the study area affected by the slum upgrading and redevelopment project. The research sought to; analyze the policy, legal and institutional framework governing slum upgrading and redevelopment programmes in Kenya, ascertain the extent to which the project has realized its intended main objective of fostering transition of beneficiaries from the slums to
the redeveloped housing units, assess the adequacy and affordability of the housing typologies implemented by the developer, investigate the perceptions of the intended beneficiaries towards the slum upgrading and redevelopment approach used in the project and finally prepare a participatory slum upgrading and redevelopment planning matrix for promoting sustainable urban human settlements in Pumwani-Majengo.
1.9 Definition of Terms

**Change Detection:** In the context of remote sensing, change detection refers to the process of identifying differences in the state of land features by observing them at different times.

**Evaluation:** A systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards (McDermott, 1973).

**Multispectral Image:** A collection of several monochrome images of the same scene, each of them taken with a different sensor. Each image is referred to as a *band* (Campbell, 2002).

**Human Settlement:** A permanent or temporary community in which people live without rightful belonging. They usually differ in specifics such as size, population and importance.

**Perception:** This is the awareness of things and events through senses and impressions formed as a result. Perception is influenced by experience and culture (Dewey, 1973).

**Public Participation:** The process by which an organization consults with interested or affected individuals, organizations, and government entities before making a decision (Rao, 2013).

**Spatial Resolution:** Describes the ability of any image-forming device such as an optical or radio telescope, a microscope, a camera, or an eye, to distinguish small details of an object, thereby making it a major determinant of image resolution (Reitchhardt, 2006).

**Transition:** is the movement, passage, or change from one position, state, stage, subject, concept, etc., to another; (Landaeta, 2004).

**Urban Upgrading:** Refers to the physical, socio-economic and environmental improvements to slums undertaken cooperatively among citizens, community groups and local authorities with a view to alleviating the poor living standards of slum dwellers (UN-Habitat, 2003).
CHAPTER TWO: LITERATURE REVIEW

2.1 Policy, Legal and Institutional Frameworks Governing Slum Upgrading and Redevelopment

On the global scale, Brazil has serious land-access problems both in urban and rural areas resulting in a significant segment of the population living in substandard housing, including slums. The above can be witnessed from the many and varied conflicts for land possession which affect equally urban dwellers, women, afro-descendants and indigenous communities. Despite the fact that the federal government has indeed managed to advance significantly in formulating comprehensive national housing and land policies and in creating the essential legal-institutional bases, many programmes are isolated and to a great extent ineffective. There are still many structural obstacles of a conceptual, political, institutional and financial nature to be overcome before the legal concessions become reality (Jones and Allmendinger, 1998).

There is currently a range of governmental policies addressing social housing, land regularization, slum upgrading, sanitation, public transport and building. Despite these efforts, there are major problems in the current distribution process of public land, and in practice, large numbers of people lack access. Property rights are regulated according to the special constitutional provisions addressing rural and urban land, indigenous people’s and afro-descendants’ lands, and private and public land. Those who have been in irregular possession of urban public or private areas for more than five years have the right to legalize possession and/or property (Lizzaralde and Massyn, 2008).

Furthermore, there are still some national laws that must be brought into compliance with the Constitution, the City Statute’s principles and related instruments. For instance, the National Law of Urban Parceling is being revised by the Federal Chamber of Deputies to consider slum upgrading, regularization, and urban and environmental licensing within the competence of the Municipalities. This new legislation aims to integrate environmental and urban policies as a way to improve decision-making process related to land development, acquisition, management, regularization, registration and construction (Easterly, 2006).
In India, urban areas are characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. The above shortages necessitated the rationale for policy focus on housing and basic services in urban areas. The policy intended to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society (Watson, 2003).

In view of the above scenario, the National Urban Housing and Habitat Policy, 2007 focuses the spotlight on multiple stake-holders namely, the Private Sector, the Cooperative Sector, the Industrial Sector for labour housing and the Services/Institutional Sector for employee housing. In this manner, the Policy seeks to promote various types of public-private partnerships for realizing the goal of affordable housing for all through promoting slum upgrading and redevelopment (Ploger, 2004).

Section 26 of the Constitution of the Republic of South Africa, 1996, enshrines everyone’s right of access to adequate housing. Since 1994, the South African state has created a raft of legislation and policy to give effect to this right. Despite this, and notwithstanding the provision of 2.3 million housing units to nearly 11 million people, South Africa still has a housing crisis after 16 years of democracy, with over 2.1 million households lacking adequate housing and millions more lacking access to basic services (Booher, 2003).

The Housing Act is the primary piece of housing legislation in South Africa. It legally entrenched policy principles outlined in the 1994 White Paper on Housing. The Act provides for a sustainable housing development process, laying down general principles for housing development in all spheres of government; it defines the functions of national, provincial and local governments in respect of housing development; and it lays the basis for financing national housing programmes (Innes and Booher, 2004). In 2008 the Social Housing Act 16 of 2008 (Social Housing Act) was passed, providing the enabling legislation for the Social Housing Policy. The Act aims to establish and promote a sustainable social housing environment and
defines the functions of national, provincial and local governments in respect of social housing, allowing for the undertaking of approved projects by other delivery agents with the benefit of public money and gives statutory recognition to social housing institutions (Mansuri, 2013).

In Tanzania, there are number of policies and pieces of legislation that relate to and affect unplanned/informal settlements. A critical land policy is the 1995 National Land Policy which effectively prohibited the removal of informal settlement and committed the government to upgrading them instead. The local government urban councils act of 1982 and subsequent legislation effectively restored local government as an institution, restoring to it the responsibility for service provision (IRIN, 2011).

In 2007, the Government of Tanzania embarked on drafting their second Housing Policy since Independence. The Policy has been in draft form for the last three years and has yet to be adopted by Parliament. One of the reasons is the lack of up-to-date knowledge in important areas of the current draft. The Government of Tanzania has enlisted the assistance of UN-Habitat to prepare the Urban Housing Sector Profile to fill these gaps and comprehensively inform the finalization of the Policy. As in other countries in the region, the public sector of Tanzania has not been successful at delivering affordable and sufficient housing for the urban poor.

In Kenya, the National Housing Policy is intended to arrest the deteriorating housing conditions countrywide and to bridge the shortfall in housing stock arising from demand that far surpasses supply, particularly in urban areas. The overall goal of the Housing Policy is to facilitate the provision of adequate shelter and a healthy living environment at an affordable cost to all socio-economic groups in Kenya in order to foster sustainable human settlements. This will minimize the number of citizens living in shelters that are below the habitable living conditions. It will also curtail the mushrooming of slums and informal settlements especially in the major towns. In addition; the Draft National Urban Development Policy, Vision 2030, Urban Areas and Cities Act and the Physical Planning Act all contain specific provisions for providing affordable housing for all citizens (Majale, 2008).
2.2 Assessing Slum Upgrading and Redevelopment in achieving their intended Objectives

2.2.1 Case Study: Proyecto Urbano Integral Pui Nororiental (Integral Urban Plan Iup)
Medellín, Colombia

Just a few years ago the city of Medellín was considered a center of violence and criminal activity. The huge informal settlement of Comuna 13, spanning some 700 hectares and home to 150,000 inhabitants was an urban crisis zone. A land use and infrastructure plan was developed and discussed with the local community, where needs were further understood through consultation. Now a fairytale transformation stands in its place. One of the catalysts for change is the project, urban integration of an informal area, continues to be implemented. Numerous measures and many stakeholders are involved in ensuring that the poorest receive only the best in infrastructure (Landaeta, 2004).

Today, the Integral Urban Project (IUP) continues to be implemented at Comuna 13 in Medellín’s north-east. The recently-constructed system of escalators with public squares and balconies addresses serious problems regarding connectivity, security and coexistence. In addition, more than ten public buildings have been completed which provide infrastructure and important spaces for meeting and building social cohesion. Other projects include community meeting rooms, music rooms, new homes and schools, a theater, business development center and auditoriums. The Integral Urban Project is so far exceeding its desired objectives and was recently awarded the Holcim Awards Gold 2008 trophy for delivering a ground-breaking and comprehensive approach to address slum formation in cities (CESCR, 2011).

2.2.2 Case Study: Hadapsar-Nanapeth Rehabilitation Projects – Pune, India

Flood affected residents of Kamgar Putala slum have been resettled to a new location away from the river at Hadapsar. The construction of the new housing and resettlement project was coordinated by the local NGO, Shelter Associates with collaboration from the community. The project was funded by the residents themselves and a government grant. The project had been completed for five years at the time evaluation fieldwork in April 2010 (Mansuri and Rao, 2013). Likewise in the same project, illegal squatters residing on privately owned land were rehabilitated in a high rise building in-situ at Nanapeth. The project was implemented by the
private property developers, iParmar Group under the government’s Slum Rehabilitation Authority (SRA) scheme. The project was funded by the developers who would recoup their costs via Transferable Development Rights. Both these projects partially attained their intended objectives as some residents reverted back to their original abodes citing financial constraints so sustain their livelihoods in the new homes (Mansuri and Rao, 2013).

2.2.3 Case Study: Matejo Slum Rehabilitation Project, Arusha Tanzania

Through the ongoing urban sector policy reform, designed to create an institutional environment more conducive to the sustainable development and delivery of urban infrastructure and services, the government of Tanzania through the World Bank supported Urban Sector Engineering Project began in 1995 redeveloping the Matejo slums. The objectives of the project were to address land management and human settlement development issues through the role of the private sector and community participation.

The government having recognized the importance of the urban sector in national social economic development conducted a human settlements review and prepared a strategy which aimed at “creating sustainable development in urban centers for improving living conditions in informal settlements, alleviating poverty, stimulating economic growth and employment and improving the urban environment”. The project however failed to meet its desired objectives due to lack of a clear policy and legal framework that was non-existent in Tanzania by the time of project inception (Connelly and Richardson, 2004).

2.2.4 Case Study: Mathare 4A Housing Project, Kenya

The Mathare 4A Housing Project started in 1992 as a joint effort between the government of Kenya and Germany, implemented by the Amani Housing Trust, which was set up by the Catholic Archdiocese of Nairobi (Kigochie, 2001). It was initiated by a German catholic priest from the local Saint Benedict Catholic church, who was appalled by the lack of infrastructure for his parishioners. One of the key principles and objectives behind the project was to ensure that tenants would not get displaced during infrastructure improvements, such as the building of roads, walking paths and toilets (Malombe, 1997). This was done by providing housing for those who were displaced and ensuring that their rent did not change. Furthermore, all structure owners
were compensated while people living in the shanties were provided with rooms measuring 9m² in cheap concrete houses based on the number of family members (Kiprotich, 2011). The tenants paid rent to the project and part of it was utilized to reinvest back into the community in form of maintenance with the intention being that any surplus would be utilized to create more formal housing (Otieno, 2011). The project commenced very well, with the swampy area being dried up and made ready for construction. The citizens participated in the construction effort and the temporary housing was quickly built allowing for the citizens to move in and their old homes to be demolished, making space for roads, footpaths and sewer line. Overall people were very happy with the project and so were the donors (Malombe, 1997).

Unfortunately, during the 1997 and subsequent 2002 parliamentary elections, politicians started interfering with the project by telling residents that the donors should be assisting them and they should not have to pay rent for housing that had already been built. This “election promise” was an easy way for the politician to get people to elect them, but it completely broke down the financing scheme that was the basis behind continuing the project as the money required for maintenance and building of further housing units started drying up when beneficiaries stopped paying (Kigochie, 2001). In the end this detrimental political interference led the German donors to pull out of the project, and in 2008 it was permanently moved over to the Ministry of Lands and Housing (Otieno, 2011). The massive failure of the Mathare 4A project and the political issues associated with it has deterred other large-scale projects from starting in Mathare and negated the achievement of the intended objective of providing sustainable urban human settlements to the residents.

2.2.5 Case Study: KENSUP – Kibera, Soweto East Housing Project, Kenya

Kibera, being the largest slum in Kenya, compromising 12 villages that cover around 225 hectares of land and with a population of over 500,000 people, was one of the slums identified to be part of KENSUP. The initial step of this program focused on clearing out houses in the informal settlement in Soweto East village and replacing them with more formal and permanent housing. To achieve this, a decanting site was built near the Langata area that could house people temporarily while the more permanent houses were being built (Ministry of Housing, 2011). The
building of the decanting site was successful and 17 five-story blocks of flats with 600 three-
room, self-contained units were ready by 2009.

Around 1,300 residents from the first area to be cleared, commonly referred to as Zone A in Soweto East, moved in to those in September that year (IRIN, 2009). Based on the original plan, it was expected it would take from two to five years to clear the informal areas of the slum, but legal action has stopped the progress of the project. Over 80 plaintiffs, a mix of residents and landlords took legal action, which currently is in the High Court against their shanties being demolished. Part of their claims was that the land did not belong to the government but to the Nubian community, which has lived on it for over a decade (Namale, 2011).

Overall, the legal delays led to the stalling of the project with some of the citizens relocated not being able to pay the 1,000 KSh monthly rent hence being evicted while others have moved back to the shanties and rented out their temporary housing to wealthier tenants willing to pay up to 3,000 KSh a month (Kiprotich, 2011). There were also cases of residents living in the temporary housing selling their “upgrading passes” and moving back to rural areas or other slums (Namale, 2011). Furthermore, new residents have moved into the area that was to be cleared and into the shanties where people who moved into temporary housing used to live with many of them unaware of the fact that these shanties are scheduled to be demolished (Namale, 2011; Ombese, 2011). The above project therefore, failed to meet its intended objectives due to a mixture of high level political interference and legal action that stalled its progress (Majale, 2008).

2.3 Challenges of Providing Adequate and Affordable Housing in Low Income Markets

As UN-HABITAT’s experience over the world indicates, the most important factor limiting progress in improving housing and living conditions of low income groups particularly in informal settlements and slums is the lack of sufficient political will to address the issue in a fundamentally structured, sustainable and large scale manner. There is no doubt that political will combined with local ownership and leadership, and the mobilization of the potential and capacity of all stakeholders, particularly the people themselves, is the key to success. Lessons from several countries underscore the importance and the fundamental role of sustained political will and commitment (UN-Habitat, 2009).
In Brazil, security of tenure is a fundamental challenge in providing urban housing and the government observes that promoting security of tenure is a prerequisite for sustainable improvement of housing and environmental conditions. Housing stakeholders contend that the squatter upgrading projects need to be carried out and these projects should prevent unlawful evictions. The government should focus on regularization schemes in order to provide incentives to families to invest in their homes and communities and every effort should be made to ensure optimal use of the housing stock and improve the quality of life in existing settlements (Imparato and Ruster, 2003).

In Venezuela, Chile and Cuba, a major housing challenge requiring attention is the promotion of rental housing options. Regardless of the nature of existing or new finance mechanisms, the reality for many poor and low-income urban residents remains that adequate housing is simply too expensive to own. The majority of urban residents are actually tenants in the private informal sector. Data on urban housing tenure in Caribbean countries are not very reliable but it is estimated that a considerable number of urban dwellers, probably in the range of 30-50 per cent, are tenants. There is discrimination against private rental housing in the national housing policies of many Caribbean countries and the involvement of tenants and owners in finding solutions prioritizing collective interests should be promoted (Rao, 2008).

In many Africa countries, a major challenge is the lack of housing policies to adopt an adequate approach to urban land management. Due to rapid urbanization, the urban poor are forced to find their shelter in illegal settlements located in a variety of places: customary land, public land reserves, marginal land or in illegal sub-divisions. The resulting growth of informal settlements, primarily in peri-urban locations, is often the response to public inaction, or ineffective interventions that create more problems than they solve. The dynamisation of land markets is a key element of any good housing strategy (Lizzaralde & Massyn, 2008).

In Kenya, one crucial and common shortcoming in the housing sector is the inadequacy and limitations of housing finance mechanisms. The fact that conventional housing finance usually works in favour of middle and high income groups is reflected in the highly segmented housing markets (Otiso, 2003). The poor, low and even middle-income majority of the population cannot
afford a loan even for the least expensive commercially built housing units. Consequently, many low- or even middle-income households build their own houses progressively over long periods-as long as ten to fifteen years, or as is the case for the majority of the low-income population in the major cities of Nairobi, Kisumu, Mombasa, Nakuru and Eldoret, they are simply tenants (Majale, 2008). Upgrading initiatives should not rely entirely on governmental subsidies or on full recovery from slum dwellers but progressive municipal finance, cross-subsidy mechanisms, micro-credit schemes and beneficiary contributions should instead be associated to ensure financial viability (UN Millennium Project, 2005).

2.4 Evolution of Policy Approaches Dealing with Slums

The formation of slums follows a reverse practice being the last stage of the development process. It has also been argued that with time and especially at the end the 20th century, political and planning authorities started to recognize these settlements and intervene in them with the intention of incorporating these areas into the formal urban system and providing its inhabitants with urban infrastructure and services (Forester, 1999). However the ways that governments have tried to deal with this situation has not always produced successful outcomes (Easterly, 2006). These policies have been also influenced to a greater or smaller extent by the competence of the political and planning institutions which is determined among things by the appropriate or inappropriate levels of governance, corruption, regulation, functional land markets and political will. In this sense, the UN-Habitat Global Report on Human Settlements “The Challenge of Slums” (UN-HABITAT, 2003) identified the most common approaches dealing with slums in the last 40 years being: negligence, eviction, self-help and in situ upgrading, developing enabling policies and resettlement.

As a conclusion, it can be said that in spite of the efforts and in some cases because of these approaches, the housing conditions in slum areas have not improved significantly. Some scholars refer to some of these approaches as an orthodox model of planning which has failed to improve the conditions of the urban poor, promoting dependency and not self-sufficiency. Additionally they criticize them by saying that these, are out of the pace and totally inappropriate for the needs and conditions of cities in the developing countries, in particular to the ones of the urban poor (Hamdi and Goethert, 1997). Nonetheless, the UN-HABITAT acknowledges that there has been
an evolution of approaches to slums, which recognizes that effective policies and programs must go beyond addressing only problems related to inadequate housing, infrastructure or services but also integrate the underlying causes of urban poverty. This evolution is seen today mainly in programs and policies following the principles of slum upgrading also called slum improvement or urban upgrading.

2.5 Community Perceptions to Slum Upgrading and Redevelopment

Despite massive slum upgrading and redevelopment projects being currently undertaken to improve lives of informal settlement dwellers, previous similar projects have however raised major questions on their success in terms of benefiting slum dwellers and contributing towards ridding our cities off slums. It is not a secret that beneficiaries of such projects usually end up renting out their houses while they find their way back into the slums such as is the case in many ACP countries. What these projects achieve therefore is slum relocation, not upgrading (Otiso, 2003). A survey carried out in Soweto, Kibera; for a redevelopment proposal back in 2008 asking the residents what they thought should be done to improve their lives had only 15% believing better houses were the solution.

Their reasoning was simple; they live in Kibera since they cannot afford better houses which are available elsewhere. If their life status improves, they would move to better homes and residential estates (CESCR, 2011). The underlying reasons for the alleged failure lies on the fact that slum residents have indeed discovered a dependency on an informal economy that suits their level of income and a social equability niche that is well supplemented by the NGO’s. There is no rationale for one expect that they should move from ‘free gas’ supply, slum tourism income and the fact that there is a sense of social equity in the uncontrolled, untaxed micro level market that thrives in that neighborhood (Namale, 2011).
2.6 Theoretical Framework

2.6.1 Smart Urbanism Theory

Smart Urbanism Theory, advanced by Congress for the New Urbanism, founded in 1993, has its origins in the works of Louis Wirth, 1938. It refers to the pursuit of a viable urban habitat in an increasingly upside down world. The theory is very relevant to dealing with the complex issue posed by existence of slums in third world countries since it comes at a time when both governments and actors tasked with urban planning have to do more with less resources; at a time when so many big plans geared towards controlling slum growth have failed; and at a time when there is an increasing emphasis on the interplay between urban resilience and social innovation (Barnett, 2010). The smart urbanism theory recognizes the myriad of planning challenges faced by governments in Africa, Asia and Latin America in their efforts to precipitate a move to localism in terms of service provision and shelter development (Knox, 2010).

Across the world, the above situation is characterized by the fact that most developing countries are experiencing rapid urbanization while relevant authorities can only exercise the lightest touch when it comes to guiding urban change. This urban change however is happening, despite lack of proper planning (Bernstein, 2010). Now, more than ever, there is a greater focus on the role of the community in shaping their own built environment. Opinions are varied as to whether the ‘bottom up’ approaches to urban planning and development should indeed replace the more conventional and government preferred ‘top down’ approaches. Smart urbanists opine that whereas the bottom up systems display a remarkable ability to innovate in difficult conditions, the conventional top down approach has the real power to enable large scale change.

The concept of Smart Urbanism therefore looks to resolve the conflicts and discover the potentials that exist between the top down and bottom up processes that shape urbanism (Kriegler, 2009). With our developing knowledge of emergent systems, we have a better understanding of the irreducible complexity of life that evolves from these processes: how order emerges from chaos. Drawing on the work of the great urban theorists and viewing their work through the lens of complexity science (self-organization, genetics, the web, the economy, etc.) the theory offers a way forward. Within this context, Smart Urbanism integrates systems
thinking with responsive environments to make cities and towns that are capable of sustaining life in a continuously changing environment (Kelbaugh, 2009).

This theory is relevant to modern day urban planning and management due to the ideology underpinning smart urbanism. The theory’s strength is in the normal 3 phase ‘Plan-Design-Deliver’ sequence of urban change that starts with planning, and then goes on to designing and delivering urbanism, classifying the role of planning in controlling urban growth is clearly fundamental. Getting it wrong in the beginning leads to everything else going wrong, while getting it right from the onset provides a good chance of realizing the later outcomes we all desire. The above is why proponents of smart urbanism often see the planning system as the primary target of efforts geared towards providing holistic and proper urban management.

2.6.2 Participatory Planning Theory

Originally advanced by Paulo Freire and Kurt Lewin, 1971 and subsequently adopted by planning pioneers Patrick Geddes and Lewis Mumford, 1973, Participatory planning, also known as communicative, deliberative or collaborative planning, emerged as a response to the failure that planning institutions had when coping with the rapid changes occurring in western cities during the second half of the 20th century. Its theories and practices aimed at replacing the technical rationality behind hierarchical and bureaucratic planning processes towards more inclusive and democratic decision making practices. This was done by promoting the involvement of a full range of stakeholders into planning processes that had dialogue, deliberation and collaboration at its core (Healy, 1996; Forester, 1999; Innes and Booher, 2003).

Participatory or collaborative planning theories state that the use of undistorted communication and the encouragement of interactive, inclusive and equal discussion scenarios should be at the base of any planning process. In these scenarios, participants (inhabitants, stakeholders, planners, politicians, etc.) should find ways to understand and learn from the opinions and interest of those that are part of the process, and they should commonly identify, evaluate, propose and mediate about problems and solutions of a planning project. As a result, decisions are based on an agreed consensus over the argument or solution that is best suitable for “all” actors involved (Healy, 1996).
Critiques to participatory planning theories have argued that that these are optimistic, idealistic and that its principles are hard to implement in real life. Critiques refer mainly to the lack of understanding of the power structures present in society and in the planning/political culture (Jones and Allmendinger, 1998; Flyvbjerg, 2002). They also refer to the denial of differences among worldviews and value-systems and the conflicting rationalities that this produces in a planning process (Mouffe, 2000; Watson, 2003; Ploger, 2004). There are also those that argue the unfeasibility to involve “all” actors and interests (Connelly and Richardson, 2004) and those that question the possibility of an unbiased/neutral local knowledge (Landaeta, 2004). These critiques are a direct challenge to the truthfulness of the consensus building principle and thus to the legitimacy of the participatory process.

In spite of the critiques, it can be said that both supporters and opponents agree on the need for more inclusive and democratic planning processes. Differences are based on the level of attention that is given to the topics mentioned before and how these should be treated within the planning process. Yet, there is no denial of the fact that involving different actors within the planning process has the potential of achieving more just and sustainable results than the technocratic approaches of the past (Watson, 2003). Furthermore, there are several cases and studies that have shown significant results that were achieved during the participatory process and which were not depended on reaching consensus, adding credence to the theory (Innes, 2004, Innes and Booher, 2004). The participatory planning approach is highly supported and recommended by the international donor agencies as a key factor in the upgrading of informal and deprived neighborhoods (World Bank, 2001; UN Millennium Project, 2005).

Based on the strengths presented on the arguments above, the study adopted the participatory planning theory as the basis of its conceptual framework due to the fact that slum upgrading and redevelopment programmes require a positive change in public perceptions in order for them to have any meaningful impact on the community or society. The above can only be achieved when all stakeholders in the process are involved in coming up with a participatory slum upgrading-redevelopment framework that caters for all their interests.
2.7 Conceptual Framework

Figure 1: Conceptual Framework
(Source: Author, 2014)
The success of any slum upgrading and redevelopment programme aimed at promoting sustainable urban human settlements is hinged on the existence of a clear policy, legal and institutional framework that is supportive of community intervention measures as shown in figure 1 above. The driving force of slum upgrading and redevelopment undertaking by many governments is the universally accepted citizens’ rights to adequate and affordable shelter. In order to achieve the above, it is essential for governments and other stakeholders to undertake a community needs assessment and thereafter adopt an enabling bottom-up approach to shelter development that incorporates aspects dealing with community empowerment through employment creation and socio-economic upliftment of intended beneficiaries. Backed by requisite legislation, slum upgrading and redevelopment measures should endeavor to achieve high transition rates of slum dwellers to better abodes, offer tenure security and lead to the gradual reduction and eventual disappearance of slums in the project areas.

An ideal slum upgrading and redevelopment programme involves a process through which informal settlements are gradually improved, formalized and incorporated into the city itself, through extending land, services and citizenship to slum dwellers. It should involve providing slum dwellers with the economic, social, institutional and community services available to other citizens including legal (land tenure), physical (infrastructure), social (health or education) and economic (investment opportunities). Successful slum upgrading and redevelopment should therefore not be simply about providing water, drainage or housing but rather about putting into motion the economic, social, institutional and community activities that are needed to turn around downward trends in an area. The above measures when constantly undertaken with public/community participation in the context of urban upgrading, can lead to the achievement of Millennium Development Goal 7, Targets 10 and 11 together with Vision 2030 Blueprint Objectives and Goals on sustainable housing and urbanization in Kenya.
CHAPTER THREE: STUDY AREA

3.1 Physical Setting

Pumwani-Majengo is located about 2 km east of the city centre of Nairobi and covers an area measuring 17 ha. It is administratively located within Pumwani Division in Kamukunji Constituency. Its geographical coordinates are 1° 17' 0" South, 36° 51' 0" East, and it shares physical boundaries with Eastleigh to the North, Shauri Moyo and Bahati to the East, Pangani to the West and the Nairobi Central Business District (CBD) to the South.

3.1.1 Nairobi Context

Nairobi is situated at the junction of the Aberdare foothills and the Embakasi Plains at an altitude of 1,674 meters above sea level. The city is a confluence of the main road and rail routes from Mombasa in the coast to Uganda in the West, with Sudan, Ethiopia to the north and Somalia to the East. Nairobi is currently the capital city of Kenya and the main economic investment hub in the East African Region. It is also a former province and one of the 47 counties in the devolved system of government in the Republic of Kenya. Nairobi is a primate city attracting people from all over Kenya to migrate into it, seeking employment and improvement of their livelihoods due to the fact that it doubles as both the administrative and commercial capital of the Republic of Kenya. The map of Nairobi County indicating the area of study is shown in Figure 2 below;
3.1.2 Pumwani Context

The Pumwani-Majengo settlement is divided into 4 smaller settlements of Sofia, Mashimoni, Katanga and Digo. It has been partially upgraded, especially the Digo section, and was started in 1921 by the colonial government to serve as a camp for domestic workers of the colonial settlers. The land is privately owned having been allocated to different individuals shortly after independence. The majority of the owners however, do not possess any legal document to claim that they own the said parcels of land. Total land size is put at 25 acres according to cadastral survey data and about 95% of the main plots in the area that has not been upgraded are mud houses while all
pockets of previously idle land that was adjacent to the Sofia and Digo slum area have been redeveloped by construction of high-rises intended for identified beneficiaries in the housing project. The map of Pumwani-Majengo settlement is illustrated in Figure 3 below;

Figure 3: Map of Pumwani-Majengo Settlement
(Source: Field Survey, April 2014)

3.2 Climatology and Vegetation

The climate of Pumwani presents a microclimatology to what is experienced in the whole of Nairobi. The city of Nairobi lies roughly one third degrees south of the equator, in a region that would be expected to have an equatorial type of climate. But due to its altitude above sea level, the climate has been generally placed in the category of low latitude highlands. It can be generalized that Nairobi lies in an equatorial climate regime that has been modified by altitude and has small diurnal and annual ranges of temperatures. In Nairobi, the hottest month has a
daily mean temperature of 29°C while the coldest month has a daily mean maximum temperature of 12°C during the day as occasioned by the altitude of 5,000 to 6,000 feet above the sea level.

Rainfall is divided between two rainy seasons: the short rains fall in November and early December, and the long rains between April and mid - June. The neighbourhood’s annual average rainfall of is approximately 950 mm per annum. There are occasional heavy downpours which result in the housing along the open drains being flooded. Vegetation cover in Pumwani-Majengo is minimal owing to the densification of settlements that lead to clearing of natural vegetation and green spaces for construction purposes. The climate graph for Nairobi is presented in figure 4 below;

![Climate Graph for Nairobi, Kenya](image)

**Figure 4:** Climate Graph for Nairobi County (Altitude 1798M)


### 3.3 Geology and Soils

Pumwani area is covered by Nairobi phonolites of middle Pliocene period and is estimated to be over 5.2 million years old. The lava attained a thickness of 120 metres in some places and differs from the Nairobi phonolites. This is because it contains less conspicuous feldspar crystals and
smaller nephlines. Small flakes of biotites are sometimes present. Some of these rocks are not very old and have not undergone deep weathering, so the soil layer is very thin and the bedrock is very near the surface (Geological Society of Kenya, 2008). Nairobi phonolites have weathered to form black cotton soils which have very high clay content, which does not easily drain. These soils become very sticky during the rainy season, because of the fine particles. Thus during the rainy season accessibility in unpaved areas is difficult.

3.4 Drainage
Lack of facilities for draining of waste and storm water in Pumwani has resulted to intensive pollution of streams in the neighbourhood. Drainage is poor and limited to major roads and paths. The drainage system in the settlement comprises of shallow open natural drains and manmade drains which are often used as dumping points of solid waste and sludge.

3.5 Socio-Economic Characteristics

3.5.1 Land Ownership
Complications arising from tenure of the land for the project have hindered the processing of titles for the units. Whereas these issues could be addressed, different arms or the same government fail to agree on issues due to politics and sometimes self interests. The allocation of parts of the land to private developers attests to these self-interests. The land is historically owned by the Nairobi City Council but the central government maintains overall jurisdiction and is backed by law to compulsorily acquire any such land as it may deem fit in public interest.

3.5.2 Tenure System
NHC as the official implementer of the government policy on housing programs has been dependent on Government allocation of land for housing development. In all cases, where the Government either through the Lands Ministry or Local Authorities, has allocated land to the NHC, the same subsidies have been passed on to the purchasers (free of land alienation costs). The high-rise flats meant for the low-income families developed on the same are financed though the Tenant Purchase mode and are based on the Sectional Properties system of ownership.
In the Pumwani-Majengo project, a trust company was formed to manage the properties once repayments are completed over the 18 years loan period. Currently, even though the proposed site for the scheme had been allocated to the NHC, the Nairobi City Council (NCC) was agitating for compensation and became imperative that the National Government be prevailed upon to donate the land as part of its contribution to the project. The above was successfully achieved and the project duly implemented (National Housing Corporation, 2005).

3.5.3 Population Structure

The population of Majengo has grown rapidly and currently there are varying estimates of the exact population of the slum dwellers. Pumwani Division where Majengo informal settlement is located is one of the most densely populated areas in Nairobi City with a population density of about 20,000 people per square kilometer. Pumwani has an estimated population of 261,855 (Kenya National Housing and Population Census, 2009). The population structure of Pumwani-Majengo is illustrated in Table 1 below;

<table>
<thead>
<tr>
<th></th>
<th>MALES</th>
<th>FEMALES</th>
<th>TOTAL</th>
<th>HOUSEHOLDS</th>
<th>DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>103047</td>
<td>89828</td>
<td>192875</td>
<td>51146</td>
<td>92819</td>
</tr>
<tr>
<td>1999</td>
<td>127383</td>
<td>109018</td>
<td>236401</td>
<td>63066</td>
<td>137900</td>
</tr>
<tr>
<td>2009</td>
<td>136920</td>
<td>124935</td>
<td>261855</td>
<td>75555</td>
<td>216040.7</td>
</tr>
</tbody>
</table>

(Source: Kenya National Housing and Population Census, 2009)

3.5.4 Economic Activities

The area is rich with various informal economic activities including: food/ tea kiosks, illegal breweries, small shops, butchering, fish mongering, vegetable selling, waste recycling, curio production, carpentry, metal work, charcoal selling, tailoring, and shoe repairing among others. An average of one person per household is employed. The other population of adults is involved in small-scale businesses and/or informal employment in the nearby Gikomba market (Kenya National Bureau of Statistics, 2009).
CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1 Study Design

Research design can be defined as the arrangement of conditions for data collection and analysis to help in the interpretation of a given phenomenon or question at hand (Flyvbjerg, 2000). The study assumed a case study design combining both quantitative and qualitative methods which employed the following steps: Pre field work, Field work, Review of relevant documents, Data collection, Data analysis and interpretation. It sought to establish the effectiveness of slum upgrading and redevelopment programmes in promoting the concept of sustainable urban human settlements.

4.2 Nature and Sources of Data

4.2.1 Type of Data

Two types of data were collected that is, primary and secondary. The primary data was collected from the field and it gave first hand information about the extent to which slum upgrading and redevelopment in the study area had met its intended objectives.

Secondary data in form of documented information was sourced through archive retrieval of documents such as technical reports, literature review, city indices, fact data sheets, maps and development plans to give information about the demographic, socio-economic patterns, land use trends and other forms of spatial data like topographic maps. The nature of data collected and analyzed sought to address the stated objectives of the study as illustrated in Table 2 below;
### Table 2: Nature of Data Collected for each Objective

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Variables</th>
<th>Type of data</th>
<th>Sources of data</th>
<th>Data Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) To analyze the policy, legal and institutional framework governing</td>
<td>Relevance, strengths and weaknesses of existing:</td>
<td>Primary</td>
<td>Resource persons</td>
<td>Questionnaires</td>
</tr>
<tr>
<td>slum upgrading and redevelopment in Kenya’s informal settlements.</td>
<td>- Policy Framework</td>
<td>Secondary</td>
<td>Literature review</td>
<td>Interview Schedules</td>
</tr>
<tr>
<td></td>
<td>- Legal Framework</td>
<td></td>
<td>Document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Institutional Roles and Regulations</td>
<td></td>
<td>Referred publications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Integrated Land and Urban Sector Programmes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) To ascertain the extent and level of transition of the beneficiaries</td>
<td>Historical background of tenant/occupier in the redeveloped houses</td>
<td>Primary</td>
<td>Households</td>
<td>Questionnaires</td>
</tr>
<tr>
<td>from the slum to the new developed housing units in the Pumwani-Majengo</td>
<td>Tenancy status in redeveloped units i.e rental or owner occupier</td>
<td>Secondary</td>
<td>Resource persons</td>
<td>Interview Schedules</td>
</tr>
<tr>
<td>Project.</td>
<td>Physical size/extent of existing slum (increase or reduction in size of</td>
<td></td>
<td>Literature review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>slum settlements over time</td>
<td></td>
<td>Document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Referred publications</td>
<td></td>
</tr>
<tr>
<td>iii) To assess the adequacy and affordability of the housing typologies</td>
<td>Water supply and sanitation</td>
<td>Primary</td>
<td>Households</td>
<td>Questionnaires</td>
</tr>
<tr>
<td>implemented by developers in the Pumwani-Majengo Project, in relation to</td>
<td>Infrastructure/open spaces</td>
<td>Secondary</td>
<td>Resource persons</td>
<td>Interview schedules</td>
</tr>
<tr>
<td></td>
<td>Morbidity and circulation</td>
<td></td>
<td>Businesses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban services</td>
<td></td>
<td>Document review</td>
<td>Observation guides</td>
</tr>
<tr>
<td></td>
<td>Household sizes/incomes</td>
<td></td>
<td>Referred</td>
<td>Digital camera</td>
</tr>
</tbody>
</table>
## 4.2.2 Sources of Data

### a) Primary Sources of Data

Primary data sources included households, businesses and resource persons such as the District Commissioner, Chief County Engineer, Physical Planner, Public Health Officer, County Environment Officer and the Chief Architect at the National Housing Corporation among others. The above primary data was collected using questionnaires, interview schedules and observation guides in order to provide the baseline data for the research study in the field.

(Source: Author, 2014)

<table>
<thead>
<tr>
<th>the living styles of the beneficiaries.</th>
<th>Spatial layout/design of housing typology</th>
<th>Monthly payable rent/mortgage</th>
<th>Socio-economic activities of the beneficiaries</th>
<th>publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>iv) To investigate the perception of the beneficiaries towards the slum upgrading and redevelopment model/approach used in the Pumwani-Majengo Project.</td>
<td>Level of community participation</td>
<td>Security of tenure</td>
<td>House ownership/financing scheme</td>
<td>Mortgage repayment scheme/period</td>
</tr>
<tr>
<td>(Source: Author, 2014)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b) Secondary Sources of Data

Secondary data was obtained from various sources including reference books (published), information from government bodies such as relevant line ministries tasked with the responsibility of executing various government policies necessary in the planning and management of urban areas in Kenya, strategic annual and quarterly reports about Nairobi City and its planning frameworks on slum upgrading and redevelopment, relevant referenced publications, GIS generated Landsat TM 30 M, Ikonos 0.8 M and Worldview 2, 0.5 M Multispectral satellite images on slum cover changes in Pumwani-Majengo over time from the Regional Centre for Mapping of Resources for Development (RCMRD) and the Department of Resource Surveys and Remote Sensing (DRSRS), National Physical Development Plans and data from UN-Habitat.

4.3 Methods of Data Collection

4.3.1 Interviews

Interviews are conversations held with a purpose of gathering information. In order to fulfill the objectives of the study, primary data was collected from households, institutions and resource persons through interviews and questionnaires. Data collected included: sources of livelihood for the community, investment opportunities, threats to secure tenure, existing policies on housing and their implications, level of community participation and more as discussed under the nature and sources of data section.

4.3.2 Focused Group Discussion (FGD)

This was conducted with representatives of different Community Associations in Pumwani-Majengo settlement and the staff of relevant government departments as well as staff of NHC who are also the project developers in this research study.

4.3.3 Photography

Photographs were used to capture information which was then referred to during the analysis of data to provide useful visual interpretations of different phenomena encountered during the research study.
4.3.4 Document Review
Secondary data was mainly sourced through review of documents such as reports, projects, and books with information gathered being utilized during the study analysis.

4.4 Data Collection Instruments

4.4.1 Questionnaires
Household, business and institutional questionnaires were used to collect data. The purpose of the questionnaires was to gather views on the community’s perception about the whole process of slum upgrading and redevelopment in the study area and how it had affected their livelihoods.

4.4.2 Observation Guides
These were used to provide a guide on the elements to be observed. The purpose of the observation was primarily to add naturalistic depth to the interview, give first-hand situational accounts existing on the ground and to provide an internal validity check from a second source of ethnographic data for corroboration.

4.4.3 Interview Schedules
These were used to collect data from relevant institutions, key individual informants with specific knowledge on the project such as community leaders and also from key resource persons.

4.5 Target Population
The target population of this study comprised mainly the residents of households in the 4 smaller settlements of Pumwani-Majengo that together comprise the slum section of the study area namely; Sofia, Mashimoni, Katanga and Digo that have undergone partial upgrading together with the residents of the adjacent and fully redeveloped section of the study area comprising High rise flats. In addition, the study also targeted National Government Administrators, County Representatives, local area leaders, youth organizations, relevant NGOs/CBOs operating in the area and the business class.
4.6 Sample Size

The study population comprised of households, institutions, private businesses together with NGOs and local CBOs operating in Pumwani-Majengo settlement. The sample size of the study was determined by the following formula (Nassiuma, 2000 cited in Kenya Institute of Management, 2009).

\[
n = \frac{N C_v^2}{(C_v^2 + (N-1) e^2)}
\]

Where n= sample size
N=population (25,000)
Cv=Coefficient of variation (take 0.5)
e=Tolerance of desired level of confidence, take 0.05% at 95% confidence level

Based on the above formula and the indicated variables, the sample size n = 99.96 rounded off to 100. The study therefore gathered field data from 50 households (out of the more than 5,700 households), based on the criteria of housing typologies comprising existing slum dwellers who constituted 20 respondents from Katanga and Mashimoni settlements and High rise flat residents who constituted 30 respondents from Sofia and Digo areas. In addition 25 businesses were interviewed while relevant key institutions provided 15 respondents with NGOs, CBOs and the civil society providing 10 respondents.

4.7 Sampling Techniques and Procedures

The study employed both probability and non-probability sampling techniques as explained below;

4.7.2 Stratified Sampling

This method was employed to divide the population into two homogenous strata based on the criteria of housing typology. The two distinct sub-groups therefore consisted of the existing slum
dwelling housing typologies on one section of the settlement and the redeveloped Highrise housing typologies in the adjacent section of the Pumwani-Majengo settlement.

4.7.3 Systematic Random Sampling

This method was used in the identification of transects along the major roads in the Pumwani-Majengo settlement. After obtaining initial households to be sampled through simple random sampling, subsequent households were arrived at by use of the systematic sampling formula \( \frac{N}{n} \) where \( N \) represented the total number of households along the transect while \( n \) represented the number of questionnaires to be administered.

4.8 Non Probability Sampling Techniques

The study utilized the purposive/judgemental sampling method. This was used particularly when administering questionnaires to businesses and choosing institutions to be interviewed.

4.8.1 Purposive Sampling

Purposive sampling technique was used to select key informants who were believed to be resourceful by virtue of possessing information crucial to the achievement of the study objectives. This method was employed in the identification of the various interest groups for instance businesses and relevant institutions such as the National Housing Corporation (NHC), Kenya Slum Upgrading Programme (KENSUP), Kenya Informal Settlement Improvement Project (KISIP), UN-Habitat and other NGOs/CBOs in the study area.

4.9 Data Analysis and Presentation

Both SPSS and Excel spreadsheet softwares were used for the analysis. After obtaining the raw data set, it was sorted, edited, cleaned and coded. The open-ended questions were manually analyzed by grouping responses into similar themes, tallying them and obtaining frequencies by using excel spreadsheet. The closed-ended questions were appropriately coded and entered into the Statistical Package for Social Sciences Software (SPSS) Version 20.

The physical extent and changes to the slum area coverage variable on objective two was measured using satellite images processed through GIS. The land use and land cover data
required for analysis was obtained from Landsat 7 Thematic Mapper (TM), Ikonos and Worldview 2 satellite imagery. The images were selected at 10 years intervals from 1993, 2003 and 2013 on the basis of their availability and suitability. Data processing was carried out using ERDAS Imagine Version 9.1 while GIS analysis was done using ArcGIS 10.1. Landsat TM Images of 30 M resolution in addition to Ikonos and Worldview 2 high resolution satellite imagery with 0.8 M and 0.5 M, 8 band multispectral resolution was adequate for change detection of slum cover changes in Pumwani-Majengo over a 20 year period.

Data presentation was descriptive in nature and involved generating proportions and percentages which were then used to make general inferences and draw up logical conclusions. Data presentation was done through, pie charts, graphs and maps. Factors that were considered while selecting the appropriate statistical technique were based on a two set criterion that included the appropriateness of the technique to the research question and the characteristics of data.

4.10 Limitations of the Study

- Inaccessibility: Due to the precarious security situation experienced in the country at the time and alert warnings issued by foreign missions, institutions such as the UN-Complex were declared off-limits no non personnel. Questionnaires to UN-Habitat were therefore administered online.

- Legal Issues: Due to the sensitive nature and legal proceedings involved in the Pumwani-Majengo project, the developer was reluctant to comment on issues that were before a court of law. Questions touching on legal issues were agreed to be kept confidential and used for academic purposes only.

- Bureaucracy: Most government institutions proved difficult to secure interviews with senior personnel due to red tape and complex protocols. Arrangements were therefore made with the second most senior personnel for questionnaire administration.

- Inadequate technical information: Remote sensing data available from most organizations did not incorporate high resolution images for early years such as 1990s. Medium resolution images of were instead used to analyze data for the year 1993.
5.1 Policy, Legal and Institutional Framework Governing Slum Upgrading and Redevelopment in Kenya

5.1.1 Policy Framework

In Kenya, the government has since independence in 1963 put in place several initiatives meant to address challenges to provision of adequate housing. These include the drafting of Sessional Paper No. 5 on Housing Policy, the National Strategy for Shelter to the year 2000 and Legal Notice No. 98 on the establishment of Civil Servants Housing Scheme Fund. The government also established the National Housing Corporation in 1967 with the mandate of providing low cost housing for its citizens. According to the National Housing Corporation report of 2013, the corporation has since its inception delivered 43,000 units against an annual urban target of 150,000 units. The Housing Finance Company which was founded in 1965 has been offering mortgage facilities for prospective house owners albeit at repayment rates that are out of reach to most citizens.

5.1.1.1 Sessional Paper No. 5 of 1966/67

The first comprehensive Housing Policy for Kenya was developed in 1966/67 as Sessional Paper No. 5. At that time Kenya's population was just over 9 million people growing at a rate of 3 percent per annum for the whole country and 5 to 6 percent per annum in the urban areas. The annual housing requirements then were 7,600 and 38,000 new units in urban and rural areas respectively. The policy directed the Government "to provide the maximum number of people with adequate shelter and a healthy environment at the lowest possible cost". It advocated for slum clearance and encouraged mobilization of resources for housing development through aided self-help and co-operative efforts. Emphasis was placed on enhanced co-ordination to increase efficiency in programmes and projects preparation and increased research in locally available building materials and construction techniques to lower building costs. The Pumwani-Majengo housing project having been conceived in the 1980s was therefore contextualized and governed by this policy.
This policy’s highlight was that in its advocacy for slum clearance, the government resulted to forced mass eviction of slum dwellers without any negotiation or alternative solutions such as resettlement or compensation which was recognized by the United Nations as a gross violation of human rights. The main shortcoming to this approach is that it was never capable of reducing slums; but rather moved them somewhere else since the evictees usually found accommodation in other slums creating additional pressure to these areas or more often resulted to rebuilding in the outskirts of cities where no services or infrastructure were provided and far from their previous sources of livelihood. This eviction increased urban poverty due to the destruction of capital assets, vital sources of income, and precious links of solidarity and mutual assistance that had already been developed leading to the need to enact a more proactive housing policy.

5.1.1.2 The National Housing Policy of Kenya (Sessional Paper No.3 of 2004)

The National Housing Policy was enacted in the year 2004 to replace Sessional Paper No 5 of 1966/67 with its main objective being to arrest the deteriorating housing conditions countrywide and to bridge the shortfall in housing stock arising from demand that far surpasses supply, particularly in urban areas. The estimated current urban housing need is 150,000 units per year while the estimated current production of new housing in urban areas is only 20,000-30,000 units annually, giving a shortfall of over 120,000 units per annum. This shortfall in housing has been met through proliferation of squatter and informal settlements and overcrowding. The overall goal of the Housing Policy is to facilitate the provision of adequate shelter and a healthy living environment at an affordable cost to all socio-economic groups in Kenya in order to foster sustainable human settlements. The above is supposed to minimize the number of citizens living in shelters that are below the habitable living conditions and also curtail the mushrooming of slums and informal settlements especially in the major towns.

Section 30 states that upgrading of slum areas and informal settlements will be given high priority. It will be undertaken with minimal displacement to cater for proper planning and provision of necessary infrastructure and related services. Appropriate upgrading measures will be instituted for existing slum areas taking into account key upgrading components that cover security of land tenure, provision of basic infrastructural facilities and services, improvement of housing structure and the socio-economic status of the target community. Section 31 commits the
Government to streamline acquisition of land for housing the poor, adopt appropriate tenure systems, planning standards to suit given slum settlements and preventing unwarranted destruction of existing housing stock and displacement residents. Upgrading should be integrated to take into account socio-economic activities that improve livelihoods of target communities particularly employment creation and income-generating activities that address poverty alleviation should be enhanced.

Further, section 32 states that the Government will also facilitate slum upgrading through integrated institutional framework that accommodates participatory approaches involving relevant stakeholders, particularly the benefiting communities while enhancing coordination at national level. Upgrading will take into account factors of ownership of land and structures, age of settlement, and affordability. Appropriate compensation measures will be instituted for disposed persons where necessary. Finally section 33 states that in order to improve the living conditions of a large proportion of the populations in urban areas, appropriate slum upgrading measures will be instituted for each slum/informal settlement, taking into account the above main components and factors. To further address proliferation of slums and informal settlements, the Government will ensure supply of minimally developed but incrementally upgradable low-cost housing.

The study established that the enactment of the National Housing Policy of Kenya in 2004 marked the turning point in the quest to provide adequate and affordable urban housing to a majority of slum residents. The above is due to the fact that by having express provisions under which slum upgrading and redevelopment can be undertaken, massive flagship projects by the government through donor funding such as the Kenya Slum Upgrading Programme (KENSUP) and Kenya Informal Settlement Improvement Programme (KISIP) were instituted in 2004 and 2012 respectively. KENSUP has since seen massive slum upgrading projects undertaken in Kibera Soweto, Huruma, Korogocho and Mathare thereby promoting the provision of sustainable urban human settlements in Nairobi.
5.1.1.3 Draft National Urban Development Policy (2012)

The draft national urban development policy’s vision is to have secure, well governed, competitive and sustainable urban areas and cities that contribute to the realisation of the broader national development goals articulated in the Constitution of Kenya 2010 and Vision 2030. Its mission is to facilitate sustainable urbanisation through good governance and delivery of accessible and efficient infrastructure and services while the overall objective of the Policy is to provide a framework for sustainable urban development in Kenya for the benefit of all. Chapter 9 on urban housing infrastructure states that urban housing infrastructure consists of on-site physical and social infrastructure, distinct from town-wide trunk infrastructure. This includes energy, water supply and sanitation, storm water drainage, solid and other waste management, and transportation systems. Provision of infrastructure is most critical in new sites where its absence has been cited as hindering private initiatives in housing delivery. The policy recognizes that virtually all urban authorities have failed in the provision of adequate infrastructure and its maintenance because of poor planning and lack of financial and managerial capacities.

To ensure that adequate housing infrastructure is available, the policy tasks both the National and County governments to:

a) Build the institutional and financial capacity of urban authorities to provide and maintain housing infrastructure;
b) Increase public budget allocations for housing infrastructure; Ensure that housing infrastructure is part of the housing development;
c) Provide appropriate fiscal incentives to encourage the private sector to provide housing infrastructure;
d) Use legislation, such as the Streets Adoption Act, to support the provision of housing infrastructure;
e) Promote pro-poor pricing of infrastructure and services in housing;
f) Adopt green concept in the development of housing infrastructure; and,
g) Emphasize the development of sustainable housing infrastructure including rain water harvesting and the reduction of energy consumption in houses.
The study found out that most institutions concerned with housing development through slum upgrading and redevelopment appreciate the enactment of the Draft National Urban Development Policy pointing out its ability to streamline urban planning and ensure uniformity in terms of building standards in all the cities in Kenya. The policy is also crucial to the success of housing projects since it has express provisions that make it mandatory for the National and County governments to work together in promoting low-cost housing programmes in urban areas. Following the development of this policy, several slum areas in the major cities of Nairobi, Mombasa and Kisumu have been earmarked for upgrading and redevelopment by the Ministry of Lands, Housing and Urban development in the 2014/2015 financial year.

5.1.1.4 Vision 2030

The 2030 vision for housing and urbanization is an adequately and decently housed nation in a sustainable and all inclusive environment. The goal for 2012 was to increase the annual production of housing units from the current 35,000 annually to over 200,000. The blueprint recognizes that Kenya's cities and towns are poorly planned and there is an acute need therefore for an effective capacity for regional and urban development planning. In addition, it envisages better development of and access to affordable and adequate housing; enhanced access to adequate finance for developers and buyers, and undertakes to pursue targeted key reforms to unlock the potential of the housing sector.

Under strategies and goals for housing and urbanization, planning and management of both rural and urban development is critical to the overall realization of Vision 2030. The projects considered as the principle vehicles for achieving housing and urbanization targets in the short term include;

- Installing physical and social infrastructure in slums in 20 urban areas to formalize slums, permit construction of permanent houses and attract private investment;
- Producing 200,000 housing units annually through a mixture of initiatives in order to fill the huge housing gap in the country (e.g. build/enhance capacity in local authorities to provide serviced land; and/or to produce low-cost housing);
- Establishing housing technology centres in each constituency to increase access to decent housing by promoting location-specific building materials and low-cost housing;
- Establishing a secondary mortgage finance corporation to increase access to housing finance; and
- Enacting the Housing Bill, 2006 to legislate for a one-stop housing development approvals mechanism to fast-track approval of housing plans and reduce the time cost of construction.

The study established that provisions of Vision 2030 can be very effective in promoting the concept of sustainable urban human settlements if implemented by various actors in the housing sector. Through advocating for capacity building in Kenya’s urban planning departments, capacity development for the building industry, promoting access to housing finance, legislative, institutional and regulatory reforms and promoting low-cost housing, vision 2030 provides an avenue for sustainable urbanization through slum upgrading and redevelopment.

5.1.2 Legal Framework

5.1.2.1 Constitution of Kenya (2010)

According to the Constitution of Kenya (2010), the right to housing is a constitutional right provided for in the Bill of Rights. Section 43 (1) (b) of the constitution provides that every person has the right to accessible and adequate housing and reasonable standard of sanitation. Legislation on strategies for achieving this right is however not clearly spelt out and housing developers and stakeholders therefore have to rely on sectoral pieces of related policies and laws in order to provide housing. The housing gap is an indicator of inadequate policy, legal and programme interventions necessary to achieve access to adequate shelter. The study established that despite the Constitution lacking express provisions that touch on slum upgrading and redevelopment, its affirmation on citizens right to adequate housing and sanitation in the bill of rights is in itself a proclamation towards promoting the concept sustainable human settlements.

5.1.2.2 Environmental Management and Coordination Act (1999)

Section 4 of EMCA, (1999) stipulates that every Kenyan citizen has a right to a clean and healthy environment while section requires that every development project likely to have adverse impacts on the environment be subjected to an Environmental Impact Assessment. The EIA is
conceived as an important environmental management tool that ensures sustainable use of the living environment for posterity. EMCA, (1999) stipulates penalties for project developers who do not comply with the above requirements before project commencement. EMCA (1999) also requires annual environmental audits to address impacts identified during the environmental impact assessment and all emerging issues. The most important output of the EIA process is the development of Environmental Management Plans that detail how each impact predicted likely to occur during the project life cycle will be mitigated and the environment restored. Projects likely to result into irreversible damage to the environment cannot be licensed to be implemented in any circumstances.

The study established that EMCA, (1999) affects slum upgrading and redevelopment in a major way since it is usually a tedious but important requirement that all housing developers must undertake before commencing projects. Its provisions on the need for a clean and healthy environment also provide the justification of improving housing conditions in existing slums through slum upgrading and redevelopment. As an entry point to promoting sustainable urban human settlements in Kenya, EMCA, (1999) has been cited by housing developers as the most proactive piece of legislation that guided the housing sector prior to the enactment of the built environmental bill in 2011.

5.1.2.3 The Housing Act (1990 Revised 2012)

The Act makes the operations of the National Housing Corporation (NHC) acquire legal mandate to provide affordable housing to households. In particular section 6 article 1 establishes the Housing Fund and Section 7 article 1 (b) mandates NHC to, from the Housing Fund, make loans to any company, society or individual person for the purposes of enabling that company, society or individual to acquire land and construct thereon approved dwellings or to carry out approved schemes. NHC is also empowered by the same article to construct dwellings, carry out approved schemes and layout and provide services for approved schemes. The study found out that the National Housing Corporation established by an Act of parliament in 1967 with the mandate of providing low cost housing for its citizens has primarily relied on this legislation to carry out its mandate. In relation to promoting sustainable urban human settlements in Kenya, the study established that the corporation has since its inception delivered 43,000 units against an annual
urban target of 150,000 units with most of them being highrise low cost housing units developed through slum redevelopment.

5.1.2.4 Urban Areas and Cities Act (2011)

The above law is an ACT of Parliament meant to give effect to Article 184 of the Constitution in order to provide for the classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas and to provide for the principle of governance and participation of residents and for connected purposes. The objects and purposes of this Act are to establish a legislative framework for (a) classification of areas as urban areas or cities; (b) governance and management of urban areas and cities; (c) participation by the residents in the governance of urban areas and cities; and (d) other matters for the attainment of the objects provided for in paragraphs (a) to (c). The study established a direct linkage between this legislation and slum upgrading and redevelopment programmes through the development of integrated urban area municipal development plans in accordance with the Third Schedule of the Act that outline how slums as illegal settlements should be gradually phased out in the pursuit of having viable cities. Alternative housing methodologies are proposed in this regard thereby lending importance to slum upgrading and redevelopment as critical intervention measures to sustainable urban settlement provision.

5.1.2.5 County Government Act (2012)

The County Government Act outlines the following types of plans that should be prepared in urban areas; (a) City or municipal land use plans; (b) City or municipal building and zoning plans; (c) City or urban area building and zoning plans; (d) location of recreational areas and public facilities. It further outlines that city or municipal plans shall be the instrument for development facilitation and development control within the respective city or municipality in terms of housing provision and shall provide for; (a) functions and principles of land use and building plans; (b) location of various types of infrastructure within the city or municipality; (c) development control in the city or municipality within the national housing and building code framework. City or municipal land use and building plans shall be binding on all public entities and private citizens operating within the particular city or municipality and the regulatory instruments for guiding and facilitating development within the particular city or municipality.
5.1.2.6 The Physical Planning Act (1996)

The Physical Planning Act, Cap 286 of 1996 provides for the preparation of local physical development plans under section 16. The plans are supposed to coordinate the development of regions for the purpose of proper physical development of land, and securing suitable provision for transportation, public purposes, utilities and services, commercial, industrial, residential and recreational areas, including parks, open spaces and reserves. Section 29 of this Act gives authority to local authorities to prohibit or control the use and development of land and buildings in the interests of proper and orderly development of its area; and to consider and approve all development applications and grant all development permissions. Section 33 (1) grants the local authority powers to grant permission for development, or refuse to grant permission to an application under Section 31, depending on whether the application of the development satisfies the regulations set for development or not.

The Physical Planning Act is therefore a set of gazetted rules and regulations that guide the standardization of physical planning process and practice. The preparation of these plans needs to be guided by a handbook that spells out, guidelines, methodologies, standards and planning considerations. The study established that the physical planning acts’ strict requirements coupled with the existence of an even stricter building code, have resulted in high costs being incurred by housing developers resulting in these extra costs being transferred to beneficiaries. The above has had the effect of converting low cost housing units developed through slum upgrading and redevelopment into relatively high cost housing that are above what the beneficiaries’ can afford.

A case in point is the Pumwani-Majengo Phase II highrise units that have seen costs related to an increase in the price of building materials being passed on to beneficiaries leading to rents that are way above their monthly earnings. The result has been constant defaulting in rent payments and accruing arrears that has led to the imminent threat of being evicted imminent.

5.1.3 Institutional Framework

5.1.3.1 National Housing Corporation

The National Housing Corporation (NHC) is a statutory body established by an Act of Parliament Cap 117 as was amended in 1967. The primary mandate of NHC is to play a
principal role in the implementation of the Government’s Housing Policies and Programmes. The Corporation Board of Directors consists of the Permanent Secretary, Ministry of Housing and Permanent Secretary, Ministry of Finance and others appointed by the Minister of Housing.

The National Housing Corporation (NHC) has its origins in 1953 when the Colonial Government of Kenya created a Central Housing Board through the Housing Ordinance. The Board was the principal medium through which the colonial Government could promote the development of houses for Africans. In 1959, the Board’s activities were extended beyond the promotion of African housing in order to cater for Europeans and Asians. In 1965, the Board decided to undertake direct construction of dwelling in areas where Local Authorities were unable or unwilling to do so. In the same year through an amendment of Housing Ordinance of 1953, National Housing Corporation (NHC) was established thereby replacing the Central Housing Board.

The Corporation was mandated to continue the functions of the Board, with wider powers to promote low-cost houses through clearing slums and redeveloping overcrowded areas, stimulate the building industry and encourage/assist housing research. The NHC became the Government's main agency through which public funds for low cost housing would be channeled to Local Authorities, and for providing the technical assistance needed by those authorities in the design and implementation of their housing schemes.

The study established that the Corporation has assisted Citizens and Local Authorities in building decent affordable houses through its various schemes such as Tenant Purchase, Outright Sale, Rural and Peri-Urban Housing Loans and Rental Housing. The corporation has since its inception delivered 43,000 units against an annual urban target of 150,000 units and therefore remains the sole avenue through which the imbalance currently existing in housing demand vis a vis supply can be bridged nationally and targets set out in both MDG 7 and Vision 2030 achieved in the medium and long term.
5.1.3.2 Housing Finance Company of Kenya

Housing Finance Company of Kenya, whose official name is Housing Finance Company Limited, but is also known as Housing Finance (HF), is a mortgage finance provider for low cost housing programmes. The company is the only mortgage company regulated by the Central Bank of Kenya, the national banking regulator. The company was established in November 1965, to promote a savings culture and home ownership among the citizens of newly independent Kenya. Major investors in the company included the Commonwealth Development Corporation (CDC), whose shareholding at one time was as high as 60%, and the Government of Kenya, which at one time owned 50% of the company. CDC has since divested from Housing Finance Limited and the Kenyan Government has substantially reduced its shareholding.

In 1992 Housing Finance Company of Kenya became listed on the Nairobi Stock Exchange, where its shares of stock are traded under the symbol HOUS. The company adopted the shorter name of Housing Finance Limited, in 2002. In 2010, the Central Bank of Kenya authorized HFL to issue and operate checking accounts; having been authorized to issue and operate savings accounts in the past.

The study established that Housing Finance Limited is a large financial regulatory framework through which the Government serves the mortgage needs of the Kenyan population. As of June 2010, the company's gross mortgage loan portfolio stood at over US$212 million, representing approximately 35% of all mortgages in Kenya, by value. On 25 October 2010, the company's market capitalization was estimated at over US$845 million. As regards low cost housing finance, the study established that the HFL has been offering mortgage facilities for prospective house owners and massive slum redevelopment programmes albeit at repayment rates that are out of reach for most citizens hence hindering Kenya’s objective of providing adequate and affordable shelter to all its citizens.

5.1.3.3 United Nations Human Settlements Programme (UN-Habitat)

UN-Habitat is a global agency under the umbrella body of the United Nations tasked with the unique position of supporting urban development and the planning and building of a better urban
future for next generations. This key process supports economic growth and social development, and reduces poverty and inequalities. UN-Habitat’s priorities are focused on seven areas:

- Urban Legislation, Land and Governance
- Urban Planning and Design
- Urban Economy
- Urban Basic Services
- Housing and Slum Upgrading
- Risk Reduction and Rehabilitation
- Urban Research and Capacity Development

The study established that UN-Habitat is one of the key partners of the Kenya Slum Upgrading Programme (KENSUP) which was initiated in 2001 by the Government of Kenya (GoK). KENSUP is complemented and supplemented by UN-Habitat through cooperation outlined in a Memorandum of Understanding and existing project documents. Slum upgrading and redevelopment projects under KENSUP/UN-Habitat MOU are taking place in Nairobi, Kismu, Mavoko, Mombasa and Thika with positive results being realized in promoting sustainable human settlements to urban dwellers.

5.1.3.4 Shelter Afrique

Shelter Afrique is a pan African Housing Finance institution that offers housing finance coupled with practical advice and assistance to developers and housing finance institutions in efforts to promote development of both residential and commercial housing in Africa. Shelter Afrique has been in the business since 1984 and therefore boasts of a huge reservoir of experience gathered over the years in the development of housing in 43 member countries across the continent. The products and services offered by Shelter Afrique include:

- Construction Finance
- Lines of Credit to financial institutions
- Trade Finance
- Equity Finance/ Joint Ventures
The study established that the institution has predominantly been offering debt financing in form of Project Loans to developers and Lines of Credit to other financial intermediaries that provide mortgages to the end-users. The company is also involved in equity financing which allows it to identify various developers for possible housing development joint ventures or buy stake in housing development vehicles such as financial institutions that seek to promote housing in the continent. In the Kenyan context however, the company has mostly concentrated its financing/joint venture partnership with private housing developers in the middle to high income bracket thereby neglecting the low income housing market/segment where slum upgrading and redevelopment projects are based.

5.1.3.5 The Kenya Slum Upgrading Programme (KENSUP)

The Kenya Slum Upgrading Programme (KENSUP) is a collaborative initiative that draws on the expertise of a wide variety of partners in order to redress the issue of slums. The Government of Kenya executes and manages the programme while the Ministry of Housing and the relevant local authorities such as the National Housing Corporation implement it. Civil society partners, participating local communities and the private sector complement and support their efforts. KENSUP’s aim is to improve the livelihoods of people living and working in slums and informal settlements in the urban areas of Kenya through the provision of security of tenure and physical and social infrastructure as well as providing opportunities for housing improvement and income generation. Implementation is underway in all provincial headquarter Kenyan cities/towns. The Government plans to expand the programme to other areas. This programme covers selected urban slums beginning with those in Nairobi, Mavoko, Mombasa and Kisumu. It targets all provincial headquarters and secondary towns with a population of 20,000.

The main principles of KENSUP are decentralization, sustainability, democratization and empowerment, transparency and accountability, resource mobilization, secure tenure, expansion and up-scaling, partnerships and networking. With regard to the institutional set-up, there is a Settlement Executive Committee (SEC) composed of people from the community where the government is operating. SEC is the main driver of this programme since the government wants the people to know what it is deciding. Other institutional aspects of KENSUP include the:
To achieve its goal and objectives, KENSUP has adopted the following strategic interventions:

- Community organization and mobilization;
- Shelter improvement: providing security of tenure or residential security, housing development and improvement;
- Preparation of city/town development strategic and land use master plans;
- Provision of physical infrastructure: sewerage system, water supply and sanitation, access roads, storm water drainage, electricity and street lighting;
- Provision of social infrastructure: schools, health centres, community centres and recreational facilities;
- Environmental and solid waste management: building garbage collection and treatment system;
- Employment and income generation: markets, skills enhancement, micro-financing and credit systems;
- Addressing issues of HIV/AIDS: HIV education and awareness, counseling and testing centres, HIV dedicated clinics;
- Conflict prevention and management in the targeted informal settlements and
- Prevention of proliferation of slums.

5.1.3.6 Kenya Informal Settlement Improvement Project (KISIP)

The Kenya Informal Settlement Improvement Project (KISIP) is a new initiative started by the Government in collaboration with the World Bank, Swedish International Development Agency (SIDA) and the French Agency for Development (AFD). KISIP will focus on improving living conditions in existing informal settlements by investing in infrastructure and strengthening tenure security. It will also support the Government of Kenya (government counterpart funding is 10%) in planning for future urban growth in a manner that prevents the emergence of new
slums. KISIP will be implemented in 15 municipalities within five years from June 2011 at a cost of USD 165 million.

The project comprises four components namely:

*Institutional strengthening and programme management of the Ministry of Lands and Housing and the participating Local Authorities* (LAs): the Government does not take this aspect for granted but seeks to strengthen its own capacity.

*Enhancing tenure security:* This involves planning, surveying and issuance of titles. Several activities that will be undertaken under this component include preparation of guidelines for informal settlements, establishing databases on land tenure, community organization and mobilization, preparation of development plans including determination of settlement boundaries, detailed mapping, identification and verification of beneficiaries based on agreed eligibility criteria, preparation of local physical development plans, issuance of letters of allotment to households/groups, surveying of individual plots and preparation of registry index maps, registration and issuance of titles to households or groups. The government would like to have a model/guideline for informal settlements whereby the identification will be mostly done by the community. Some require group titles while others need individual titles. The government would like to do the mapping and provide secure tenure.

*Investing in infrastructure and service delivery:* The Government will invest in roads, bicycle paths, pedestrian walkways, street and security lights, waste management, water drainage, sanitation, green space and platforms in the informal settlement spaces. KENSUP will work on the housing whereas KISIP will deal mainly with this infrastructure.

*Planning for urban growth:* Lack of adequate planning is a challenge. Through this component, the Government will provide technical assistance to the municipalities. The goal of this initiative is to take measures that will reduce or prevent slums thereby promoting the principle of adequate and affordable housing in Kenya’s urban settlements. In this regard, strategic partnerships with stakeholders to meet the required targets for wide scale project implementation are essential.
5.2 Extent of Project Objective Achievement on Transition Rates

5.2.1 Tenancy Status in Redeveloped Units

The study established that the project implementer (National Housing Corporation) has to a large extent managed to foster transition of beneficiaries earmarked in phase I and II of the Pumwani-Majengo housing project from the slums to the redeveloped housing units. 78 percent of respondents interviewed asserted that they were the original beneficiaries of the redevelopment project and had migrated from the slums to their current abodes while only 22 percent of interviewed respondents occupying the houses were not the original intended beneficiaries of the project. The above is illustrated in figure 5 below;

![Figure 5: Percentage of Original Beneficiaries benefitting from the Redevelopment Project](image)

Figure 5: Percentage of Original Beneficiaries benefitting from the Redevelopment Project
(Source: Field Survey, April 2014)

A further breakdown of the above established that a majority, 76 percent of the above respondents were residing in the housing units allocated to them by the project developer as owner-occupiers, 20 percent had opted to rent out their units and revert back to the slum area while 4 percent were intended beneficiaries putting up with relatives in the Highrises while
waiting for their own units to be constructed in the pending and delayed Phase III of the redevelopment project. This is illustrated in figure 6 below;

![Tenancy Status in Redeveloped Units](image)

**Figure 6: Tenancy Status in the Redeveloped Units**

*(Source: Field Survey, April 2014)*

The study further revealed that a majority of beneficiaries (58 percent) who had opted to rent the housing units and revert to the slum were from Phase II of the redevelopment project and they cited inability to pay rent as being the major reason for doing so. Rent disparities between Phase I housing scheme residents who pay 1700 Ksh and Phase II residents who pay 11,000 Ksh is attributable to lack of participation by beneficiaries in the lease agreement preparation and an oversight by the project developer to carry out a new socio-economic survey of the project beneficiaries. 32 percent of respondents cited unaffordable monthly living expenses in terms of water, electricity and sanitation service charge as their reason for moving back to the slums, 8 percent stated their desire to protect their properties left in the slum while continuing to benefit from rents charged on Highrise tenants while 2 percent cited inadequacy of the living space to comfortably accommodate their family sizes as the reasons for reverting back to the slum area. The following is best illustrated in figure 7 below;
Figure 7: Reasons for Renting Houses and Reverting to Slum

(Source: Field Study, April 2014)

5.2.2 Changes in Physical Extent of Slum Area Coverage

The study established that there has been a gradual increase in the size of the Pumwani-Majengo slum settlement over time. This was ascertained using time series analysis covering a 20 year period through GIS analysis of high resolution remote sensing images from which maps were generated. It is imperative to note that despite the project having relatively succeeded in fostering transfer of beneficiaries from the slums to the redeveloped units; the same has only managed to lift a small proportion of the slum population out of extreme poverty resulting in the slum growth rates continuing to be positive. The following is illustrated in table 3 below.

Table 3: Changes in Slum Area Coverage in Pumwani-Majengo (1993-2013)

<table>
<thead>
<tr>
<th>Year</th>
<th>1993</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slum Area Coverage (sq m)</td>
<td>417,700</td>
<td>573,000</td>
<td>649,000</td>
</tr>
</tbody>
</table>

(Source: Field Study, 2014)
The above changes in the physical extent of slum area coverage done through GIS analysis are illustrated by maps beginning with figure 8 below showing slum area coverage as at 1993;

**Figure 8: GIS Map of Pumwani-Majengo Slum Settlement in 1993**

(Source: *Field Study, April 2014*)

The above GIS map was generated using Landsat Thematic Mapper™ satellite images of 30 M medium resolution Multispectral Band that was pan sharpened to 15 M resolution for clarity. The Red, Green, Blue (RGB) spectral combination was preferred due to its convenience in the analysis of land use and land cover changes on the earth’s surface. The physical size of the slum area coverage calculated using Arc Map showed that the Pumwani-Majengo slum area measured approximately 417,700 Sq M in the year 1993.
Figure 9 below shows the extent of the Pumwani-Majengo slum area coverage in the year 2003 after a 10 year interval;

**Figure 9: GIS Map of Pumwani-Majengo Slum Settlement in 2003**
(Source: *Field Study, April 2014*)

The above GIS map was generated using Ikonos satellite images of 0.82 M very high resolution Multispectral Bands. The physical size of the slum area coverage calculated using Arc Map showed that the Pumwani-Majengo slum area measured approximately 573,000 Sq M in 2003 representing a major change by an increase of 155,300 Sq M within 10 years. The above symbolizes the failure by the redevelopment project to tackle the problem posed by slums since instead of leading to their gradual disappearance, they are getting bigger. This situation also runs counter to the concept of promoting sustainable urban human settlements and negates Kenya’s
progress towards achieving targets set in MDG 7 targets 10 and 11 and those of Vision 2030 on Housing and Urbanization.

Figure 10 below shows the extent of the Pumwani-Majengo slum area coverage in the year 2013 after another 10 year interval;

![GIS Map of Pumwani-Majengo Slum Settlement in 2013](image)

**Figure 10: GIS Map of Pumwani-Majengo Slum Settlement in 2013**
(Source: *Field Study, April 2014*)

The above GIS map was generated using Worldview II satellite images of 0.5 M very high resolution Multispectral Bands. The physical size of the slum area coverage calculated using Arc Map showed that the Pumwani-Majengo slum area measured approximately 649, 000 Sq M in 2013 representing change by an increase of 76, 000 Sq M since 2003 and a massive 231, 300 Sq
M from 1993. The study therefore observed that the desire of achieving MDG 7 targets 10 and 11 in Kenya through provision of sustainable urban settlements remains elusive.

5.2.3 Change Detection Analysis

Through digital segmentation, the study found out that most of the physical changes in the extent of the Pumwani-Majengo slum area coverage were as a result of encroachment onto previously open and green spaces that had been converted into slums through densification of informal settlements owing to population increase. The following is illustrated in figure 11 below;

Figure 11: GIS Map of Pumwani-Majengo showing Open and Green Spaces in 2003
(Source: Field Study, April 2014)
A comparative analysis of the above 2003 digital image with the one below for the year 2013 shows the above highlighted open and green spaces having been converted into slums with the exception of the area used to construct the Phase II housing units of the Redevelopment Project. The following is best illustrated in figure 12 below:

![GIS Map of Pumwani-Majengo showing converted Open and Green Spaces in 2013](image)

(Source: Field Study, April 2014)

The study also noted that the above changes have come at a great expense to the environment and negated the principle of MDG 7 as far as ensuring environmental sustainability is concerned. Promoting sustainable human settlements in Pumwani-Majengo was found to be far from being realized in the short to medium term planning facet.
5.3 Adequacy and Affordability of the Housing Typologies Implemented by the Project Developer

5.3.1 Adequacy of Housing Typologies

The study established that the housing typologies consisting of two rooms were not spatially adequate to accommodate the family sizes of most beneficiaries. This is due to the fact that majority (80 percent) of the residents in the Pumwani-Majengo settlement are from the Muslim community and practice polygamy with most of them having between 3-4 wives and an average of 7 children per household. Therefore, using the UN-Habitat benchmark that defines adequate housing as a situation whereby not more than 3 people share the same room; it became apparent that the housing sizes were inadequate. The above was further corroborated by the respondents who echoed similar sentiments as illustrated in figure 13 below;

![Pie Chart](image.png)

**Figure 13: Adequacy of the Number and Size of Rooms in the Housing Unit**

(Source: *Field Study, April 2014*)

The study also found out that the above inadequacies have led to adoption of coping mechanisms involving beneficiaries converting sections of the living room space into a semi-bedroom as shown in plate 1 below;
Plate 1: Picture showing Converted Living Space into a Semi-Bedroom
(Source: Field Study, April 2014)

However, in contrast to the above sentiments on unit size most of the residents appreciated the architectural design implemented by the developer in the project. They pointed out the convenience of separating the rooms by a corridor and placing them on adjacent angles with different access points as being very strategic especially to those who have opted to rent a room in order to supplement their income levels and raise the rents charged by the developer. The above is shown in plate 2 below;

Plate 2: Picture showing Main Corridor Separating Room Entrances in Highrise
(Source: Field Study, April 2014)

The above scenario has resulted in harmonious co-existence between beneficiaries on the one hand and their rental tenants occupying rooms within their allocated units.
The study established that a majority of beneficiaries (76 percent) considered the spatial layout/design of the housing typologies to be adequate in relation to their living styles while only a minority (24 percent) considered them inadequate. Those who considered them inadequate were big polygamous families consisting of more than seven children and therefore had to share room amongst children and parents. The above is illustrated in figure 14 below;

**Figure 14: Adequacy of the Spatial Layout/Design of Housing Typologies to Living Styles of Beneficiaries**
(Source: Field Study, April 2014)

In addition to the spatial and structural design contexts of the housing typologies, the study also revealed that a majority of the beneficiaries were disenfranchised with the state of urban service provision of water and sanitation. They pointed out that the provision of water was poor and they had to rely on buying it from water vendors while sanitation facilities and collection services was non-existent leading to garbage being dumped everywhere. In addition sewers are broken down posing a major health hazard to the Pumwani-Majengo Highrise community as well as drainage channels being blocked leading to storm water stagnating within the living quarters. The following is illustrated in figure 15 below;
Figure 15: Situation of Water Demand and Supply and Sanitation Facilities
(Source: Field Study, April 2014)

The poor water demand and supply situation in Pumwani-Majengo Highrise settlement is also evidenced by plate 3 below;

Plate 3: Picture showing Water Vendors Supplying Residents in the Highrises
(Source: Field Study, April 2014)
The poor situation of sanitation facilities in Pumwani-Majengo Highrise settlement is best illustrated by plates 4 and 5 below;

Plate 4: Picture showing Garbage Dumped by the Roadside in Highrise Area
(Source: Field Study, April 2014)

Plate 5: Picture showing Burst/Clogged Sewer Lines posing Health Hazards to Residents
(Source: Field Study, April 2014)

Further the study also found out that the existing situation of infrastructure such as street lights, open spaces, mobility and circulation and emergency services including fire escapes and water hydrants were inadequate in redeveloped area. This not only dents the image of the redevelopment project but injures its credibility in terms of its ability to offer adequate housing to beneficiaries.
5.3.2 Affordability of Housing Typologies

In terms of affordability of the housing typologies by the beneficiaries, the study found out that the project implementers (NHC) transfers legal ownership of the redeveloped housing units to the beneficiaries through a tenant purchasing agreement scheme whereby monthly rents of specified amounts are paid over a stipulated period time period ranging from 15-20 years as outlined in the lease agreements. The study established that a majority of the beneficiaries of Phase I redevelopment scheme implemented in between 1987-1989 and commissioned in 1992 consider the initial chargeable rents of Ksh 1700 later increased to Ksh 2000 affordable. However all residents of Phase II redevelopment scheme consider the monthly rent of Ksh 11,000 unaffordable taking into account their socio-economic situation. The above is illustrated in figure 16 below;

![Are the Rents/Payment Instalment Rates Affordable](chart)

**Figure 16: Affordability of Rents/Payment Installments Rates of Housing Units**

(Source: *Field Study, April 2014*)

The above situation was also highlighted by further findings that revealed that a vast majority of the beneficiaries are yet to finish paying the full principal amount charged for the housing units and as such do not claim legal ownership of the houses they occupy since they do not possess
allotment letters or title deeds to the housing units. The tenant purchase scheme implemented in the housing project states that the legal title deed/allotment letter to the housing unit shall remain the sole property of the housing developer (NHC) until such a time when the beneficiaries have finished paying the full amount stated in the lease agreement. The study established that given the prevailing hard economic conditions being experienced in the country, the situation has resulted in beneficiaries losing hope in ever becoming the eventual home owners. The above is illustrated in figure 17 below;

Figure 17: Possessor of the Allotment Letter/Title Deed to the Housing Unit
(Source: Field Study, April 2014)

The study revealed that the above situation is attributed to an omission by the project developer to factor in aspects of the socio-economic activities and monthly incomes of the beneficiaries most of whom engage in small scale businesses and non-formal skilled employment that earns most of them less than Ksh 10,000 monthly. Coupled with the increasing cost of living being experienced in the country, it becomes rather impractical by the housing developer to charge monthly rents as high as 11,000. An analysis of the main occupation of the beneficiaries allocated housing units in the Pumwani-Majengo project is illustrated in figure 18 below;
Figure 18: Main Occupation of Beneficiaries
(Source: Field Study, April 2014)

Further the study was able to dissect the above occupations of beneficiaries as being mainly centred on food and vegetable vending in the open air within the Highrise area, selling of groceries in kiosks and tailoring as illustrated in plates 6 and 7 below;

Plate 6: Picture showing Food and Vegetable Vending Businesses within the Highrise
(Source: Field Study, April 2014)
Plate 7: Picture showing Kiosk Businesses within the Highrise
(Source: *Field Study, April 2014*)

An analysis of the monthly incomes of beneficiaries allocated housing units in the Pumwani-Majengo project is illustrated in figure 19 below:

![Bar Chart: Monthly Income of Beneficiaries (Ksh)](chart.png)

**Figure 19: Monthly Income of Beneficiaries**
(Source: *Field Study, April 2014*)
5.4 Beneficiaries’ Perceptions towards the Slum Redevelopment Project Approach

5.4.1 Perception on Benefits/Disadvantages of Redevelopment Programme

The study established that whereas a majority of beneficiaries (48%) perceived the slum redevelopment programme implemented in Pumwani-Majengo as having led to improved living standards, a significant number (36%) cited it as having resulted in financial burdens and strains on their livelihoods due to overbearing costs of housing unit maintenance and the ever increasing costs of modern lifestyles. Further, (6%) of the beneficiaries perceived the project as having led to a reduction in insecurity and crime levels while (10%) perceived it as having led to mental and emotional stress due to uncertainty over their future owing to the high rate of arrears charged on rent defaulters and the impending eviction notices served on them by the National Housing Corporation. The above is illustrated in figure 20 below;

Figure 20: Benefits/Disadvantages of the Slum Redevelopment Project
(Source: Field Study, April 2014)
5.4.2 Perception on Security of Tenure

On beneficiaries’ perceptions towards security of tenure offered by the housing scheme implemented by the developer, a majority of the beneficiaries (86%) were not satisfied since even most of those who benefitted from Phase I scheme in 1992 and have completed paying the principal amount charged through the tenant-purchase agreement are yet to get the allotment letters and are instead being charged overdue arrears whose origins they do not understand. Phase II residents on the other hand are facing imminent eviction due to default arrears amounting to 998,000 shillings less the principal sum of 1.2 Million Ksh charged through the same financing scheme. This is illustrated in figure 21 below;

![Contentment with the Tenure Security offered by the Slum Redevelopment Project](source: Field Study, April 2014)

5.4.3 Perception on Improved Investment/ Socio-economic Status of Beneficiaries by Redevelopment Project

The study established that a majority of the beneficiaries (78%) were of the view that the slum redevelopment project had not led to any improvements in the investment opportunities or socio-economic status of Pumwani-Majengo residents. Only (22%) cited improved investment
opportunities such as putting up kiosks that target a ready customer base in the Highrise and the availability of odd jobs such as water vending and cleaning services that had led to a small improvement in their socio-economic status. This is illustrated in figure 22 below;

![Pie Chart: Has the Redevelopment Project led to Investment Opportunities/Improved Socio-economic Status of Beneficiaries]

**Figure 22: Investment Opportunities/Improved Socio-economic Status of Beneficiaries**
(Source: Field Study, April 2014)

5.4.4 Level of Public-Community Participation

The study established that the Pumwani-Majengo redevelopment project was implemented without proper participatory public consultation and involvement. A majority of the beneficiaries (80%) were only involved through information giving as a method of participation while (20%) were involved through consultation. The study therefore established that the beneficiaries were never involved in the formulation of the project design and its methodologies. The above is the main contributing factor to the major failure of Phase II of the project whereby beneficiaries have openly rebelled against the project implementer refusing to pay the 11,000 monthly rents and declining to heed eviction orders whatsoever. The above situation is illustrated in figure 23 while in contrast, the beneficiaries’ preferred level of participation illustrated in figure 24 below;
Figure 23: Level of Public/Community Participation in the Redevelopment Project
(Source: Field Study, April 2014)

Figure 24: Beneficiaries’ Preferred Level of Public Participation in the Project
(Source: Field Study, April 2014)
5.4.5 Preferred Slum Intervention Approach to Improving Livelihoods of the Pumwani-Majengo Community

The study established that overall; the beneficiaries in Pumwani-Majengo did not oppose the slum redevelopment approach but insisted that they would have preferred to be more involved in the planning of the interventions. A participatory approach to slum upgrading and redevelopment is favored by a majority of the respondents (68%) while (12%) prefer socio-economic upliftment/social welfare programmes instead while only (8%) prefer employment creation as opposed to redevelopment. This is illustrated in figure 25 below;

![Preferred Slum Intervention Approach to Improving Livelihoods](image)

**Figure 25: Preferred Slum Intervention Approach to Improving Livelihoods of the Pumwani-Majengo Community**

(Source: Field Study, April 2014)
CHAPTER SIX: SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Summary of the Findings

The study established that the policy, legal and institutional framework governing slum upgrading and redevelopment in Kenya has been designed to not only address the right of vulnerable groups but to constantly review standards and ensure adequate shelter for all. Kenya’s housing policy and legal framework is to a large extent aligned to global conventions, charters and protocols that seek to promote sustainable shelter development by governments worldwide. The policy and legal framework gives priority to slum upgrading and redevelopment efforts in seeking to realize Kenya’s objective of attaining targets set out in the Millennium Development Goal 7, Targets 10 and 11 and Vision 2030 objectives on Housing and Urbanization. Overall, the policy, legal and institutional framework governing the housing sector is ambitious but equally cognisant of the fact that Kenya still has a long way to achieving the acceptable housing standards as envisaged in the National Strategy for Shelter to the Year 2000, and MDG 7 whose targets have so far not been realized.

The study also established that the Pumwani-Majengo redevelopment project had to a large extent succeeded in meeting its intended main objective of fostering transition of beneficiaries earmarked during project conception from the slums to the Highrises. However, the above success has not translated to a reduction in the physical slum area coverage which was proven through GIS analysis of remote sensing images to be increasing at a steady and alarming rate thereby rendering the slum upgrading and redevelopment effort unable to promote sustainable urban settlements. A positive slum growth rate runs counter to MDG 7 targets 10 and 11 which seek to reduce by half the number of slum dwellers without adequate water and sanitation facilities and improve the livelihoods of approximately 100 Million worldwide by the year 2020. It also negates achievement of Vision 2030 medium targets of improving urban shelter through provision of housing that is adequate and affordable.

On the adequacy and affordability of the housing typologies implemented by the National Housing Corporation in the Pumwani-Majengo redevelopment project, the study established that the beneficiaries were supportive of the Highrise typology citing its ability to accommodate a
large population of slum dwellers due to densification and its ability to maximize on space. However, despite the houses having complied with the Building Code regulations on Floor Space Index (FSI) in terms of its design context, a majority of beneficiaries’ nevertheless find them spatially inadequate to comfortably accommodate their large family sizes owing to the need by most of them to rent out the single rooms in order to supplement their incomes in meeting the high rents charged by the developer through the tenant purchase scheme. This situation is responsible for the permanent slum situation existing in Pumwani-Majengo due to children of beneficiaries reverting to the slum in order to have privacy once they attain adulthood. Further, the study also established that the redevelopment project is defined by aspects of inadequacy stemming from the prevailing conditions of urban service provision of water demand and supply, sanitation services, infrastructure and open spaces, mobility and circulation and emergency services that are either totally lacking or in a state of disrepair. Affordability on the other hand is compromised by the relatively high rents charged on beneficiaries that does not correspond with their monthly incomes or ascribe to their socio-economic status.

Finally, the study established that beneficiaries generally had a negative perception of the slum redevelopment approach used by the developer since there was no proper public participation and decisions such as the rate of monthly payable rent was taken unilaterally without their involvement. The study further revealed that as much as most beneficiaries point out improved living standards as a milestone positive impact brought about by the slum redevelopment, the lack of incorporating a socio-economic aspect by the project developer to boost their incomes and enable them cope with the differences between a ‘slum economy’ that they migrated from and expenses of modern lifestyles has led to mental and emotional stress on their livelihoods. A majority of beneficiaries reminisce life being relatively easy back in the slums where they didn’t have to contend with water, electricity and sanitation costs that they pay in the Highrises and also bitterly complain about the government neglecting their plight as they legally battle eviction orders served on them by National Housing Corporation citing rent default arrears amounting to almost a million shillings, without even factoring in the principal amount of 1.2 M that they are yet to repay.
6.2 Conclusion

The study established that following the adoption of the United Nations Millennium Declaration in the year 2000, the Government of Kenya has addressed shelter issues through various initiatives and sectoral interventions that include: provision of minimum services, extension of tenure security and physical upgrading, recognition of the legitimate role of low income settlers and other stakeholders in urban development, and the formulation of a comprehensive national slum upgrading programme under the Kenya Slum Upgrading Programme (KENSUP) and Kenya Informal Settlement Improvement Programme (KISIP). However, despite many slum upgrading and redevelopment projects having been implemented countrywide under the above frameworks, progress towards attaining MDG 7 targets 10 and 11 continues to be slow and generally off-track. The Pumwani-Majengo case study presents a practical example of how slum upgrading and redevelopment measures continue to face numerous challenges such as the lack of comprehensive land use planning and management policies that lead to the development of substandard settlements with inadequate infrastructure, services and open spaces and the tendency of redeveloped low cost housing units ending up being unaffordable to beneficiaries due to lack of subsidies that can attract major housing developers to invest in shelter provision in the low income markets. The result of the above situation is manifested by the presence of expansive permanent slums settlements that continue to characterize the Pumwani-Majengo landscape with slum dwellers having developed negative perceptions towards slum rehabilitation measures due to the inability of such programmes to enhance their socio-economic status.

Overall, slum upgrading and redevelopment programmes have had little impact on Kenya’s progress towards achieving MDG 7 targets 10 and 11 and Vision 2030 goals on housing and urbanization that seek to improve the social, economic and environmental quality of human settlements and the living environments of all people, particularly the urban poor through adopting an enabling approach to shelter development and improvement which is environmentally sound.
6.3 Recommendations

The following recommendations have been put forward based on the challenges identified during the research undertaking. The planning matrix in this chapter provides more detailed description of these recommendations within the context of the research objectives. The study recommends the formulation of a monitoring and evaluation plan to accompany the planning matrix. The auditing regulations provided by the National Environment Management Authority (NEMA) should also be used to benchmark the environmental implications of implementing the planning matrix.

6.3.1 Short term Recommendations

Short-term recommendations are those measures to be implemented within 5 years. These recommendations are listed hereunder.

- The Government should create markets and avail locally the youth and women empowerment fund in Pumwani-Majengo to improve the socio-economic status of project beneficiaries.
- The County Government should increase water supply and sanitation service provision to the Pumwani-Majengo settlement.
- The project implementer (NHC) should enter into a memorandum of understanding with the Highrise resident’s welfare association with a view to reaching an out of court settlement concerning the rent default/arrears issue.
- The Government through the rent dispute and tribunal court should set the average payable monthly rent by the beneficiaries that is within their socio-economic status.
- The National Housing Corporation should review the lease agreements imposed on beneficiaries and involve them in the preparation of more reasonable and affordable ones.
- The project implementer should enter into discussions with beneficiaries aimed towards altering terms of the tenant purchasing scheme to incorporate clauses on routine Highrise maintenance.
- The County Government should put in place measures to improve infrastructure, provide open spaces and emergency services such as fire engines and ambulances.
6.3.2 Long term recommendations

Long term recommendations those measures to be implemented within a span of more than 5 years. They include the following:

- As a strategy towards realizing the adequate housing objective nationally, The Government should review the Building code, Physical planning act, the public Health Act, Land policy and other legal policy documents related to land and low-cost housing development.
- The Government should initiate the preparation of an MDG 7 progress evaluation and monitoring mechanism to provide for the regulation, coordination and guidance of the housing and human settlements sector in Kenya with a view to incorporating the changing dynamics of slum growth rates in urban areas.
- Research into alternative and cheaper building materials and architectural designs should be encouraged by housing developers to lower construction costs.
- The Government through the Housing Finance Company of Kenya should establish a Low Cost Housing and Infrastructure Trust Fund to serve as a depository for funds mobilized for slum upgrading and redevelopment programmes.
- The NHC should utilize the above fund to finance construction of the stalled Pumwani-Majengo Phase III Redevelopment Project.
- The Government should put in place measures and incentives aimed at encouraging investments by private housing developers in the low income markets.

6.4 Areas for Further Studies

The following areas are recommended for further studies based on the research findings.

- Analysis of the role of private housing developers in providing adequate shelter in the low income housing market of Pumwani-Majengo.
- Exploring alternative slum intervention approaches and measures applicable in Pumwani-Majengo with a view to improving the livelihoods of residents.
- Achieving nexus between slum upgrading and redevelopment and improved socio-economic status of project beneficiaries in Pumwani-Majengo.
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>PLANNING ISSUES</th>
<th>STRATEGIES</th>
<th>ACTIVITIES</th>
<th>TIME FRAME (Years)</th>
<th>BUDGET (Kshs)</th>
<th>ACTORS (STAKEHOLDERS)</th>
</tr>
</thead>
</table>
| 1. Policy, Legal and Institutional Framework Governing Slum Upgrading and Redevelopment in Kenya | -Lack of a Comprehensive Land Use Planning and Management Policies Guiding Development in the Housing Sector                                                                                     | --Formulation of Land Use Planning and Management Policies Guiding Development in the Housing Sector                                         | • Asses the existing policy framework and review relevant laws on urban land use planning and mgt  
  • Enforce existing laws on land use zoning  
  • Involve public in the policy formulation process | ST <2 MT 3-5 LT 10 |  | Ministry of Lands, Housing and Urban Development  
  =Ksh=  
  KIPPRA  
  Dept of Physical Planning/County Government  
  Kenya Law Reform Commission |
| Stringent and Outdated Planning Laws Governing Urban Development | --Evaluate the Existing Gaps between Paper Policy and Actual Practice in Urban Development | • Review the building code regulations | ✓ ✓ | Ministry of Lands, Housing and Urban Development
Dept of Physical Planning/County Government |
|---|---|---|---|---|
| -Gaps in Institutional Framework Governing Coordination of Stakeholders in Housing Sector | --Analyze the Vertical and Horizontal Coordination Nexus between the major Players in the Housing Sector | • Promote line ministry/multi-sectoral agency cooperation in slum upgrading/ redevelopment programmes | ✓ ✓ | =Ksh= Ministry of Devolution and Planning
KENSUP/KISIP |
| | | • Encourage cross sectoral partnerships in urban housing development | ✓ ✓ | NHC UN-Habitat KENSUP/KISIP |
| **-Overlapping and Inconsistent Urban Planning Roles between National and County Governments** | **--Review Top-Down Governance Channels in Management of Housing Sector Programmes** | - Strengthen capacity building  
- Increase county funding  
- Devolve urban planning role | ✓ | ✓ | ✓ | Ministry of Devolution and Planning  
Transitional Authority (TA) |
|---|---|---|---|---|---|
| **2. Extent and Level of Transition of Beneficiaries from the Slum to the Developed Housing Units in the Pumwani-Majengo Project.** | **-Renting of Housing Units by Beneficiaries and Reverting back to the Slum** | **--Outlaw Renting of Whole Housing Units by Beneficiaries** | ✓ | ✓ | ✓ | NHC  
Government, local community, NGOs and CBOs  
Ministry of Housing  
NGOs and CBOs |
| | **-Increase in Physical Extent/Size of Slum Settlement Over Time** | **--Curb Proliferation of Slum Settlement** | ✓ | ✓ | ✓ | Dept of Physical Planning/County Government  
NHC, UN-Habitat, Shelter Afrique |
<table>
<thead>
<tr>
<th>Issue</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>- High Poverty Levels and Unemployment</td>
<td>Ministry of Lands, Housing and Urban Devpt</td>
</tr>
<tr>
<td>--Employment Creation and Socio-Economic Upliftment</td>
<td>• Allocate funds for incremental upgrading initiatives</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>--Initiate social welfare programs</td>
<td>Ministry of Devolution and Planning</td>
</tr>
<tr>
<td></td>
<td>=Ksh=</td>
</tr>
<tr>
<td></td>
<td>Ministry of Devolution and Planning</td>
</tr>
<tr>
<td>- Skewed Housing Unit Allocation Methodologies</td>
<td>NHC,CBOs</td>
</tr>
<tr>
<td>--Initiate Audit on Socio-Economic Survey of Original Beneficiaries</td>
<td>• Develop beneficiary register</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Ministry of Devolution and Planning</td>
</tr>
<tr>
<td>--Confirm Unit Allocation</td>
<td>NHC,CBOs</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>- Persistent Slum Attitude</td>
<td>NGOs/CBOs</td>
</tr>
<tr>
<td>--Education and Awareness Creation</td>
<td>• Community sensitization</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
### 3. Adequacy and Affordability of Housing Typologies in Relation to Living Styles of Beneficiaries

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
<th>County Govt</th>
<th>NWSC</th>
<th>NHC</th>
<th>Ministry of Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Unbearable Living Costs in Highrises</td>
<td>-- Avail Alternative Socio-Economic Opportunities to the Project Beneficiaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Build market stalls</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reduce costs of water and electricity</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reduce arrears charged on services</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Allow small scale business within the Highrises</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>=Ksh=</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Unaffordable Rents Charged by Developer</td>
<td>-- Modify Terms of the Tenant Purchase House Financing Agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reduce the rent/arrears</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reduce service charge</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Increase the repayment period</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NHC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Repair water delivery piping system</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide litter bins in the neighbourhood</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sink boreholes in the settlement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NWSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>County Govt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ministry of Water</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Poor Infrastructure and Lack of Open Spaces | --Enforce Physical Planning Act Requirements | • Improve internal road network | ✓ | ✓ | Ministry of Roads and Infrastructure  
NWSC  
County Government |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Inadequate Spatial Design/Layout of Housing Typologies</td>
<td>--Redesign and Modification of Existing and Impending Phase III Highrise Units</td>
<td>• Develop new architectural designs of Phase III housing</td>
<td>✓</td>
<td>=Ksh=</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Construction of extension units in Highrises</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increase sizes and number of rooms in future projects</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>4. Perception of Beneficiaries towards the Slum Redevelopment Approach</td>
<td>-Lack of Public Participation during Project Conception</td>
<td>--Undertake an Audit on Community Problems being Experienced in Pumwani-Majengo</td>
<td>• Analyze impact of slum redevelopment on livelihoods</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Socio-cultural analysis</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Enhance community</td>
<td>✓</td>
</tr>
<tr>
<td>Lack of Tenure Security</td>
<td>Direct Government Involvement to Provide Mortgage and Subsidies to Beneficiaries</td>
<td>Capacity building</td>
<td>Micro-financing mechanisms</td>
<td>Community empowerment</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Dissatisfaction with House Ownership/Financing Scheme</td>
<td>Review of Low Cost Housing Provision Framework</td>
<td>Expand mandate of KENSUP/KISIP</td>
<td>Increase budgetary allocation to slum upgrading/redevelopment programs</td>
<td>Source donor funding for slum upgrading</td>
</tr>
<tr>
<td>-Lack of Investment Opportunities and Livelihood Improvement</td>
<td>--Capacity Building and Market Chain Value Addition/Expansion of Gikomba Market</td>
<td>• Prepare and implement capacity building action plan</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Diversify markets for Gikomba jua-cali products</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regulate and provide incentives to small scale business traders</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Author, 2014)
REFERENCES


APPENDICES

Appendix 1: Household Questionnaire

Kenyatta University
Department of Environmental Planning & Management
Master of Environmental Planning and Management

I am a Masters Student from the Department of Environmental Planning and Management at Kenyatta University. In order to fulfill the requirements of this degree programme, I am carrying out a study entitled: **An Evaluation of Slum Upgrading and Redevelopment in Promoting Sustainable Urban Human Settlements: A Case study of Pumwani-Majengo Housing Project, Nairobi County**. I therefore kindly seek your indulgence in filling this questionnaire.

**Declaration:** The information and data provided will be confidential and is intended for academic purposes only

Please answer these questions to the best of your knowledge.

Write your response in the space provided.

Please put a tick (√) where appropriate

Name of the Interviewer -----------------------------------------------

Date of interview -----------------------------------------------

A. Household information

1. (a) What are your household characteristics? (Please fill in the table below)

<table>
<thead>
<tr>
<th>Household member/s</th>
<th>Gender</th>
<th>Age</th>
<th>Educational level</th>
<th>Main occupation</th>
<th>Monthly income from the main occupation</th>
<th>Other sources of income</th>
<th>Monthly income from other sources</th>
</tr>
</thead>
</table>
To ascertain the extent to which the Pumwani-Majengo housing project has realized its intended main objective of fostering transition of beneficiaries from the slums to the redeveloped units.

2(a) Are you an original beneficiary of the redevelopment programme in Pumwani-Majengo?
   (i) Yes [ ]       (ii) No [ ]
   If no,
(b) Where did you come from? ..............................................................................................................

(c) For how long have you been living here?
   (i) 1-5yrs [ ]       (ii) 6-10yrs [ ]       (iii) 11-15yrs [ ]       (iv) 15yrs and above [ ]

(d) Why did you migrate to this place? ................................................................................................
   (i) Business opportunity [ ]       (ii) Family obligations [ ]       (iii) Education [ ]
   (iv) Any other (Specify)…………………………………………………..

3. In your opinion, why do you think the original beneficiary opted to rent the house and remain in the slum?
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………

4. What is the housing scheme purchase method for the redeveloped units?
   (i) Tenant purchase housing [ ]       (ii) Mortgage housing [ ]       (iii) Cash purchase [ ]
   (iv) Any other (Specify)…………………………………………………..
5. What is your tenancy status in the redeveloped housing unit?
   (i) Rental tenant [ ]    (ii) Owner-occupier [ ]    (iii) Any other (Specify)
   ……………………………………………………………………………………………

6. Who possesses the allotment letter/title deed to the redeveloped housing unit?
   (i) Beneficiary [ ]    (ii) Housing developer [ ]    (iii) Local authority [ ]
   (iv) Any other (Specify)………………………………………………………………

7. In your opinion, has the physical extent/size of the existing Pumwani-Majengo slum increased or decreased over time?
   (i) Increased [ ]    (ii) Decreased [ ]

   To assess the adequacy and affordability of the housing typologies implemented by the developer in the Pumwani-Majengo housing project in relation to the living styles of the beneficiaries.

8. What is the number of rooms per unit house? ………………………………………………………

9. Do you find the above number and size of the rooms adequate for your family?
   (i) Yes [ ]    (ii) No [ ]

10. Is the spatial layout-design of the housing typologies adequate for your living styles?
    (i) Yes [ ]    (ii) No [ ]

11. What is the monthly payable rent/mortgage for the housing units?
    (i) 1000-5000 [ ]    (ii) 5001-10000 [ ]    (iii) 10001-15000 [ ]    (iv) Above 15000 [ ]

12. Do you find the above rates affordable?
    (i) Yes [ ]    (ii) No [ ]
13. Indicate the current situation on urban services provision of water and sanitation supply?

<table>
<thead>
<tr>
<th>Service</th>
<th>Greatly Improved</th>
<th>Moderately Improved</th>
<th>Slightly Improved</th>
<th>Not Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sanitation facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Indicate the state of infrastructure, open spaces, morbidity/circulation, street lighting and emergency services in Pumwani-Majengo?

<table>
<thead>
<tr>
<th>Service</th>
<th>Greatly Improved</th>
<th>Moderately Improved</th>
<th>Slightly Improved</th>
<th>Not Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open spaces</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morbidity/Circulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street lighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To investigate the perception of the intended beneficiaries towards the slum upgrading and redevelopment approach used in the Pumwani-Majengo housing project.

15. What is your opinion on the benefits or losses brought about by the slum upgrading/redevelopment programme?

…………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………

16. Are you content with the security of tenure offered by the housing scheme implemented by the developers?
17. Are you content with the terms of the lease agreement/tenant purchasing scheme offered by the housing developer in the Pumwani-Majengo project?

18. What was the level of community participation in the Pumwani-Majengo Redevelopment project?

19. Has the redevelopment programme led to any investment opportunities and improved socio-economic status in the community?

To prepare a preferred participatory slum upgrading and redevelopment planning matrix for promoting sustainable urban human settlements in Pumwani-Majengo.

20. What is your preferred slum intervention approach to improving the livelihoods of the Pumwani-Majengo community?
21. At what level would you like to be involved in any slum rehabilitation project?
   (i) Planning phase [ ]  (ii) Design phase [ ]  (iii) Construction/implementation phase [ ]  (iv) Monitoring and Evaluation [ ]

22. What housing typology would best suit your financial and social status?

23. What socio-economic opportunities can the government avail to the community to improve your living standards?

THANK YOU FOR YOUR COOPERATION
Appendix 2: Business Questionnaire

Kenyatta University

Department of Environmental Planning & Management
Master of Environmental Planning and Management

I am a Masters Student from the Department of Environmental Planning and Management at Kenyatta University. In order to fulfill the requirements of this degree programme, I am carrying out a study entitled: An Evaluation of Slum Upgrading and Redevelopment in Promoting Sustainable Urban Human Settlements: A Case study of Pumwani-Majengo Housing Project, Nairobi County. I therefore kindly seek your indulgence in filling this questionnaire.

Declaration: The information and data provided will be confidential and is intended for academic purposes only

Please answer these questions to the best of your knowledge.

Write your response in the space provided.

Please put a tick (√) where appropriate

Name of the Interviewer ------------------------------- Date of interview -----------------

Background information

1. How many employees do you have?

<table>
<thead>
<tr>
<th>GENDER</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td></td>
</tr>
<tr>
<td>FEMALE</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>

2. Age of employees

<table>
<thead>
<tr>
<th>AGE BRACKET (YEARS)</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td></td>
</tr>
<tr>
<td>18 – 35</td>
<td></td>
</tr>
<tr>
<td>36 – 55</td>
<td></td>
</tr>
<tr>
<td>56 and above</td>
<td></td>
</tr>
</tbody>
</table>
A) Business information
1. What type of business do you run?

...........................................................................................................................
...........................................................................................................................
...........................................................................................................................

2. What type of labour do you employ in your business?
(i) Skilled [ ]  (ii) Semi-skilled [ ]  (iii) Unskilled [ ]

3. How long have you been in the business?
(i) 1-5 yrs [ ]  (ii) 6-10 yrs [ ]  (iii) 11-15 yrs [ ]  (iv) 15 yrs and above [ ]

4. What informed you to choose the present location?

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5. How has the Pumwani-Majengo slum upgrading/redevelopment project affected your business?
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6. How has the slum upgrading/redevelopment project affected urban service provision in Pumwani-Majengo?
(i) Greatly Improved [ ]  (ii) Moderately Improved [ ]  (iii) Slightly Improved [ ]
(iv) Not Improved [ ]

7. Which problems do you encounter in your business?
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8. Where do you draw the bulk of your clientele/customers from?
   (i) Pumwani-Majengo Slums [  ]   (ii) Redeveloped High-rise Units [  ]   (iii) Outside Pumwani-Majengo [  ]   (iv) Outside Kenya [  ]

9. Has the slum upgrading/redevelopment project led to investment opportunities and improved socio-economic welfare in the Pumwani-Majengo community?
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10. Comment on the housing typologies implemented by the developer in the Pumwani-Majengo project and how it has affected your business turnover?
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11. In your opinion, can the slum upgrading/redevelopment approach used by the developer help mitigate urban poverty being experienced in Pumwani-Majengo?
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12. What was the level of public participation by the business community in the Pumwani-Majengo housing project?
   (i) No Participation [  ]   (ii) Participation through Information Giving [  ]
   (iii) Participation through Consultation [  ]   (iv) Participatory Stakeholder Involvement [  ]

THANK YOU FOR YOUR COOPERATION
Appendix 3: Interview Guide

Kenyatta University

Department of Environmental Planning & Management
Master of Environmental Planning and Management

I am a Masters Student from the Department of Environmental Planning and Management at Kenyatta University. In order to fulfill the requirements of this degree programme, I am carrying out a study entitled: An Evaluation of Slum Upgrading and Redevelopment in Promoting Sustainable Urban Human Settlements: A Case study of Pumwani-Majengo Housing Project, Nairobi County. I therefore kindly seek your indulgence in filling this questionnaire.

Declaration: The information and data provided will be confidential and is intended for academic purposes only

Please answer these questions to the best of your knowledge.

Write your response in the space provided.

Please put a tick (√) where appropriate

Name of the Interviewer …………………… Date of interview ………………………

Organization/ Ministry/ Department: ………………… Position of interviewee …………………

Q1. What is your role and mandate in relation to slum upgrading and redevelopment programmes in Kenya?

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Q2. What is the policy, legal and institutional frameworks governing slum upgrading and redevelopment programmes in Kenya?

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Q3. What are the relevance, strength and weaknesses of the above frameworks in promoting sustainable urban human settlements in Kenya?

Q4. To what extent has slum upgrading and redevelopment programmes in Kenya excelled in fostering transition of beneficiaries from slums to better shelters?

Q5. In your opinion, what is the adequacy and affordability of the housing typologies implemented by housing developers in slum rehabilitation programmes in Kenya?

Q6. In your opinion, what is the perception of intended beneficiaries to the approaches used as entry points to slum intervention measures?
Q7. What is the preferred slum upgrading/redevelopment approach for promoting sustainable urban human settlement in Kenya?

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Q8. What are the challenges experienced by housing developers in their quest of providing adequate and affordable housing in the low income market?

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Q9. What are some of the preferred solutions towards correcting the distorted housing markets in Kenya?

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Q10. What is the most economical housing financing scheme in the low income market?

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Q11. Comment on the failure by many KENSUP/KISIP intervention programmes to achieving their objectives in the Kenyan context?

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Q12. In your opinion, what is the importance of public participation and adopting a bottom-up approach in slum upgrading/redevelopment programmes?

Q13. How does the multifaceted nature of the housing problem (political, economic and social) affect slum rehabilitation measures in Kenya?

Q14. How important is government reforms and sustained poverty eradication measures in slums required in helping to eradicate the housing problem in Kenya?

Q15. Comment on Kenya’s progress towards achievement of MDG 7, targets 10 and 11 so far?

THANK YOU FOR YOUR COOPERATION