INTEGRATING COMMUNITY PARTICIPATION FOR URBAN REDEVELOPMENT PLANNING IN ZANZIBAR TOWN

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March, 2012

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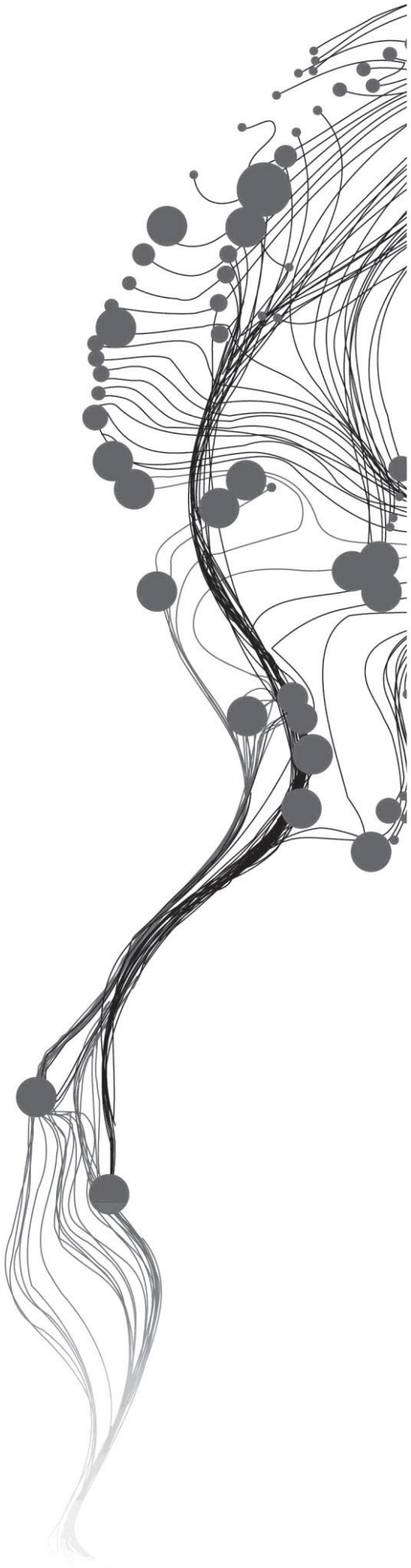

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Enschede, The Netherlands, March, 2012

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Dedicated to my beloved parents

ABSTRACT

Past urban redevelopment planning initiatives in the developing countries have largely been criticised due to; (i) top-down planning frameworks, and (ii) lack of involvement of the targeted beneficiaries which have led to misplaced interventions contrary to the perceived needs of the populace. Moreover, post-implementation of many urban redevelopment initiatives, have culminated to gentrification soon after their conclusion. These failures have led to numerous authors and researchers advocating for a new paradigm shift focusing on participatory approaches in redevelopment strategies.

The study focussed on evaluating Zanzibar's planning structure, comparison of community and experts/policy makers' perspectives on qualitative perceptions of an informal neighbourhood and the participation component in an anticipated neighbourhood redevelopment initiative. The study identified that Zanzibar's planning has no participation component and is sector-based and lacks coherent co-ordinated efforts. It was also revealed that significant differences exist between experts and local residents' perceptions of quality of the neighbourhood earmarked for redevelopment.

Employing a case study approach, the study's aim was to determine and concurrently employ a Participatory Geographic Information Systems (PGIS)-based methodology redevelopment framework. Focus group discussions, geo-coded textual narratives and photographs, participatory mapping are some of the PGIS tools that were used to illustrate the integration of community participation in urban redevelopment planning process. The emerging framework was found to be effective in creating awareness, eliciting and ascertaining local spatial knowledge, reconciling different perceptions held on neighbourhood variables, visioning redevelopment constructs, policy formulation, and data retention for an anticipated informal neighbourhood redevelopment initiative.

Keywords: neighbourhood, participation, PGIS, redevelopment, urban informality

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Shareen L. A. Auma
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1. DILEMMA OF INFORMAL URBANIZATION

This chapter presents the background information on the dilemma of informal urbanization and evaluates the efforts that have been directed at improving the condition. It is on this underlying principle that the research problem and aim are defined.

1.1. Urban informality dilemma

The spread of urban informality is the most significant trend shaping the space and time of our 21st century world. It has been recognised as a predominant "mode of urbanisation" (Roy, 2005) in many developing countries. The discourse of informality has shifted from a formal-informal dichotomy (Hall and Pfeiffer 2000) to a formal-informal continuum (Roy and Alsayyad, 2004 cited by Hill & Lindner, 2006).

This is clearly manifested by many slums and informal settlement that continue to proliferate at an alarming rate. The derelict neighbourhoods have become symbolic of the malformations that characterize the urbanization process currently underway in Sub-Saharan Africa. However, authorities charged with urban development and planning seem incapacitated in dealing with this challenge. A major resultant challenge is that many cities in the region are undergoing a widespread dysfunctional urban land supply system. Government authorities have invariably failed to supply developable land in locations and at prices that cannot be easily afforded by majority of urban poor (Fekade, 2000).

The informal mode of (re) producing urban space is steadily growing in many cities of the region despite facilitation and support by concerned authorities In these informally developing areas, there has emerged an alternative mode of appropriating and (re) producing urban space, as people seek ways of accessing land for shelter and livelihood opportunities (Fekade, 2000). As may be expected, the resulting spaces produced are varied, not just in their spatial scale and function, but also in their degree of formality, and therefore level of acceptance by the authorities concerned. Government authorities in the region had initially sought after wiping out these 'unsightly development' from the surface of the city (Fekade, 2000; UNDP, 2005) but attitudes have since changed towards accommodation. A number of informal neighbourhoods have since undergone redevelopment (Abbott, 2002a, 2002b; Huchzermeyer, 2008) albeit reports of achievements with various limitations.

Zanzibar Island, located off the eastern coast of East Africa is also not an exception to the informality dilemma. It has experienced tremendous growth especially in the urban fringe of the city to a point that the formal planning system of the state is unable to cope with the demand for building land and plots making informal neighbourhoods the major factor of urban growth (Scholz, 2008).

In this study, urban informality is understood as, 'neighbourhoods characterised by informal building activity with no government control/influence hence increasing the informal development process'. It has mainly been attributed to the weak statutory urban planning framework in the Government (Mwehe, 2011, p. 31) necessitating for a solution to formalize the neighbourhoods through urban redevelopment initiatives. Urban redevelopment is quiet a complex term to define since its meaning transform depending on the era it was/is conducted, stakeholders involved, objective(s), mean(s) and extent of redevelopment.

In general terms though, it can be seen as a concept to imply 'a comprehensive and integrated vision and action which leads to the resolution of urban problems. It therefore seeks to bring about a lasting progress in the economic, physical, social and environmental conditions of an area that has been subject to change' -(Roberts, 2000 cited by Tallon, 2010, p. 5).

1.2. Urban Redevelopment efforts in Zanzibar

Previous attempts at urban redevelopment of some of the informal neighbourhoods in Zanzibar seem to have started with the revolutionary government ambitious urban redevelopment of *Ng'ambo* neighbourhoods' after the revolution of 1964. Even at that time, *Ng'ambo* was already an impoverished neighbourhood and faced long-entrenched problem of poor accessibility of public utilities(H. Haji, Rashid, & Said, 2006), overcrowding and the housing shortage in the city overall (G. Myers, 1996).

The reconstruction program at the time, aimed at improvement of the standard of living in *Ng'ambo* area, was largely ignored by the colonials whose urban planning strategy had concentrated development on the Stone Town side often at the expense of poor dilapidated neighbourhoods of *Ng'ambo*. The government sought at providing decent houses to its inhabitants whom were living in poor houses (H. Haji, et al., 2006; H. A. Haji, Azzan, & Ufuzo, 2006; Garth A. Myers, 1994; Sulaiman & Ali, 2006). Thus, new multi-storeyed buildings were constructed in various areas on the isles. The pilot project involved the construction of 150 apartments at *Kikwajuni Juu* and later *Michenzani*. However, the government of the time embodied and micromanaged the whole process and as Myers (1994, p. 451) puts it, "the revolutionary government excluded residents from the process". Ultimately, the regime implemented very little of the plan.

The post revolution remedy to increasing informality development and pertinent land problems are seen in the government attempt in regularizing landownership. Government repossessed all the land and was then redistributed to peasants. However, its sole retention of land rights and failure to accord them full legal ownership of land was perceived as a retrogressive step to its urban redevelopment endeavours and a cause as well as consequence to the informal growth proliferation of the landless peasants where each peasant was given three acre plots (Sulaiman & Ali, 2006).

In addition various policies and legislation were formulated to control urban development. These included; the Zanzibar Town Master Plan of 1982 that aimed at addressing for example the problem of squatter development. This was to be done through formulation of the urban physical planning guidelines, establishment of town boundaries for urban development control and reorganisation of urban land use. In 1995, the national land use policy plan was formulated that was to coordinate land use development of the whole of Zanzibar. As Haji, et al., (2006) states, among the most pertinent issues the plan was to address was the uncontrolled settlement development and persistent growth of informal areas.

In 1998, a proposition paper on "the redevelopment of *Ng'ambo* areas in the Zanzibar municipality" was prepared by Zanzibar city programme in conjunction with Zanzibar Sustainable Programme in an attempt to improve the infrastructural service provision of *Ng'ambo* area. Issues addressed included; the insufficient and inefficient public services, inadequate clean and safe water supply, improper collection and disposal of solid wastes and high population density in urban areas among other issues. The town and country planning decree of 1955 (Cap. 85) according to Haji, et al., (2006) is the only existing land use planning statute and has been enforced since 1958 when the town scheme was prepared. Within this decree was the Joint Building Authority (JBA) that controlled the spatial development in the towns, the decree listed the guideline for the physical planning development control and land use development procedure, however

the decree has been considered old and outdated and JBA has since been replaced by the Urban Development Control Authority (UDCA).

The present response to informal settlement growth has seen government formulating various policies and planning initiatives to address informal neighbourhoods' growth. It has also collaborated with other NGO and international organizations in order to address the informality. This has also led to rolling out of wide scale poverty alleviation strategies not only in the urban areas but in the country as a whole. Among these policies include; the UDCA, The National Land Use Plan, The Zanzibar Sustainable Project, and the recently joint effort between Land and Registration and Survey and Urban Planning departments of reviewing lands and spatial planning through the support of SMOLE- "Sustainable Management of Land and Environment Programme" (GoZ, 2007; H. A. Haji, et al., 2006; Sulaiman & Ali, 2006).

However, the operationalization of all these urban development mechanism is characterised by overlapping of responsibilities which create loopholes for illegal development to take place and encroachment of way leaves, and open spaces. Sulaiman and Ali (2006a), note that since the enactment of Town Country Planning Decree of 1955, there has been no further development of legislation of institutional framework to guide the implementation and coordination of urban management efforts. The challenge is even with all these efforts, Zanzibar town continues to grow largely through the informal neighbourhoods. The deterioration and expansion of old informal neighbourhoods in the earlier planned areas now poses a major challenge especially in the redevelopment efforts.

1.3. Problem Statement and Justification

Abbott (2002b) notes that informal neighbourhoods house a significant percentage of the population of developing cities, yet there is no common planning framework for redevelopment of these neighbourhoods. The unprecedented increased number of urban populations has made urbanization inadvertent which has contributed to urban sprawl in areas that are devoid of affordable quality neighbourhoods and related services including basic amenities.

In Zanzibar, the dynamics of urban growth, lack of effective leadership, weak land administration and planning policies with regard to settlement development by the public sector, impedes the sustainable development of urban areas. Most of the urban agglomerations grow without any official planning (Ali & Sulaiman, 2006b; H. Haji, et al., 2006; Scholz, 2008) leading to city expansion mainly based on informal processes. In essence, this trend has led to urban settlements influenced by new and powerful forces of informality that have come to the attention of governments to reconsider how they manage the future of urban development.

As a reform mechanism, planning authorities in Zanzibar have made efforts of improving the situation through urban redevelopment programmes discussed in 1.2 above albeit few successes indicative of a problem. Sheng (1990) observes that, in neighbourhood redevelopment projects, the authorities regularize the legal land tenure of squatters and provide basic infrastructure in the neighbourhoods; in sites-and services schemes, the authorities provide serviced plots to residents in informal neighbourhood and expect them to produce their own houses, through individual or mutual self-help or the employment of small contractors. These interventions have always been expected to be sufficient incentives for the residents to start improving their houses. More often than not, these interventions have to a certain extent failed. Communities in such neighbourhoods have always tried to organize themselves in such a way to address their most important problems, though informally. An attempt indicating that, communities have a common point of view, which aids them in perceiving their own problems and finding solutions.

Redevelopment should in essence be holistic in improving the livelihoods in informal neighbourhoods. Once people have been involved in planning and decision making for their entire neighbourhood, they are more likely to be interested in the maintenance and management of their neighbourhood, its infrastructure and services. Sheng (1990) concur that, if people participate in planning and decision-making with regard to their house and its direct environment, they can also decide how much they can and want to contribute to their neighbourhood redevelopment. Where possible therefore, development and planning policies should be designed in a way that would help identify established communities through a bottom-up participatory approach, and strengthen them through redevelopment assistance (El-Shakhs, 1997).

According to a draft report on Zanzibar Policy Review (2004) and the Department of Urban and Rural Planning (DoURP), attempts are underway to revise planning legislation accordingly and adopt participatory approaches tailored to respond to settlement-specific spatial problems that address the rapid demand of planned and serviced urban land to decrease the intensification of informal neighbourhoods.

Numerous authors are highlighting the adoption of participatory approaches that seek collaboration rather than interaction which takes into account the perspectives of all actors involved in community development. Adoption of a Participatory Geographic Information Systems (PGIS) practice is considered an effective approach in integrating community's knowledge and participation in such initiatives. Rambaldi et al. (2006), emphasise that documented realizations and insights of the community are significant inputs into the development plan that integrates the social and economic fundamentals into the quality of their place. While PGIS has been applied in urban and rural contexts, little research has been done on its potential use in informal neighbourhoods' redevelopment. Few studies have practically developed a PGIS framework in redevelopment initiatives. It is on this basis that the study wants to contribute to these research gaps by determining use of a participatory methodology framework in defining community needs and aims in a redevelopment initiative.

1.4. Research aim and objective

This study aims to determine use of a participatory methodology for a neighbourhood redevelopment planning emphasising on community local spatial knowledge in Zanzibar Town.

1.4.1. Research sub-objectives

To achieve this broad objective, the study sought to the following sub-objectives outlined in Table 1-1:

Table 1-1: Research sub-objectives and questions

Research Sub-Objectives:	Research Questions:
Sub-objective 1: **To find out to what extent is community involved by planning authorities in neighbourhood redevelopment planning**	a) To what extent is the community involved in neighbourhood redevelopment planning? b) How can the community be more involved in neighbourhood redevelopment planning? c) Which stakeholders should be involved in planning for neighbourhood spatial redevelopment?

Sub-objective 2:	
To identify the local spatial knowledge [1] on perceptions and aims of the community regarding redevelopment using GIS	d) What are the spatial issues, perceptions and aims in the neighbourhood in regard to redevelopment? e) To what extent do the perceptions and priorities of the neighbourhood match those of the policy makers? f) What is the role of GIS in eliciting and recording the perceptions and aims of community?
Sub-objective 3:	
To determine how local knowledge can be useful to planning authorities in neighbourhood redevelopment planning	g) How can PGIS technology be used to integrate local knowledge when planning for a redevelopment strategy?

1.5. Thesis structure

Chapter 1: This chapter presents the background information on the dilemma of informal urbanization and evaluates previous efforts that have been engaged to improve the circumstances. It is on this rationale that the research problem and objective are defined.

Chapter 2: This chapter looks at the theoretical framework that typifies urban studies and planning research through literature review on the traditional and contemporary planning approaches. It mainly focuses on adopting spatial local knowledge on a community perspective in redevelopment initiatives.

Chapter 3: This chapter explores the discourse of urban informality in Zanzibar through evaluating the existing urban planning and management policy and institution frameworks.

Chapter 4: This chapter describes the study area. It presents a brief overview of the demographic and spatial characteristics of the informal study area which was also used as criteria for an anticipated redevelopment initiative.

Chapter 5: This chapter conceptualizes the GIS and society framework by developing a participatory methodology in identifying local spatial knowledge for redevelopment. It also outlines the approach and tools employed during fieldwork of the study.

Chapter 6: This chapter looks at the results from different methods applied, namely; household and expert survey/discussions, key-informant interviews, focus group discussion and walking interview.

Chapter 7: This section discusses the integration of community participation framework developed and employed emphasising on local knowledge. A review of the framework is done in a five-step outline to aid in facilitating the anticipated redevelopment planning process in Zanzibar.

Chapter 8: This chapter gives conclusions and highlights on the limitations, recommendations and the potentials in carrying out further research.

[1] Local spatial knowledge in this study refers to the perceptions, opinions and aims of urban dwellers that live in or near the neighbourhood of concern that is largely informal to be redeveloped.

2. URBAN REDEVELOPMENT IN AN INFORMAL ENVIRONMENT

This chapter looks at the theoretical framework that typifies urban studies and planning research through literature review on the traditional and contemporary planning approaches. It mainly focuses on adopting spatial local knowledge in a community perspective of redevelopment initiatives.

2.1. Intricacy of Urban Redevelopment in an Informal Environment

In this study, urban redevelopment, also used in conjunction with urban regeneration, urban (neighbourhood) renewal is understood as an initiative designed by the state to help local communities improve areas that are deteriorating, unsafe or poorly planned. Urban redevelopment strategies pose many challenges that urban planners and local authorities must contend with when planning. As Magigi and Majani (2006), postulates, within informal neighbourhoods are complex, dynamic spatial, social-cultural, economic and political systems that continually undergo changes. These complexities have made it difficult to gather sufficient, relevant and reliable data that is a prerequisite in planning for redevelopment interventions. This leads Watson (2009) to argue that any consideration of the future of urban planning needs to take place within an understanding of the factors shaping the socio-spatial aspects of cities. Moreover, the heterogeneous nature of population within these informal neighbourhoods also makes it difficult in choosing who to include and who to leave out in the redevelopment process. As earlier discussed, a sub-objective (section 1.4.1) of the study focused on identifying the extent to which community is involved in redevelopment initiatives and at what stage of planning. A big challenge facing local authorities lies in devising an appropriate method that can address all these challenges when designing redevelopment interventions (Lemma, 2005; Otiso, 2003). Without adoption of a good multi-dimensional approach in data collection, it becomes more difficult to develop viable plans in a data scarce environment that characterize these neighbourhoods.

2.2. Past Planning Approaches to Urban Informality

According to UNDP (2005), official response to urban informality the world over and especially in the developing countries, has been characterized either by inaction, inappropriate action, or insufficient action. When the phenomenon of informal urbanization first attracted the attention of the authorities in the developing world, the responses were mixed at best, and ranged from 'active hostility' to 'benign neglect' (Fekade, 2000, p. 128). In many cities, the most common line of action at the beginning was to ignore informal settlements, when they posed no threats to the powerful élite, or to bulldoze them whenever they stood on a piece of valuable real estate (UNDP, 2005). With time, a policy of informal settlement clearance was slowly adopted by many cities around the world. Spontaneous settlements were simply razed down and in its place new public housing erected to accommodate the sufferers of such demolitions (Fekade, 2000). The policy was however paradoxical to the extent of such demolitions often outstripping any new constructions, leading some observers such as Werlin (1999) to remark that governments were in

fact destroying more low-income housing than they were actually building and accommodating new constructions causing harm to the present community by destroying their livelihoods and encouraging gentrification.

With this sort of realization, government authorities were gradually persuaded to acknowledge that informal settlements did in fact, occur as a result of, or in response to their own inappropriate public policies, for instance, lack of affordable land and housing. In effect, this fomented a change of heart – from viewing low-income groups as constituting an infuriating aberration on the urban landscape, to acknowledging the poor as resourceful partners who in deed presented part of the solution to the informality problem that the authorities themselves had been unable to effectively address (Abbott, 2002a; Fekade, 2000; UNDP, 2005). In this regard, many literature works have been published advocating for the application of redevelopment interventions to address this problem (Abbott, 2002a; Mukhija, 2002; Turkstra & Raithelhuber, 2004). One such intervention widely advocated for is informal settlement redevelopment. Abbott (2002a), defines it as any sector-based intervention in the settlement that results in a quantifiable improvement in the quality of life of the residents affected.

Cities Alliance views informal settlement redevelopment as an integrated approach to investing in physical, social, economic, organizational and environmental improvements. World Bank (2010), lay emphasis of settlement redevelopment on legalizing and 'regularizing' the properties in situations of insecure or unclear tenure. There are many reasons as to why urban redevelopment as a form of redevelopment intervention is undertaken. Some of the most common issues addressed by redevelopment programs include:

1. Legalization of tenure status for sites and houses, including regularization of rental agreements to ensure improved tenure (Sliuzas, 2003).
2. Provision or improvement of technical services and physical infrastructure e.g., water, waste and waste water management, sanitation, electricity, road pavement, street lighting, etc (UN-Habitat, 2006).
3. Provision or improvement of social infrastructure such as schools, clinics, community centres, playgrounds, green areas, etc.
4. Physical improvement of the built environment, including rehabilitation/improvement of existing housing stock.
5. Construction of new housing units (Housing construction can but doesn't necessarily form part of redevelopment schemes. Often enhancing and rehabilitating the existing housing stock is much more sensible and effective and can be achieved at little cost through legalization of tenure status or regularization of rental agreements) (UN-Habitat, 2006).
6. Design of urban development plans (Sanoff, 2000), (including, for example, the rearrangement of sites and street patterns according to infrastructure needs, although working within existing settlement patterns is generally less disruptive to community networks. This measure might entail resettlement of some residents).
7. Changes in regulatory framework to better suit the needs and opportunities available to the poor, as far as possible keeping to existing settlement patterns.
8. Densification measures (e.g. multi-storeyed houses) for example in order to protect agricultural land from being occupied for settlement. Also possible: de-densification due to partial resettlement.

2.3. Inadequacies and Failures of past planning approaches to Urban Informality

Major weaknesses of redevelopment efforts have been documented in various literatures.[2] Among the critical failings in the design and implementation of various informal neighbourhoods have been indicated to have been as a result of;

2.3.1. Insufficient focus on target communities

There is inadequate involvement of targeted communities where, urban planning is constructed to be an area of public policy to be carried out by centralised planning machinery. Fischer (2003) notes that experts views in such processes are highly complex and only science can provide an authoritative base for policy-making. This explains why most often, professional experts define problems and their solutions, dominating decision-making and manipulating, instead of facilitating development processes[3] (Botes & Rensburg, 2000). As a result, spatial redevelopments are typically dealt with as routine planning tasks, with experts single-handedly assuming the entire extent of project initiation, design and implementation (Otiso, 2002). Seldom have community been engaged. If so, it has been at the request of external institutions such as bilateral donor agencies. Nevertheless, where community engagement has been practical, it has been constrained by the extent to which external agendas entwine with local residents needs and social contract between the state and diverse class interests. This implies that genuine participation never really takes place (Abbott, 2002a).

In another perspective, many countries in the sub-Saharan region has majority of residents in informal neighbourhoods as poor renters, as opposed to house owners. In Kenya, for example, a study revealed that Nairobi's informal settlements had 92% of the households as renters as opposed to home owners (Gulyani & Talukdar, 2008). These revelations constitute a challenge to conventional redevelopment policy efforts implying that experts/ policy makers ought to also think about the plight of tenants as a target group in redevelopment initiatives (Gulyani & Talukdar, 2008; Jørgen, 1996).

2.3.2. Gentrification and attempts to stem its recurrence

Another critique of redevelopment is gentrification. Gentrification has for long been associated with urban redevelopment efforts where 'the working class residential neighbourhoods are redeveloped by professional private developers and landlords then later invaded by the middle-classes displacing the working-class occupiers and the social class of the neighbourhood is altered.'- (Davidson & Lees, 2005) The process is often seen as having both winners and losers.[4] This means that the targeted beneficiaries often do not benefit from the process obligation thereby lessening the impact of its purpose. Table 2-1 gives a summary of the general positive and negative impacts of gentrification.

[2] Some of the sample sources include; Slater (2009), Abbott (2002a), Mukhija (2002), UNDP (2005), Roy (2005) among others.

[3] Element of 'facipulation'- facilitation and manipulation, is inevitable in community organization and development (Constantino-David, 1982 cited by Botes & Rensburg, 2000).

[4] Overwhelming majority of literatures point to negative impact of gentrification but fewer studies focus on its positives (Doucet, 2009).

Table 2-1: Summary of impacts of gentrification on redeveloped neighborhoods

Positive	Negative
	Displacement through rent/ price increase
	Secondary psychological costs of displacement
Stabilisation of declining areas	Community resentment and conflict
Increased property values	Loss of affordable housing
Reduced vacancy rates	Unsustainable speculative property price increases
	Homelessness
Encouragement and increased viability of further development	Commercial/ Industrial displacement
Reduction of suburban sprawl	Increased cost and changes to local services
	Displacement and housing demand pressures on surrounding poor areas
Increase social mix	Loss of social diversity
Rehabilitation of property both with and without state sponsorship	Under-occupancy and population loss to gentrified areas

Source: Adapted from (Atkinson & Bridge, 2005)

The negative consequences of gentrification are non-reversible. As such, different strategies have been employed in the design of the past redevelopment initiatives to curb gentrification processes. Example of one such strategy in a developing country has been the restrictions on sale, intended to impede conveyance in new property. It is argued that such initiatives may only last for a specified duration (Fernandes & Smolka, 2004). The strategy has also been faulted on the basis that such restrictions undermine the land market consequently restraining the flow of resources to productive users (Deininger, 2003).

Another strategy used to control the sale of redeveloped property has been to integrate on-site income-generating opportunities into project design, for instance, encouraging the development of business-cum-residential houses within the redeveloped property. Planners argue that increased income streams from such add-ons would reinforce the ability of the targeted beneficiaries thereby lessening the impact of involuntary sales. However, Basset (2002) notes that whether such on-site income-generating opportunities bear any correlation with decreased land sales has not been established as yet.

2.4. New Paradigm Shift: Participatory Redevelopement Planning efforts

The past three decades has seen an increase in support for community participation in processes of housing and general neighbourhood development from both the academics and development professionals. The rationale for community participation is that, it: (1) increases efficiency, to lower cost of projects; (2) increases effectiveness, to achieve greater reach for development and (3) empowers the communities, to increase their influence in decisions that affect their living conditions (Miraftab, 2003).

Abbott (2002b) points out that, success in urban redevelopment strategies like redevelopment interventions can best be achieved if the local communities are actively involved. This should be

undertaken cooperatively and locally among citizens, community groups and local authorities (Ha, 2001; Okpala, 1999; Sanoff, 2000; UN-Habitat, 2006; World Bank, 2010). The aim is to improve living and general economic condition of the informal neighbourhoods. Sanoff (2000), views the solution as the incorporation of the local communities to be part of the interventions during redevelopment projects. He continues to describe the purpose of participation to generally include exchange of information, conflict resolution and supplementation of planning and design. Where possible therefore, community based organizations should be supported and allowed to play an active role in preparing and executing plans for informal neighbourhoods redevelopment initiatives (UN-Millennium-Project, 2005). The ideal conditions considered by Choguill and Chowdhury (1996) when analysing participatory issues are: Is community participation practised? What kind of participation is under consideration? Who participates in it? And, how does participation occur?

There are many literatures that have been written advocating for the adoption of neighbourhood redevelopment as a form of urban redevelopment strategy[5]. Neighbourhood as a distinctive, significant planning component of larger metropolitan area was first strengthened by the works of Ebenezer Howard in 1898 as a sub unit that builds the physical and social fabric of a city (Talen & Shah, 2007).While many of these literatures acknowledge the existing challenges of any redevelopment work they call for more involvement of the targeted communities if better results are to be achieved. Manzo and Perkins (2006, p. 339) contribute to the discussion stating that, "residents' identification and articulation of place meanings mark the beginning of community participation in the planning process. Importance of place attachment and sense of community equally plays a significant role in neighbourhood redevelopment efforts. Researches that examine community-level place attachment have noted that bonds to places can be connected to community participation in planning and design efforts which can be done through surveys and focus group discussions". Such redevelopment initiatives- rooted in careful explorations of place meanings, attachments, and perceptions- are still uncommon. The use of participatory approach intentions in this study is to achieve the following as outlined by McCall (2004):

1. Facilitation: Identifying local spatial knowledge through participatory mapping and use of GPS.
2. Empowerment: Emphasise on community defined purpose in redevelopment initiatives to empower local people and reinforce local decision making.
3. Collaboration: Establish good link between the joint efforts in planning of neighbourhood redevelopment by both experts and community.

2.4.1. Pitfall to Community Participatory Redevelopment Efforts

Whereas many authors and researchers stress the adoption of participatory approaches in redevelopment interventions, challenges still exist in devising a participatory method that facilitates a multi-disciplinary approach in meaningful participation. Conventional methods of participation have been criticised (Kingston, 2007) and UN-HABITAT (2009) observes that a worrying trend continues to arise. Adoption of such approaches seems to yield little success as the informal neighbourhoods continue to increase

[5](Refer to Abbott, 2002b; Marcus & Asmorowati, 2006; Mukhija, 2002; Turkstra & Raithelhuber, 2004)

unabated in many cities of developing countries. Botes and Rensburg (2000) illustrates participatory development to be a complex and difficult, though essential and challenging venture. Myers (2010) contend that, two contrasting sets of concepts and practices clash in the work of planning urban places – both in the building and managing of environments through land subdivision and its regulation, housing construction, infrastructure and service provision, and in the attachment of socio-cultural meaning and value to such places.

Yli-Pelkonen and Kohl (2005) mention that one of the principal criticism in community participation is the relationship of local knowledge and expert knowledge. Local knowledge cannot be totally detached from the community who not only claim stake but also have full right to it. The authors continue to argue that as much as local knowledge lacks verification and status of expert knowledge, it is imperative to advocate for a meaningful participation by local residents and policy makers, in a socially inclusive way.
Community participation is said to facilitate consensus building efforts since many different interests are represented as well as producing innovative ideas and solutions for spatial planning. While consensus building efforts yield positive outcome, it has been criticised to produce poorly worded proposals with little substance (Margerum, 2000) as well as being problematic since not all interests are represented in the planning process.

2.5. Local Knowledge in Neighborhood Redevelopment Planning

Local knowledge has been used and termed in different ways by different authors[6]. Different terms are used concurrently to refer to this knowledge. These include; indigenous knowledge, traditional knowledge, ethnoscience and ethnobiology (Mwehe, 2011). Concisely, all these definitions have one thematic view, that of community providing particular information they posses. As already indicated, in this study, local knowledge is referred to as the perceptions, opinions and aims of urban dwellers that live in or near the neighbourhood that is largely informal in need of redevelopment.

Manzo and Perkins (2006) note that peoples' local knowledge, in form of thoughts, feelings, and beliefs about their local community places also known as 'intra-physic' phenomena, impact their behaviours toward their living environment, hence influencing whether and how they might participate in their neighbourhood redevelopment planning efforts. They note that, the unique qualities and meanings of detailed physical locale where planning and development take place, plays a critical role in the development planning process. With the current trend focus now shifting to community participation, Local Knowledge is taking centre-stage as a valid source of information to base decisions that have already been applied especially in the natural resource management field[7]. Focus in community planning for development is both within the community and between the community and public/ governmental agencies. Laurian (2003), highlights that as much as land-use planners contend that many different types of

[6] Refer to Dunn (2007)
[7] See also Quan et al., (2001), Brown & Weber (2011), Parrotta & Trosper (2012), Rambaldi et al., (2006)

information improve the effectiveness of community planning, the two sources of information (newspaper articles and public meetings), that have been commonly used to inform the public about critical land-use issues in the community are not sufficient enough. Sandercock (2003) argues that the role of 'story' and the process of 'storytelling' to planning practitioners is central particularly in community development initiatives. She further elaborates that "the story-gathering is likely to be followed by an attempt to find common threads that will help to draw up priorities"-(p. 186).

2.6. Adopting PGIS to improve Participatory Urban Redevelopment efforts

Geographic Information Systems (GIS) in general terms is known as computer based system for analysing and mapping spatially referenced data. Numerous GIS researchers have identified the potential of GIS to collect various forms of spatially referenced data that can be used in engaging residents in neighbourhood redevelopment planning. According to Talen (2000), using GIS in participatory planning initiative provides spatial complexity, spatial context, interactivity and interconnection in articulation of viewpoints.

This therefore makes it an effective tool to aid planners in deepening their understanding of community's local knowledge thereby facilitating decision making in redevelopment planning process. Abbott(2002a) and Hordijk & Baud (2006), explain that GIS tool complement the weakness of traditional planning approaches which lack the capability of integrating spatial local knowledge of the community. Local knowledge and public participation are deem important aspects in planning more so at a neighbourhood level which has largely been ignored. Al-Kodmany (2000, p. 5), concur that while the use of GIS has been applied widely in large-scale urban and regional planning, it has been applied far less frequently in neighbourhood planning. He ascertains the situation to availability of GIS data at a much broader scale and not at the local level. Value of a local GIS and land-use maps become relevant when an immediate event like rezoning or proposed development threatens a neighbourhood.

PGIS is defined as the integration of local knowledge and stakeholders' perspectives in GIS (Quan, et al., 2001). Laituri (2003), describes PGIS in the planning context as a confluence of social activity, such as the integration of input from grassroots organizations with government decision making and technology in specific places or grounded geographies. Rambaldi et.al (2005 cited in 2006, p. 13), describes PGIS as a tool that 'often relies on the combination of expert skills with local knowledge'. They further explain that, it facilitates representation of local community spatial knowledge using community maps. The map is an instrument that let people talk and clarify situations. It contributes to the diagnosis of a situation using the words of the actors themselves (Hill & Lindner, 2006). The community maps are made by the community members because they have the best knowledge of their neighbourhood as well as its local assets, opportunities and limitations.

Rambaldi et al.(2006) and McCall (2003) assert that PGIS practice promote interactive participation of stakeholders in generating and mapping spatial information by fostering accountability, transparency and

legitimacy. Therefore, to improve planning in an urban context, local communities ought to be given opportunities for participation and their spatial local knowledge given prominent role in redevelopment activities. Talen (2000), uses PGIS approaches for land use planning describing it as "Bottom-up GIS" (BUGIS), a tool used to communicate how a resident would describe, evaluate, or prescribe a course for development for a particular area. It helps communicate and visualize residents' perceptions of their neighbourhoods. She remarks that "GIS is placed in the realm of expression and used as a means of expression". As such, it is considered an effective tool to deepen understanding of community's perceptions of local issues and preferences. Al-Kodmany (2000), describes the application of a community-based GIS in a smaller-scale urban landscape of communities and neighbourhoods to enhance communication between planners, community groups and local residents.

More GIS users, researchers and community groups conversant with PGIS propose use of techniques to integrate local knowledge with the formal, technical data already represented in GIS (Craig, Harris, & Weiner, 2002). The local knowledge is often derived by use of traditional approaches like; oral histories, public gatherings, focus group discussions, in-depth key informant interviews, walking interviews in form of geo-coded transect walks complimented by geo-coded photos, household surveys, 3-D modelling & visualization techniques, and community mapping exercises. These traditional approaches are implemented to provide GIS with rich, valuable, qualitative information possessed by the communities that is hardly incorporated using the traditional GIS planning approach. According to Craig et al (2002), community's knowledge is heavily qualitative in nature and invariably based on oral history as well as the experience of having lived in a place for a longer duration of time.

As much as several authors have highlighted the relevance of PGIS in planning, McCall (2003), argues that while PGIS is not an essential component of participatory spatial planning, if used with an adequate regard and sensitivity for issues of ownership, legitimacy and local knowledge, it can contribute to the empowerment of communities in solving spatial planning problems.

3. URBAN PLANNING AND MANAGEMENT IN ZANZIBAR

This chapter explores the discourse of urban informality in Zanzibar through evaluating the existing urban planning and management policy and institution frameworks.

3.1. History of urbanization in Zanzibar

Urban planning development practice in Zanzibar is rooted on its political divide ideology namely; (1) the administratively controlled planning heritage, (2) the revolutionary socialist heritage, and (3)the contemporary polarize mix of the first two. It is from these three streams, that the existing disconnections between formal and informal processes exist.

Zanzibar's urban planning has been unable to keep pace with the rapidly growing demands for housing and other urban services. The last master plan was prepared in 1982. But this was of course not implemented accordingly. Its failure is attributed to various reasons ranging from social, economic, political and institutional setbacks. (See section 1.2)

Zanzibar is a semi-autonomous polity within the United Republic of Tanzania, consisting of two main islands, Pemba and Unguja, and 52 other islets. Unguja is the home to the polity's capital city, known as Zanzibar. The city's origin can be traced back during the establishment of the Omani seat of power in 1690s. The settlement expanded dramatically when the Sultan of Oman moved to Zanzibar early in the nineteenth century which gave rise to a building boom and urban expansion. A significant Arab and Indian commercial elite resided mostly in the western area of the city, Stone Town, and an African and Swahili majority lived mostly across a tidal basin from them, in Ng'ambo (the other side). Still, the city's population only climbed above 30,000 towards the nineteenth century's end, and it stagnated through most of the British colonial era (1890–1963). By 1931, the city had 45,276 people, while the 1948 count increased by only a few dozen (Garth Andrew Myers, 2010).

The 1950s saw a new wave of urbanization, with the population of the city and its suburbs growing to nearly 70,000 by 1958. Independence created freedom of movement that allowed for greater urban population expansion, such that the urban and peri-urban settings combined held 142,041 people by 1978, and 208,137 by 1988 (Garth Andrew Myers, 2005). Thereafter, there came into existence the socialist regime in 1964 that focused on urban development projects which drew more people into the city. Since then, there has been unprecedented growth in the urban district which has besides doubled in areal extent (Garth Andrew Myers, 2010). One critical challenge to planning policy makers is how to respond to the rapid demand of planned and serviced urban land and decrease the intensification of informal settlements.

3.2. Existing policy and legislations related to urban planning in Zanzibar

Zanzibar has not had a defined National land policy since its colonial times, although there have been many land legislations that govern land administration which include;

i. The Land Tenure Act No. 12 of 1992
ii. The Land Adjudication Act No.8 of 1990
iii. The Registered Land Act of 1990
iv. The Land Tribunal Act No. 7 of 1994
v. The Land Transfer Act No. 8 of 1994
vi. The Land survey Act No. 9 of 1989
vii. The Town and Country Planning Decree Cap. 85 of 1955, and
viii. The Land Acquisition Decree No. 95 of 1909

It has been realised that most of these legislations are incompatible and have resulted in complex land management and administration system. This too has compounded into incompatible social, economic, political and environmental urban development.

3.3. Principles guiding urban planning in Zanzibar Town

The overall responsibility for urban planning, design, implementation and management lies with the Ministry of land, water and energy, granted through the Town and Country Planning Decree Cap.85 of 1955. It is a comprehensive piece of legislation and many of its provisions are still valid. Based on the discussion had by the planning expert, it was noted that, the planning decree has provisions for the preparation of planning schemes (development plans) including development control but no provisions for local participation in the process other than in the integrated rural development schemes, a limitation factor to integrating community participation in the current planning framework. Other stakeholders mainly, the Local Authority and Department of Construction noted with a dotted line in Figure 3-1, also contribute in the planning process but only as reviewers. The same decree has also provided the formation of UDCA whose functions and responsibilities include: provision of building permits for new buildings, issuing permits for maintenance, conducting audits and monitoring progress of construction and issue legal notice on illegal constructions that don't follow procedures.

Realisation of the limitation in the current planning framework of a rigid planning approach where the government assume the role of provider and controller has necessitated a shift to a collaborative planning approach, laying emphasis on an enabling approach with a wide range of public, private and community partners in the pursuit of sustainable development. For instance, the ministry's current draft of land policy (2009) focuses on decentralization, private-public partnership, commercialization, and stakeholder participation. According to experts interviewed, they were all in agreement that there has not been any form of community participations in their operations. They also responded by saying that they are in the process of developing a framework which involves community participation that includes; identification of felt needs, project designing and consultations in planning and management.

3.3.1. Challenges and constraints in urban planning development

According to an interview respondent, '*despite the numerous legislations and presence of institutions meant to guide development in Zanzibar, challenges incapacitate efforts in urban planning. The government has a low capacity to acquire land, service it and allocate it for urban development. Similarly, due to limited resources, government cannot be able to compensate residents in order to acquire land for urban development and that is why we wallow in informality'*. It was realized that the planning and management of urban development is split under different not so well coordinated institutions. In the case of Zanzibar Municipal Council (ZMC), management is split among the municipal council and Stone Town Authority. Other ministries are also involved in the provision of infrastructure as well as other services none of which are coordinated. One key expert described the planning in Zanzibar as 'sector-based'. Due to the increased demand for building lots, an informal land market is in force, giving rise to spontaneous development.

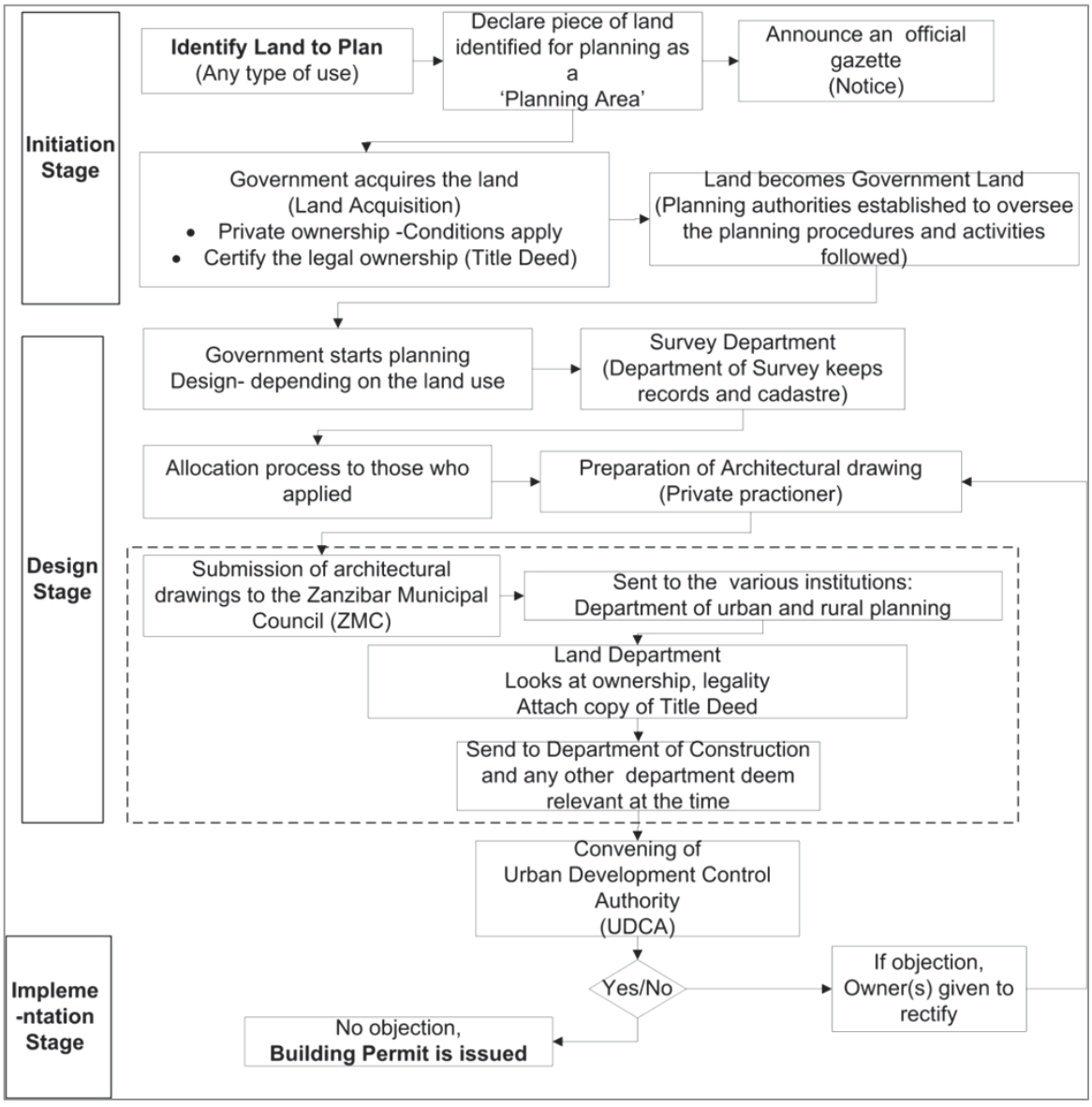


Figure 3-1: Guideline for urban planning process in Zanzibar

Other challenges identified are; a low resource base in finance, manpower and equipment. For instance, according to an interview by ZMC official, '*there is no planning officer in the municipality office making it difficult to implement the existing policies*'. The main provider of plots and services in the urban development area is the central government; however funds, manpower and equipment for urban development are not sufficient. The expert official at ZMC also stated, '*the ZMC, like any other local authority in the world is supposed to provide and maintain access paths and garbage collection but we don't have the mandate or enough funds for such activities'*. However, a potential lies in acquiring money by making use of some untapped sources, mainly service charge through UDCA and land tax.

General physical plans to guide development are lacking for the majority of Zanzibar Municipality which uses the now outdated 1982 Master Plan. As a result of unclear urban management machinery and a poor resource base, development control is inadequate. Worth noting in the Planning Decree stipulations is that when a new development is replacing an existing building or collapsed building, it should generally follow the existing building line (a line defined by the frontages of existing plots and buildings). This is an indication of the continuum of informality, if the new development has to follow the pre-existing building line that is already amorphous.

3.4. Towards participatory redevelopment planning in Zanzibar

As earlier described by Sanoff (2000) on the purpose of participation, it is clear from the urban planning guideline process framework in Figure 3-1, that land use planning in Zanzibar has been characterized by a centrally control planning system based on the interaction among and contribution from a section of group of experts. Planning in Zanzibar is described as 'sector-based planning strategy'. It emerged from the experts' interview that each government department sector has its own planning agenda which lacks coordination leading to duplication of efforts and preventing policy makers from achieving shared goals to facilitate formal planning. Similarly, there is no indication of the traditional community participation in the planning process in form of public meetings. Land use planning system is only founded on expert knowledge which takes form of planning maps and surveys that few local residents can identify and comprehend.

The result of a development process mainly depends on the involvement of people at the grassroots level and their choices. This is where residents in a neighbourhood to be redeveloped play key role in their advocacy too. According to the household survey carried out in the study, the community responded to not having participated in any planning process by the government. In general, community responses highlighted that 'Planners usually prepare plans and guidelines for different uses without consulting the local people affected by the plan'. Although, there is a community organization that focuses on social issues, there is no coherent community organization to spearhead local development initiatives with legal backing. This is likely to translate into weak forms of community mobilisation hence limited representation of residents in community participation process.

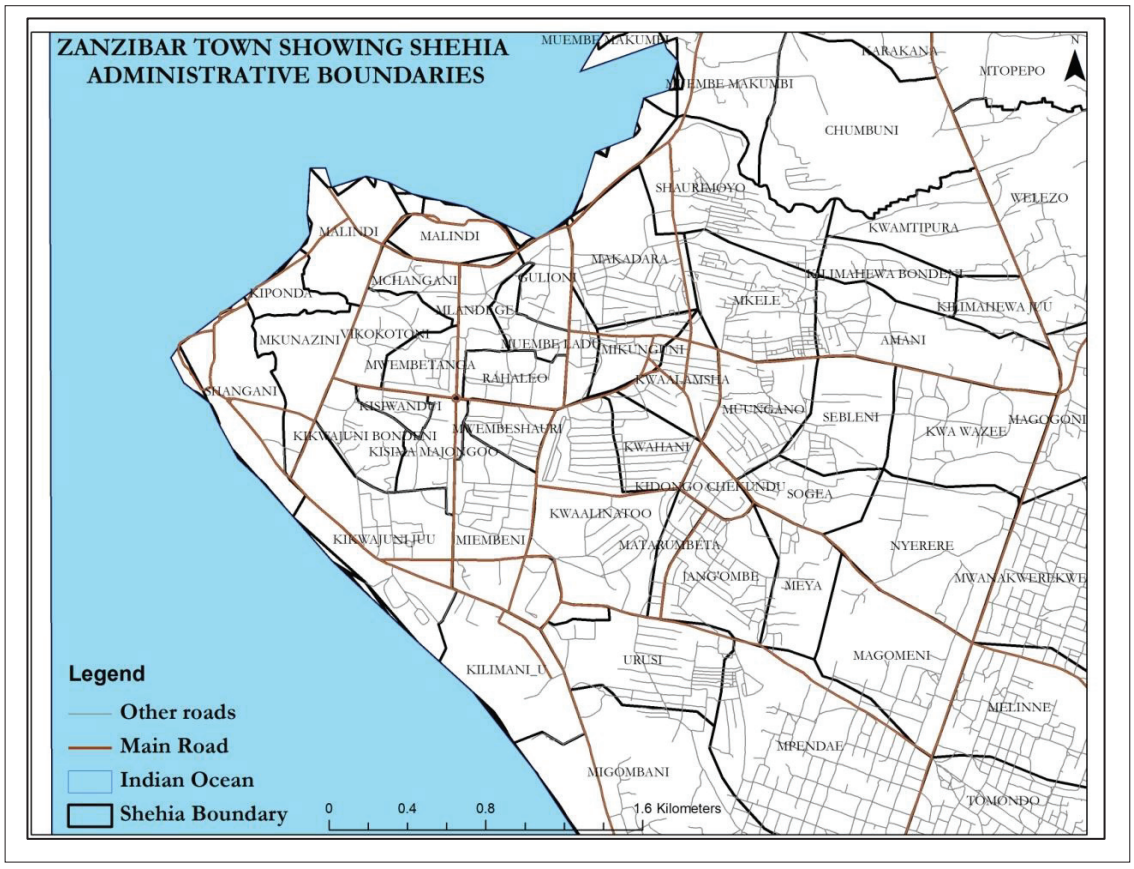
4. BACKGROUND TO STUDY AREA

This chapter describes the study area. It presents a brief overview of the demographic and spatial characteristics of the informal study area which was also used as criteria for an anticipated redevelopment initiative.

4.1. Location

Zanzibar Island is a low-lying Island in the Indian Ocean with an area of about 2,654 square kilometres situated some 30 kilometres from the mainland of East Africa, (GoZ, 2010). Zanzibar forms part of the United Republic of Tanzania and consists of two islands Unguja and Pemba Islands with about other 52 smaller islets. Unguja is the main island with the urbanized areas covering approximately 1,600 hectares approximated to be three times bigger than the official town boundary (Murage 2008 as cited by Mwehe, 2011).Pemba has an area of about 988 square kilometres (GOZ, 2003).

The main centre of the population is Zanzibar Town where the study was carried out. It lies on the western side of the Unguja Island. It is also the administrative and commercial centre of the islands.



Map 3-1: Location of Zanzibar Town in the national context

4.2. Demographic Characteristics

According to the Zanzibar Statistical Abstract (2010), the population census carried out in 2002, Zanzibar had a population of 984,625 with Unguja being the most populated with approximately 620,957 persons. Its population density was 400 persons per square kilometre in 2002 making it a country with the highest population density in Africa.

4.2.1. Settlement Pattern

The settlement pattern in Zanzibar does not have a balanced settlement system. It consists of patterns developed in different decades; old and new unplanned areas, old semi planned and new planned areas. The development in the unplanned areas is still growing rapidly compared to the planned areas. There is poor development control mechanism by the Municipal and District Council (GOZ, 1995). The dominant features in these areas are characterized by:

- Highly congested buildings and relatively high density and haphazard housing pattern
- Limited accessibility to internal part of the neighbourhood. The existing access paths are passable mostly by cycles and pedestrians.
- Limited control on the environmental hygiene.
- Storm water drainage system neither exists nor maintained.
- Very narrow spaces between houses.
- Limited access of social services such as play grounds and open spaces.

The informal settlements that continue to mushroom are vivid signs that public policy has not yet reached the urban dwellers. Their only option is to settle in informal areas, which lack basic infrastructure and poor environmental conditions.

4.3. Land use in Zanzibar

Zanzibar municipal area covers an area of 4,424 hectares of which the total built-area is 1,945 hectares. Table 4-1 gives a summary of the land use categories in Zanzibar town. Residential area coverage is 43.5% of which 73% is informal.

Table 4-1: Land use categories in Zanzibar Town

Land use Category	Area (hectares)	Area (%)
Residential	846	43.5
Public open spaces	108	5.5
Public utilities	59	3.0
industry	55	2.8
Agriculture	33	1.7
Commercial	18	0.9
Other areas	247	12.7

Source: Adapted from (Khatib, Mmochi, Mpatane, & Kombo, 2009)

5. METHODOLOGICAL FRAMEWORK FOR COMMUNITY PARTICIPATION IN URBAN REDEVELOPMENT PLANNING

This chapter conceptualizes the GIS and society framework by developing a participatory methodology in identifying local spatial knowledge for redevelopment. It also outlines the methods and approach employed during fieldwork of the study.

5.1. Conceptual Framework

This research is based on the GIS and Society conceptual framework that has formed a body of literature on PGIS which explores issues related to GIS implementation (See: Abbot et al., 1998; Al-Kodmany, 2000; Asare, 2008; Craig, et al., 2002; McCall, 2003; Talen, 2000).

Urban informality and urban redevelopment responses calls for a realm of participatory approaches in understanding the perceptions and needs of those in informal neighbourhoods and allowing them to define their aims. This more often than not lack in many conventional urban planning approaches and redevelopment planning initiatives, where the intervening planning authorities make board room solutions (see section 2.2) to improve the informality situation without recognising the local knowledge on issues, perception and aims of community.

Noting that PGIS research ought to be driven by specific community need priorities, PGIS methodology can be used in conjunction with the planning policy makers' to identify the local community priorities and defined needs in improving their neighbourhoods. Similarly, local community are allowed to share their expert knowledge of their areas and map their issues unlike traditional board room approaches. Products developed such as knowledge maps help in representing, communicating and visualizing these perceptions, needs and aims to urban policy makers. Figure 5-1 gives a summary of the conceptual framework foundation to this research:

5.2. Research Design

The research comprised of three phases outlined in Figure 5-2. The study sought to determine the process of a participatory methodology in neighbourhood redevelopment planning in Zanzibar. This called for a nuanced understanding of the complex procedures and institutions that shape the planning process.

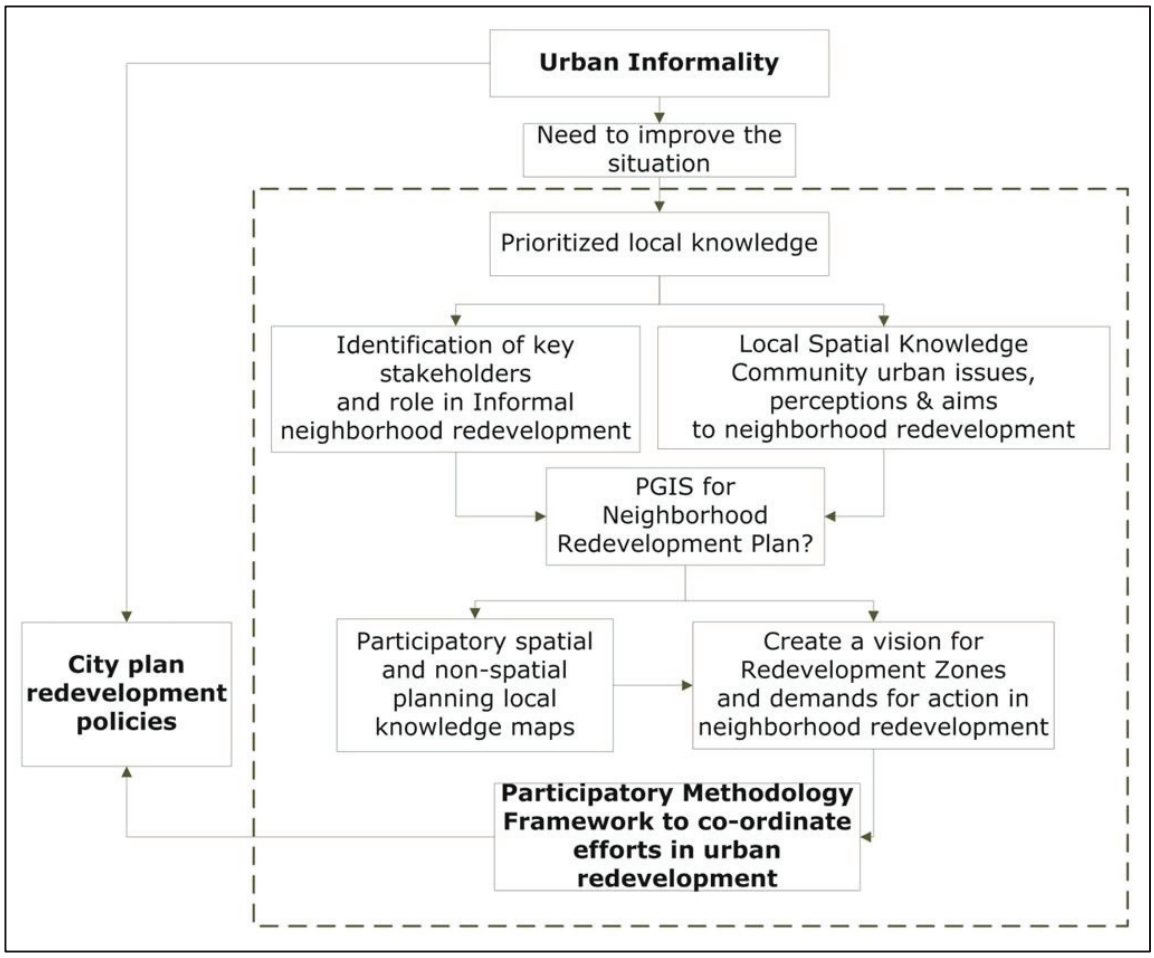


Figure 5-1: Conceptual Framework

5.3. Field Survey Preparation

Prior to collecting data, official consent was sought from relevant authorities and the community through their administrative leader, *Sheha*. A combination of quantitative and qualitative data collection techniques were used to collect relevant data to carry out the research. The quantitative data aimed at exploring and obtaining people's qualitative perceptions to their neighbourhood as well as that of the experts which would act as input to neighbourhood redevelopment planning process. Similarly, the qualitative data was used to further clarify the reported respondents' quantitative data. An outline of the measures employed prior to collecting data is outlined as follows:

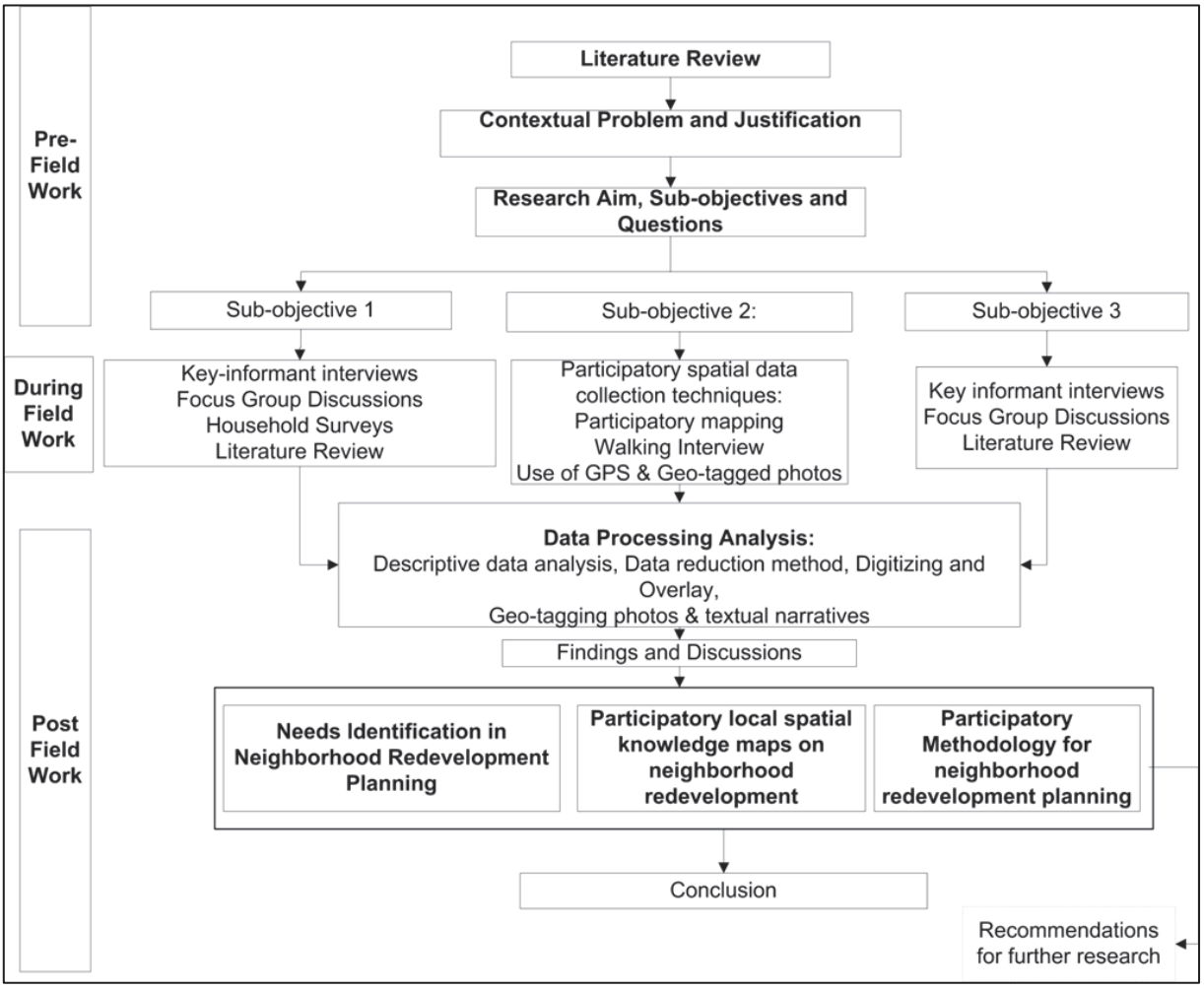


Figure 5-2: Research design

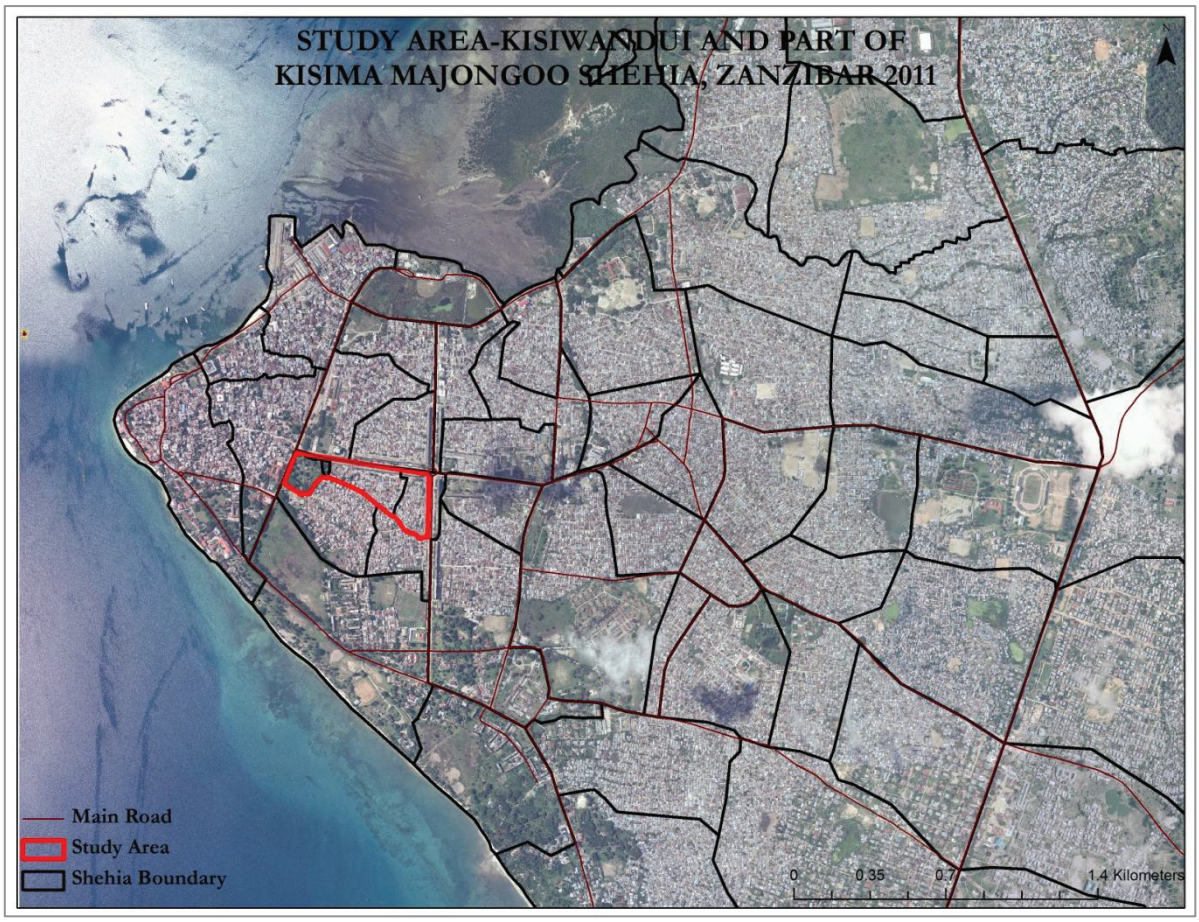
5.3.1. Criteria for choosing the study area

A study site was identified in consultation with the new planning department staff that had prospects of creating a community-based organization to elicit local spatial knowledge for long-term development partnership in planning. Similarly, they aimed to implement a redevelopment planning vision consistent with plans of other government agencies and interests across the community using a participatory approach.

A number of criteria were used to select the study area within Zanzibar town jurisdiction. Firstly, an area characterized by informal development with haphazard physical pattern of houses and winding access paths. Secondly, an area neighbouring the old city-Stone Town, which is a world heritage site owing to its strategic location significance.

Incidentally, the area has been undergoing rampant demolition and reconstruction of multi-storey buildings financed by individuals and private developers which is considered illegal by the policy makers as it is not compliant to any planning standards.

A high- resolution satellite image (Map 5-1) was used to identify the study area that indicates the criteria outlined. The selected *Shehia*, *Kisiwandui* included part of a neighbouring *Shehia*, *Kisima Majongoo* as it was recognized that there is a likelihood of some interventions having direct impact as a consequence of its adjacency to other neighbouring *Shehia*s, for instance expansion of road, laying way leaves for water pipes and storm water drains.



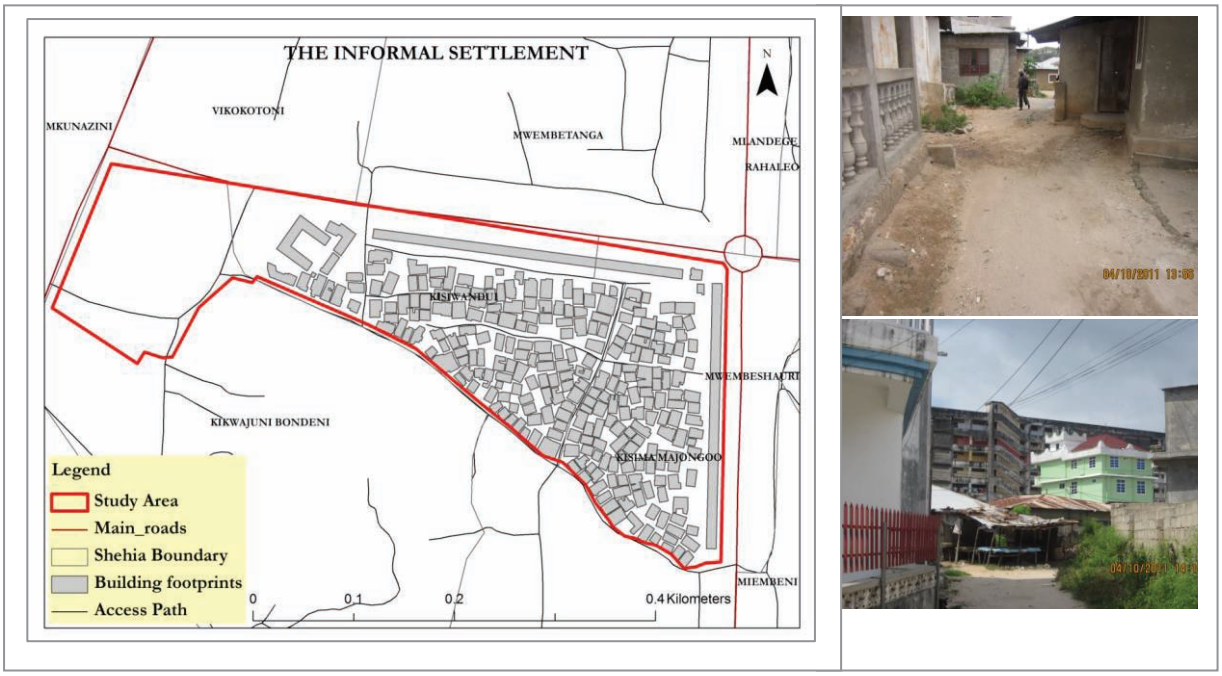
Map 5-1: Location of the study area within Zanzibar Town

Subsequent discussions with the planning staff revealed that as a new planning department, there had been a considerable increase of redevelopment applications for change of use (single-use to multi-use storey buildings) on the existing informal development which the government seem not to have any influence to control. Currently, the department has issued a directive to stop all ongoing building activities until a proper guideline is put in place. One key informant remarked '*Development is happening so fast. If not careful, we will have another extension of 'New' Stone Town development (and I think part of it has to be with the multi-storey buildings coming up) due to overbuilding. Some order is needed here.*

5.3.2. Reconnaissance Survey

A preliminary survey was carried out in order to confirm the delineated study area boundary as well as familiarising with the area prior to data collection. The following characteristics of the area were noted; There is an irregular layout of houses in the neighbourhood as illustrated in Map 5-2; the area has mixed development use with both single-storey and multi-storey buildings in a highly densified fabric. Existing

new multi-dwellings are mostly business-cum-residential uses; Most of the houses are in good physical condition; only one access path-three-meters wide, that goes round the neighbourhood is accessible by motorised traffic, the rest have been encroached by protrusion of buildings blocking the passages.



Map 5-2: Characteristics of the study area

5.3.3. Neighbourhood quality variables

Neighbourhood spatial concerns were first identified using in-depth key informants' interviews. Ritchie and Lewis (2003) describe in-depth interviews as content focused discussions with key informants who have lived in an area for a long period of time and have rich knowledge about particular subject of interests (such as subjective informal neighbourhood spatial issues in this case study). Two informants, one from the community and the other one an expert/policy maker, were interviewed. The aim was to gather inclusive and elaborate list of variables on the neighbourhood spatial strengths and weaknesses of the area to be used in the questionnaire survey for all respondents.

A satellite image was used as a complement to the conversation with the informants. This was meant to stimulate expression of perceptions in a spatial dimension and to obtain a representation of the significance of respective places. A list of characteristics of the neighbourhood variables was derived from this exercise. Some of the variables definition was derived from the Town and Planning Decree, Cap 85 regulations subjective to the existing situation in the study area: This list was later reviewed during reconnaissance survey and pilot testing of questionnaires for validation.

- Main road- the road that leads from the old Stone Town to other areas in Zanzibar that has more traffic and is adjacent to the neighbourhood.
- Access path- the road that branches from the main road allowing entry to the neighbourhood.
- Housing congestion- overcrowding build-up of houses in a small surface area of residential land.
- Housing pattern- configuration layout plan/pattern in the housing arrangement.

- Neighbourhood pride and appearance- a function of satisfaction in the neighbourhood characteristic
- Interaction- the social ties and relation between dwellers in the neighbourhood unit.
- Provision of water services- ability to use and benefit from improved water sources e.g. piped water, public tap and borehole or protected well.
- Storm water drainage- drains system to collect and convey water runoff to the ocean in order to prevent flooding.
- Open space/ recreational facility- describe public squares, parks and recreation grounds.
- Access to public social amenities- ability to use and benefit from public educational, health and other social facilities like library.

5.3.4. Pilot testing of questionnaires

Questionnaire administration was aimed at gathering the community's knowledge, views and responses on the qualities of their neighbourhood[8]. Prior to actual questionnaire administration, household survey was pre-tested with ten residents from the community. This exercise was aimed at:

(1) Reviewing the list of variables to ensure that the conditions indeed exist in the neighbourhood.
(2) Test the questions which provided the opportunity to garner community feedback on the content and general direction of the questionnaire in ensuring that the delivery of the questions is;
    (a) Relevant, understood and acceptable to the respondents
    (b) Questions capture sufficiently what the survey is seeking to find, and
    (c) Time duration of administering the questions is acceptable.
(3) Familiarize the team with an entry strategy to be employed in the field during actual sample survey, and
(4) Test the capability of the research assistants in administering the questions and make necessary adjustments before deploying them to the field.

Part of the questionnaire (qualitative perceptions to neighbourhood) was administered to the experts in order to identify their perception of the neighbourhood intended for redevelopment process. This facilitated identification of the different perceptions of the two groups, experts and local residents for later comparison to recognize possible mismatch in perceptions.

It was realized that the community respondents were not fully aware what entails urban redevelopment. Therefore, the entry strategy was changed by explaining briefly what urban redevelopment entails. It started by pointing out an example of a well planned neighbourhood environment in the area then comparing it to the resident's neighbourhood. The questionnaire administration was used as a first-step of a consultation planning process as well as introducing the community to an intended neighbourhood redevelopment.

5.4. Data Collection Methods

5.4.1. Key informant interview

Key informants from government authorities were identified using snow-balling technique. 10 experts relevant in the urban planning and management administration were identified. The interviews were

[8] Refer to Table 6-3 for the spatial issues and perceptions in regard to neighbourhood redevelopment which are also the variables measured.

structured in both close and open-ended questions oriented along a list of topics. This approach offered flexibility in emerging new topics and more discussions with the experts. The interviews were conducted in both English and Swahili language. Interviews were audio-recorded and transcribed to enhance reliability. Table 5-1 shows a list of key informants from different departments who participated in the survey.

Table 5-1: List of experts interviewed

Department	No. of respondents
Department of Urban and Rural Planning	4
Director, Urban and rural planning	
Chief Physical Planner	
Senior Planner	
Planning Officer	
Department of Construction	5
Assistant Director Engineer	
Chief Engineer	
Engineer officers	
Zanzibar Municipal Council	1
Deputy Director- Sanitary Engineer	

5.4.2. Household Survey

The actual primary data collection took place on the 5th -17th October, 2011. A total of 200 local resident respondents were interviewed. The survey was targeted to persons above the age of 18 years and preferably household head. The average age of the local residents in the survey was approximately 41 years ranging between the ages of 18 and 77 years.

Prior to the survey, the sampling frame was drawn from the overlay of a geo-referenced satellite image and building footprints spatial layer. The assumption made was that one building footprint represents a rooftop of one household. Random sampling technique was applied using SPSS and later joined in ArcGIS to visualize the households selected to participate in the survey. As for the households in the multi-storey buildings, a systematic sampling technique was applied. If selected house earmarked for questionnaire administration had no respondent, strategy put in place for replacement was to pick any house in the vicinity which had not been selected. This was reckoned to be imperative not only in orientation of the study area but in marking the houses interviewed in the study to avoid repetition. Research assistants were engaged in the study and were trained on map reading and given A4 sized oriented satellite image and a copy of the randomly selected households to be interviewed.

The four research assistants were selected with the help of a contact person who had a database of youth workers and a pool of university students that had been engaged in previous projects. The research assistants consisted of students from the tertiary institutions in Zanzibar. Each research assistant was given an A4 size print-out copy of the satellite image showing the study area and its building footprints that were randomly selected. The questionnaire was designed in such a way, to give it a spatial context. For

each questionnaire administered in a household, a unique number was given to the questionnaire and the corresponding rooftop on a geo referenced satellite image with the building footprints. Statistical analyses were carried out and the different perceptions on each neighbourhood quality variable determined. The unique number later facilitated integration and visualisation of the local knowledge within an existing GIS database.

Demographic information of the local residents was collected. In addition, views on community spatial concerns in the neighbourhood were discussed and rated on a six point-Likert scale. Focus group discussion schedule was arranged with the community respondents at this time.

5.4.3. Focus Group Discussion

FGD with the community was held on 20th October, 2011 in *Kisiwandui* Primary School organized with the help of the *Sheha* and facilitated by the researcher (Picture 5-1). As stated by Goss and Leinbach (1996, p. 115), " 'stories' produced in a collaborative performance of a focus group better reflect the social nature of knowledge than a summation of individual narratives extracted in interviews". Therefore, as illustrated in Picture 5-1, FGD was used to enrich and expand the first hand data collected through in-depth key informant interview and household survey. Present were few of the experts who felt the need to attend the meeting to familiarize with the community aims in implementing their intended redevelopment planning and consultation activities.

The purpose of the meeting was first explained to the participants who were later asked to explore issues by focusing on broad discussion theme areas broken down from perceived neighbourhood quality in the household survey. Five redevelopment constructs identified were: accessibility, housing development/economic development, service provision, and recreation, which provided a frame for discussing: 1) existing spatial issues, 2) the different perceptions of the locals on their neighbourhood 3) aims on improving the situation and, 4) mapping the knowledge. This was done to get an in-depth understanding and determine the reasons for the local residents' perceptions, priorities and aims including but not limited to neighbourhood redevelopment.

5.4.4. Participatory Mapping

This is an exercise which allows tacit knowledge embedded in people's spatial memory to be converted into explicit and externally-usable knowledge (Corbett et al., 2009). The participatory mapping exercise, which was used during focus group discussion, had two groups; men and women, although the number of women was insufficient to ensure proper participation. The mapping was done on a tracing paper overlaid on a 1: 4,000 metres scaled map of the study area. Participants with both positive and negative perceptions to the neighbourhood explored and exchanged general ideas. In the same map, areas indicated as strengths and weaknesses of the neighbourhood were identified and participants later explored possible solutions to their neighbourhood issues. Picture 5-1 shows the participatory mapping exercise where the community

recorded their knowledge using felt-tipped markers. Other miscellaneous content were also written directly on the map.

Picture 5-1: Focus group discussion (left) and participatory mapping exercise (right) sessions at *Kisiwandui* Primary School, Zanzibar
Source: Fieldwork, 2011

The strength of participatory mapping lies in the integration of contrasting views in an interactive setting as the locals identify areas of potential accord and conflict while retaining individual's perspective. As noted by Rambaldi et al (2006), spatial data and maps generated at this stage are intermediate products of a long-lasting and articulated process, making them a means and not an end. These maps become resources for suggesting to planners the aims of the community in neighbourhood redevelopment to guide in policy making and redevelopment planning process. They also create a platform to communicate how residents prescribe course for the redevelopment of their neighbourhood.

Practical ethics of mapping exercise require that physical output of the maps generated from the participatory mapping exercise stays with those who generated it. But because this study needed to process and analyse the maps, the maps were not left to the custodians, who are the residents in the neighbourhood.

5.4.5. Walking Interview

To verify the perceived neighbourhood qualities discussed and later mapped as redevelopment constructs by the local residents, a walking interview was carried out. Walking interview is a form of interview conducted 'on the move' to produce narratives both in terms of quantity and spatial specificity of the study area (Evans & Jones, 2011, p. 849). A number of participants took part in the exercise where, they physically identified the locations that were discussed in the room-based setting discussion. The exercise was aimed at the community identifying the described key characteristics of the neighbourhood both positive and negative while taking photographs and picking the geographic positions using a GPS. This was used to complement and verify geo-referenced textual narratives of specific determined locations highlighted from the survey and FGD along with. The exercise elicited additional significant discussions

and impressions of specific locations that arose 'on the move' which were otherwise not mentioned in the previous exercises already mentioned.

Prior to this exercise, participants were trained on how to pick GPS positions as they took photos and at the same time recording their narratives using a digital recorder. Time was synchronised for the three gadgets for easy categorization during analysis. These photographic data and narrative further illustrated the local community perspectives on their neighbourhood environment reflecting on their strengths, concerns and aims for redevelopment.

5.5. Secondary Data

The secondary data on urban planning and management in form of reports and policy documents were acquired from government departments already mentioned. They included; UDCA document outlining its legal mandate in planning for Zanzibar Town, draft policy documents on land use planning, national land policy and hosing policy framework, feasibility study report on human settlement development and Zanzibar Statistical Abstract.

5.6. Data Processing and Analysis

The respondents' questionnaire on their perceived neighbourhood qualities was analyzed using SPSS to compute frequencies, means and standard deviations. T-test was computed to find out whether significant differences existed regarding the perceptions between community and expert of the neighbourhood. Effect size was calculated using Cohen's d[9] to find out the extent of the differences(Cohen, 1988).

Key informant interviews and focus group discussions were transcribed and analyzed qualitatively using data reduction technique (Miles & Huberman, 1994). To analyze the data descriptive statistics, paired samples t-tests and effect size were calculated to ascertain the perceived neighbourhood qualities by both the community and the experts. Effect size was calculated using Cohen's d (Cohen, 1988). Cohen provided tentative benchmarks for the interpretation of effect sizes. He considers d=0.2 a small, d=0.5 a medium, and 0.8 a large effect size. This effect size is used to measure the magnitude of the perceived differences of the different groups' perceptions. Community spatial perceptions and aims were processed using ArcGIS and results displayed as local knowledge maps including geo-coded photos and textual narratives of redevelopment constructs mapped by the local community.

5.7. Limitations to the study

Zanzibar has no redevelopment framework in place yet but the proposed participatory framework process was guided by the limitation in the current guideline of the planning process which would otherwise be adopted for the redevelopment initiative.

[9] Cohen defined *d* as the difference between the means, M1 –M2, divided by the standard deviation, σ, of either group.

As is required of any participatory approach, the visioning process output was not validated by 'co-owners' -the target community to ensure that the reproduction of the map by experts captured the condition and needs of the community.

To comprehensively understand the 'sectoral based' planning in Zanzibar, all sectors concerned in the development of Zanzibar ought to have participated in the study to identify their mandate. However, due to the complex nature of the study coupled with limited time frame during fieldwork, this was not tackled.

6. LOCAL SPATIAL KNOWLEDGE FOR NEIGHBOURHOOD REDEVELOPMENT PLANNING

This section provides the results of a participatory approach from different methods applied, namely; household and expert survey/discussions, key-informant interviews, focus group discussion and walking interview. Community local knowledge maps, geo-coded textual narratives and photographs have also been processed and analysed to be integrated in the redevelopment planning process.

6.1. Demographic Characterisitics

This serves to understand the general demographic characteristics of the community respondents. An overview of factors such as age, occupation and ownership status were surveyed. Similarly, it was significant in understanding respondents reasoning for opinions and aims in the event of a neighbourhood redevelopment.

Majority of the interviewed respondents were between the ages of 18 –77 years with the largest proportion, 104 (52%) between the ages of 20- 39 years The average time lived by the respondents in the area was 17 years indicating how acquainted and attached one is to the neighbourhood.

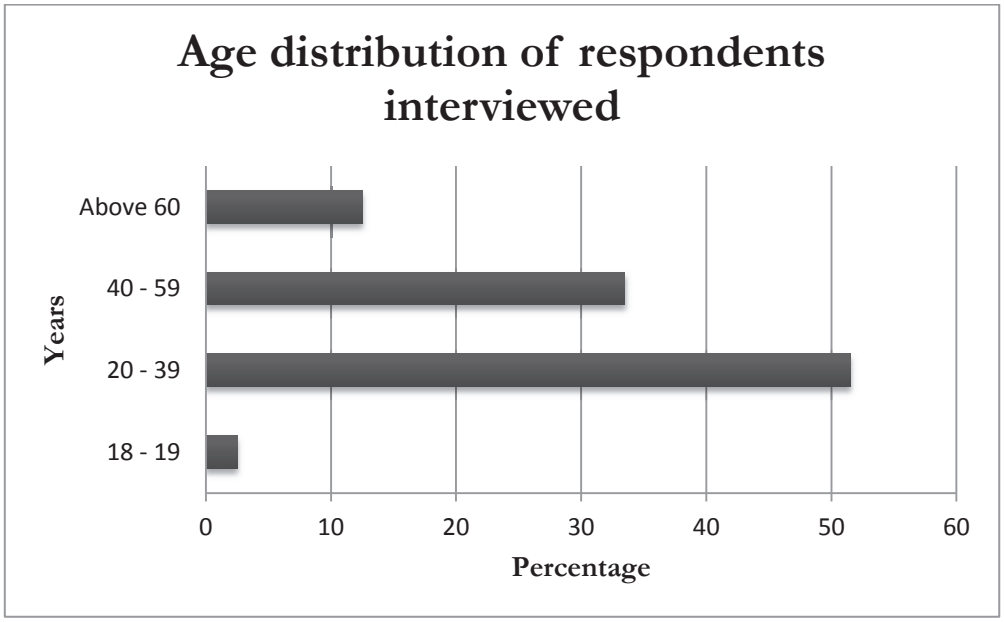


Figure 6-1: Age of the respondents interviewed

6.2. Housing in the informal area

A moderate percentage (49%) of the interviewed respondents own (inheritance/ born there) their current residence as illustrated in Figure 6-2 . Currently, there are 44% (Table 6-1) of the dwellers living in single-dwelling units but 56% (Table 6-2) of all the interviewees would prefer to live and own single-storey house, a contrasting view with the current development taking place in the area (See section 5.3.2). The situation in Zanzibar is such that, households build their own housing units on rented land owned by the

government. Majority of the houses are permanent (96%) made up of cement blocks and corrugated galvanized iron sheets.

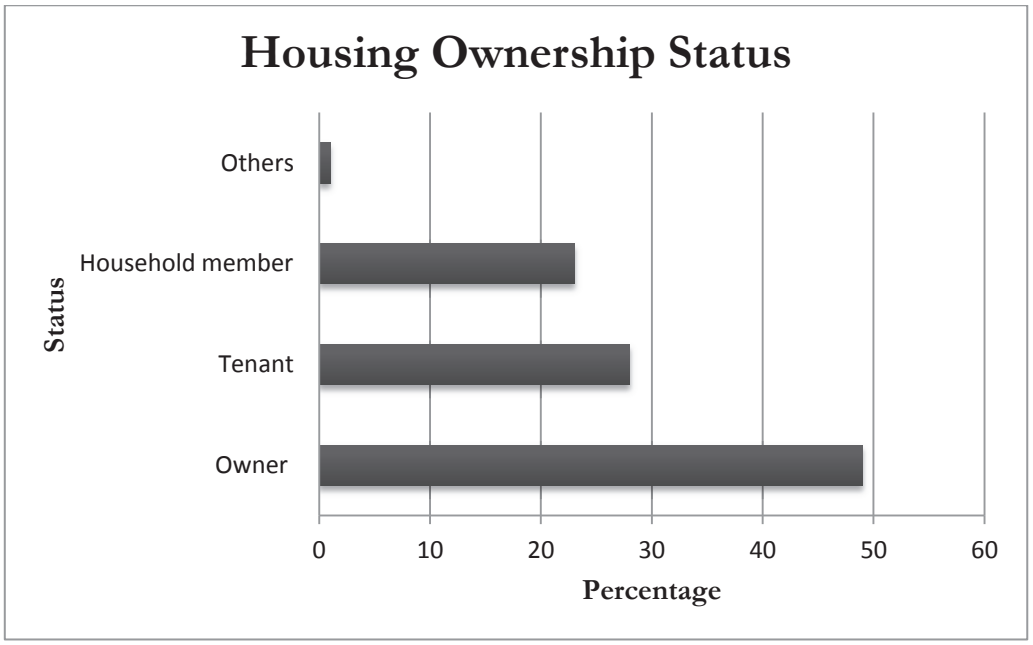


Figure 6-2: Housing ownership status in the neighborhood

Table 6-1: Type of housing in the neighborhood

Current Housing Type	Respondents (n=200)	
	Frequency	Percent
Apartment/flat under 4 storey's	56	28.0
Apartment/flat over 4 storey's	55	27.5
Typical Swahili House	2	1.0
Single- Dwelling unit	87	43.5
Total	200	100.0

Table 6-2: Type of housing preference

Preferred Housing Type	Respondents (n=200)	
	Frequency	Percent
Single dwelling unit	112	56.0
Multi-storey building	88	44.0
Total	200	100.0

6.3. Employment

A Moderate percentage of the respondents (32%) are unemployed as illustrated in Figure 6-3, partially reflecting the affordability challenge of owning '*single- dwelling houses with large compounds for children to play*' as described by one of the community respondent. This poses a challenge to an impending relocation and resettlement intervention where majority of the residents cannot afford. One of the policy makers responded by saying '*redevelopment initiatives are by no means easy to organise, finance or implement especially where there is limited inter-agency co-ordination among actors. Residents must be effectively protected from unnecessary evictions, if the redevelopment premise is to remain meaningful*'.

However, a significant percent (30%) of the respondents were employed both in semi-skilled and skilled occupations and 29% were self-employed but largely in unsustainably small subsistence trading activities. This as valuable resource ought to be considered too in the redevelopment process of the neighbourhood to encourage local economic development.

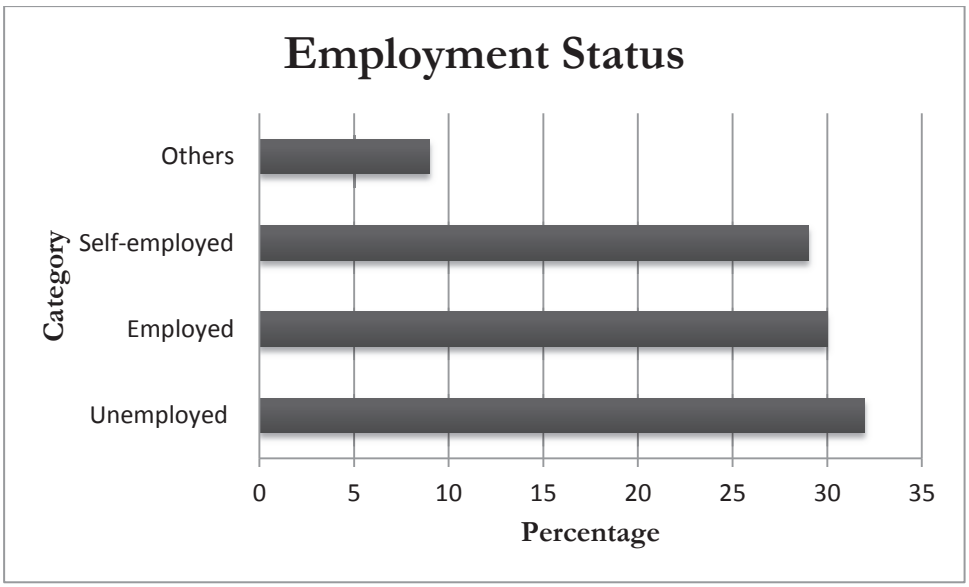


Figure 6-3: Employment situation in the neighbourhood

6.4. Community participation

To determine participation goodwill in sense of community cohesion, the community was consulted on participating to redevelop their neighbourhood. Almost all of the interviewed respondents 95% (190) indicated interest of participating citing reasons how they would want to participate; like giving opinions and designing their neighbourhood (for instance, housing layout and locating access paths).Only a few, 5% (10) who did not want to participate cited reasons such as; lack of time to take part in such initiatives owing to other responsibilities and doubts if their input will be relevant to the planning authorities.

6.5. Identification and Visualization of Perceived Neighbourhood Quality

One of the aims of this study was to find out to what extent the priorities of the neighbourhoods match those of the policy makers. The comparison and shared insights of perceptions amongst the community and experts bring about the different ways of interpretation and meaning to an informal neighbourhood

quality. 200 local residents and 10 experts in policy making responded to this item, citing their understanding sense of the neighbourhood. In Table 6-3, a comparison between the two groups of participants' perceptions to the neighbourhood qualities is done. To ascertain what is perceived to be best and worst neighbourhood qualities in the *Shehia* were investigated in the study. Respondents were asked to indicate their levels of agreement on perceived neighbourhood qualities on a six-point Likert scale. The scores were interpreted as follows: 1 is the lowest possible score, which represents a very negative perception, while 6 is the highest possible score which represent a very positive perception.

Table 6-3: Difference in perceptions of neighborhood qualities of the community and expert respondents: (M, SD, p-value and effect size)

	Community (n=200) [a]Community (n=176) [b]Community (n=172)		Experts (n= 10)		Sig.	Effect Size
Perceived Neighbourhood Variables	**M**	**SD**	**M**	**SD**	**P**	**d**
Perception to the main road	2.35	1.097	3.30	.483	0.000*	-1.12
Perception to the access path	3.18	1.295	1.10	.316	0.000*	2.21
Level of satisfaction with housing congestion	3.90	1.343	2.10	.316	0.000*	1.85
Perception to housing pattern	3.87	1.408	2.40	.966	0.001*	1.22
Neighbourhood pride and appearance	4.74	1.007	3.80	.632	0.001*	1.12
Level of interaction	5.64	0.795	6.00	.000	0.000*	-0.64
Level of safety	5.21	0.990	5.00	.000	0.003*	0.30
Perception to provision of water services	2.40	1.056	1.00	.000	0.000*	1.87
Perception to storm water drainage	2.18	1.328	1.00	.000	0.000*	1.26
Access to open space/recreational facilities	5.28	1.040	1.00	.000	0.007*	5.82
Evaluation of access to public health facilities	4.46	1.510	2.00	.000	0.000*	2.30
[a]Access to public schools	5.09	1.081	4.00	.000	0.000*	1.43
[b]Access to public library	3.94	1.607	4.00	.000	0.636	-0.05

*Significant at 0.5 level

In general, mean scores (M) were higher for the community respondents than the experts for almost all the perceived neighbourhood variables. It suggests that the residents tended to indicate stronger or more positive views of their neighbourhood conditions than the experts. This is paradoxical considering the characteristics of the informal neighbourhood. The only exceptions were with three variables; perception to main road (community=2.35, expert = 3.30), level of interaction (community = 5.64, expert = 6.00) and access to public library (community=3.94, expert = 4.00). Different reasons which could explain this was accounted for in the interview data. Almost all of the respondents that is, both the experts and community stated emphatically that there are relatively strong social ties and sense of community citing

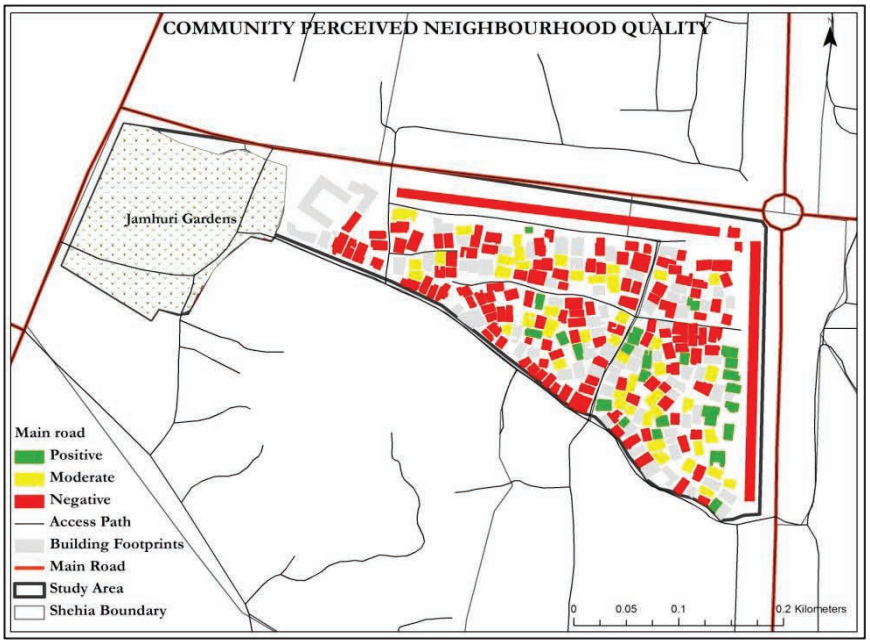
cultural and religious reasons relenting people to interact well with each other. Although, a few of the residents especially those on the ground floor of flats over 4 storey's, rated low interaction citing reasons like neighbours littering and pouring dirty water on their backyards creating strained ties amongst them. The main road was rated more negative by the community as they are directly affected with the unsafe use of the road (See section 6.6.1).

With respect to access to public library, (28) respondents from the local community did not respond to this item. The communities in the study neighbourhood indicated that barely do they use the library facility and services. Though the experts emphasize that the public library is an essential social institution, their view seem misplaced. This is based on the communities who are the users of such a service who report they never use this facility. However, households with school-going children reported that schools provide the facility so they do not interact with the public library.

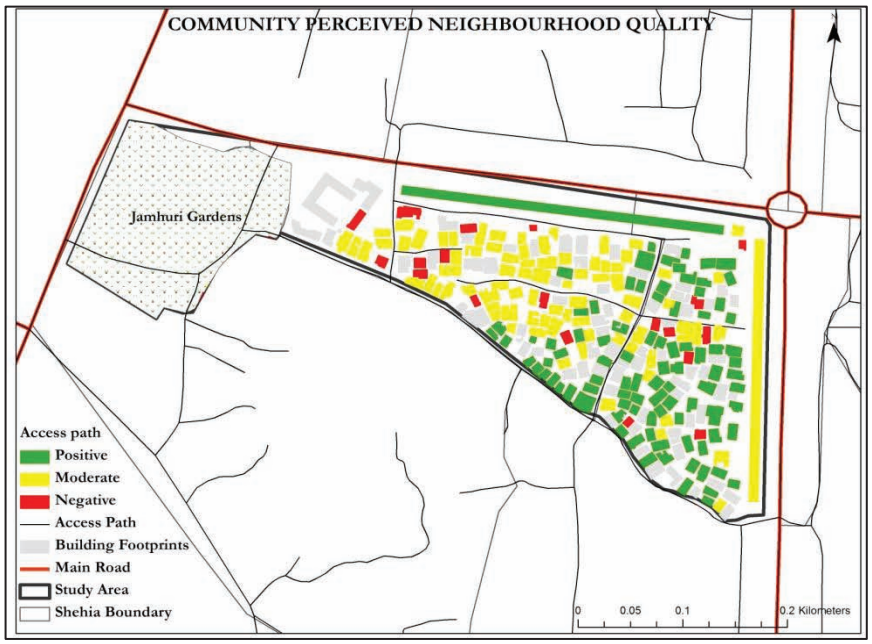
The T-test results shown in Table 6-3 further indicated the significance difference in the means of variables of the groups' perceptions, with large effect sizes confirming a marked difference in views between the community and experts participants.

Perception on access to open space/recreational facilities recorded the most perceived mismatch (d= 5.82) between the local community and the experts (community =5.28, Experts =1.04). Although responses from the experts indicated negative perception to open space/recreational facilities it was subject –specific referring to aesthetics and functional attributes of landscaping of private open spaces such as private gardens. The public recreational park, Jamhuri Gardens is currently divided into two sections; public and private with the latter having the above mentioned facilities that can only be accessed at a fee. On the contrary, the community prides in the park as a strong quality of its neighbourhood since it is located in their *Shehia* hence the positive perception.

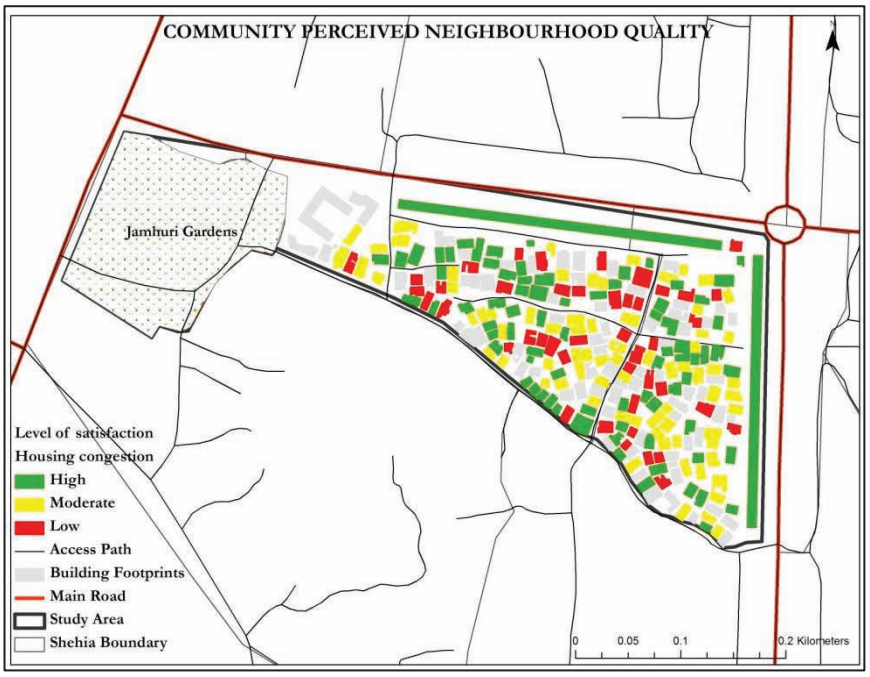
As previously discussed in section 5.4.2, GIS was used to record community's local knowledge. It was also used to authenticate and visualise the local knowledge maps, as illustrated in Map 6-1 - Map 6-6. Inferring from the maps, aid the planners in understanding the spatial complexity, spatial context, interactivity and interconnection in articulation of viewpoints as described in the literature (See section 2.6). The visualisation ascertains the perceived needs identification from each household that participated in the study.



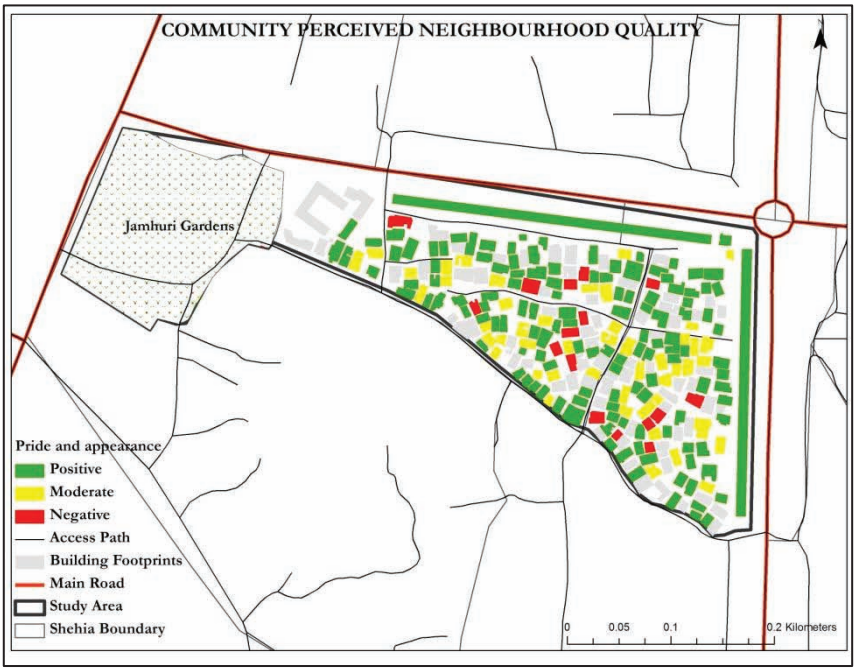
Map 6-1: Community perception to the neighborhood's main



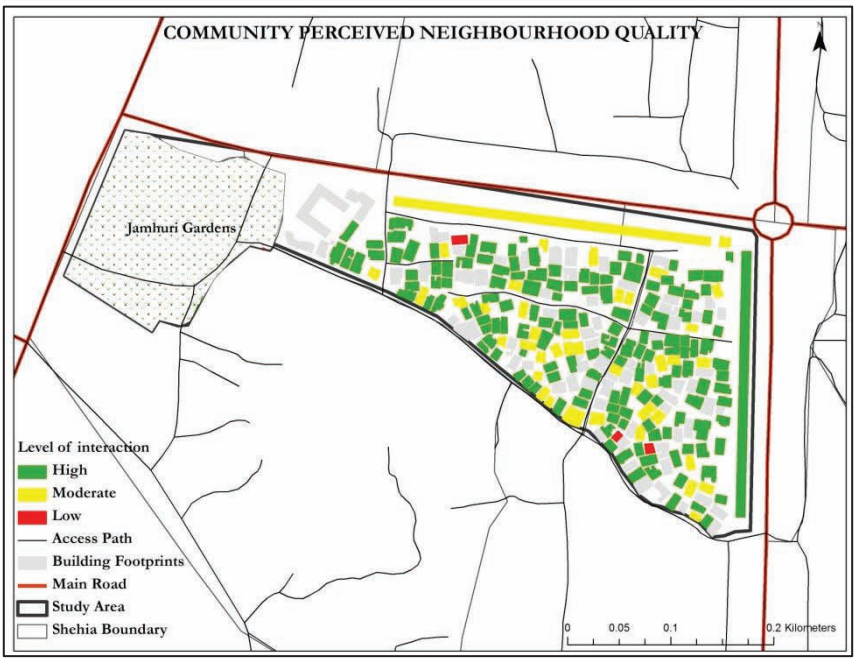
Map 6-2: Community's perception to the neighborhood's access path



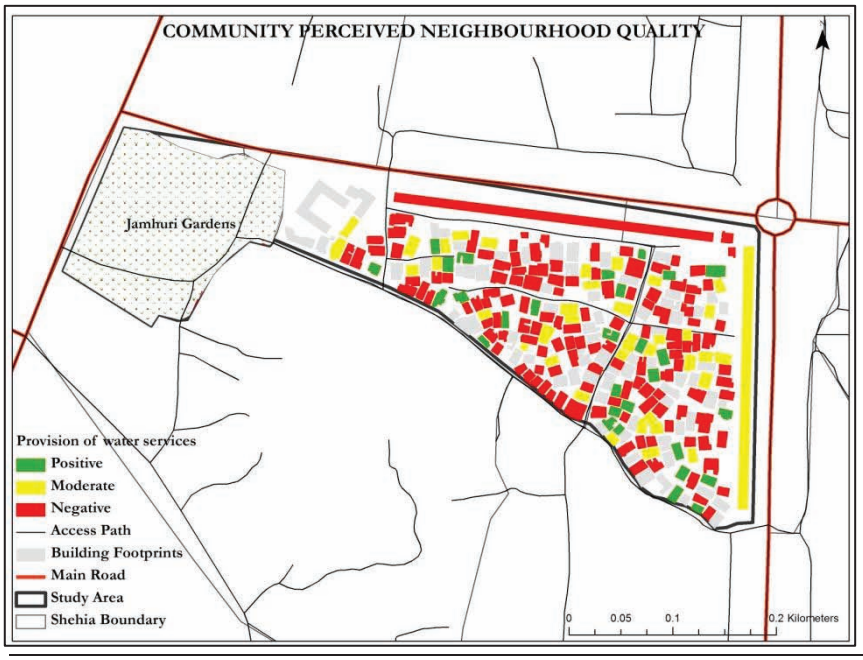
Map 6-3: Community level of satisfaction to housing congestion



Map 6-4: Community perception to the neighborhood's pride and appearance



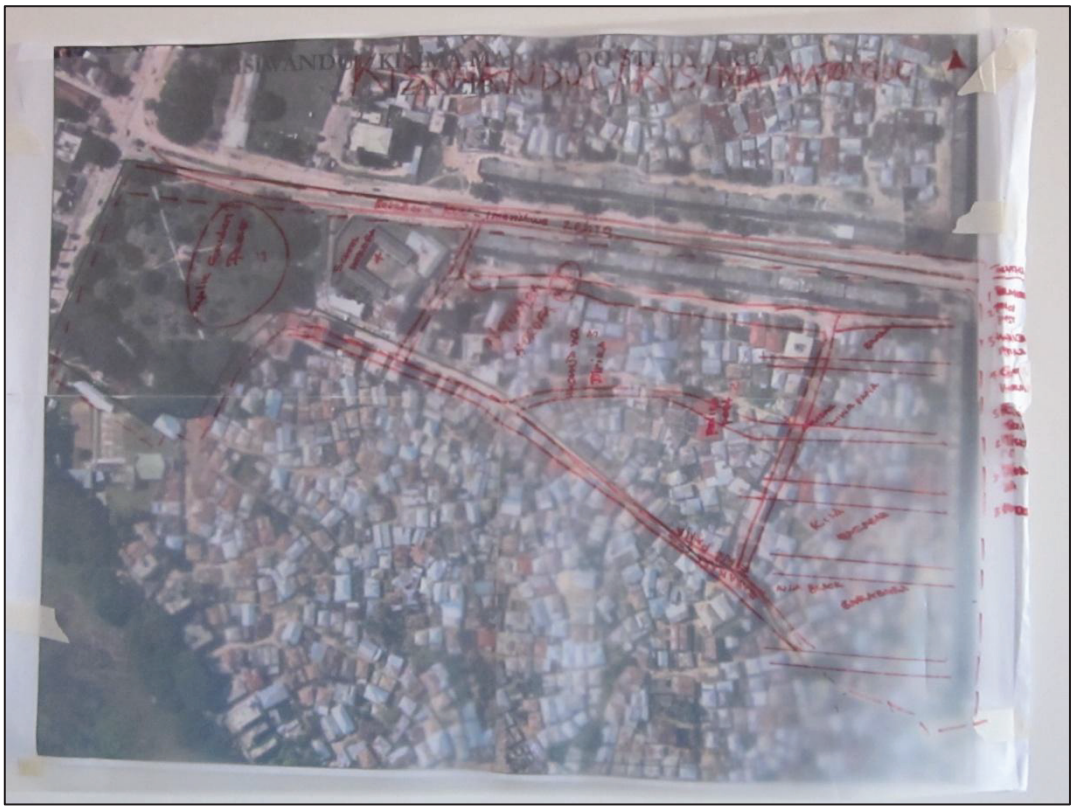
Map 6-5: Community perception to the neighborhood's level of interaction



Map 6-6: Community evaluation to the neighborhood's provision of water services

6.6. Participatory Mapping of Perceived Redevelopment Needs

The community consultation process using collaborative participatory mapping exercise and a walking interview facilitated further detailed view and insight to a variety of community perspectives about the neighbourhood. The importance of land-use planning was discussed at length by the experts to the community that yielded results in form of a sketch concept-design plan of redevelopment constructs defined by the residents, namely; access, housing/economic development, provision of services and recreation. Satellite imagery was used to aid in the discussions. Both members of the community and experts were in attendance and participated but only the community carried out the mapping exercise. The result of this exercise is illustrated in Map 6-7 below. Some of the key highlights of the redevelopment constructs in the participatory map are:



Map 6-7: Community-defined redevelopment map
Source: Fieldwork, 2011

6.6.1. Access

The local community mapped unsafe intersection on the main road and access paths traversing their neighbourhoods as illustrated by Picture 6-1 and marked as weakness locations in Map 6-8 below. It was stated during the mapping and discussion exercises that: '*Most children come from far and they have to cross the main road to school. They are exposed to the danger of the busy road with speeding vehicles. It's only 2 days ago that a young man was hit by a speeding car and he was tossed to the other side of the road. That shows how our school going children are exposed to the dangers of this road. So, it will be a relief to see a freshly paint zebra crossing, sign post showing children crossing or a fly-over built for safety use of the road*.' Another participant reacted by suggesting, '*As a community, if*

approached, we can also participate in planting more trees along pedestrian paths to give a pleasant walking environment and provide shade.'

In the neighbourhoods that formed the study area, it was observed that most of the access paths have since been partially blocked whereas in other sections of the neighbourhood, others have been completely blocked. This issue was affirmed by one of the resident who highlighted that, '*As long as I can remember in my childhood days as this is where I was born, there were access paths and you could see one end of the street if you stood at my doorstep. But now, people build and extend to the access paths. If an accident were to occur like fire outbreak, or if someone were to fall sick in my house, I would be forced to climb with them on my neighbour's rooftop to get to safer grounds to gain speedy access to take them to hospital*'. Picture 6-1 was taken to complement the narratives described in the discussions.

Picture 6-1: Access; Main road (right) and one of the access paths (left) in the neighborhood
Source: Fieldwork, 2011.

6.6.2. Housing/ Economic Development

Within the neighbourhood, there is mushrooming of new housing development that does not follow zoning regulations, which has lead to haphazard development. The urban planning experts reported that there lacks a proper zoning regulation and people adopt existing informal plan layout when building As already indicated by the experts (See section 5.3.1) in the planning department, new housing development has been spreading throughout the neighbourhood, building on the existing informal plan layout with lack of zoning regulations enhancing haphazard housing pattern. Picture 6-2 shows the nature of redevelopment going on. Here, discussions were focussed on the impressions of housing issues such as congestion, layout pattern of the house, housing needs such as promoting vertical development[10] in the area.

Participation in planning is to a larger extent non-existence. As such, the community was inquisitive on the government's intent in redevelopment. Only when asked what the government intended to do did an expert from the planning department responded by explaining, '*This is a community planning exercise to empower*

[10] According to the policy makers in the planning department, Zanzibar is rapidly growing and soon running out of space hence ideal for vertical development.

the community contribute to their living environment. What we want to discourage is a repeat of the old process where government used to direct and provide. We would like to have a people process where your needs are an input to our plans'.

To address lack of participation, the communities came up with various suggestions as quoted below:

- *'Development here in Kisiwandui is taking place at a very rapid pace and unplanned growth. It is a good sign of development but can't they be like the ones in Bongo-Mainland (Storey buildings adhering to planning standards) with some order?'*
- *'It would be well to have new housing development with a standard pattern of 'two-four storeyed buildings and commercial units at the ground floor to provide employment for the youth'.*
- *'In addition to that, if the government intends to build houses for us, consider both the owners and the tenants to suggest for buildings that they can afford. Similarly, consider those who have to be relocated if you have to demolish houses.'* – FGD, 21.10.2011

Picture 6-2: Example of single-storey buildings (left) converted to multi-storey buildings (right) in the neighborhood
Source: Fieldwork, 2011

6.6.3. Provision of services

The water was described by the participants as being 'perpetually unavailable' leading to higher costs of buying water that is considered unsafe for domestic use. Other services like, storm water drainage were found to be deplorable in the neighbourhood of study. It had been turned into solid waste drainage with some residents channelling their sewage into the drain. During the walking interview, the location was identified as a hazardous zone as illustrated in Map 6-8 where contamination is likely to cause diseases especially for households and children playing in the vicinity if no measures are taken to bring it to a halt.

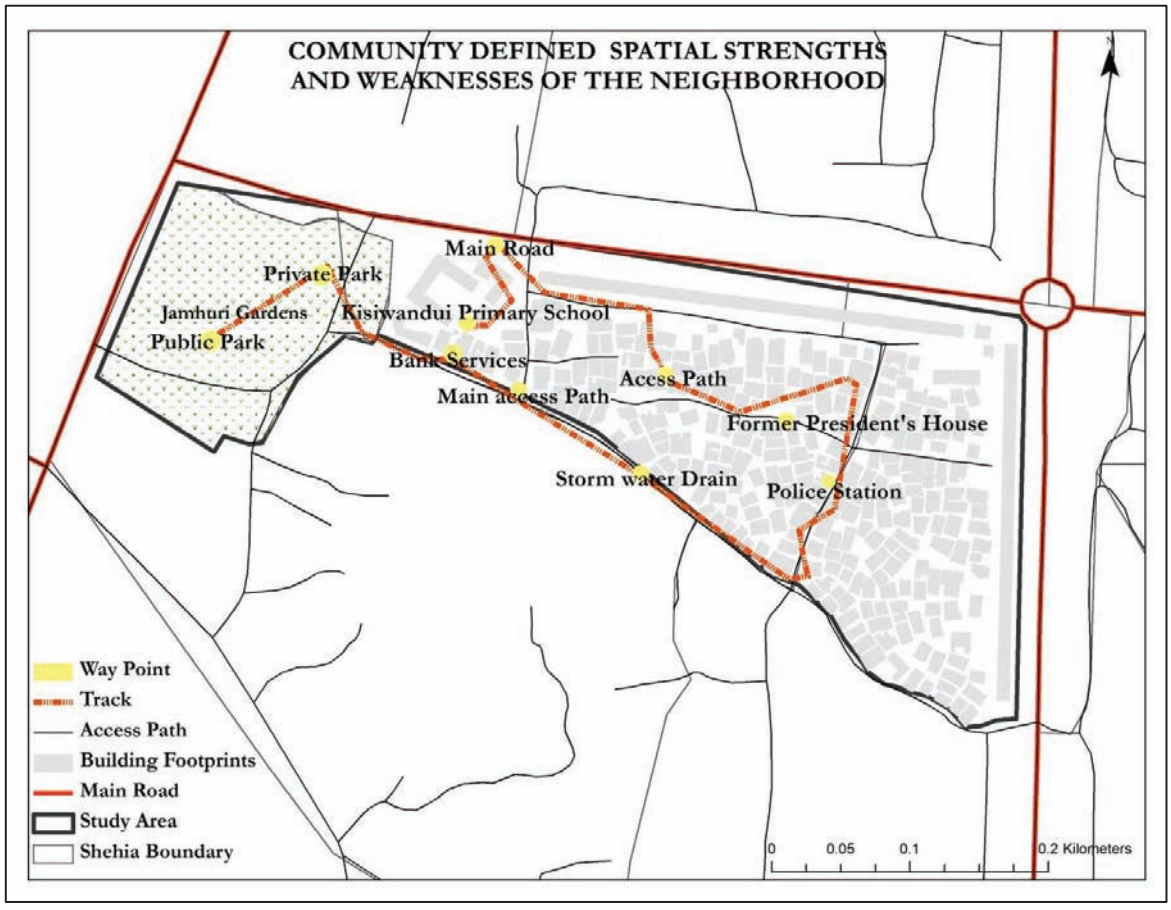
6.6.4. Recreation

Jamhuri Garden park was found to be an asset by respondents to their *Shehia* with one respondent highlighting: '*at least every time we have a ceremony, we gather with my family to have a goodtime right next to our home unlike other neighbourhoods which have to board a 'daladala' to be here. They only need to improve the existing facility with a playground having swings and slides, patio with open-air picnic tables, improved walking trails and picnic shelters for public access*'. Majority of the users in the park are students especially for group-work studies, which was evident

from the activities observed taking place at the time of the walking interview, illustrated in Picture 6-3 and Map 6-8 as one of the strengths in the neighbourhood.

Picture 6-3: Public section (left) and private section of the recreation park (right) in Jamhuri Gardens
Source: Fieldwork, 2011

Other significant locations identified as strengths (refer to Map 6-8) in the neighbourhood during the walking interview not mentioned in the mapping exercise included; the former president's house, *Kisiwandui* primary school which is among the best performing schools in Zanzibar Town, bank services and a police station whose presence was said to attribute to the positive perception of level of safety.



Map 6-8: Walking interview route showing community's identified location points of neighborhood-defined spatial strengths and weaknesses

7. INTERGRATING COMMUNITY PARTICIPATION FOR A NEIGHBOURHOOD REDEVELOPMENT STRATEGY IN ZANZIBAR

This section discusses the integration of community participation framework developed and employed emphasising on local knowledge. A review of the framework is done in a five-step outline to aid in facilitating the anticipated redevelopment planning process in Zanzibar.

7.1. Step 1: Initiation Stage: Local Knowledge Identification (Perceived Needs Identification)

In reference to the main aim of the study, the first step towards integrating community participation in neighbourhood redevelopment as illustrated in Figure 7-1 starts with needs identification of the local residents in form of perceptions. As reviewed in the literature, community participation is often more successful when it starts from the needs of the community. In this context, the questionnaire administration was used to introduce the community to an intended neighbourhood redevelopment. It was also used as a first-step in consultation process to assess the demographic profile of the residents as well as their local knowledge in the neighbourhood in regard to specific neighbourhood qualities.

As already discussed in section 5.4.2, the questionnaire was designed in such a way as to give it a spatial dimension. For each questionnaire administered in a household, a unique number was given to the questionnaire and the corresponding structure on a geo referenced satellite image for easy integration within an existing GIS database.

In traditional planning approaches, (just as is the case in Zanzibar), experts have single-handedly assumed the entire extent of development initiation, design and implementation as illustrated in Figure 3-1. Consequently, this has lead to misplaced interventions which are ineffective, contrary to the perceived needs of the populace. To determine if that was the situation in the anticipated redevelopment initiative in Zanzibar, experts' knowledge of the neighbourhood with regard to specific neighbourhood qualities was also determined.

Statistical analyses as illustrated in section 6.5 were carried out to identify and investigate data by comparing perceived neighbourhood qualities for residents and experts. The differences in perceived neighbourhood qualities between community and experts provide an understanding of the magnitude of differences that occur between the community and the experts in redevelopment initiatives. It further indicates the risk of having inappropriate state interventions generated by experts without consulting the community in redeveloping their neighbourhood. The target beneficiaries are likely not to accept, own or identify with the redevelopment hence the cycled debate on inadequacies of planning approaches to urban informality. Therefore, it is paramount for planning experts to understand the neighbourhood qualities

and meanings of specific physical setting in which redevelopment planning is to take place. It is on this note that the participatory methodology framework started with local knowledge identification. As recommended in the literature review (See section 2.4), experts/policy makers ought to emphasise on residents, their neighbourhood and the spatial local knowledge as the object of redevelopment.

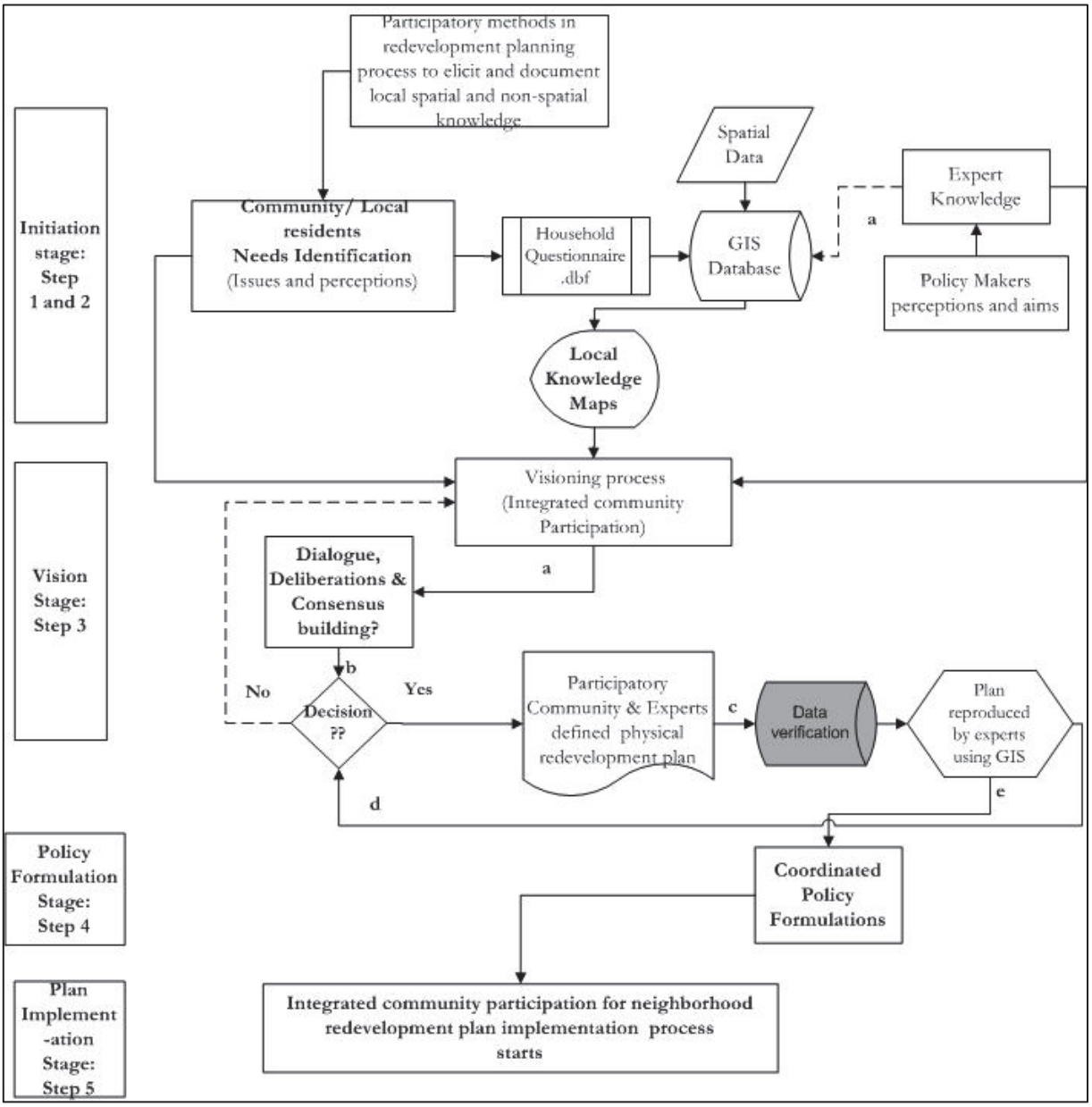


Figure 7-1: Steps of integrating community participation for a neighborhood redevelopment planning process

7.2. Step 2: Initiation Stage: Integrating Community's Participation with GIS

Once the perceived needs had been identified, the next step was to integrate the local knowledge into GIS. The local knowledge collected from household survey was converted into a GIS compatible file format, '*.dbf extension*' which was integrated to existing GIS database with the following geo-referenced spatial dataset, namely; satellite image of Zanzibar, shapefile of building footprints of the neighbourhood, shapefile of main road, shapefile of access paths and shapefile of the study area boundary. GIS aided in

visualizing the quantified neighbourhood quality ratings of the perceptions that represents the community viewpoints with spatial information as illustrated in Map 6-1- Map 6-6.

A summary of how community participation was integrated in GIS is shown in Figure 7-1. Use of the dotted line marked 'a' in the framework is to convey emphasis on planning experts adopting GIS technology to counter the weaknesses of traditional planning approaches that lack the capability of integrating community's spatial local knowledge in redevelopment planning(i.e. use of newspapers and public notices). As reviewed from the literature GIS in participatory planning initiative provides a platform to comprehensively understand the spatial complexity, spatial context, interactivity and interconnection in articulation of viewpoints.

Local knowledge maps generated as shown in Map 6-1- Map 6-6 are visual communication tools from community perspectives capable of aiding planners in analysing local knowledge perception of felt needs, reflecting on the mismatch of neighbourhood qualities perceptions between them and the community. The results and insights learned served as necessary inputs for the experts in revising their approach to redevelopment planning geared towards adopting community local knowledge. This is aimed at countering the effects of traditional planning approaches outlined in section 2.3.1 where the experts in overall assume the entire extent of the redevelopment planning which is also replicated in Zanzibar's planning framework as illustrated in Figure 3-1.

Practically, identifying the residents' perceptions can also enhance toleration of differences between the experts and the community. Besides, the community learn from experts on the significance of planned formal environment while sensitizing and creating awareness to the community on the procedures that need to be followed in approving development that adhere to planning standards.

Additionally, identifying community viewpoints on neighbourhood quality facilitates transparency amongst the stakeholders' during project initiation especially on qualities that need immediate attention. More attention ought to be focused by experts on the neighbourhood qualities with larger effect sizes (Refer to section 6.5). This is likely to curtail the misplacement of interventions by experts which are ineffective and contrary to the perceived needs of the residents translating to legitimacy.

7.3. Step 3: Visioning Stage

Other than experts depending on quantitative results from the previous steps (See sections: 7.1 and 7.2), qualitative methods of data collection were used to further consult the community in order to understand residents' experiences with their living space. The visioning process comprised participatory tools like FGD, participatory mapping, walking interview using GPS and taking photographs (Refer to sections: 5.4.3, 5.4.4 and 5.4.5) that provided a broad framework for mapping location of places and ideas in relation to each other showing the neighbourhood strengths and weaknesses. It is through this interaction

that planners ascertain the local knowledge and potential redevelopment anchors in specific locations. FGD and participatory mapping exercise offer a bottom-up approach where the local spatial knowledge mapped by the community, dictates how the redeveloped neighbourhood will look like. This is in itself, an attempt to integrate more meaningful community participation in the designing phase of the neighbourhood redevelopment planning process through dialogue and deliberations that resulted in the redevelopment plan. The purpose of dialogue is to seek the mapping of the neighbourhood plan and understanding of issues, ideas and perceptions. Deliberation purpose is to reflect on every participant views, making choices and reaching planning decisions. It is through deliberations that ideas are tried, tested and redefined before approval in a collective manner that translates to cross-sectoral and co-ordination among stakeholders with diverse interests. However, given the complementary feature of participatory mapping for its ability to elicit residents' perceptions and redevelopment aims to their neighbourhood, it was noted that the process is time-consuming. Similarly, the ensuing information provided was difficult to combine given the areal extent of the neighbourhood.

A walking interview as illustrated in was carried out to authenticate (step marked 'c' in Figure 7-1) local knowledge data collected from fieldwork as well as to complement geo-referenced textual narratives from the household survey, FGD and participatory mapping exercise. This tool elicited significant discussions and additional impressions on specific locations of salient features of the neighbourhood, like the former president's house, the primary school which was otherwise not mentioned in the room-based setting discussions. Geo-coded photographs and geographic positions of the neighbourhood perceived spatial strengths and weaknesses were taken to be linked in a GIS database for data retention and verification purposes.

The visioning process derived from the participatory mapping exercise output (See Map 6-7), ultimately resulted to a neighbourhood physical redevelopment plan shown in Figure 7-2 that was later reproduced by the planning experts using GIS. In PGIS ethics, it is required of a participatory mapping exercise, the visioning process output to be taken back to the community for validation (step marked as'd') but this did not materialise in the study due to time constraint. Here, it is subject to further discussion if indeed it reflects what had been deliberated on. If there is no consensus reached, then adjustments can be made.

As illustrated in step 3 of the framework in Figure 7-1, once the output is deliberated on and consensus reached, then it becomes a resource for suggesting to policy makers/experts the aim of the community in redeveloping their neighbourhood as already outlined in section 6.6.

7.4. Step 4: Policy Formulation Stage

Once the local knowledge is collected and visioning process defined then community members and experts concurrently formulate (step marked 'e') some of the detailed policies for the implementation of the neighbourhood redevelopment. It is through the community visioning process that policy makers can

translate some of the community's local knowledge and concept design plan into policy statements which are dependent on the needs at the time they are made. This way, policy redevelopment statements may be adjusted as needs change. For instance the study revealed probable policy statements from the local residents to be adopted in the redevelopment plan as; The neighbourhood should feature mix of land uses, with a high degree of business-cum-residential use 'to enhance local economic development' or 'both tenants and house owners to be consulted in preparing the neighbourhood redevelopment plan'.

Figure 7-2: Integrated Community defined Redevelopment Plan
Source: DoRP, 2011

7.5. Step 5: Towards a Collaborative Redevelopment Planning Process

The final step of the participatory methodology embarks on the planning implementation process where the perceptions of the neighbourhood have been identified, spatial local knowledge of the residents ascertained and policies defined to guide the vision of an integrated community redevelopment neighbourhood plan. It marks the onset of the implementation of an integrated community participation in the redevelopment planning process advocated (see section 2.4) for in redevelopment efforts. Redevelopment planning premise in this context, is identified based on community participation by the state through dialogue, deliberations, amendments and consensus building. As such, the emerging framework's core as illustrated in Figure 7-1 is on spatial local knowledge derived from integrating community participation in proposed stages of the redevelopment planning process.

8. CONCLUSION AND RECOMMENDATION

This chapter gives conclusions and highlights on the recommendations and the potentials in carrying out further research.

8.1. Conclusion

The major conclusions of this study are;

8.1.1. Community participation in the planning framework of the study area

The intent of the first objective of the study was to find out the extent of community participation in development planning. A mixed method approach was used to assess the planning framework of the case study area. The study showed that, planning and management of urban development is split under different not so well coordinated institutions. The responsibility of planning in Zanzibar is 'sectoral based' with no linkages with each other, except for the members of UDCA which includes the Local Authority and Department of Construction. For instance, in the case of ZMC, management is split among the municipal council and Stone Town Authority. Other ministries are also involved in provision of infrastructure as well as other services, none of which are coordinated. There is also a network of NGOs that directly channel their resources to the local level through single-entity development projects like water service provision. Because actors in each of these sectors draw their mandate from different sources, development planning in Zanzibar is characterised by lack of co-ordination between government sectors and coordination between government and other agencies.

It was realized that, community participation has not been part of the planning process in Zanzibar Town. Moreover, the general spatial planning development framework is predominantly co-ordinated by the state and lacks a formal mechanism for a community participation approach. It also emerged that there is no institutionalized or coherent community based organization to partner /spearhead local development initiatives. This is likely to translate into weak forms of community mobilisation hence limited representation of residents in community participation process. On inquiry whether the community wanted to participate in the redevelopment planning of their neighbourhood, majority agreed citing how they would want to participate, for instance; giving opinions, designing the neighbourhood plan, workmanship and monetary contribution, if need arises. The minority who did not want to participate cited reasons such as; lack of time to take part in such initiatives owing to other responsibilities as well as sense of powerlessness and distrust in that their input will be irrelevant to the planning authorities

8.1.2. Spatial local knowledge on neighbourhood redevelopment planning

The second objective sought to identify the local spatial knowledge on perceptions and aims of the community regarding redevelopment. A mixed-method approach was used to identify the local knowledge of the neighbourhood.

Non-spatial and spatial local knowledge collected included; demographic characteristics, household and expert views and opinions on the neighbourhood quality and community involvement approach. As noted in section 2.3.1, some of the past failures of past redevelopment initiatives have had to do with the fact that planners failed to recognise perceptions and visions of the target beneficiaries. Traditionally, redevelopment initiatives in the past have been determined only by experts and it emerges that their visions have considerably differed with that of the community. It is for this reason that the study sought to investigate the extent of the differences that might exist between the community and the experts.

Part of the household questionnaire (qualitative perceptions to neighbourhood) was administered to the experts to identify perceptions of both the residents and the experts. In general, the study results revealed the mean scores for the community respondents to be higher than the experts for almost all the perceived neighbourhood quality variables. This meant that community respondents tended to indicate stronger or more positive perception of their neighbourhood conditions than the experts, an acknowledgement of the residents acceptance and adaptation to the quality of their neighbourhood conditions.

This view therefore, necessitates a shift from a bureaucratic-controlled planning process to consultative, direct, meaningful and sustained community participation. As such, any changes to be introduced in form of redevelopment ought to be made in consultation with the community, building upon local aspirations. For this reason, the study employed and implemented a participatory methodology framework in determining its purpose in defining community needs and aims in redevelopment initiatives.

GIS was used in eliciting, recording and visualising the perceptions and aims of the community. The household questionnaire was used as a first-step in the consultation process. This local knowledge serves as an instrument to help planning experts identify and understand the local residents, perceived needs and potential redevelopment anchors in the neighbourhood.

The results further revealed how traditional redevelopment planning approaches with no community participation component often fail to deliver due to misplacement of interventions amid policy implications that contradict the perceived needs of the residents. It was duly noted that, as much as participatory approaches have been termed as costly affairs in comparison to centralised driven initiatives, if done appropriately (Section 2.6) it allows for awareness, dialogue, deliberations, adjustments and consensus building before implementation enhancing sustainability.

8.1.3. Integration of community participation in neighbourhood redevelopment planning

The final objective of the study was to determine how local knowledge can be useful to planning authorities in a redevelopment planning strategy. In a nutshell, it was realized that of participation in urban redevelopment can be enhanced using a PGIS methodology to go beyond being only a symbolic nature. A five-step participatory methodological framework was employed and partly implemented.

The first step was to identify the perceptions of the local residents. It was aimed at helping planners identify local perceived needs in an informal neighbourhood. Here, experts gain more insight to the 'intra-physic' of the target beneficiaries thereby allowing proper needs identification to later adopt responsive measures that are acceptable and beneficial to the populace

In the second step, the local knowledge was integrated with existing spatial data and visualised to give it a spatial dimension for a comprehensive understanding of community's viewpoints. Local knowledge maps generated are visual communication tools that allow spatial identification of the viewpoints held by local residents about their neighbourhood. It facilitated experts' deeper understanding to the 'object of redevelopment' which is the neighbourhood and it's spatial local knowledge.

To facilitate compatibility of perceptions held by the experts and community, participatory mapping exercise was conducted in the third step. Here, the residents' spatial local knowledge from diverse group was elicited and again integrated into the participatory planning process. This was aimed at seeking community local spatial knowledge on potential redevelopment anchors in the neighbourhood. It was, in itself an attempt to integrate more meaningful community participation in the visioning stage of the neighbourhood redevelopment planning process by creating awareness on importance of planned living environment through dialogue and deliberations. The tool showed the potential of building relationship between the experts and the community enhancing collaboration in decision making. It offered a bottom-up approach where elicitation of the local knowledge by the planning experts motivated the community to give information regarding redeveloping their neighbourhood. In essence, redevelopment ought to be holistic in improving the state of informal neighbourhoods.

In addition, the participatory mapping exercise was seen to empower local residents by enabling them to map their local spatial knowledge dictating how their redeveloped neighbourhood would look like in the event of a redevelopment, giving it a sense of ownership. The mapping experience illustrated that if the community is empowered, they are able to select options that are affordable to the majority with possibilities of minimising misplaced and unresponsive measures, like beneficiary displacement, as they develop physical redevelopment plans that reflect their real needs and aims in the community. The walking interview provided concrete evidence on the individual and community local knowledge. Spatial local knowledge generated, created a database highlighting on the neighbourhood strengths and weaknesses as discussed by the residents.

The fourth step of the framework provided a platform for a collaborative policy formulation tailor-made for the planning and implementation of the redevelopment plan. This fosters transparency and legitimacy in the planning process. The final step shift focus from the traditional planning approach that is centralised to an integrated community participation approach using a PGIS methodology. This approach

proved to be effective in that residents are given meaningful opportunity for participation to elicit spatial local knowledge of their neighbourhood, textual narratives are given prominence in redevelopment planning needs identification and deliberations, and the target community as well as the experts build consensus on the redevelopment anchors.

8.2. Recommendations for further research

From the study results and conclusions, it has been acknowledged that redevelopment initiatives are not easy to implement, take time to deliver and are likely to face disapproval, particularly so under conditions of poor inter-sectoral co-ordination among actors. The study therefore, recommends further research on how to co-ordinate efforts amongst the government sectors and other actors involved in redevelopment planning as well as institutionalising collaborative planning.

It has also been demonstrated that mapping local knowledge can play a fundamental role in a neighbourhood redevelopment planning process. The participatory mapping process not only creates awareness to the community on the significance of a planned environment, it also leads to identification of subject-specific needs and aims of target beneficiaries in neighbourhood redevelopment. This counters the risk of ineffective misplaced interventions by centralised planning approaches hence sustainability in redevelopment. As such, it is imperative to have community participation right from inception of the redevelopment initiative, through design stage, policy formulation and implementation.

Therefore, further research may focus on a more advanced and comprehensive PGIS framework that takes into account, a more elaborate and detailed stages in redevelopment planning process up to monitoring and evaluation stage. Alternatively, stakeholders involved in redevelopment programmes may identify and agree with the community in which phase of the redevelopment planning process and at what stage of participation they may expect the community to participate.

The study has also demonstrated that local knowledge on neighbourhood redevelopment can be integrated using PGIS tools like participatory mapping exercise which allows spatial issues and priorities to be defined appropriately. This is conveyed to experts/policy makers for responsive measures in implementing the redevelopment plan. Therefore, experts/ policy makers can implement the developed participatory planning framework, wholly or in part in the anticipated neighbourhood redevelopment initiative. Further research can also focus on adoption of other PGIS tools and techniques as a mechanism to accommodate all varied interests and power relations in redevelopment planning strategies.

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