ASSESSMENT OF SOCIO-SPATIAL RELATIONS OF INFORMAL SETTLEMENTS INTERVENTIONS IN DAR ES SALAAM

Nsimenye Mwafongo

M.Sc. (Urban Planning and Management) Dissertation

Ardhi University

November, 2022

ASSESSMENT OF SOCIO-SPATIAL RELATIONS OF INFORMAL SETTLEMENTS INTERVENTIONS IN DAR ES SALAAM

By

NSIMENYE MWAFONGO

A Dissertation Submitted in (Partial) Fulfilment of the Requirements for the Degree of Master of Science (Urban Planning and Management) of Ardhi University

Ardhi University

November, 2022.

ACKNOWLEDGEMENT

DEDICATION

This dissertation is dedicated to Almighty God, whose guidance, help and grace was instrumental in making this humble work a reality.

To my beloved Wife, Dorothy, family and friends, without their love, moral support and lifetime efforts, my pursuit for post-graduate education would not have been possible and I would not have had the chance to study for M.Sc. in Urban Planning & Management.

Also, to my supervisors, Dr. N. J. Babere and Dr. V.M. Mwakalinga, and to the entire lecturers and staff in the School of Spatial Planning and Social Sciences and the Department of Urban and Regional Planning, Ardhi University, without whom, their wise suggestions, helpful guidance and direct assistance, this thesis could have neither got off the ground nor ever been completed.

Lastly, I dedicate it to my late parents, Welbon and Mercy Mwafongo, whom could have loved see me excel this stage of life, but thank God that the people you left behind are taking good care of me, May Your Souls Rest in Eternal Peace.

ABSTRACT

The development and proliferation of informal Settlements is a function of socio-spatial relations. Today, approximately 75% in the city of Dar es Salaam lives in informal settlements and about 61% of the city built-up area is covered with informal settlements. Informal settlements in Dar es Salaam have a long history of socio-spatial relations that date back to the colonial period and have continued to expand to this day. Since independence, various interventions have been implemented to address these socio-spatial disparities, including squatter upgrading, community infrastructure programs, community infrastructure upgrading programs, and regularization and formalization of informal settlements, among others. However, the interventions have contributed less to the overall improvement of informal settlements quality of life and are inadequate to contain further growth and development of informal settlements. Therefore, adopting a qualitative case study approach with multiple data collection methodologies, Vingunguti, Hanna Nassif and Manzese informal settlements in Dar es Salaam were selected to investigate the socio-spatial relations of informal settlements interventions. That is, the study concludes that the colonial urban planning policies' socio-spatial relations and configurations have been maintained, and that this dictates the management of subsequent informal settlements interventions, which are perpetuating socio-spatial exclusion and inequalities in the settlements. In Dar es Salaam, the existing socio-spatial relations of informal settlements are characterized by socio-spatial inadequacy, tenure insecurity, and dynamic informal socio-spatial morphologies, among others but characterized by social and behavioural perspective of urban informality. In addition, incoherent legal and policy frameworks, a multiplicity of actors with competing jurisdiction, and coordination failures, including inadequate community participation, characterize informal settlements governance of the socio-spatial relations of interventions. As a result, the study suggests reforming informal settlements interventions to integrate informal socio-spatial morphologies in settlement management, as well as strengthening local governance and promoting good governance.

Key words: Informal settlements; Socio-spatial relations; Interventions; Dar es Salaam.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS & ABBREVIATIONS

CIP	Community Infrastructures Programme
CIUP	Community Infrastructure Upgrading Programme
DCC	Dar es Salaam City Council
MLHHD	Ministry of Land, Housing and Human Settlements Development
NUA	New Urban Agenda
SDG	Sustainable Development Goals
SDP	Sustainable Dar es Salaam Project
URT	United Republic of Tanzania

CHAPTER ONE
BACKGROUND INFORMATION

1.0. Introduction

This chapter comprise of the background information of the research; problem statement; objectives of the study; research questions and the significance of the study

1.1. Background Information

The development of informal settlements is influenced by socio-spatial relationships. Informal settlement emergence and growth is more than just static physical structures but they are socio-spatial constructs that are constantly transformed by the interaction of spaces and social relations. Informal settlements spaces emerge "as a direct consequence of people's social interactions, memories, images, and daily use of the material setting-into scenes and actions that convey symbolic meaning" (Hernandez & Lopez, 2011). The social relations not only influence the production of spaces, but the respective spaces also determine or transform their social relationships. As a result, social aspects of informal settlements construct spatial characteristics, and spatial characteristics construct social relations.

Informal settlements now constitute one of the most pervasive primary modes of urbanization in cities throughout the global south (Kamalipour & Dovey, 2020). According to estimates, informal settlements house nearly 30% of global urban dwellers (Ngau & Blanco, 2019), and in Africa, informal settlements are estimated to house 30%-70% of the urban population (Ono and Kidokoro, 2020). Informal settlements have become indispensable urban areas, providing housing and a steady source of livelihood for a large urban population (Zhang et al, 2020). The relentless growth of informal settlements has become a major policy issue around the world, particularly in developing countries. In informal settlements, various interventions are being implemented, but the socio-spatial relations that characterize the settlements are generally a reflection of urbanity's social and spatial marginalization.

Interventions in informal settlements have usually emanated from internationally agreed protocols and conventions. These interventions are cumulative and multifaceted, but they all aim to address the social and spatial relations attributes that shape informal settlements. Implementation of interventions (policies and strategies) for sustainable human settlements development has been a custom since the 1976 Habitat-I Conference on Housing and Sustainable Urban Development in Vancouver (1976); Habitat-II conferences in Istanbul (1996) and Quito (2016), in addition to the 1992 Rio Declaration and its Agenda 21; Millennium Development Goals (2000); and Sustainable Development Goals (2015). In light

of the global urban agenda, national or regional informal settlements interventions are being developed and implemented to address the marginalization of urbanity in informal settlements. In general, these interventions aim to improve the rights of the urban poor to their respective environments, both socially and spatially.

However, despite the variety of interventions, the development and growth of informal settlements has continued with its endemic but objectionable socio-spatial relations characteristics. Physical characteristics of informal settlements are inadequately improved in the absence of corresponding improvements in social characteristics relations, or social characteristics of informal settlements are enhanced at the expense of physical characteristics. This implies a disconnect among other factors of the socio-spatial relations of the interventions in informal settlements, indicating that the deficiencies in the settlements' social and spatial constructs are a persistent issue that requires close attention.

Dar es Salaam in Tanzania, is one of the rapidly urbanizing cities in the global south, and it is associated with the growth and development of informal settlements. Approximately 75% of the city's population lives in informal settlements, and informal settlements cover about 61% of the city's built-up areas, with inadequate basic social services, utilities, and infrastructure (Magina, et al., 2020; Gwaleba and Masum, 2018). Slum clearances (1960-1970s); Squatter Upgrading (1970-1980s) including Site and Service projects (1970-1990s); Community Infrastructures Programme (1990s); Community Infrastructures Upgrading Programme (2000s); and Formalization and Regularization of Informal Settlements (2000s) have all been implemented since the colonial era. Despite these interventions, informal settlements and their objectionable socio-spatial characteristics have proliferated. The interventions have been barely adequate in terms of infrastructure and social environment settings, including improving land tenure security. Therefore, a warrant to study the socio-spatial relations of informal settlement interventions in managing urban informal settlements in Dar es Salaam is pursued.

1.2. Problem Statement

The development and growth of informal settlements is a function of the combination of social and spatial constructs. That is, effective space production or reproduction in informal settlements is a consequence of the balance of socio-spatial relations. The implementation of informal settlements interventions strives and implies on the production and/or reproduction of the settlements' spaces through the modification or improvement of the social attributes

that have a corresponding effect on the spatial construct of the settlement and conversely provides or enhances the spatial construct for the betterment of the equivalent social characteristic. To address the socio-spatial relations characteristics of informal settlements, developing countries urban (city) governments, including Dar es Salaam in Tanzania, have devised various informal settlements interventions. These interventions aim to improve the spatial quality of informal settlements while also addressing social construct characteristics. That is, the interventions address deficiencies in public and social services utilities and infrastructure, resulting in improved livelihood strategies and social organization in informal settlements.

However, the implementation of informal settlements interventions by urban governance institutions, including those in Dar es Salaam, is argued to be reactionary and contested to contribute less to the overall improvement of informal settlements quality of life and inadequate to contain further growth and development of informal settlements, i.e., the interventions barely strike the social and spatial relations balance. The interventions either provide public and social service infrastructure without improving settlement livelihood and social organization, or they improve settlement livelihood and social organization while ignoring public and social service infrastructure provision, making the interventions unsustainable in the production and reproduction of informal settlements space. To that end, this study was necessitated to investigate the socio-spatial relationships of informal settlements interventions, which have received inadequate attention in Dar es Salaam.

1.3. Research Objectives

The overall objective of the study was to analyse the socio-spatial relations of informal settlements interventions in Dar es Salaam, Tanzania.

1.3.1. Specific Objectives

The specific objectives of the study were the following:

1. To identify the socio-spatial relations of informal settlements in Dar es Salaam.
2. To examine the socio-spatial relations of informal settlements interventions in Dar es Salaam.
3. To investigate the implementation framework of socio-spatial relations of informal settlements interventions in Dar es Salaam.

1.4. Research Questions

The following questions guided the study:

1. What is the socio-spatial relations of informal settlements in Dar es Salaam?
2. What is the socio-spatial relations of informal settlements interventions in Dar es

Salaam?

3. What is the implementation framework for socio-spatial relations of informal settlements interventions in Dar es Salaam?

1.5. Significance

Management of informal settlements is essential to long-term urban development and livelihood. Interventions in informal settlements are unquestionably important in achieving the New Urban Agenda (NUA) and Sustainable Development Goal 11 (Sustainable Cities and Communities) in addressing social, economic, and spatial inequalities. The interventions' implementation can be viewed as vehicles for achieving the global urban agenda. Effective implementation of informal settlements interventions necessitates the creation of an enabling environment that reduces settlement vulnerability socially, economically, and physically, as well as improves urban livelihood security.

The growth and development of informal settlements in Tanzania is a result of rapid urbanization, but also of a socio-spatial relationship. Because of rapid urbanization and weak institutional frameworks in urban planning, urban authorities are unable to provide planned and serviced land for development of the burgeoning population, which has resulted in disorderly and unguided urban growth, as evidenced by the development and growth of informal settlements. Thus, in accordance with the NUA and SDG 11, the Tanzanian government's informal settlements interventions aim to limit the growth and development of informal settlements while also promoting sustainable urban development. As a result, investigating and analysing the social-spatial relations of informal settlement interventions helps to achieve the global and national agenda of ensuring sustainable cities and communities. The study further contributes to the existing body of knowledge and helps to ensure the long-term management of informal settlements.

CHAPTER TWO
LITERATURE REVIEW

2.0. Introduction

This chapter comprise of literature review on the socio-spatial relations of informal settlements and its related interventions including the implementations frameworks implications.

2.1. Conceptualizing Socio-Spatial Relations of Informal Settlements

2.1.1. Informal Settlements Spaces as a Socio-Spatial Relation

Human settlements are typically the outcome of social interaction and intervention of its inhabitants. People never simply use space; they attach meaning to it, and through this meaning, they re-think its physicality. This is true for different land-uses as well as informal settlements. However, in informal settlements, "meaning" is culturally and socially constructed by various factors that include the interrelationship of social and spatial attributes; thus, the process to "ascribe meaning" is a collective action and a relational process that is rich in representation and symbolism.

Space is viewed differently in urban theory, but Renade (2007) perceives space as a neutral setting where social change takes place in a dialectic relationship between social structure and space, where the two aspects contrast and deepen one another. Space is defined as having two dimensions: one physical, which is the actual space, and one social, which is the activity that takes place within a given space. Thus, the relationship between the built environment and its surroundings is defined as space. People influence the physical environment in which they live, and as a result, the physical environment influences and changes them. According to Carmona (2003), space can be viewed as a two-way process in which human activity is situational and influenced by physical, social, cultural, and perceptual context and settings.

Habraken (1998) recognizes space differently and as the result of three interconnected forces expressed as "orders," namely (1) *the order of form*, the physical aspect of the built environment; (2) *the order of place*, cultural and territorial behaviour; and (3) *the order of understanding*, the social interaction between users. These forces describe the various aspects and levels of space, as well as the interaction of people and the forms they inhabit. *The Order of Form*, in general, refers to the city's morphological characteristics and the effects of human interventions and actions; whilst *the Order of Place* is described as control of territorial space and a reflection of a continuous process of control over the built form, the space, as well as

5

the users' space. The *Order of Understanding* is concerned with a consciousness of how the space is being used, including being described as an interconnectedness of the first two orders into the prevalent cultural understanding that creates diversity and variations of urban morphologies. The built form and its transformation are made up of levels of intervention, which are produced by the inhabitants who also govern how it is lived. That is, people act in various ways as a result of their interactions with the built environment. The way space is lived also structures and subdivides it based on what users require in their daily lives. Space control is an aspect of demand and accessibility.

Correspondingly, Lefebvre (1991) and Soja (1996) sociologically present three spatial representations of socio-spatial structures that influence the production and reproduction of social interaction. (1) *Perceived spaces* where space is a physical form, the objective and material structure; (2) *Conceived space* as the mental environment defined by the physical structure, that is, space conceptualized by scientists, urban planners, technocratic subdivisions, and social engineers, all of whom identify what is lived and what is perceived with what is conceived; and (3) *Lived space* which is the space of the people who inhabit it. Figure 2.1 shows spatial representation.

Figure 2.1: Spatialised Trialectic (Gatrell & Worsham, 2002)
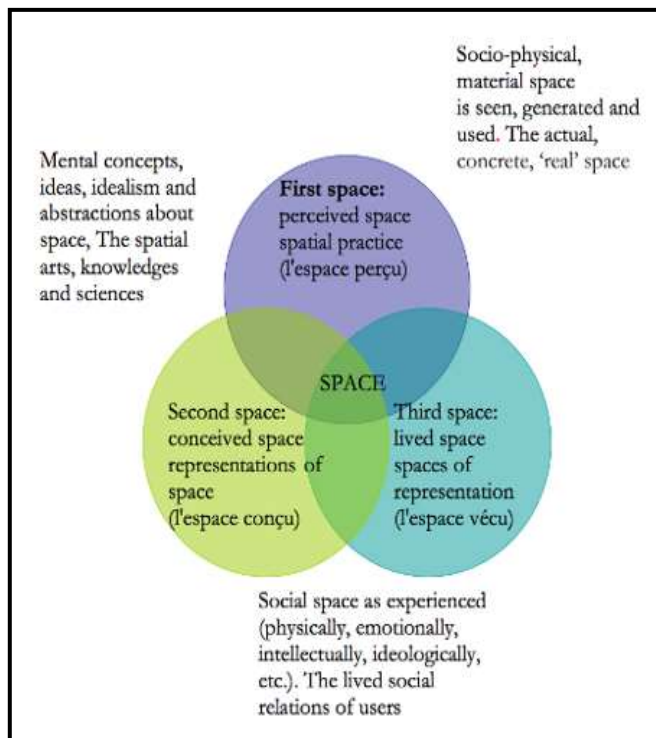
Massey (1994) adds a temporal perspective to space, arguing that space is neither static nor timeless. The nature of various activities in space varies depending on the context. The passage of time can reveal historical changes such as economic, technological, social, and cultural transformations from a local to a broader perspective. Over a certain period of time, spaces change and conform to existing time-frames (Carmona, 2003). From that standpoint, understanding the values and daily life of the respective spaces and places is

critical in the development of human settlements spaces. Informal settlements have often evolved organically and changed over time as a result of their users' aspirations and functions, resulting in a temporal representation (Hutama, 2018).

In general, space, as defined in this study and by other scholars, is a function of the interdependence of the social and spatial dimensions. People's interactions with land are referred to as the social dimension, while the spatial dimension refers to the environment in which social processes occur and decisions are made. The socio-spatial relations of space are the dynamic relationships between social and spatial processes that are key drivers of the economic, cultural, and environmental conditions of the built environment. Form, use, and activities of human settlements are reflected in space. The way to read representation and conception of space is through the users' perspectives or social understandings within various theoretical underpinnings. As the cultural and social aspects explain inhabitants' lives, they also embody aspirations within the actual setting. So, in the case of informal settlements where social factors are reasons for existence, the social aspect is formed by daily life through the form and manner in which people inhabit the space, as well as its cultural context. If the contextual setting reflects social and cultural values in space, then social roles and power structures are expressed subtly in how spaces are used. The various users who constitute the space, in that sense, experience it in different ways depending on their background or community involvement. Thus, the production of informal settlements spaces is bound to differ in terms of their morphologies, typologies, and morphogenesis processes, despite the fact that they may share many spatial similarities.

2.1.2. Informal Settlements' Socio-Spatial Relations Characteristics

Informal settlements are described by their respective settings in a specific country but the social and spatial characteristics distinguish them. For example, the Housing Development Agency (HDA, 2013) distinguishes informal settlement as "an unplanned settlement on land that has not been surveyed or declared as residential, primarily consisting of informal dwellings" (shacks). According to Satterthwaite et al. (2018), informal settlements are urban settlements or neighbourhoods that arose outside of the formal system for recording land ownership and tenure and without complying with a variety of regulations relating to planning and land use, built structures, and health and safety. Rasmussen (2013) defines Dar es Salaam informal settlements as unplanned neighbourhoods where middle- and low-income families coexist with different socio-spatial relations characteristics. This study uses the UN-

Habitat (2015) definition of informal settlements as residential neighbourhoods where: inhabitants commonly lack security of tenure for the land or dwellings they inhabit-for example, they may squat or rent informally; neighbourhoods typically lack basic services and city infrastructure; housing may not conform with planning and building regulations, and is oftenly located in geographically and environmentally sensitive areas.

Generally, informal settlements settings can be categorized and distinguished into two: social and spatial. The social dimension refers to people's interactions with land, which includes the development and implementation of formal land policies, laws, and administrative systems governing land tenure, land use, land value, and land development. It also includes the unwritten rules that govern people's interactions with land. The spatial dimension refers to the spatial space in which social processes occur and decisions are made in a physical sense. The dynamic relationships between social and spatial processes are regarded as key drivers of the built environment's economic, cultural, and environmental conditions (World Bank, 2012), which also informs the characteristics of informal settlements. In other words, informal settlements spaces can produce or determine the social practices that define the settlement, or the social construct can produce the settlements space. The socio-spatial relationship of informal settlements varies, but the settlements represent behaviour and condition, describing identifiable parts of a space that have developed without regard for prescribed formal planning standards and laws. As a result, there is broad agreement that the conditions and activities that underpin or result from such socio-spatial interaction are incompatible with the perceived urbanity characteristics (UN-Habitat, 2014).

2.1.2.1. Spatial Characteristics of Informal Settlements

The physical characteristics that define informal settlements vary considerably from location to location (Wekesa, et al., 2011). Informal settlements, on the other hand, are defined as "spontaneous settlements with temporary (non-durable) construction materials, a lack of basic social services such as safe water and sewerage, and no legal land tenure" (Dwyer, 1974). Informal settlements are usually high-density urban poor settlements with self-built shelters under customary land tenure (Huchzermeyer and Karam, 2006). Informal settlements, according to UN-Habitat (2006), lack improved access to water and sanitation, land tenure security, sturdy housing materials, and adequate living space.

Physical characteristics of informal settlements are fundamentally related to social characteristics. That is, the spatial and physical characteristics of informal settlements

influence the social configurations that define them. According to space syntax research, the spatial configuration of cities and buildings can be linked to their social circumstances (Hillier and Hanson, 1984). Informal settlements, which are an important component of cities in developing countries, are no exception (Karimi, et al, 2007). Studies investigating the impact of spatial configuration on the formation of informal settlements and the spatial organization of social and economic activities show that how informal settlements are embedded in their global context and how they can benefit from natural movement patterns in their host city play a significant role in their long-term improvement or decline (Hillier et al, 2000; Greene, 2001).

According to UN-Habitat (2015), informal settlements are residential areas that have one or more of the respective physical characteristics: 1) Insecurity of tenure in relation to land use and/or dwelling structures. Occupants live in informal rented or owned sheds/structures; 2) lack of basic facilities, services, and city infrastructure; and 3) non-compliance with urban planning building regulations, standards, and is quite often located in a geographically hazardous area. This is comparable to previous studies (Inam, 2015; Lai, 2015; Nwokoro et al., 2015) that investigated the criteria for contextualizing physical settings of informal settlements as overtly identified based on 1) physical attributes or nature of the structure; 2) the overall quality of life and living condition of a given geographical area; and 3) the prevailing use of the land as either residential, commercial, and/or industrial land in contravention of the designated, approved land uses. These characteristics refer to the entire living environment, which includes the individual's or population's social, economic, and physical condition in a given locality (Soyinka & Siu, 2018). The physical characteristics of informal settlements are described in relation to their social inadequacy. This is an evaluation of a person's or family's visible dwelling space in relation to the quality of the building materials and the living environment, as well as the ability of a person or family to relate to and maintain relationships within a community. A person's or family's social capacity to reside and maintain a minimum quality of social standard of living in a geographical space.

2.1.2.2. Social Characteristics of Informal Settlements

Determining the social characteristics of informal settlements is difficult, contentious, and varies across the world over time (Huerta, 2019). The social definition of informal settlements is dependent on the theoretical framework used to study the phenomenon, as well as the socio-spatial relations of the specific society or community under study (ibid.). The precarious, inadequate, and distinguishable physical attributes of informal settlements inform

9

the settlements' respective social characteristics. The physical vulnerability of informal settlements correlates with the settlements' social construct (UN-Habitat 2015). Informal settlements are socially defined by the majority of their population relying on the informal economy or sector for subsistence (Burton, 2002), with irregular income, housing inequalities or insecurity, and social exclusion.

The informal economy has long been a defining characteristic of informal settlements. The informal economy is defined as the informal organization of activities, processes, and outputs that are partially or entirely outside the purview of government (UN-Habitat, 2015). It includes income-generating activities that fall outside the purview of regulatory frameworks, as well as all economic forces by workers and economic units that are in law or practice but are not covered or are inadequately covered by formal arrangements" (ILO 2002). In general, the informal economy found in informal settlements correlates directly to spatial informality. Because informal settlement activities are unregulated, their spatial configuration is haphazardly organized and distributed irregularly across settlements. These informal arrangements distinguish mixed land uses in informal settlements.

Another social characteristic or component that defines informal settlements is housing insecurity, which is also known as housing inequality in some cases. In general, housing inequality or insecurity refers to a disparity in housing quality in a society, which is a type of economic inequality. Generally, the main criteria for identifying housing insecurity or inequality are based on land use economic considerations (Soyinka & Siu, 2018), but also on general housing conditions and tenure (Filandri, Olagnero, 2014). Housing inequity is also directly related to racial, social, income, and wealth inequalities in the society under consideration, but the standard legal planning framework does not take this into account. The informality of land tenure, as well as the irregular spatial settings that characterize informal settlements, contributes to poor housing conditions in the informal settlements. The public health and well-being of the inhabitants of informal settlements is jeopardized not only by the unplanned built environment, but also by the generally lack of sanitation nature of the settlements. However, housing inequalities or insecurity vary according to income disparities within informal settlements and the diversity of spatial orientation of informal settlements.

According to Arimah (2017), one of the long-lasting physical manifestations of proliferation of informal settlements is social exclusion. People living in informal settlements face the most dreadful living and environmental conditions, including insufficient water supply, squalid sanitary conditions, breakdown or non-existence of waste disposal provisions,

congested and dilapidated housing, hazardous geography, insecurity of tenure, and exposure to serious health hazards (ibid; Soyinka & Siu, 2018). Because the development and existence of informal settlements is considered illegal by governance structures, they are frequently subject to demolition and forced evictions and are only provided with basic social utilities, infrastructure, and services. In other words, because of their physical location, residents of informal settlements are barred from participating formally in the city's economic, social, political, and cultural spheres (all of which create and nurture capabilities-livelihood) (Arimah, 2017). That is, residents of informal settlements are socially and politically denied basic rights and entitlements, such as the right to safe water, sanitation, healthcare, and education, as well as public basic infrastructures such as roads. Economically, residents of informal settlements are barred from participating in the formal sector due to stringent administrative provisions in the sector, so the informal sector dictates the residents' respective well-being.

2.2. Socio-Spatial Relations of Informal Settlements Interventions

Various interventions have been implemented around the world over time to address the socio-spatial relations of informal settlements. Interventions alternate between territorial development control, land management, and more systematic building inspection (UN-Habitat, 2003), but all focus on the socio-spatial relations characteristics of informal settlements. Informal settlements have been regarded as both a temporary urban irregularity that must be eradicated and a permanent urban feature that must be integrated. Negligence; Clearance and Eviction; Upgrading; Enabling Participatory Approach; and Integration Approach are some of the interventions to informal settlements that have been implemented and are currently in use. However, these interventions have evolved over time, and many are still in use despite their failure to provide long-term solutions to the formation and spread of informal settlements.

2.2.1. Negligence

Most developing countries used the negligence strategy until the early 1970s and the immediate post-independence period. Mushrooming or existing informal settlements were purposefully ignored, and informal settlement governance was laissez-faire. Informal settlements were viewed as an illegal and unavoidable occurrence connected with accelerated rural-urban migration that would fade with economic growth (UN-Habitat, 2003). Informal settlements were regarded as surviving traditional villages that were being absorbed by the colonial administration's new urban planning tradition (Njoh, 2003). In their planning documents, urban planning authorities barely acknowledged the existence of informal

settlements, such that land use maps, depicted informal settlements with blank spots denoting undeveloped land (Wekwete, 1997).

In order to meet the needs of low-income households while turning a blind eye to informal settlements, local authorities pursued a low-cost housing program using land reserves and public subsidies. The strategy anticipated that high and consistent economic growth would result in better housing conditions and the abolition of informal settlements (UN-Habitat, 2003). The strategy had envisioned that improving the social attributes of informal settlements would result in an improvement in the spatiality of the informal settlements. However, the policy response's socio-spatial relationship was unsuccessful. The housing needs of the program's intended beneficiaries were not met. In terms of housing demand, the houses were insufficient and unrealistically high in comparison to the beneficiary's economic status (Arimah, 2017). Economic restrictions imposed after independence in many Sub-Saharan African countries, for example, exacerbated the situation, resulting in greater socioeconomic inequality and spatial segregation in cities. In general, the strategy offered few solutions to the social and spatial relationships that comprise and characterize informal settlements.

In Nigeria, for example, Mardeusz (2014) emphasizes that housing for residents of informal settlements is not a priority. As a result of rapid urbanization, informal settlements have proliferated, and the Lagos government, for example, has been hesitant to provide even the most basic of amenities, removing them from urban legislation and planning systems (Habitat 2010). Despite the fact that 70% of Nigeria's urban population lives in informal settlements, the government recognizes the housing crisis but has chosen to ignore the needs of informal settlements in Lagos, the country's largest metropolis, in favor of focusing on other issues. Since Abuja became Nigeria's capital city in 1933, the government has not prioritized funding for Lagos development and infrastructure, including housing (Awofeso 2010). In order to promote growth, the government encourages the private sector to build opulent housing for the middle class and elites, relocating the unfortunate masses to the suburbs, where there is little to no infrastructure (ibid). Housing for people with high and middle incomes received a larger share of public funds than housing for people with low incomes (Ibem 2011). Due to the government's SAP demands, insufficient bureaucracy, and the "politicization of public housing programs," public housing has been underfunded, resulting in an insufficient number of available affordable housing units and the neglect of low-income Nigerians (Mardeuz, 2014).

2.2.2. Slum Clearance and Eviction Approach

This approach was popular during the 1970s and 1980s as a response to the development and growth of informal settlements, particularly in political environments marked by centralized decision-making, weak local governance and administration, non-democratic urban management, non-recognition of civil society movements, and a lack of legal protection against forced evictions (Cohen, 1983; Badcock, 1984; Murphy, 1990). The strategy called for the demolition and eradication of informal settlement housing, as well as the relocation of residents elsewhere (Abott, 2002; Hassan, 2011). The approach frequently emphasized land acquisition, land purchase, and land banking (UNDP & MLHUD, 2008). Many developing countries pursued this path until research and international experience exposed the inadequacies of these eradication efforts, as well as their flaws and devastating consequences for the urban poor (Khalifa, 2015); however, the policy approach is still used in some countries today.

The approach, in theory, entails the "permanent or temporary removal against their will of individuals, families, and/or communities from the land they occupy, without the provision of, and access to, appropriate forms of legal or other protection" (UN-Habitat, 2018). Negotiations with residents of informal settlements are uncommon, according to UN-Habitat (2003). People living in informal settlements are rarely given realistic alternatives, and evicted households are often left with no compensation. Evictions are frequently rationalized by the implementation of urban renewal projects (particularly when city centers are rebuilt) and the construction of urban infrastructures, as well as for health, hygiene, and security reasons. Residents of inner-city informal settlements face the most pressure because they occupy prime development sites with better infrastructure access.

The approach does not address the problems of informal settlements; rather, it pushes or relocates them to the urban outskirts or within the city, where land is easier to come by and planning controls are largely non-existent or inadequately enforced (UN-Habitat, 2003). Constant urban growth either accelerates the overcrowding of decaying buildings within cities or results in an endless cycle of new evictions and the establishment of new informal settlements on the outskirts and within urban boundaries. The strategy has also been found to be expensive (assuming that governments compensate and provide housing for the evicted population) and socially disruptive, yet it is still used in some countries (Jaitman and Brakarz, 2013).

Slums and informal settlements are now a distinctive urban feature in Kenya. According to the National Bureau of Statistics (Republic of Kenya, 2014), Kenya has a population of 41.8 million people; UN-Habitat estimates that out of the 40% of the population that lives in urban areas, 70% is housed in informal settlements (UN-Habitat, 2008). That is, 17.2 million people lack access to safe drinking water, and an even greater number lack access to basic sanitation. Slums in Nairobi house 1.5 million people and cover one-eighth of the city's total area (Sana & Okombo, 2012; Amnesty International, 2013). In Kenyan cities, however, forced evictions are common. Local authorities demolish informal settlement housing, including socioeconomic infrastructure, without notice, compensation, or relocation provisions (Amnesty International, 2010). Evictions are justified as a result of municipal planning and the implementation of urban development plans through government decrees (UN-Habitat, 2018). Because of the city's constant spatial growth, informal settlements that were first built on the city's outskirts or marginal land are being assimilated, resulting in a significant increase in its value, and the government is now acquiring the land for urban development plans such as railway construction or ring road bypass.

The slum clearance and eviction intervention is conceptualized on the premise that the spatial configuration of informal settlements serves as a container for all socioeconomic activities in informal settlements. The intervention considers the social and spatial relations of informal settlements to be constructed independently by spatial attributes rather than mutually inclusive. That is, social characteristics of informal settlements are understood to be rooted in their spatial configurations, and physical clearance of informal settlements entails addressing socioeconomic informality. However, slum clearance and eviction intervention, according to Arumah (2017), focuses on the symptoms rather than the root causes of informal settlement development and results in displacement or further proliferation of informal settlements rather than eradication. Besides, slum clearance causes the destruction of fixed capital and livelihoods, the loss of social and safety networks, the disintegration of families, psychological and emotional trauma, the exacerbation of the housing deficit, and increased impoverishment (ibid.).

2.2.3. Slum Upgrading

Slum or informal settlements upgrading dates back to the late 1970s, when slums were identified as a long-term structural problem that required appropriate solutions (Benton, 1994; COHRE, 1999; 2002). The strategy was a reactionary response to previous unsuccessful and repressive state interventions, which were dominated by subsidized public

housing schemes and clearance of informal settlements. It was generally based on the variety of local situations that had seen the emergence of civil society actions, as well as democratization and decentralization processes (Schubeler, 1996). Given the failure of previous strategies to effectively address the problem of informal settlements, many African countries, for example, adopted slum and squatter upgrading programs funded largely by the World Bank in the 1980s. The Bank's support for slum upgrading is largely due to John Turner's efforts (Werlin, 1999; Pugh, 2000) who argued based on field observations in Peru, that the solution to slums was to improve the environment: if governments could improve the sanitary conditions and environmental quality of slums, residents, given their organizational skills and resourcefulness, would gradually improve their houses, especially when encouraged by security of tenure and access to credit (Werlin, 1999). The implementation of slum upgrading strategies signalled a sea change in the official attitude toward slums and informal settlements.

The strategy was a gradual shift designed to mitigate the negative social, economic, and environmental consequences of previous interventions by preserving existing social bonds and community cohesion. The emphasis was on advancing interventions and incorporating them into housing laws, with initiatives and programs focusing on tenure legalization, infrastructure improvements, credit facilitation to encourage self-help housing and housing improvement, and social and economic development (Khalifa, 2015). It was assumed that providing security of tenure to people living in informal settlements would gradually improve their living conditions and increase revenue collection through local taxes (Uzun, et al., 2010). The approach had resulted in the implementation of site and service projects in which future residents were given land parcels with security of tenure as well as basic social and public infrastructure. Nevertheless, an evaluation of the approach reveals that land legalization is an expensive and time-consuming process that cannot be recovered because the targeted beneficiaries are unable to pay their fare. Furthermore, the approach's institutional and policy transformation has not been replicated or scaled up on a larger scale (Payne, 1984; Skinner, et al., 1987).

The slum upgrading strategy is theoretically based on preserving and improving the existing environment, social interactions, and community cohesion. The intervention, according to Jaitman and Brakarz (2013), is based on preserving the socioeconomic livelihoods of informal settlements and integrating them into larger metropolitan settings. The approach's primary advantage is that it preserves and sustains social networks and community cohesion

while improving people's living conditions (Abdenur, 2009). The approach supports community development by providing social and public service facilities and infrastructure (Brakarz et al., 2002). The approach literally assumes that spatial or physical improvements gradually aggregate to social improvements and vice versa.

In general, the intervention of informal settlements upgrading recognizes the mutual dependence of informal settlements' social and spatial relations. The intervention recognizes that improving social attributes contributes to the spatial improvement of informal settlements, and that improving the latter improves the former. However, empirically, upgrading interventions are limited and insufficient to result in significant changes in the living conditions of the urban poor (Gambo, et al., 2012; Turley, et al., 2013; Muchadenyika, 2015; Hasanawi, et al., 2019). Slum upgrading improves the spatial living conditions of settlements, but it does not address the myriad social disorders associated with slum living. In other words, the solutions fall short of addressing the slums' inequities in social-spatial relations. As a result, slum improvement projects must be supplemented with more comprehensive interventions that combine infrastructure (spatial) and social components in order to address the other major issues influencing slum well-being.

2.2.4. Enabling Participatory Approach

The enabling approach was developed and adopted in the 1990s, culminating from the mid-1980s to The Habitat Agenda of 1996, with the goal of coordinating community mobilization and organization, moving away from public housing delivery schemes and opting for local willpower and action. Securing land tenure and economic development in informal settlements required the involvement of informal settlers not only in the delivery of services but also in decision making and systems design that set action priorities and provide support for implementation as slum upgrading progressed (UN-Habitat, 2003).

An enabling approach is rooted in a holistic approach to project design and implementation that prioritizes needs based on resource availability and institutional support throughout the process (World Bank 2002a). Decentralization of duties and obligations to lower organs is achieved through enabling mechanisms. This promotes transparency, local leadership, and democratic rule at all levels, as well as defining and expanding stakeholders' roles in the construction of sustainable human settlements.

According to Khalifa (2015), as new concepts of decentralization and privatization emerged in the 1990s, the importance of local governments in managing and driving urban

development processes grew. The interventions were founded on the principles of subsidiarity, which recognized that decisions about resource investment in domestic economic, social, and physical growth must be made at the lowest effective level in order to be efficient. For the majority of informal settlement improvement actions, the community and neighbourhood are the least effective levels. As a result, there is a need to build and strengthen community participation capacity.

The approach entails community participation in improving their settlements, ensuring that they are a part of the community's housing challenges, necessitating government support for community involvement initiatives, which is critical for creating an enabling environment (Mukumba, 2019). A specific intervention in an enabling setting or paradigm supports and enhances local efforts, necessitating the early identification of such projects. Srinivas, 2005 The enabling approach increases community involvement from project inception to completion, depending on available resources and local government support. The approach integrates various stakeholders such as local governments, the private sector, non-governmental organizations, and target beneficiaries to establish partnerships and governance patterns that result in inclusive participatory planning and long-term outcomes.

In practice, however, participation is difficult. The term "participation" is used more frequently than it is practiced, according to Jordhus-Lier and De Wet (2013). Participation is the process of contextualizing and carrying out agreed-upon decisions (Arnstein 1969). In some, if not many, cases, plans or programs for upgrading informal settlements are pre-determined and outlined before being presented for consultation with target beneficiaries at a later date. UN-Habitat (2003) emphasizes the importance of participation in developing-country housing interventions, but participation has primarily been implemented on a small scale or as demonstration projects thus far.

A study on enablement strategies to the upgrading of informal settlements in Misisi informal settlement in Lusaka, Zambia, for example, acknowledges that the enabling process can be used to upgrade informal settlements in Zambia, and particularly in Lusaka (Mukumba, 2019). Mukumba (ibid) acknowledges that the achievement of an enabling participatory approach is contingent on full participation. The prevalent informal settlement upgrading processes in Zambia are characterized by inadequate community engagement from the beginning of the intervention's implementation process. Nonetheless, target beneficiary communities want to be fully involved in informal settlements upgrading programs.

In broad sense, the enabling participatory approach emphasizes informal settlement social organization as a critical component for improving the socio-spatial relations setup of informal settlements. That is, for long-term informal settlement management, social attributes of informal settlements must take precedence over settlement spatial configuration. In other words, informal settlements' social attributes are vehicles for successful implementation and improvement of the settlements' physical attributes; that is, informal settlements can barely improve their spatial configuration without vibrant social organization. Notwithstanding the implementation of enabling systems and participatory approaches, existing interventions do not adequately address the needs or demand of informal settlements households. The frameworks ignore the mutual interactive effects of informal settlement spatial elements on informal settlement socioeconomic activities and vice versa.

2.2.5. Integration Approaches

During the 2000s, the concept of "integration" supplemented "upgrading," and efforts were made to link informal urbanization with the rise of the legal real estate sector. According to Khalifa (2015) and Acioly (2002), integration consists of three major components: physical integration, social integration, and juridical integration. Physical integration entails directing public funds toward the provision and improvement of infrastructure linkages and public services, including accessibility; social integration entails the implementation of community needs-oriented programs that promote social development; and juridical integration entails the legalization of illegal or informal sector real estates, such as those in the informal sector, into the mainstream legal sector.

The intervention envisions integrating livelihood. That is, it entails preserving the economic capacity of informal settlements while undergoing visible physical transformation of target areas and implementing livelihood improvement packages for long-term outcomes (UN-Habitat, 2018). In general, the approach builds and strengthens community capacities so that informal settlements are regarded as economic assets in the urban planning fabric. In other words, informal settlement communities are viewed as important components of the urban economy. One example program under this approach is the regularization of informal settlements.

Regularization programs integrate a variety of socioeconomic and prevalent urban-environmental realities, including the facilitation of recording, adjudication, organization, and registering of occupations and land use, with the ultimate goal of formalizing property rights (Ali, et al., 2018). Regularization programs ensure the preservation and consolidation of

18

informal settlements while also improving living conditions and providing basic public social services and infrastructure. According to Midheme (2007), there are two main approaches: judicial or legal tenure regularization, which requires formalization, legalization, and titling, and physical regularization, which improves the built environment.

Regularization of informal settlements in Tanzania takes a physical and legal form, with cadastral surveys and the provision of basic public and social infrastructure culminating in the issuance of land title deeds. The title deeds and public infrastructures are expected to improve tenure security, attracting land investment and, ultimately, helping to alleviate poverty and improve livelihoods (Seif, 2007). However, empirical and scholarly evidence suggests that the expected positive effects of regularization have not been fully realized in Dar es Salaam (Kyessi, 2009). It has previously been established that land title deeds are not a necessary factor to ensure security of tenure and thus subsequent improvement on the land asserted to improve livelihood. According to the studies, long-term occupation and use of the land, as well as social recognition from neighbouring land owners and local leadership, are more important than land title deeds in guaranteeing tenure security (Seif, 2007; Wanjohi, 2007).

In particular, integration intervention is a comprehensive look at the socio-spatial relationships of informal settlements. The intervention acknowledges the interaction of the social and physical characteristics of informal settlements. In other words, an improvement in the social attribute is reflected in the physical configuration of informal settlements, and an improvement in the spatiality of informal settlements is reflected in the social organization of the settlements. The social and spatial characteristics of informal settlements differ, but their respective socio-spatial relationship is essential. However, the integration intervention's implementation barely achieves a balance.

Figure 2.2 depicts the socio-spatial relationships of the evolution of informal settlement interventions.

Figure 2.2: Evolution of Informal Settlements Interventions

Negligence
Informal settlements illegal & unavoidable but temporal-addressed through economic growth

Clearance & Forced Eviction
Informal settlements as eyesores requiring eradication from urban space

Settlements Upgrading
Preserving & improving informal settlements livelihood & physical environment including provision of services

Enabling Approach
Decentralization & democratization of informal settlements management is key to efficient outcomes-community empowerment

Integration Approach
Formal-informal economy linkages-acknowledging the informal settlements as part of urban fabric

Timeline: 1960s — 1970s — 1980s — 1990s — 2000s

	1960s	1970s	1980s	1990s	2000s
Social Attribute	• Economic growth incentives for low-income housing (SAP)	• Clearance of informal settlements livelihood	• Preserving informal settlements livelihood	• Informal settlements community participation or involvement	• Preservation & integration of informal settlements livelihood & community participation
Spatial Attribute	• Low-cost housing	• Removal of informal settlements-built environment-physical environment	• Improving informal settlements physical environment & provision of services	• Efficient & effective improvement of informal settlements physical environment	• Efficient & effective improvement of informal settlements physical environment, provision of services & livelihood
Socio-Spatial Relation	• Inadequate housing against beneficiary needs & demands	• Relocation or displacement of informal settlements	• Limited & insufficient preservation provision of services & livelihood	• Inefficient & ineffective improvement of informal settlement physical environment	• Inefficient & ineffective improvement of informal settlement physical environment, provision of services & livelihood

Informal Settlements Interventions Provisions & Outcomes

20

2.3. Governance of Informal Settlements Interventions

The governance challenges in rapidly growing third-world cities are significant. One of the challenges that developing-country urban governance structures face is managing the burgeoning informal settlements with their pervasive socio-spatial relations characteristics. Contextualizing the social and spatial relations of respective informal settlements and developing an intervention that balances the settlements' socio-spatial constructs is challenging, but an examination of institutional frameworks constituting urban governance provides perspectives and suggestions to the ongoing challenge of managing informal settlements. According to UN-Habitat (2015), among other factors, the growth and development of informal settlements is a function of weak urban governance, implying that urban governance institutional frameworks evaluation can be integrated with informal settlement management.

The political and administrative frameworks of cities, as well as the major issues they face in providing both social and physical infrastructure services, are referred to as urban governance (Wekwete, 1997). The goal of urban governance is to promote economic growth and well-being by providing basic services, including in informal settlements (Sharma 1989). The most important factor in both improving and deteriorating informal settlements is urban governance (Van der Molen 2014). Epistemologically, population growth and rural-to-urban migration (Dubovyk et al. 2011), lack of a pro-poor housing policy (UNECE 2009), poor information systems, poor urban planning and land management practice (Roy 2005), inappropriate land tenure systems (Jones 2012), lack of a pro-poor housing policy (UNECE 2009), and political uncertainties and transitions (Niebergall & Loew 2008); are some of the factors which contributes to the development and proliferation of informal settlements. These and other interconnected elements are primarily the outcome of underperforming social aspects, such as the input and process indicators that lead to the physical manifestation of informal settlements in a given geographic location (Alemie, et al., 2015). As a direct consequence, it is clearly evident that informal settlements are a prime example of weak urban governance.

Similarly, land governance, a subset of urban governance, refers to "the policies, processes, actors, and institutions that manage land, property, and natural resources through decisions on access to land, land rights, land use, and land development" (World Bank 2009). It is essentially about developing and implementing urban land policies, including informal settlements interventions, and establishing a strong relationship between inhabitants and the space they live in the context of informal settlements governance. Informal settlement results

21

from complex interactions among geographical, policy, and governance institutions (Dawson et al. 2014). In order to assess the socio-spatial relations governance of informal settlements interventions in Dar es Salaam, an evaluation of input, process, and performance outcomes is required. Inputs are measurable land policies, rules, and regulations; processes are the responsibilities and activities performed by various actors during the development and implementation of policies and laws; and outputs are the social dimension of inputs and processes represented in a spatial dimension.

2.3.1. Institutional Frameworks for Informal Settlements Intervention Management

In general, institutional frameworks guide land governance, including informal settlements. Institutions are a set of norms, values, and beliefs that have developed to ensure that targets are met, whereas a framework is a link that supports two or more subsystems and allows information/data to flow easily from one subsystem to another (Wapwera, et al, 2015). In other words, the institutional framework is the link that ensures the efficient flow of information from one part of a system to another (ibid). The governance framework (tiers of institutions), organizational framework (planning authorities), legislative framework (planning laws), and administrative framework are the major components of the institutional framework (structure). The frameworks govern development control and management in urban areas, including informal settlements (Goldratt, 2004).

2.3.1.1. Governance Frameworks (Tiers of Government)

The framework includes governance institutions, which are typically the conduits through which information travels from one subsection to the next within the governance jurisdiction, either top-down or bottom-up (Healey, 2006). These are the levels of government in charge of managing urban development, including informal settlements. That is, they differ by country and are governed by their respective constitutions. Tanzania, for example, has two levels of government: central government and local governments.

Different levels of government are charged with different responsibilities in the management of informal settlements. In general, the central government is responsible for developing national urban policies, including approaches to informal settlements policy, while the local government is responsible for contextualizing and implementing the formulated policies. According to Jones (2017), one aspect acknowledged in the New Urban Agenda (NUA) is that current urban and municipal management plans, strategies, and processes have been unable to successfully grapple with the complexity of urbanization, as evidenced by the expansion of informal settlements. According to the NUA, sustainable national, city, and municipal urban plans and policies are an important tool for expressing and laying out a

vision for city planning and development. These plans and policies should be contextualized and tailored to the conditions of each country and the state of its towns and cities. Notwithstanding some basic principles of considerations in the development of national urban policies and related frameworks, cooperation and coordination between tiers of government in the development of plans and policies must be context-specific, with nuanced solutions and implementation paths, including in the management of informal settlements.

2.3.1.2. Organization Frameworks

"Organization frameworks" refers to planning authorities and organizations constituted by law and used by the government to provide urban planning services aimed at the control and management of development (Wapwera, 2015). The National Human Settlements and Development Policy of 2000 outlined the following organizations for the implementation of human settlements development policy, including informal settlement management, in order to streamline the organizational framework of human settlements development in Tanzania: Ministry responsible for human settlements development; local authorities; private sector; finance institutions; Non-Governmental Organizations and Community Based Organizations; Parastatal sectors including National Housing Cooperation; Building research Units; the Institute of Housing Studies and Building Research Unit of Ardhi University (then University of Lands and Architectural Studies); and Ministry of foreign affairs and international cooperation (URT, 2000).

According to Johnson and Henry (2004), decentralization was used to restructure urban planning and development management in developing countries. As per this viewpoint, urban planning in developing countries, including the management of informal settlements, is organized around multidivisional frameworks. Multidivisional organizations or agencies exist primarily to coordinate the work of their divisions (Alonso et al., 2008). Collaboration between various entities involved in urban planning and development, including informal settlement management, is essential for long-term sustainability (Yazdan et al., 2015b). Coordination is an important facilitator in bringing together various agencies to make their efforts more compatible with the triple bottom line of sustainability, which includes environmental, economic, and sociological phenomena. However, inefficiencies in urban management and a lack of coordination among organizations in developing countries exacerbate the phenomenon of informal settlements (Tiraki, et al., 2011). Institutions and organizational frameworks responsible for physical development, financial investment, social organization, urban development planning research and development, and informal settlements management are disconnected; and basic urban development plans and policies

have a foundational inability in the preparation, approval, and implementation processes (ibid.). But, effective coordination of organizational frameworks is required for long-term management of informal settlements.

2.3.1.3. Legislative Frameworks

The legislative framework is composed of planning laws that govern planning authorities in determining urban development control or management applications, including operations; it is also acknowledged as a consolidated procedure order (Wapwera, 2015). The legislative framework is divided into three primary categories, according to Payne and Majale (2004): administrative processes, which include institutional setup; planning standards; and planning regulations. Administrative procedures define the steps that organizations or institutions must take to achieve their goals. Planning standards are guidelines for urban planning development that include minimum lot sizes, frontages and depths, road dimensions, and provisions for public, social, and economic uses; and Planning regulations are instructions that control development that include land use or zoning controls, plot-use restrictions, and building setbacks (ibid.). In Tanzania, informal settlements management legal frameworks comprise of: National Land policy of 1995; National Environmental policy 1997; National Human Settlement and Housing Development policy of 2000; Land Act of 1999; Urban Planning Act of 2007; Unit Title Act of 2008; Guidelines for preparing regularization scheme of 2007 and the Urban Planning (Planning Space Standards) Regulations of 2018; among others.

Many developing countries' legislative frameworks have been urged for setting unreasonably high standards and being overly bureaucratic, putting legal land and housing out of reach for impoverished households (Kironde, 2005). This has resulted in an increase in informal settlements, among other problems. Legislative frameworks have been criticized for being inconsistent or insufficient for the local economy, as well as unenforceable (Okpala, 1987 and Owotona, 1988 in Kironde, 2005). The majority of regulations are based on outdated and ineffective legislation or urban planning codes dating back to colonial times; spatial planning preparation and enforcement are frequently based on outdated planning ordinances that vest all planning powers and responsibilities in the central government (ibid). However, effective urban land development, including informal settlement management, requires streamlined, responsive, decentralized, and coordinated legislative framework reforms.

2.3.1.4. Administrative Framework

A competent administrative structure capable of managing urban development, including informal settlements, should be present in any planning jurisdiction. An administrative framework is a set of management structures and operations that a company or institution

maintains and uses to achieve a specific goal. The hierarchy or structure of informal settlement management is reflected in the organizational structure of the central government agency responsible for human settlement development, as well as local authorities at the national and local levels. In Tanzania, management of informal settlements is a responsibility of the physical planning division in collaboration with the housing division under the central government-Ministry of Lands, Housing, and Human Development, whereas at the local level-municipal councils, management of informal settlements is under the land development and urban planning department.

Over time, central and local governments have established a complex network of legal, formal, organizational, and institutional structures for managing urban development issues, including informal settlements (Bhambhri, 1985). As a consequence, the multiplicity of organizations for managing urban development and informal settlements has hampered coordination, line of command, and effective provision of services to society. Effective and efficient administrative frameworks, on the other hand, improve coordination and the division of power and responsibilities in informal settlement management.

CHAPTER THREE

THEORETICAL AND CONCEPTUAL FRAMEWORK

3.0. Introduction

This chapter comprise of the theoretical and conceptual framework of the study.

3.1. Theoretical Framework

Due to the abundance of variables, no single theory, according to Diang'a (2011), adequately explains the development and growth of informal settlements. Poor urban management, particularly failed urban policies, poor land administration, inadequate and incoherent land and housing legislation, dysfunctional land markets, social insecurities, poor economic performance, and a lack of political will are all commonly argued for the development and growth of informal settlements. Nonetheless, the study was guided by production of space theory.

3.1.1. Production of Space Theory

The theory of production of space, coined by French Marxist Henri Lefebvre in 1974, is one of the most influential and widely cited works in urban theory. The production of space by Henri Lefebvre is a theoretical construct and blueprint that proposes a science of space to analyse the relationships between humans and the spaces they consume, produce, and reproduce while producing not only objects but themselves (Wilson, 2015). According to Barrera (2013), the way space is organized embodies a power dynamic between those who are privileged and those who are not. This relationship is the foundation of social structure and organization. "The space of a (social) order is hidden in the order of space," claims Lefebvre (Lefebvre 1991). Space is understood not only as a built environment, but also as a productive force and a consumer good. As a consequence, the space created is a tool for thinking and acting, as well as a result of control, dominance, and power.

Lefebvre (1991) proposes a triplicity-based conception of space within the dialectic tradition: spatial practice (space of perception arising from daily reality); representations of space (i.e., conceived space and represented space); and representational spaces (i.e., spaces experienced through images and symbols, the spaces of passion and action). According to Santos (2014), "spatial practice, representations of space, and representational spaces contribute in different ways to the production of space depending on their qualities and attributes, the society or mode of production in question, and the historical period."

In addition to Lefebvre's argument, Harvey (1973; 2006) proposes a tripartite conceptualization of space based on absolute, relative, and relational space. When space

becomes a thing in itself with an existence independent of matter, it has a structure that can be used to pigeonhole or individuate a phenomenon. According to this perspective on relative space, space can be understood as a relationship between objects that exist only because objects exist and relate to each other. Thirdly, space is regarded as relational in the sense that an object can be said to exist only in so far as it contains and represents relationships to other objects within itself (Harvey, 1973).

Nonetheless, despite all of the underpinnings of space production, it is important to recognize that space production is marked by contradictions, disputes, and material and symbolic conflicts among various agents. According to Harvey (1973), the production of space in urban areas is a function of various elements that facilitate production, appropriation, and reproduction. The variety of agents and interests involved in the production of [urban] space, as well as its various forms of relating to urban land, housing, and urban equipment as use values and exchange values, understood as relational concepts. This perspective allows one to see the [urban] space as an arena in which various agents with competing interests compete (Santos, 2014). Each agent seeks to achieve its goals, whether they are related to one's very existence and social reproduction in the city (e.g., living well or realizing symbolic gains relative to the status of residing in a special place), that is, use value, or to the possibilities of material gains and wealth accumulation, that is, exchange value.

From this viewpoint, Bourdieu (1997) makes an important contribution by affirming that physical city [urban] space is an expression of social space [physically created and objectivized space]: the distribution in physical space of various kinds of goods or services, as well as individual agents and physically located groups (as bodies linked to a permanent place) endowed with opportunities for appropriation of these more or less important goods and services (in accordance with their capital and the physical distance from these goods, which also depend on their capital). The value of the various regions of reified social space is defined by the relationship between the distribution of agents and the distribution of goods in space. That is, city [urban] space is thus the manifestation of "great social oppositions objectivized in physical space," such as the division between a city's centre and its periphery, and it tends to be reproduced in forms of representation (Santos, 2014).

Conversely, Lefebvre (2008) claims that these contradictions of space production explode for two reasons: first, contradictions arise from the production itself and social appropriation, particularly by capital; and second, on the institutional plane, contradictions appear between private ownership of land, which is generalized for all spaces, with the exception of collective and state rights, and the globality, knowledge, and strategy of the state itself. In other words,

there is a conflict between abstract space (conceived, global, and strategic) and appropriated, immediate, experienced, and fragmented space. This contradiction manifests itself on land regulation planes as well as in partial projects of production and appropriation of space on the part of incorporators and economic agents. According to Santos (2014), space production is a function of capital production and reproduction. Nonetheless, urban space is more than just the creation of conditions for capital reproduction; it is also the production and reproduction of capitalist production relations. That is, "capitalism was only sustained by being extended to the entire space," implying a need for capital to produce and reproduce its own space (Lefebvre, 2008).

Throughout history, capitalism has shaped cities to meet its needs: more or less fragmented into suburbs, peripheries, and satellite agglomerations, the city serves as both a decision-making centre and a source of profit (Lefebvre, 2008). When it comes to the production of space and capitalism, Lefebvre (ibid) brings up an important point that can be related to space fetish. Private appropriation of land and subordination of space to capital, together with institutionality mediated by the state, can be blamed for creating space fetish, masking the social relations contained in [urban] spaces. As a result, Lefebvre (1967) proposes the concept of the right to the city, which expresses a demand for the provision of social reproduction in the city and is linked to struggles against dispossession [capitalism defects on space production]- referring to claims related to housing, sanitation, mobility, education, health, culture, democratic participation, and so on (Marcuse, 2012).

In other words, Lefebvre's concept of the right to the city functions as a call to action for interventions aimed at the reproduction and/or production of space. In fact, the right to the city cannot be exercised in its entirety within the context of capitalist urbanization (Santos, 2014). The right to the city is linked to the establishment of a less alienated alternative urban life that promotes human emancipation as a collective demand. It is the right to rebuild the city in the interests of social justice and happiness (Marcuse, 2012). According to Lefebvre (2008), the right to a city is analogous to a utopian project, that is, something that is not currently possible but may be in the future (Santos, 2014). Therefore, "claiming the right to the city is effectively claiming a right to something that no longer exists" (Harvey, 2012). In this way, "the definition of the right to the city is an object of struggle, and that struggle must proceed concurrently with the struggle to materialize it" (ibid).

3.1.1.1. Production of Space in Informal Settlements

According to Lefebvre, many parameters influence space production: everyday life routine, materials, the physical space itself as a point of departure for the production process, and of

course the cultural background and social relations of the society or "the mode of production" (as he calls it) producing that space."...every society- and thus every mode of production with its sub-variants [...] produces a space, its own space" (Lefebvre, 1974; 1991). Space is created through a combination of the appropriation process and regulations (Babere, 2015). Similarly, the production of informal settlements space is influenced by a variety of factors.

Describing a space [including informal settlements space] differs from person to person, even among people who live or share the same space (Mahmoud and Elrahman, 2014). According to Lefebvre's approach to space, there are three notions or fields of space: first, the physical "perceived," the nature, and this is the origin of the space, "the inception point" of the cosmos; second, the mental "conceived," including logical and formal abstraction, this space is manly produced by theoretical practices and takes its roots from knowledge; and third, the social "lived," or the lived space (Lefebvre, 1991). The quasi-logical presupposition of an identity between physical and social spaces on one side and mental space on the other creates a void between the two entities, as if they were represented by two spheres facing each other on opposite sides of an abyss (ibid). This could explain why not all of the spaces designed by planners and architects are lived in or perceived positively by users (Mahmoud and Elrahman, 2014).

Furthermore, space is a complex product that combines culture, materials, place, and architecture (Lefebvre, 1991). We can assume that the genre of produced space is made up of three parts: "perceived space; conceived space; and lived space" (Mahmoud and Elrahman, 2014). Because Perceived, Conceived, and Lived spaces are variables, the type of produced space will differ each time. The relationship between the various modes of spatial production should be carefully considered. Despite the fact that this relationship is immeasurable and extremely complex, its outcome can be recognized.

Many scholars agree that the lack of basic urban infrastructures (water, electricity, sanitation), poor infrastructure and structural quality of housing, and unsecure residential status characterize urban informal settlements. Morphological, functional, and symbolic issues cross borders and exist in the majority of developing countries. These definitions describe the physical and socioeconomic deficits these settlements face in order to achieve urbanity while also exceeding what is thought to be a strong and distinct feature of informality; strong social infrastructure. In general, the production of urban informal settlement space results from social-spatial dialectic or social relations. Socioeconomic characteristics of human agency illuminate the physical place and show how it is lived within the social world, of which physical space is a part (Kerr, 1994). That is, through the physical space one can see the

characteristics of urban informal settlements. Soja (1989), as cited by Kidder (2009), provides an overall understanding of the social relevance of spaces as socio-spatial dialectic: "social relations of production are both space forming and space contingent." According to Lefebvre, the production of social space is dependent on three factors, the "Spatial Triads," which interact dialectically spatially rather than temporally: spatial practices, representations of space, and representational spaces (Mahmoud and Elrahman, 2014). Figure 3.1 depicts this.

Figure 3.1: Spatial Triads of Henri Lefebvre
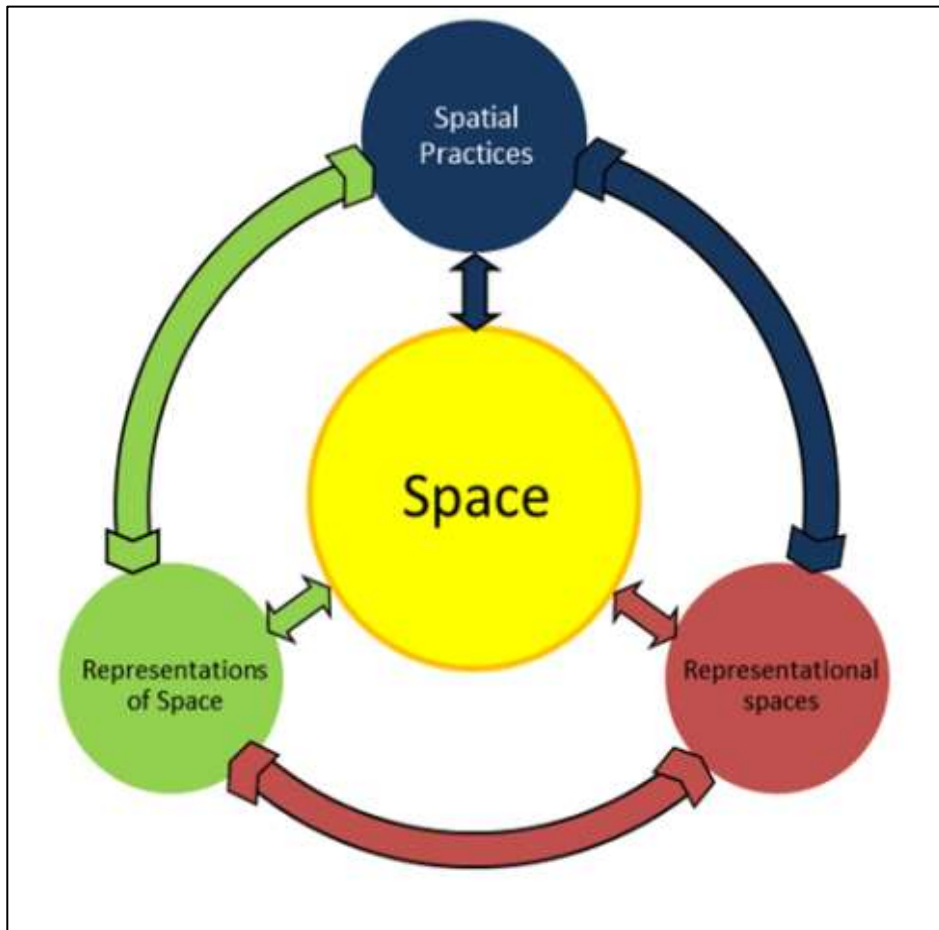
Spatial Practice (Physical/Perceived Space): A society's spatial practice conceals its space. Social practice both proposes and presupposes that space in a dialectical interaction. The latter is gradually and steadily produced while being monopolized and distributed by this social practice. It is the space perceived in the common-sensual mode of daily life practices, with all of its contradictions. Deciphering a society's spatial practice reveals its spatial practice. Social practice is closely associated in neo-capitalism with the perceived space that is map-able and measurable- everyday life reality (daily-routine) and urban reality (trajectories, networks connecting the place of work, of private life, of leisure, etc.). This association is surprising because it includes the greatest distance between the sites it connects.

Each member of this society's spatial competence and performance can only be evaluated practically. In an extreme but significant case, the daily life of a resident of a governmental social high rise housing project in a suburb can thus define "modern" spatial practice. Spatial practice must have some cohesion, but this does not always imply coherence (Lefebvre, 1974).

Mental/Conceived Space Representations: Lefebvre refers to this factor as "discourses on space." Scientists, planners, urbanists, architects, technocratic subdividers, and social engineers inhabit it. It is a conceptualized space created by those who can distinguish what is perceived from what is lived or conceived. This space is typically the dominant space in any society, representing the power and knowledge that attracts people from outside the society as it shapes the image of that society. However, because many governments refuse to recognize the existence of informal settlements, their space is created outside of the conceived space. In other literature, the discourses of the imagined space have played a role in the growth of informal settlements.

Representational Spaces (Social/Lived Space): Also known as "discourses of space or spaces of representations," this is the space as it is experienced directly through its associated symbols and images (Lefebvre, 1974). So, it's the space of "users" and "inhabitants" of certain artists, such as writers, policymakers (decision makers, politicians), and philosophers, who can only describe or aspire and believe they can do no more than that. It is the dominated space, and thus is experienced passively. This space can be altered and appropriated only through the use of one's imagination. It usually superimposes physical space by symbolically representing its objects in such a way that these representational spaces tend towards more or less coherent systems of symbols and nonverbal signs.

In general, space is a social product, and the social construction of space implies a time-consuming process. The form of social space assembles everything produced by nature and society's cooperation or conflict (Lefebvre 1991). Social space is the point at which spatial practice, representation of space, and representational space collide. The production and reproduction of the relationship between society and/or the individual and space are referred to as spatial practices. Spatial practice is an everyday practice that embodies the physical manifestation of space; society produces and appropriates space through spatial practice (Lefebvre 1991). Representations of space imply, among other things, the abstraction of space through maps, plans, and policies. These spatial representations impose some kind of order (ibid).

31

Thus, the representational space can be a social product created by marginalized or oppressed societies, such as informal settlements seeking a chance to live in a city that constantly rejects its existence. These marginalized societies typically struggle to reclaim and transform the space of inequality. According to Mahmoud and Elrahman (2014), the produced space in informal settlements is typically an emerging hybrid space resulting from the fusion of multiple cultures in one location. It usually suppresses or sets aside old values in order to establish new ones, new perspectives, and symbols that are completely different from the originals. Therefore, the "Lived Space" can explain and clarify some of the complexities of space production in informal settlements.

According to Cardoso (2004), informal settlement space is mostly asynchronous and makes little sense to those who do not live there. Because of this, it is classified as a disordered space. Nonetheless, both order and structure exist in 'abstract' space and in 'built' form; however, order is natural to form, or what is built synchronously, and structure is natural to space, or what is formed asynchronously (through independent and non-coordinated actions). With these distinctions in mind, it is easier to see why upgrades to informally produced spaces should not be hampered by formal standards and should be negotiated with the user community. To avoid arbitrary imposition of simplifying order, the existing structure must be considered and assessed.

Nonetheless, informal settlements as a social-spatial construct are distinguished by the following characteristics: inhabitants who frequently lack security of tenure for the land or dwellings they inhabit, for example, they may squat or rent informally; neighbourhoods that typically lack basic services and city infrastructure; and housing that may not comply with planning and building regulations, and is frequently located in geographically and environmentally sensitive areas (Brown, 2015). Thus, in relation to Lefebvre's concept of the right to the city, it can be inferred that various urban governance interventions towards informal settlements are quests for social justice for those who live in the settlements.

3.2. Conceptual Framework

Rapoport (1985) defines conceptual frameworks as blueprints that describe how things work and philosophies that explain phenomena, rather than models or theories. In general, conceptual frameworks do not define or explain how things work; rather, they aid in the conceptualization of phenomena, data organization, pattern discovery, and the development of models and theories (ibid.).

Evaluation of the socio-spatial relationships of informal settlements Intervention necessitates a conceptualization of what constitutes the socio-spatial relations of informal settlements; specific interventions or responses being implemented; and the institutional frameworks of urban governance. The socio-spatial relations of informal settlements are a combination and interaction of the settlements' social and spatial attributes or characteristics. That is, socially, informal settlements are typically associated with the informal economy, which defines livelihood; social exclusion, which is the state of the settlement's inadequacy and deprivation of basic social and public infrastructures and utilities, including deplorable living conditions; and housing insecurity, a social characteristic indicative of disparities in housing quality in the form of economic inequality or indicative of income and wealth inequalities characterizing the settlements. On the other hand, informal settlements are defined spatially by: inadequate housing and an unplanned built environment; inadequate social, public, and infrastructure; and land use tenure insecurity. The interaction and manifestation of these characteristics is what defines the socio-spatial relations of informal settlements, and they are typically regarded as a marginalization of urbanity by urban governance structures, necessitating interventions.

Interventions in informal settlements are primarily formulated in relation to the global or regionally framed urban agenda, as well as other locally agreed national priorities and policies. The interventions are typically incremental and diverse, but they all envisage to address the social and spatial disparities which characterize the informal settlements construct. In other words, informal settlement intervention strategies aim to improve the socio-spatial relations of the settlements or the social and spatial characteristics of the settlements. The indicators of intervention strategies are informed by informal settlements socio-spatial relations constructs. The interventions' strategies social indicators comprise of, improved livelihood; housing security; and social inclusion, while the spatial indicators include, among many issues, an improved built environment and housing quality; adequate social and public infrastructure provision; and land tenure security. The implementation of these interventions, however, is a function of urban governance.

Essentially, urban governance is the conceptualization and pursuit of a common goal at the local scale of the government system. According to Sharma (1984), the primary objective of urban governance is to promote economic growth and improve people's well-being by providing basic services. The objectives of urban governance are attained through interlinkages of institutional frameworks comprising of norms, values, and beliefs that support sub-systems and allow information to flow easily from one sub-system to another.

Legislative frameworks (regulatory provisions); organizational frameworks (regulatory established institutions or authorities); administrative frameworks (structure or hierarchy of authority); and governance frameworks (tiers of government) are among the institutional frameworks which facilitates the implementation of informal settlements interventions.

In general, the effective implementation of informal settlements interventions through coordinated urban governance institutional frameworks results in the efficient production and/or reproduction of informal settlements' socio-spatial relations, culminating to sustainable informal settlements management. Therefore, the study postulates that identifying the prevalent socio-spatial relations of informal settlements and examining the indicators of informal settlements interventions, including an investigation of the intervention's implementation framework (institutional frameworks), will inform the effectiveness of informal settlements interventions on the socio-spatial relations construct. Figure 3.2; illustrate the conceptual analysis that governed the study.

Figure 3.2: Conceptual Framework

Sustainable Settlements Management

Effective Socio-Spatial Relations of Informal Settlements

Legislative Framework

Administrative Framework

Urban Governance

Governance Framework

Organization Framework

Implementation

Social Indicators

- Housing Security
- Improved livelihood
- Social Inclusion

Informal Settlements Interventions

Spatial Indicators

- Improved Built Environment & Housing Quality
- Social & Public Infrastructure Provision
- Land Use Tenure Security

Formulation

Informal Settlement Socio-Spatial Relations

Social Characteristics of Informal Settlements:

- Informal economy
- Social Exclusion
- Housing Insecurity

Spatial Characteristics of Informal Settlements:

- Inadequate housing & Unplanned Built Environment
- Inadequate Social & Public & Infrastructure
- Land Use Tenure Insecurity

Source: Author

CHAPTER FOUR
RESEARCH DESIGN AND METHODOLOGY

4.0. Introduction

This chapter presents the research design and strategy; case study area, and the research methodological approaches.

4.1. Research Design

To investigate the research problem, the study employed a qualitative design with multiple data sources. According to Baxter and Jack (2008), a qualitative technique allows for the elaboration of critical research information and ensures that the topic of interest is explored using multiple sources of information (2008). Through the researcher's interaction with the participants, the qualitative approach allows the researcher to explore the participants' perspectives, experiences, and beliefs on the research topic, as well as gain a deeper understanding of the research area (Creswell, 2013; Baxter & Jack, 2008). In general, the research design enabled the researcher to triangulate various datasets reflecting what magnitude of the case study settlements is spatially and socially coherent with the informal settlements interventions requirements in order to maximize credibility, dependability, and conformability of the findings, and the datasets further assisted the researcher to compute data that was quantitative in nature.

4.2. Research Strategy-Case Study Approach

According to Kothari (1992) and Yin (1994), it is critical to answer respective research questions; develop a logical sequence for data collection and analysis; and understand how to connect empirical data to initial research questions to the study's ultimate conclusions. As a result, a case study approach was used in this study. The approach is based on the assumption that the case under investigation is representative of cases of a particular type, allowing for generalization that can be applied to other examples of the same type through rigorous examination (Kumar, 2005). When one needs to understand a topic or scenario in depth and can select cases with a lot of information, the case study approach is particularly effective (Patton, 1987). Because the study aimed to investigate the implications of informal settlement interventions on the socio-spatial relations of Dar es Salaam's informal settlements, a case study approach was deemed an appropriate strategy for exploring in great detail the socio-spatial distinctions among the selected case study settlements and investigating in specific detail the socio-spatial indicators of each informal settlement in question for generalization.

Data collection and analysis were planned sequentially from one case to the next. Data from the previous case study settlement was rigorously administered and analyzed before the next

case study settlement, and lessons learned from the previous case study settlement were used to improve performance in future cases. This proved useful for validating data collection techniques and methods. Following that, detailed case study reports were written and discussed, followed by cross-case analysis to identify patterns and variations emerging from individual case studies, as well as their implications for theory, planning, and policy issues, and as a foundation for developing conclusions and recommendations. (Figure 4.1 depicts the study's research design.)

Figure 4.1: Research Design & Strategy Outline
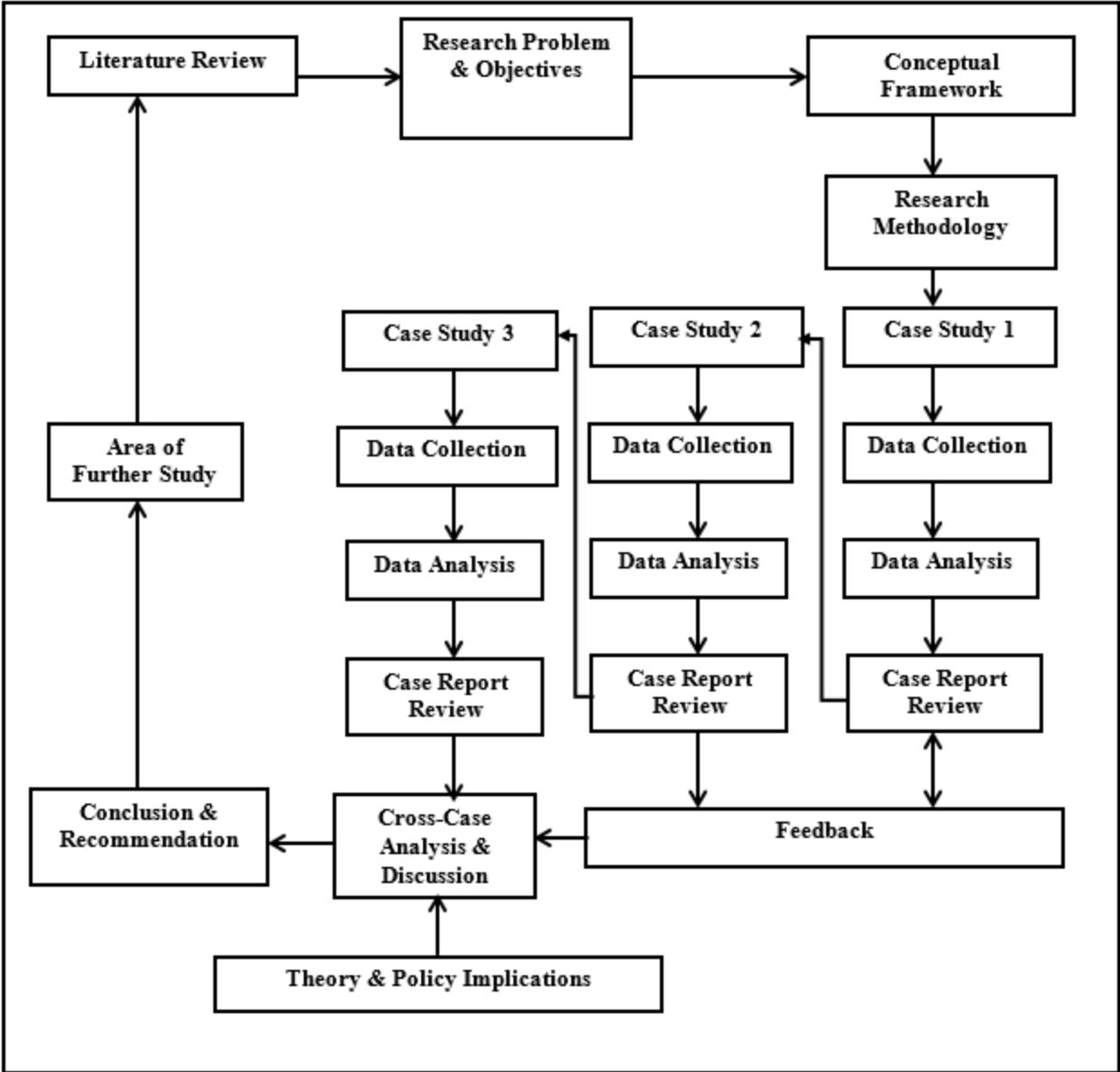
Source: Author

4.2.1. Choosing Case Study Areas

Dar es Salaam, Tanzania, was chosen as the research location for a variety of reasons, including its excellent location for the study of socio-spatial relations of informal settlements

interventions. Dar es Salaam has approximately 123 informal settlements, which house approximately 75% of the population (Figure 4.2) (Rasmussen, 2013; MLHHD, 2018; 2019). One of the challenges that developing countries, including Tanzania, face is managing and planning informal settlements. Since independence, a number of intervention programs and urban policies have been implemented to improve the living conditions of city dwellers, including those living in Dar es Salaam's informal settlements. Nonetheless, informal settlements have persisted despite various interventions. Therefore, in order to investigate the socio-spatial relations of informal settlement interventions, the initial case study selection criterion was that the settlement had a history of interventions since development. In other words, case study selection included formalized, regularized, upgraded, consolidating, and consolidated informal settlements.

Figure 4.2: Informal Settlements in Dar es Salaam
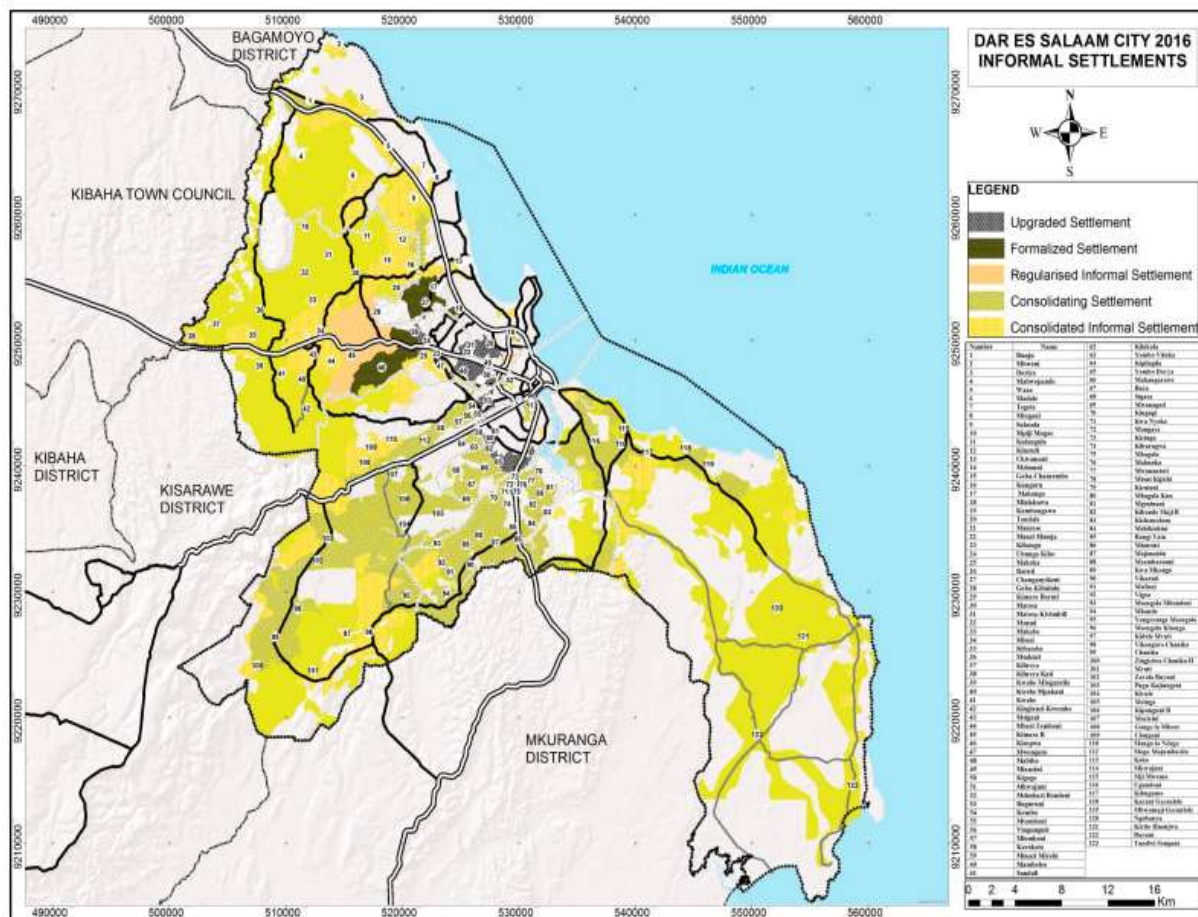
Source: MLHHD (2018).

Another factor considered when selecting a case study settlement was its geographical location. Gentrification is now taking place in informal settlements near the city centre, and accumulation by dispossession is driving the development of cities such as Dar es Salaam,

38

which is exacerbated by logics produced and reproduced by neoliberal ideology (Rasmussen, 2013; Brugman, 2019). According to Rasmussen (2013), because of the ephemeral nature of their relationship to the land, new settlements will most likely begin at the periphery of the urban development cycle, with worse living conditions, non-permanent housing, and an uncertain future of infrastructure and service delivery. As a consequence, case study settlements were chosen based on their central location, proximity to the city centre, and primary development factors or history.

Furthermore, Patton (1987) suggests that case study topics be chosen based on the availability of relevant data. Cases with a lot of information can teach you a lot about important issues for evaluation (Patton, 1987). Unlike in representative situations, where statistical sampling's power is based on selecting a truly random and representative sample of a significant portion of the population, the power of deliberate sampling is based on selecting data-rich cases (ibid). Besides that, cases that are plausible, answer what one wants to investigate, match the goal, and have easy access to case location and data are used to determine which case study to focus on (Patton, 1987). That is, the objectives of case selection were to find 1) cases that could be representative of broader socio-spatial relations processes, and 2) useful variations on theoretically relevant dimensions (Seawright and Gerring 2008). The first step in selecting case studies was to interview research scholars and urban professionals, who provided an overview of the history, location, and characteristics of informal settlements, as well as which ones in the city would be suitable for research, including an empirical literature review of the case settlements.

The time available in the field, as well as the available resources in terms of the number of case studies chosen and their location within the city, were important constraints in the case study selection, as acute traffic congestion makes travel around Dar es Salaam time-consuming and inefficient. The informal settlements selected had to be easily accessible, which meant they had to be within a certain distance of the city centre; however, this may result in specifications that affect the theory surrounding the socio-spatial relations of informal settlement development and interventions.

Another limitation was the scarcity of informal settlements with a strong correlation to the study's topic. A key factor in providing a comparative evaluation across Dar es Salaam was the selection of case study settlements in relation to the city's metropolitan districts. Dar es Salaam's metropolitan districts have different socio-spatial relationships despite having different institutional and governance frameworks. Despite having a diverse range of economic

backgrounds, different districts are more populated by either higher or lower income groups, with Kinondoni being the wealthier area and Temeke being the poorest (Doyle, 2017). However, because of their geographical location, time constraints, and historical background, the informal settlements in Kigamboni and Temeke districts were excluded from this study.

Despite these constraints, case studies that met a majority of the criteria were chosen. Vingunguti, Hanna Nassif, and Manzese were the three informal settlements chosen. Table 4.1 shows the characteristics of each settlement for the various selection criteria. Figure 4.3 depicts their location.

Table 4.1: Informal Settlements Selection Criteria			
Criteria	**Vingunguti**	**Manzese**	**Hanna Nassif**
Age	1960s	1960s	1960s
Development History	Development linked to coconut plantation-plantation labourers' occupation	Development linked to growth of industrial activities-industrial workers occupation	Developed as a coconut plantation-Free occupation by ex-workers
Proximity to CBD (Km to CBD)	6	6	4
Availability of Social and Spatial Empirical Data	Yes	Yes	Yes
Social and Spatial Transformation of the Settlements	Yes	Yes	Yes
Intervention History			
Slum Clearance Programme	No	No	No
Squatter Upgrading	Yes	Yes	Yes
Community Infrastructure Programme	Yes	No	Yes
Community Infrastructure Upgrading Programme	Yes	Yes	No
Formalization and Regularization	Yes	Yes	Yes

Vingunguti, Manzese, and Hanna Nassif informal settlements are located between 3 and 8 kilometers from Dar es Salaam's city center and are located in the municipalities of Ilala, Ubungo, and Kinondoni respectively. Vingunguti has a population of around 106,946 people

and an area of about 32 hectares, according to the 2012 national population census. It is approximately 6 kilometers south of the city center. Manzese is 6 kilometers west of the city center along the Dar es Salaam-Morogoro route, has a population of 70,507 people, and covers an area of about 1.86 square kilometers (URT, 2012). Hanna Nassif is located about 4 kilometers from the city center and has a population of 37,117 people. Generally, the case settlements have high population density with reminiscent informal settlements characteristics.

The development and evolution of case settlements show a consistent trajectory. However, the settlements have rapidly transformed from peripheral farming areas to densely populated inner-city settlements since the 1960s. Vingunguti began as a coconut plantation owned by Arab settlers under a freehold ownership system until 1963, when the freehold system was abolished. Former plantation laborers were among those who first settled in this area. The 1980s urbanisation trends resulted in the rapid development of informal housing in the area. Similarly, Hanna Nassif informal settlement began as a coconut plantation abandoned by one Hanna Nassif. Former plantation laborers illegally built houses, subdivided the land, and sold it to newcomers, most likely through selling. Depending on the size of the parcel purchased, those who purchased land subdivided it and sold it to other developers.

In the 1940s, Manzese was a rural settlement outside of Dar es Salaam until 1957, when a portion of it was incorporated into the city boundary (Kironde, 1995). It was once farmland owned by an Asian named Albhai, who raised cattle there. After beginning as a small peri-urban village governed by customary laws, Manzese, like many other informal settlements, was fully incorporated into the city in the 1960s (Sliunza, 1998). The city boundaries were generally extended due to the then-current urban land policy, resulting in the incorporation of the case informal settlements into the urban area, and the residents of the settlements were then regarded as squatters. Manzese's growth was aided by the planning and establishment of an industrial area at Ubungo (Tripp 1997), proximity to the CBD, and improved accessibility provided by the Morogoro highway.

Figure 4.3: Map of Dar es Salaam Showing Case Study Areas
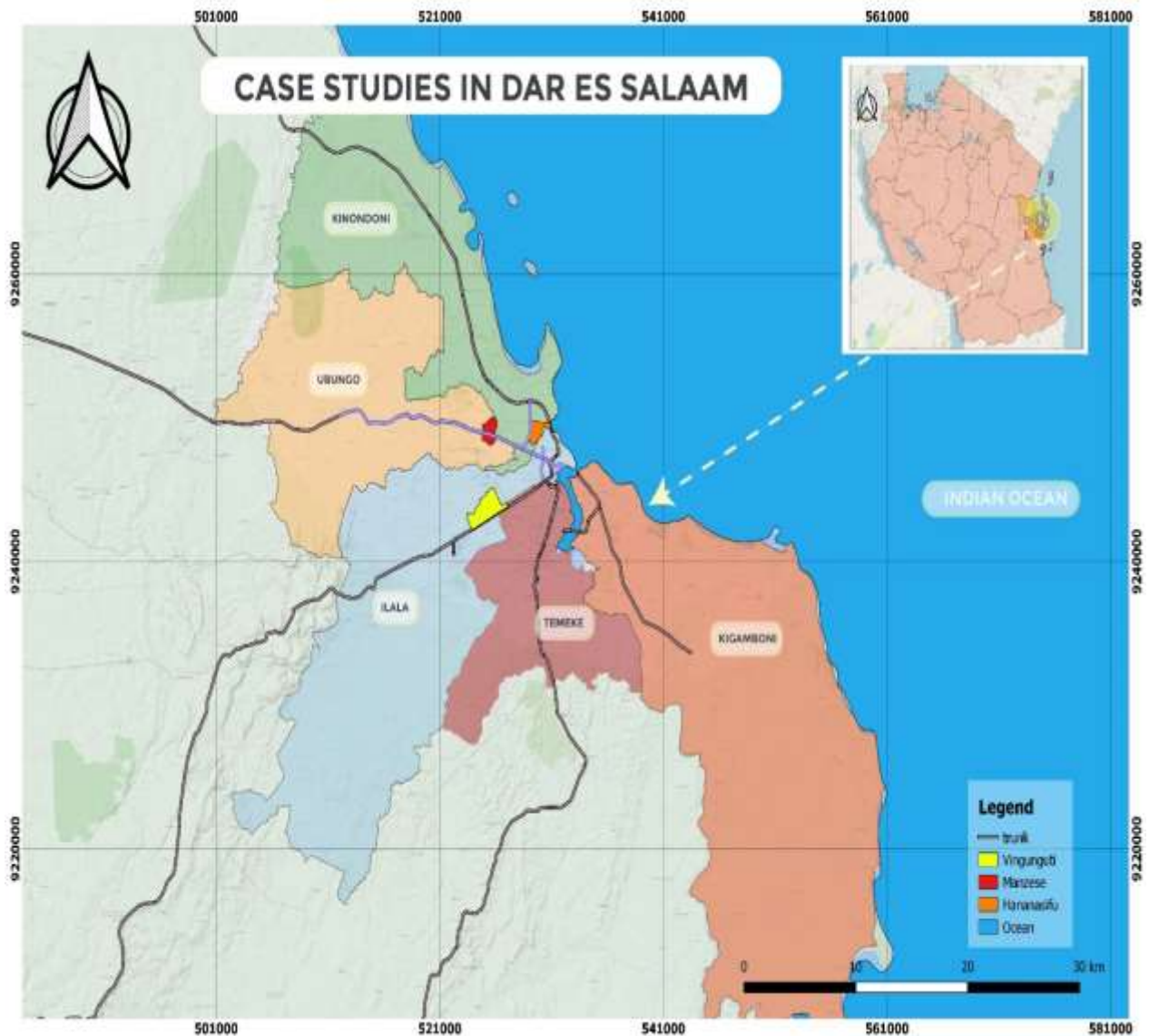
Source: Author

4.3. Sampling Methods

Purposive sampling and a multi-stage cluster sampling approach were used in the study (multistage sampling). Purposive sampling uses expert judgment to select cases, or the researcher selects cases with a specific goal in mind (Ishak & Bakar, 2014). Purposive sampling is useful in three situations for case study research strategy: (1) when a researcher wants to select unique cases that are particularly instructive, (2) when a researcher wants to select members of a hard-to-reach, specialized population, and (3) when a researcher wants to identify specific types of cases for in-depth investigation (ibid.). The goal is to learn more about those specific types of cases and to be able to generalize the findings (Neuman, 2009). To ensure the quality and reliability of the data collected from the study, a cross-section and triangulation of case findings was limited to three case studies, including Vingunguti,

Manzese, and Hannah Nassif, which have historically been under informal settlements intervention implementation. Furthermore, the case studies were chosen based on the availability of the socio-spatial relations variables information that was the subject of the research. Besides, key (research) informants (households, local leaders, municipality officials, academicians, and researchers) associated with the study were carefully chosen.

In multistage sampling, the final sample is obtained in two or more phases, taking into account the nested or hierarchical structure of the population's members. In other words, multistage cluster sampling begins with a probability sample of the primary sampling units, followed by a probability sample of the secondary sampling units; a third level of probability sampling is then drawn from each of these secondary units, and so on until we reach the final stage of breakdown for the sample units, when we will sample every member in those units (Sekaran & Bougie 2010). A two-stage multistage sampling approach was used in this study. The first stage involved clustering the respective settlements into specified clusters based on aerial photograph interpretations (spatial, spectral and temporal elements present in the image). The second stage entailed systematic random sampling of the quantified clusters within the case study settlement.

To assess the efficacy of the study area's socio-spatial interventions, households from the selected settlements of Vingunguti, Manzese, and Hannah Nassif were sampled for analysis and evaluation. The sample sizes for the settlements were determined based on their practical (confidence) significance rather than statistical (precision), that is, the collected information provided information that was correct and relevant to the research problem identified in the research study (Sekaran & Bougie 2010). According to Patton (1987), the power of statistical sampling is dependent on selecting a truly random and representative sample that allows for generalization, whereas the power of deliberate sampling is dependent on selecting information-rich examples for in-depth study. As a result, the researcher was able to draw conclusions applicable to the target population. Furthermore, the population of informal settlements can be considered dynamic due to the fact that land acquisition, occupation, and use can be obtained formally or informally, as the informal sector, which is typically unremunerated, governs its operationalization, making it difficult to establish a distinct population frame to calculate specific sample size. Additionally, one of the rules of thumb for determining sample sizes, according to Roscoe (1975) in Sekaran & Bougie (2010), is that sample sizes greater than 30 but less than 500 are appropriate in most research. As a result, the sample size for this study was 166 household respondents, with an average of 55 household respondents per selected case study settlement.

4.4. Data Collection Methods

The case study approach has the advantage of not being restricted to a single method of data collection (Kombe, 1995). Interviews, direct observation, documentation, archival records, participant observation, and physical artifacts are six examples given by Yin (1994). Given that the research themes and related phenomena under investigation are complex, diverse, and in some cases inseparable, a systematic identification of the type of data required, as well as methods of inquiry, is established.

Primary and secondary data were collected in order to adequately address the research objectives and variables. Physical observation and mapping, interviews, and still photographs were used to collect primary data, while document review or analysis was used to collect secondary data.

4.4.1. Physical Observation and Mapping

Physical observation and Open Street Mapping (OSM) methods were primarily used to establish the spatial, spectral, and temporal elements of the settlements and their associated social construction using a physical observation checklist (see appendix 4) and OSM software to determine the socio-spatial construct of the respective case study settlement and to analyse the socio-spatial relations of the informal settlement policy responses. The physical observation method was used to collect data on settlement housing characteristics (construction materials) as well as physical facilities like drainage systems. Temporal change detection in the respective case informal settlement was also carried out using geographic information system and remote sensing in order to evaluate the land use land cover change using GIS and remote sensing software-ArcGIS 10.2. This data collection method was used to collect spatial information about the case study settlements and the social constructions associated with them. Figure 4.4 depicts the socio-spatial dimensions used in the study.

Figure 4.4: Physical Observation and Mapping Data Collection Framework

Geographic Setting
Urban Structure; location of the case study area; economic activities, environmental issues and impacts; & topography, natural resources and potentials

Institutional and Political Framework
Legal and political issues; land tenure; planning system; economic base

Settlements
Settlement patterns; spatial organization e.g. density, accessibility, technical and social infrastructure

Community/Neighbourhood
Families, social network, ethnic groups, social rules, norms and traditions, rural vs. urban life, conflict solving

Households/Individuals
Personal needs & objectives, capacity and knowledge

Source: Adapted from Scholz (2008).

4.4.2. Interviews

An interview is a type of data collection method that is similar to an oral questionnaire (Acquino, 1992). An interview, according to Moser and Kalton (1971), is a conversation between an interviewer (researcher) and a respondent with the goal of eliciting specific information from the respondents. This study enlisted key informants on the subject matter and respective individuals, who provided input into the research variable, allowing the researcher to draw conclusions. Key informants are respondents who are particularly knowledgeable and have deep insights that can assist the researcher in understanding what occurs (Patton, 1982). Key informant interviews were conducted with municipal officials from the respective case study settlements (Ubungo, Ilala, and Kinondoni municipalities); local leaders from the case settlements (Vingunguti, Manzese, and Hanna Nassif); and scholars and professionals using interview guides (see appendix 1, 2 &3). Key informants primarily provided information on the socio-spatial relations of the informal settlement's interventions and the implications of contemporary planning theory. In addition, a household questionnaire survey (see Appendix 5) used interviews to collect data on the socio-spatial characteristics of individual case settlements.

45

4.4.3. Document Analysis

Case studies, according to Yin (1994), are likely to benefit from information contained in a variety of documents, including: letters, memoranda, and other communiqués; agenda announcements and minutes of meetings and other internal documents; formal studies or evaluations of the same sites under study; and newspaper clippings and other articles appearing in the mass media. The primary purpose of documents is to supplement and confirm evidence from other sources. Documents can reveal other people's explanations for the same phenomenon. However, if a researcher discovers that the study results contradict documentary evidence, further investigation into the subject is required (Scholz, 2008). Nevertheless, caution is advised when using documentary evidence because documents are written for a variety of purposes and are tailored to a different audience than the case studies pursued by the researcher (Yin, 1994). That is, information documents on the socio-spatial relations of managing urban informal settlements in Sub-Saharan Africa and/or the Global South were consulted, with a focus on Tanzania and Dar es Salaam in particular.

4.4.4. Photographs

Still photographs related to the study issue were captured to supplement the socio-spatial characteristics of the respective case settlements. These photographs depict various socio-spatial aspects of the case study informal settlements, such as construction materials, drainage systems, solid waste management, accessibility networks, and livelihood activities. Physical observations and mapping methodology were supplemented by the methodology.

4.5. Unit of Analysis

An individual, a program, an institution, or a concept can be used as the unit of analysis (Lupala, 2002). Patton's (1987) approach was used in the strategic selection of the unit of analysis for the study. Patton contends that the key factor in selecting and deciding on an appropriate unit of analysis is deciding what you want to be able to say at the end of the evaluation. The unit of analysis is related to the case's fundamental problem (Yin, 1994). The units of analysis in a socio-spatial relationship of urban informal settlement management study referred to the informal settlement's interventions and the associated interaction of social and spatial variables impact.

In general, the social-spatial constructs of informal settlements where interventions were implemented served as the study's units of analysis. These were specifically: physical selection of informal settlements Environmentally, the site of the informal settlement management intervention as well as its impact or effectiveness; The economic forces that drive the physical structure of the settlement; Legally, the environment in which informal settlements were formed and space was created; Residents and stakeholders involved in

development, as well as their actions; and Organizationally, the groups and institutions involved, as well as their interactions.

4.6. Data Processing and Analysis

Descriptive and cross-case content analysis were used in the study. The goal of descriptive analysis is to characterize a phenomenon that we believe exists. It tries to analyse situations in order to define the norm (Waliman, 2011). Descriptive analysis seeks to describe what already exists in order to facilitate the discovery of new facts. It entails gathering data about things, people, individuals, events, and circumstances, as well as organizing, tabulating, depicting, and describing the findings. This approach characterizes variables rather than testing a predicted link between variables. Its primary goal is to describe; it makes no predictions or attempts to determine cause and effect. As a consequence, because the study used a case study research strategy, aspects or different phenomena from each case study settlement were described independently, and the respective variables of each case settlement were later organized comparatively for generalization and ultimate conclusion.

In this study, cross-case content analysis was also used. Content analysis is a research technique that identifies the presence of specific words, topics, or concepts in qualitative data (text) (Luo, 2019). Content analysis can be used by researchers to measure and analyse the existence, meanings, and correlations of specific words, themes, or concepts, as well as to draw conclusions. As a result, different variables or themes were identified, described, and inferences were drawn in order to determine the socio-spatial relations of the informal settlements interventions in accordance with the planning and theoretical implications and generalization of the data collected across the case study settlements.

Furthermore, validity and reliability processes and analysis were performed in this study to avoid subjective judgments of the data collected, processed, and analysed for inferences. Sheuya (2004) recommends three methods for conducting validity checks: using multiple sources of information, creating a chain of evidence, and allowing key informants to review the draft report. Multiple sources of evidence and establishing a chain of evidence were used in this study to perform checks before generalization and ultimate conclusions were drawn. Table 4.2 summarizes the study's research methodology.

Table 4.2: Research Methodology Matrix

Specific Objectives	Variables	Data Required	Data Source	Data Collection Method	Data Collection Tools	Data Analysis Techniques
1. To identify the socio-spatial relations of informal settlements in Dar es Salaam	• Social and Spatial attributes of informal settlements	• Livelihood strategies (occupation) • Housing security • Social organization • Public and social utility services • Built environment design • Land use tenure	• Community leaders • Community households • National Bureau of Statistics (NBS) reports • Municipal lands departments	• Household surveys • Interviews • Document review • Open Street Mapping	• Household questionnaire • Interview guide • Observation checklists • Google earth	Descriptive analysis
2. To examine the socio-spatial relations of informal settlements interventions in Dar es Salaam	• Slum Clearance Programme • Squatter Upgrading Strategy • Environmental Planning and Management (CIP & CIUP) • Regularization and formalization of informal settlements	• Socio-spatial relations of the interventions (empirical findings)	• Intervention documents and reports • Key informants • Community leaders • Municipal officials • Community households	• Document review • Interviews • Household surveys	• Household questionnaire • Interview guide	Cross-Case Content Analysis
3. To investigate the implementation framework of the socio-spatial relations of informal settlements interventions in Dar es Salaam	• Governance frameworks • Administrative framework • Legislative framework • Organization framework	• Regulatory instruments • Institutions administrative set-ups • Levels of Governments • Authorities responsible for management of informal settlements	• Intervention documents and reports • Key informants • Community leaders • Municipal officials • Community households	• Document review • Interviews • Household surveys	• Household questionnaire • Interview guide	Thematic Content Analysis

CHAPTER FIVE
RESEARCH FINDINGS

5.0. Introduction

This chapter presents empirical study findings of the existing socio-spatial relations of informal settlements; informal settlements interventions; and implementation framework of the socio-spatial relations of informal settlements interventions in Dar es Salaam.

5.1. Socio-Spatial Relations of Informal Settlements in Dar es Salaam

Tanzania and Dar es Salaam, like many other Sub-Saharan African countries and cities, are rapidly urbanizing. The rate of growth has frequently outpaced government capacity to provide basic services, such as providing planned, surveyed, and serviced land for housing development. This has resulted in the growth of informal settlements, among other things. Over 75% of Tanzania's urban population lives in informal settlements, which account for 61% of the city's built-up area and lack access to basic social services (Magina, et al, 2020a). Similarly, it is estimated that up to 75% of the population of Dar es Salaam lives in informal settlements (Ministry of Lands, Housing and Human Settlements, 2019).

The development of informal settlements in Dar es Salaam, on the other hand, is a function of social and spatial relations. These socio-spatial relations comprise of the demographic characteristics, household and housing characteristics, built environment characteristics, public and social infrastructure, and land use tenure attributes.

5.1.1. Demographic Characteristics of Informal Settlements: Population Configuration

Population composition statistics describe the people-groups in a given population. The study revealed that reminiscent to the city population growth, the informal settlements population is growing exponentially with corresponding density increase (Figure 5.1). Informal settlements land areas are 1.86 Km^2-Manzese; 4.48 Km^2-Vingunguti; and 1.85 Km^2 -Hannah Nassif (MLHHD, 2018).

Figure 5.1: Informal Settlements Population Trends & Projections
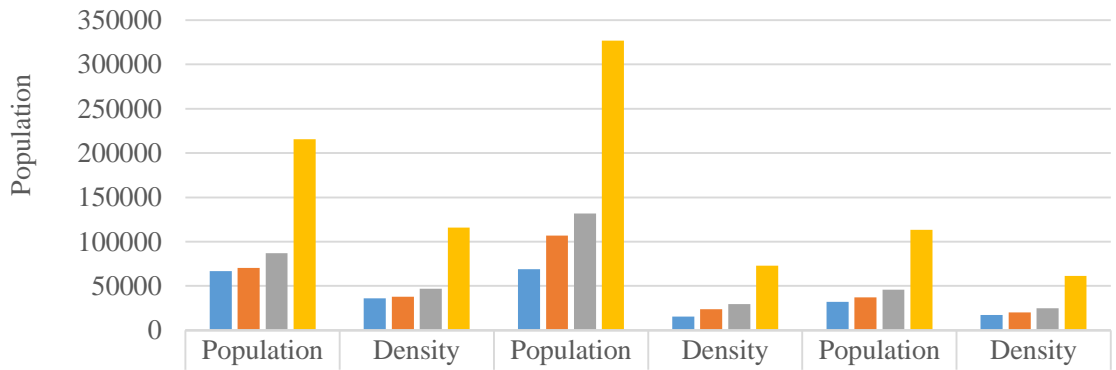
	Manzese		Vingunguti		Hannah Nassif	
	Population	Density	Population	Density	Population	Density
■ 2002 Census	66866	35949.46	68923	15384.59821	32023	17309.72973
■ 2012 Census	70507	37906.99	106949	23872.54464	37115	20062.16216
■ 2016 Population Estmates	86949	46746.77	131886	29438.83929	45770	24740.54054
■ 2036 Population Projections	215549	115886.56	326947	72979.24107	113465	61332.43243

■ 2002 Census ■ 2012 Census ■ 2016 Population Estmates ■ 2036 Population Projections

Source: Author

In social surveys, marital status and household sizes is critical for understanding marriage trends, forecasting future needs for programs or interventions, and measuring the effects of policies and programs that focus on the well-being of families. The study collected information on marital status and 58.6 % of the case settlements population are married (figure 5.2) and on average 24% of the informal settlements households has a household size of 3 (figure 5.3).

Figure 5.2: Percent Distribution of Informal Settlements Marital Status

Marital Status	Hanna Nassif	Manzese	Vingunguti
Widowed	9	9	7
Divorced/Separated	7	0	18
Never Married	22	28	24
Married	62	63	51

■ Hanna Nassif ■ Manzese ■ Vingunguti
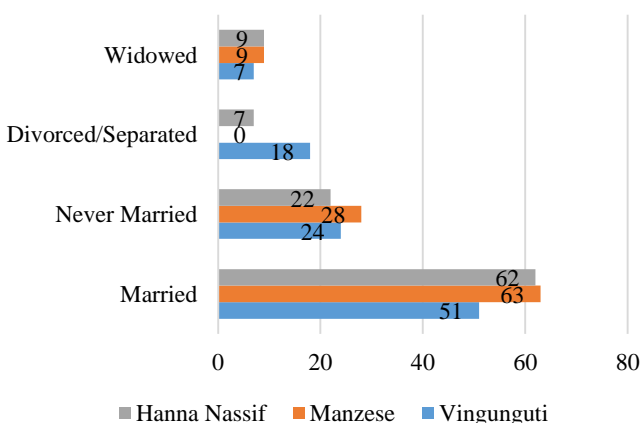
Figure 5.3: Percent Distribution of Informal Settlements Household Sizes

	1	2	3	4	5	6	7+
■ Average	2.33	9.33	24.00	22.00	21.00	11.67	9.33
■ Hanna Nassif	2	13	38	20	20	5	2
■ Manzese	3	15	25	22	8	8	18
■ Vingunguti	2	0	9	24	35	22	8
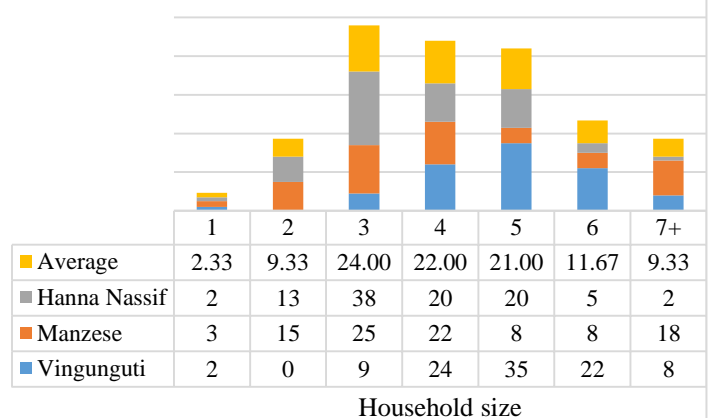
Household size

According to Tanzania Demographic Health Surveys (TDHS, 2016), the percentages of both men and women who are married have remained nearly unchanged since the 2010 TDHS,

while Tanzania Mainland urban households are relatively smaller (4.3 people per household) than Tanzania Mainland rural households (5.1 people per household).

Furthermore, informal settlements occupations are critical to understanding social stratification. The study finds that 80% of the informal settlements are self-employed operating in the informal sector as a main source of income and livelihood occupation (Figure

Figure 5.4: Percent Distribution of Informal Settlements Occupation Sectors
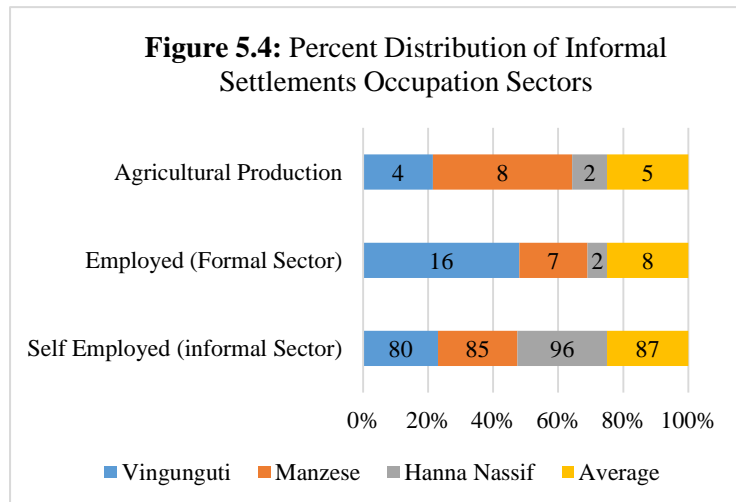
5.4). Occupation is frequently associated with income and educational attainment, which together determine a person's social class. However, occupations with high occupational prestige can raise one's social class without increasing indicators like income. The study reveals that 40% of the informal settlement's population attained primary school education with at least 27% of the population attaining secondary school education and 18.6% have no education (Figure 5.5).

Educational attainment is a major determinant of social status and a socio-economic indicator of a society. Educational attainment is strongly related to employment rates, income, health status, housing, and a variety of other benefits. Unlike other demographic characteristics, educational attainment is

Figure 5.5: Percent Distribution of Informal Settlements Education Attainment
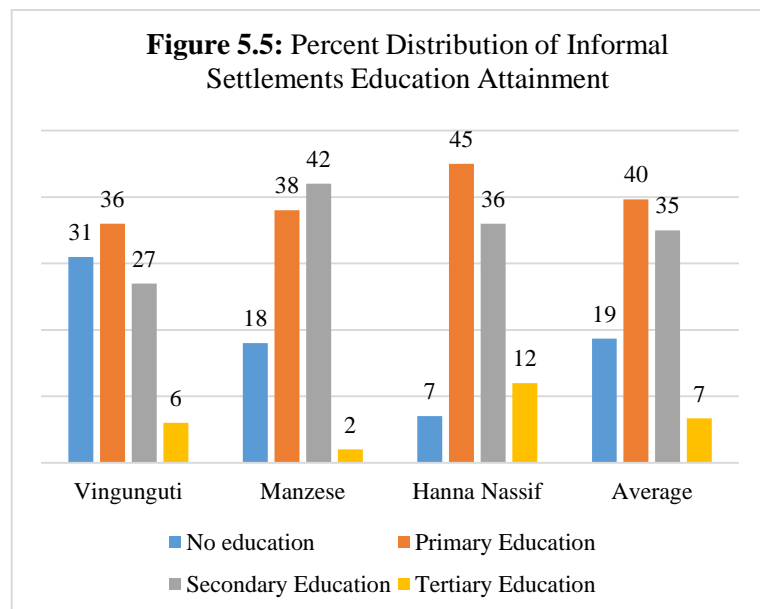
regarded as gateway to a better way of life. A higher educational attainment, regardless of social class, mitigates the impact of occupational social class inequalities.

The study also collected information on household effects and means of transportation. About 64% of the sampled households own mobile phones, 76.3% own radio; 68% own Television; 22.6% own a refrigerator; and 9.3% own a computer (Figure 5.6). According to TDHS

Figure 5.6: Percent distribution of informal settlements household effects

	Mobile phone	Radio	Television	Refrigerator	Computer
Vingunguti	64	58	56	27	16
Manzese	92	87	68	30	5
Hanna Nassif	89	84	80	11	7
Average	82	76	68	23	9
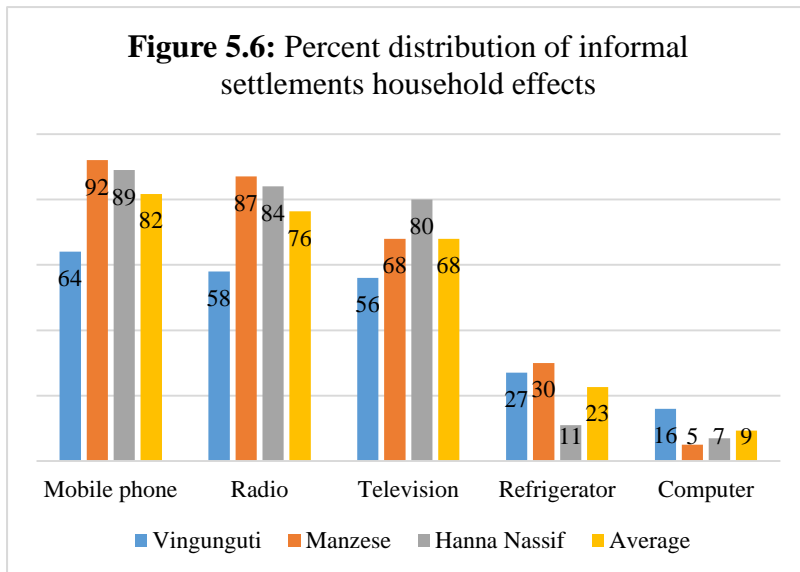
(2016), possession of these household effects is significantly higher among Tanzania Mainland urban households than among Tanzania Mainland rural households, which are more likely to own agricultural land (80%) or farm animals (69%) than Tanzania Mainland urban households (30% each). Appropriation of these household effects is a representation of a household's total net worth, which is a composite measure of the cumulative living standard of a household.

Walking (75%) is the most common means of transport especially among households in informal settlements whilst 19% of the population use public transport (daladala) and 2% (each) of the settlement's population use motorcycles and bicycles respectively (Figure 5.7).

Figure 5.7: Percent distribution of informal settlements means of transport

	Walking	Public Transport (Daladala)	Motorcycles	Bicycles
Vingunguti	64	27	0	4
Manzese	94	3	3	0
Hanna Nassif	67	27	4	2
Average	75	19	2.3	2
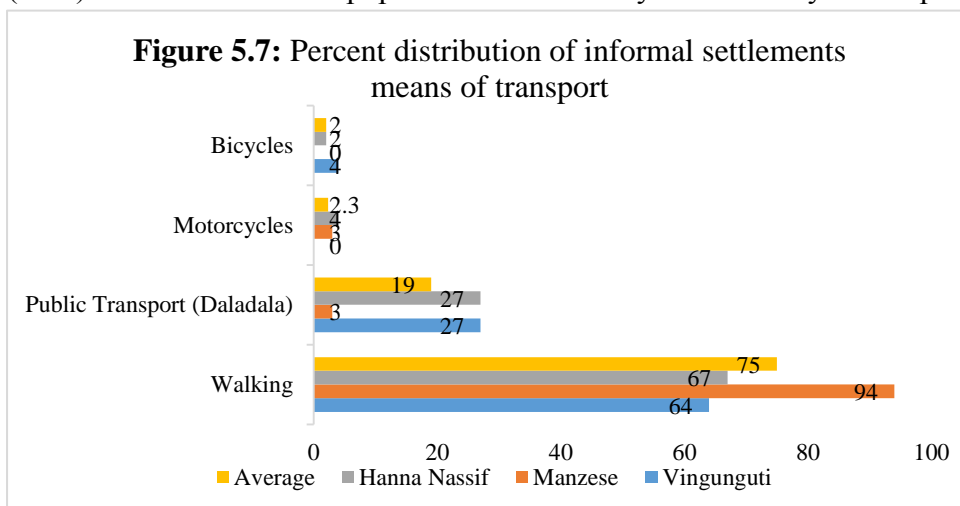
5.1.2. Household and Housing Characteristics

Household and housing characteristics include sources of drinking water; sanitation; sources of power and energy for lighting and cooking; and housing construction materials. Household and housing characteristics are important predictors of socioeconomic status and societal well-being. Housing can be viewed as a transitional structural factor that connects broader societal processes and influences to an individual's immediate social and physical environment. It provides physical security and weather protection, and it is an important

factor in determining an individual's physical and social risk environment. Housing can also serve as a source of identity and belonging, as well as a physical or social space for the development and maintenance of social ties and positive social relations.

Improved overall drinking water sources is critical to preventing water contamination and making water safe to drink. In Tanzania, approximately 6 out of 10 households (61%) obtain their drinking water from improved sources (TDHS, 2016). About 8 out of every 10 informal settlements households (75%) obtain their drinking water from improved sources, that is, piped water sources either through neighbour's water tap or public water kiosk (Figure 5.8 & 5.9). This is reminiscent of the 86% of Tanzanian Mainland urban households that obtain their drinking water from improved sources. Water piped directly into the household's dwelling, yard, or plot (25%), and water piped to a neighbor (26%), are the two most common sources of drinking water among Tanzania Mainland's urban households (ibid).
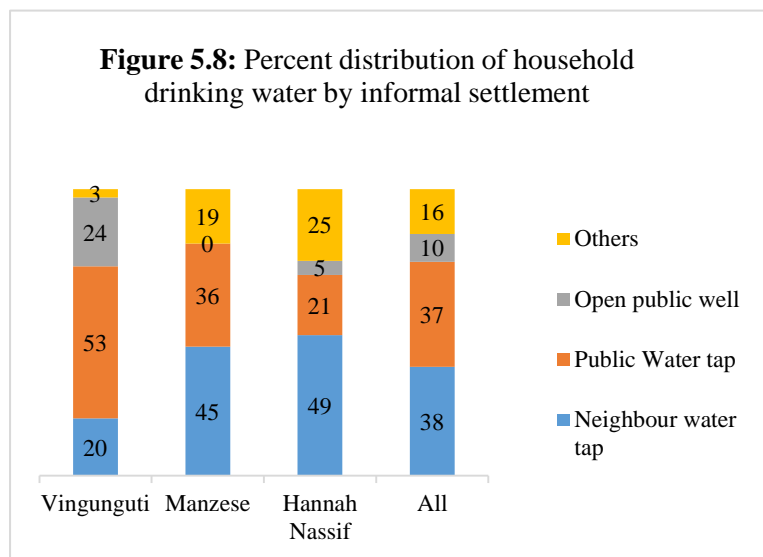
Figure 5.8: Percent distribution of household drinking water by informal settlement

Settlement	Neighbour water tap	Public Water tap	Open public well	Others
Vingunguti	20	53	24	3
Manzese	45	36	0	19
Hannah Nassif	49	21	5	25
All	38	37	10	16

Figure 5.9: Sources of drinking water in informal settlements

Estimated 7 in 10 households (73%) use improved toilet facilities, which are non-shared facilities that prevent people from being in contact with human waste. Shared toilet facilities

of otherwise acceptable quality are especially prevalent in Tanzanian Mainland urban areas (42%) (TDHS, 2016). Traditional pit latrines are used in three out of every ten households (Figure 5.10).

Figure 5.10: Percent distribution of household toilet facilities by informal settlement
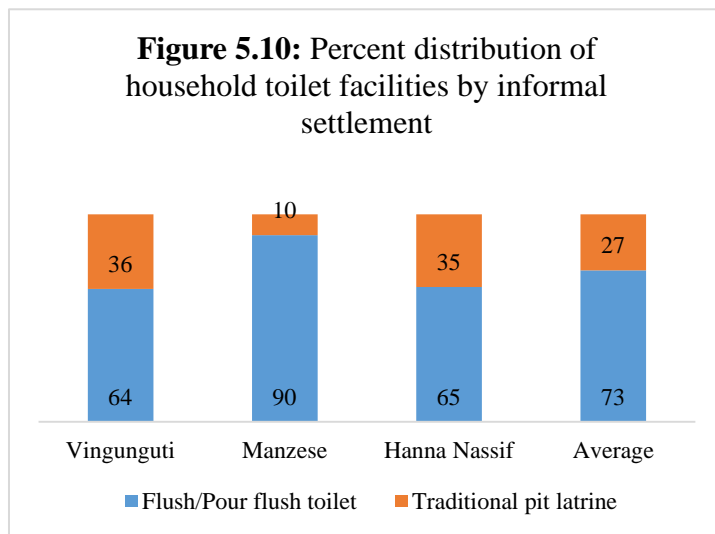
In Dar es Salaam, informal settlements account for 70% of the city's population, and it is estimated that 5,300 tons of solid waste are generated per day. According to MLHHD (2018), the rate of solid waste generation per household is estimated to be around 1 kg/day, which is higher than typical values in developing countries, which range between 0.4 and 0.6 kg/day per household. That is, based on 2016 population estimates of the informal settlements and an average household size of three, the settlements generate approximately 88 tons of waste per day. The majority of informal settlements use community-led house-to-house waste collection (74%), which is then transported and disposed of by designated waste collection bankers. However, indiscriminate waste disposal and waste collection delays endanger the settlements' public health. (Figure 5.11 & 5.12).

Figure 5.11: Percent distribution of waste management in informal settlements
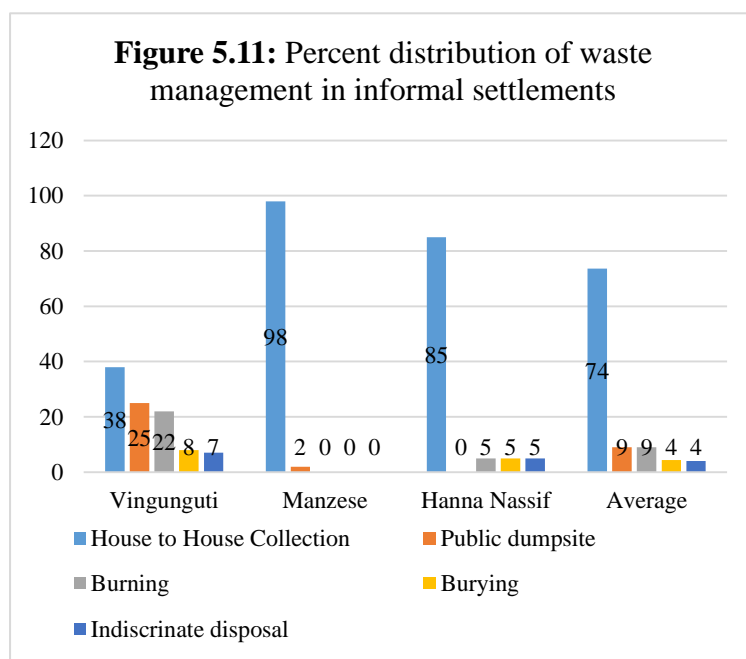
Improved waste management can provide employment and income opportunities for people living in informal settlements, assisting vulnerable populations in adapting to and mitigating the effects of climate change.

Figure 5.12: Waste management in informal settlements

Smoke exposure, whether from cooking with solid fuels or from smoking tobacco, has the potential to be harmful to one's health. The study reveals that 6 out of 10 households in the informal settlements use charcoal (58%) for cooking followed by gas (46%), electricity (18), firewood (17%) and solar (10%) (figure 5.13).

Figure 5.13: Percentage distribution of informal settlements source of cooking energy
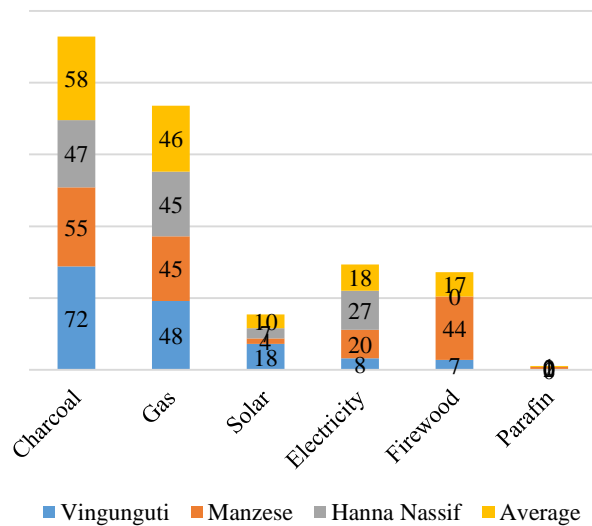
In contrast to overall Tanzania energy use for cooking, more than 9 out of 10 Tanzanian households (94%) use some form of solid fuel for cooking, primarily wood (66%), and charcoal (27%). However, in the previous years, the use of wood has decreased while the use of charcoal has increased (TDHS, 2016). Cooking inside the house rather than in a separate building or outside increases exposure to cooking smoke. In Tanzania, approximately one-third of households (33%), cook inside the house. Furthermore, 16% of households

have someone who smokes inside the house on a daily basis. On sources power for lighting, 88% of the informal settlement's population are connected to electricity supplied by TANESCO (Figure 5.14).

Figure 5.14: Informal Settlements Access to Electricity

This is higher that Tanzania Mainland urban household (56%) but according to TDHS (2016), the use of electricity as a source of lighting is increasing in Tanzania. Nationally, approximately one-quarter of households (23%) have electricity. However, local generation capacity and supply of electricity in Dar es Salaam including in the informal settlements is insufficient to meet the local demand (MLHHD, 2018). Alternatively, informal settlements use solar energy (13%), kerosene (8%), candles (5%), and other means of lighting (2%) (Figure 5.15).

Figure 5.15: Percent Distribution of informal settlements sources of lighting energy

Furthermore, the findings of the study reveals that the majority of the informal settlement population's houses are made of permanent or modern construction materials. According to Nguluma (2003), another difference that distinguishes Tanzanian informal settlements from those in other countries is the use of permanent

building materials in informal settlements. On average, more than 85% of the informal settlements' households use cement for flooring (figure 5.16); at most 92% of the study population use iron sheets for roofing (figure 5.17); and 94% use cement bricks for walls (figure 5.18).

Figure 5.16: Percent distribution of informal settlements housing flooring materials
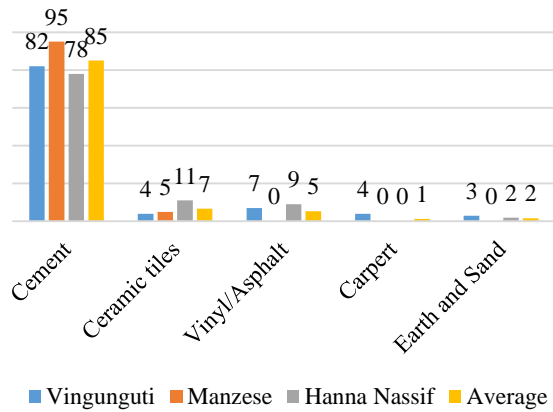
Figure 5.18: Percent distribution of informal settlements housing wall materials

The materials used in housing construction have far-reaching economic, environmental, and social consequences in any society. One of the primary indicators of one's quality of life is the materials used in one's household. The resilience of houses in society has an impact on the materials used. As a result, construction materials are an important factor in sustainable development.

Figure 5.17: Percent distribution of informal settlements housing roofing materials

In addition, informal settlements are characterized with different housing types comprising of a majority of Swahili house types (42%) with 39% and 20% of the housing units being detached and semi-detached respectively (figure 5.19 & figure 5.20).

Figure 5.19: Percent distribution of informal settlements type of housing units

Swahili | Detached | Semi-detached

Vingunguti: 22, 27, 51
Manzese: 87, 10, 3
Hanna Nassif: 16, 22, 62
Average: 42, 20, 39
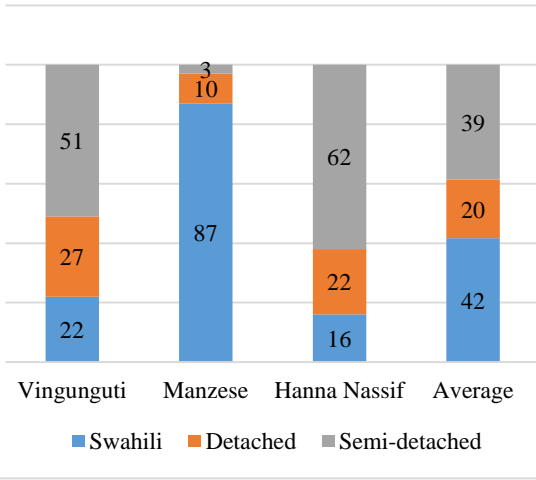
Figure 5.20: Informal settlements housing units' types.

5.1.3. Informal Settlements Housing and Land Use Tenure Characteristics

Housing and land use tenure have significant implications for society's socioeconomic development, including in informal settlements. The security of housing and land use tenure prevents the suffering and social instability caused by arbitrary or unfair evictions, landlessness, and the breakdown of local arrangements for managing common property resources. Housing and land use tenure security is critical for land resource management, including investments and sustainable land use. The study finds that 7 of every 10 household housing units in the informal settlements (66%) are rented and only 26% of the settlement's households own the housing units with 4% and 3% being free occupant and family-owned units respectively (Figure 5.21).

Figure 5.21: Percent distribution of the informal settlements housing tenure characteristics

Rented | Owned | Free occupant | Family owned

Vingunguti: 62, 24, 9, 5
Manzese: 70, 30, 0
Hanna Nassif: 67, 25, 4, 4
Average: 66, 26, 4, 3
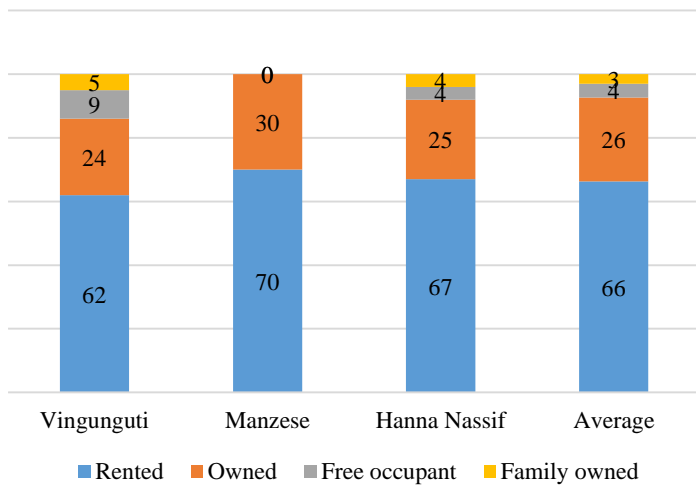
Generally, of the 26% who own the housing units: 4 in every 10 households (44%) of the housing units' owners have lease title document; 7% have allocation papers and site plans documents each; and 41% of the informal settlements households does not have any document as housing and land tenure entitlement (figure 5.22).

Figure 5.22: Percent distribution of informal settlements housing & land use tenure entitlements
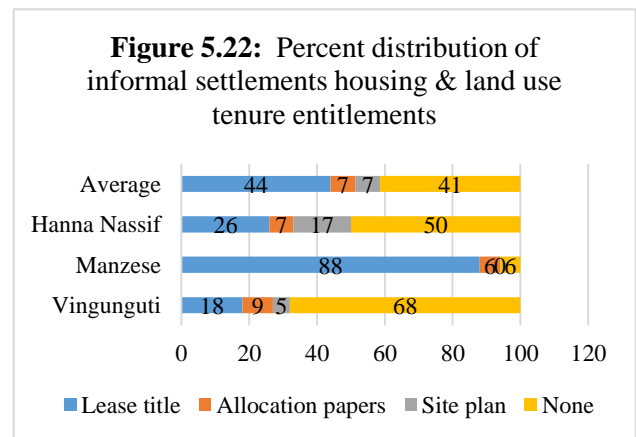
Approximately 6 out of every 10 settlement households (58%) have no fear of being evicted from the settlements, while 27% acknowledge the fear of being evicted from the respective settlements, and the remaining households (14.3%) are unaware of the risk of eviction (figure 5.23).

Figure 5.23: Percent distribution of informal settlements housing & land use tenure security (risk of eviction)

The study also reveals that, over time, the population of indigenous or earlier occupants is decreasing, while the number of new immigrants is increasing (Figure 5.24).

Figure 5.24: Percent distribution of informal settlements households period of residence
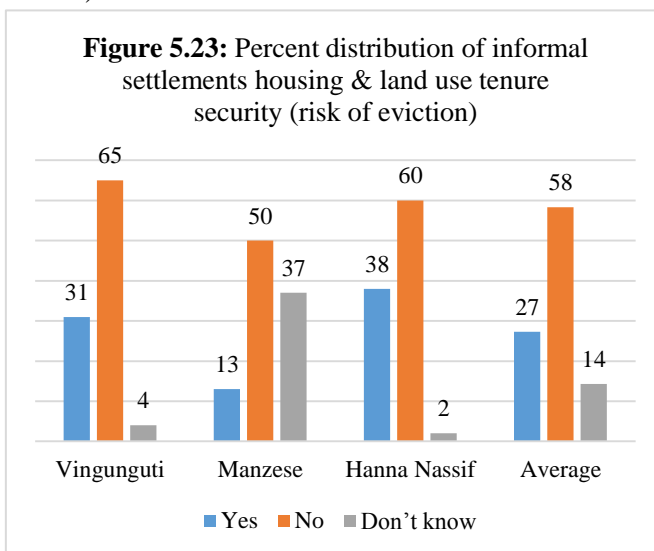
Furthermore, informal settlements are characterized with mixed land use including commercial and residential land uses in close proximity. Approximately, 79% of the land use of the informal settlements is used for residential purposes whilst 21% of the land use is used for commercial use (figure 5.25).

Figure 5.25: Percent distribution of informal settlements land uses

	Residential	Commercial
Vingunguti	67	33
Manzese	95	5
Hanna Nassif	75	25
Average	79	21
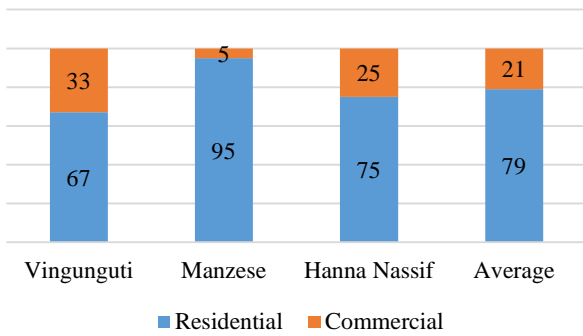
However, the majority of commercial land use activities are haphazardly distributed but clustered along the main arterial roads. Besides, 60% of land use is held under customary land tenure, 24% under statutory land tenure, and the remaining land use tenure (16%) is unknown (figure 5.26).

5.1.4. Housing and Built Environment Characteristics

Informal settlements in Dar es Salaam have evolved in response to their proximity to main transit axes, industrial districts, city centres, the harbour, and institutional sites. Some of the towns are built on steep slopes

Figure 5.26: Percent distribution of informal settlements types of land tenure

	Customary	Statutory	Don't know
Average	60	24	16
Hanna Nassif	75	7	18
Manzese	55	40	5
vingunguti	51	24	25

that are prone to erosion, flooding, and faulting, and others are built in environmentally hazardous places. The basic spatial morphology and built environment design of informal settlements are disorderly, irregular, and unplanned structures. Figures 5.27-5.29 shows the morphology and built environment design of the informal settlements over the past two decades.

Generally, the case settlements are located in vulnerable areas to flooding risks. The Msimbazi river valley forms the northern boundary of Vingunguti, and most residential buildings along the river valley are affected by flooding, with Majengo, Kombo, and Mji Mpya sub-wards being particularly vulnerable (Figure 5.30). Flooding is also a risk in Hanna Nassif. The river Ng'ombe forms the southwestern boundary, while the Msimbazi River borders the southern and southeast. A drainage channel that runs through Hanna Nassif from Tandale, Makumbusho, Ndugumbi, Magomeni, and Mwananyamala wards exacerbates flood risk (Figure 5.31). Similarly, the Ng'ombe River borders the Chai Bora sub-ward in Manzese's northern region, with water pooling along the river banks during heavy rains. The Mvuleni and Uzuri sub-wards are also affected by this phenomenon, though the Mbokomu stream (which later joins the Kiboko River) adds to the complication by making the buildings and infrastructure along its banks even more vulnerable to flooding. (Figure 5.32).

Figure 5.27: Vingunguti Satellite Image

Source: Google Earth

Figure 5.28: Hanna Nassif Satellite Image

Source: Google Earth

Figure 5.29: Manzese Satellite Image

Source: Google Earth

Figure 5.30: Vingunguti Inundation Map
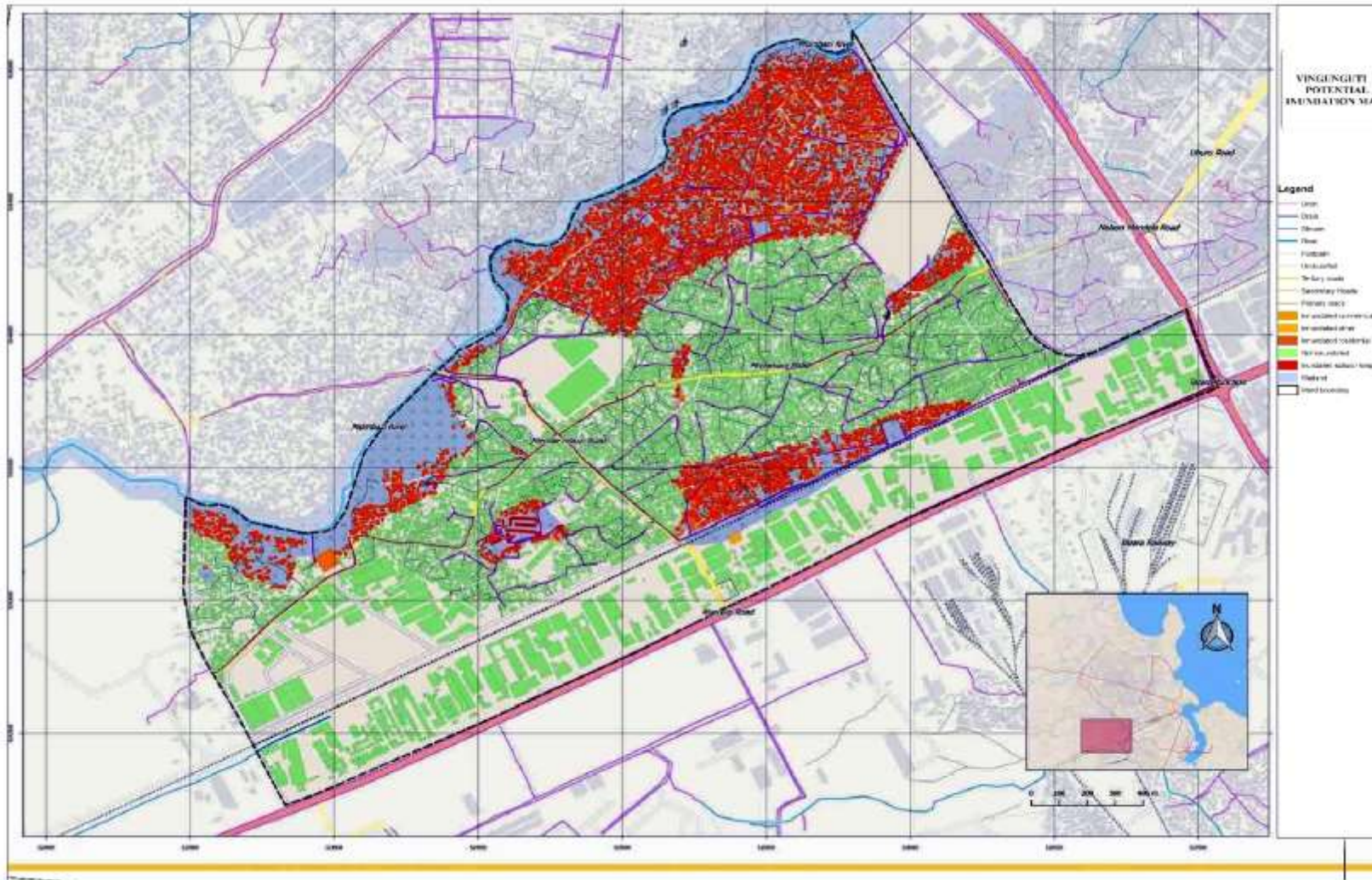
Source: Adapted from Dar Ramani Huria (2015)

Figure 5.31: Hanna Nassif Inundation Map
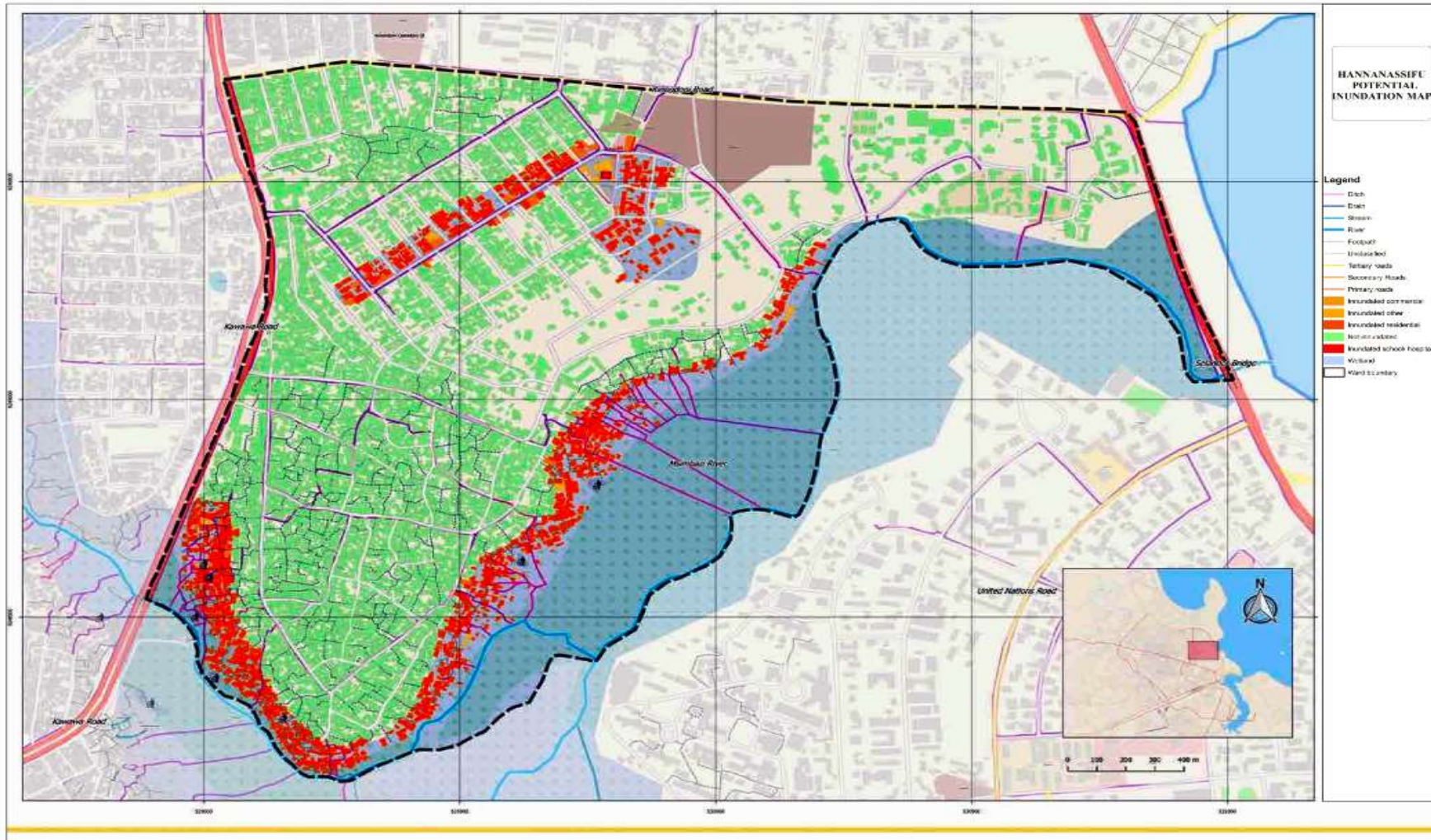
Source: Adapted from Dar Ramani Huria (2015)

Figure 5.32: Manzese Inundation Map
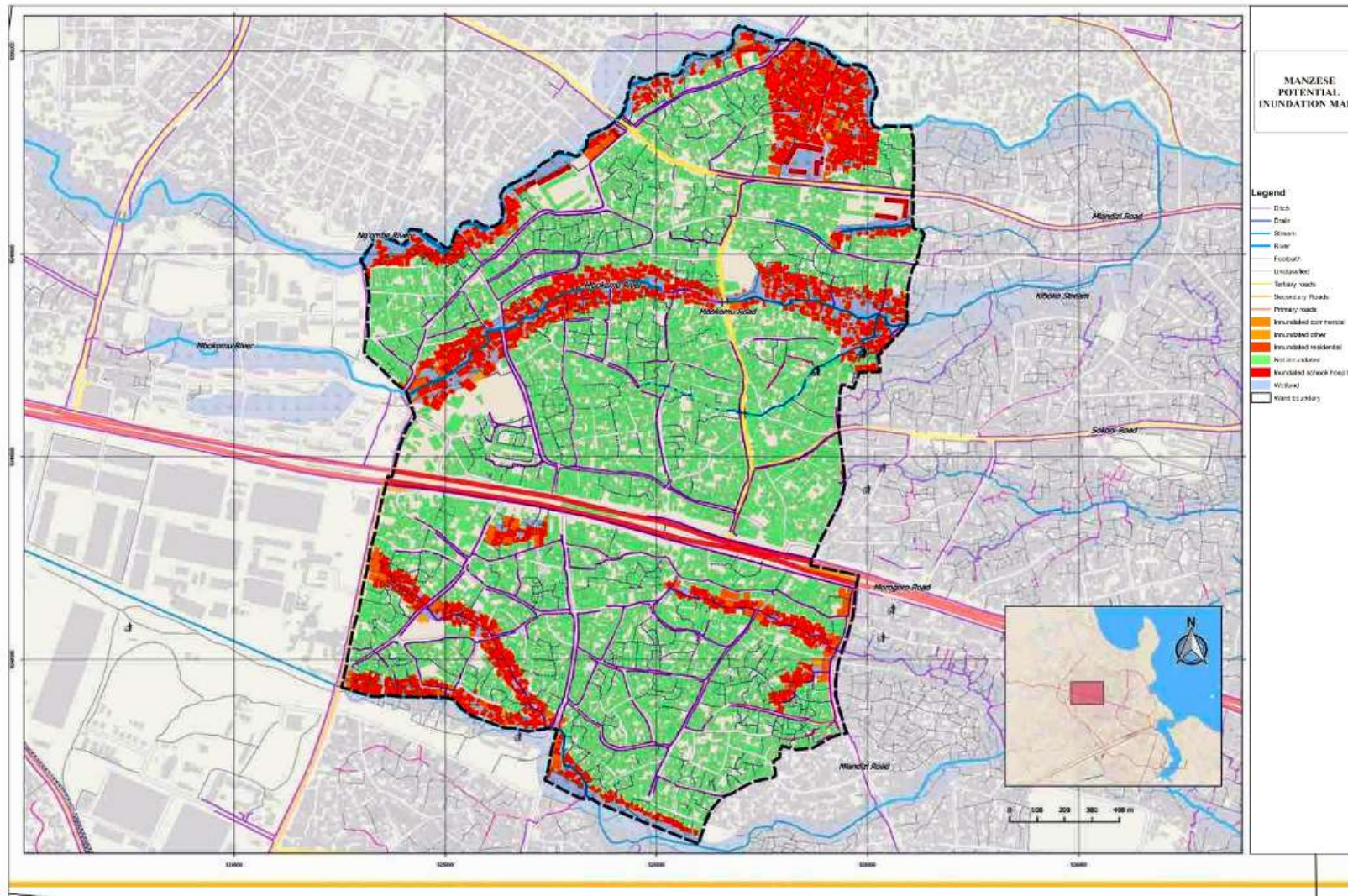
Source:

Adapted from Dar Ramani Huria (2015)

5.1.5. Informal Settlements Public and Social Infrastructures

Provision of social services has a significant role in increasing the quality of life of residents in societies. The existence and accessibility of social services in residential settlements has the functions of giving services and supporting community needs in social, economic and cultural aspects. The study has established that 76% of the informal settlement's population is serviced with dispensary health facility whilst 45% and 10% of the settlement's residents are alternatively served by health centres and hospital respectively (figure 5.33).
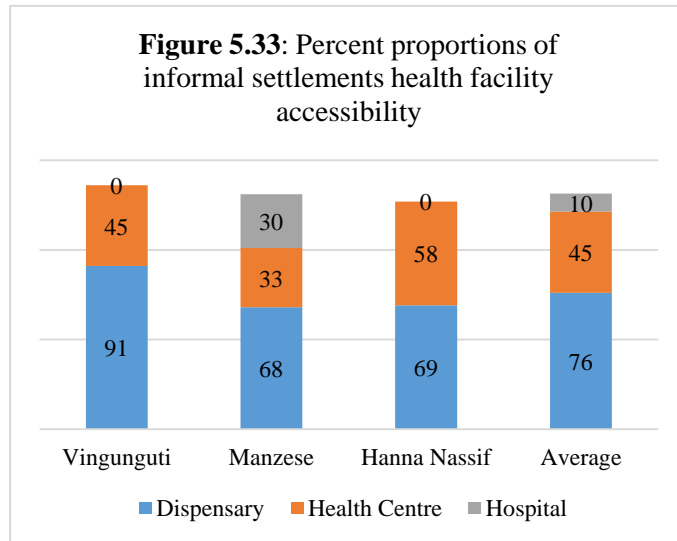
Figure 5.33: Percent proportions of informal settlements health facility accessibility

Beside health facilities, the case settlements are also serviced with education facilities that 49.6% of the informal settlements are provided for with nursery schools; 76.3% with primary schools; and 50.3% with secondary schools (figure 5.34).

According to the 2012 National Population and Housing Census, primary school students account for 13% of Dar es Salaam's population, including in the informal settlements, and secondary school students account for 8.0%. The proportion calculates the number of pupils in each ward and then derives the number of school facilities projection in the future, based on 945 pupils per primary school and 640 pupils per secondary school. Correspondingly, according to Urban Space and Planning Standards, a dispensary is provided for every 6000-person residential community; a health center is provided for every 24000-person residential community; and a hospital is provided for every 25000-120000 people. Therefore, the findings revealed that, given current and projected population growth rates, the demand for health and education
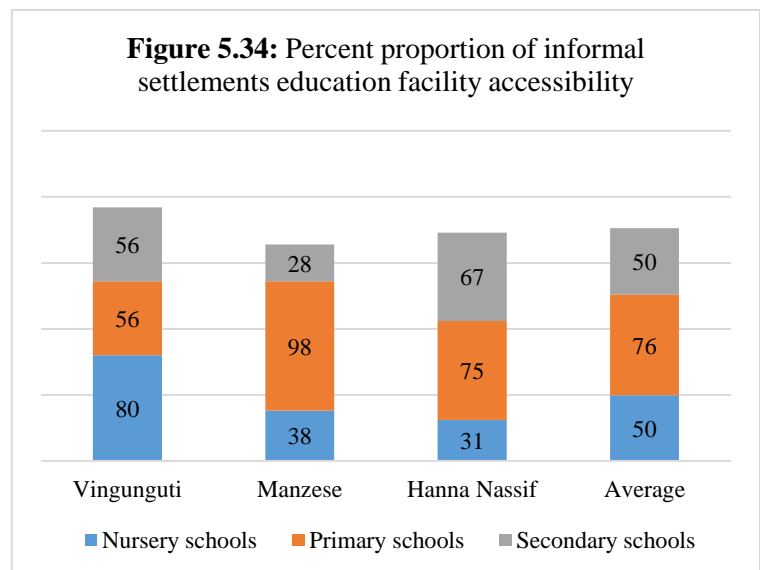
Figure 5.34: Percent proportion of informal settlements education facility accessibility

facilities in informal settlements is expected to rise. Table 5.1 summarizes the existing and projected demand for education and health facilities.

Furthermore, the study finds that housing in the informal settlements is built without regulated water or surface drainage systems. That is, the settlements lack adequate infrastructure, and where drainage infrastructure exists, it is indiscriminately used for waste disposal, reducing its effectiveness. A significant proportion of the existing drainage system is obsolete, undersized, or partially clogged. This, among other things, has exacerbated flooding in the settlements during heavy rainy seasons. Figure 5.35 show the status of drainage infrastructure in informal settlements.

Figure 5.35: Informal Settlements Drainage Infrastructure

In addition, lack of basic service infrastructures such as paved roads and footpaths is one of the distinct characteristics of informal settlements. That is, the study finds that the informal settlements have inadequate road infrastructure. The case settlements are serviced with main arterial roads which are paved but a majority of the regional collector, feeder and access roads are sub-standard with little and/or without space left for utility facilities according to the government approved space standards. Table 5.2 and Figure 5.36 shows the area coverage of road type and status of road networks in the informal settlements.

Table 5.2: Informal Settlements Road Coverage Area (%)			
Road Type & Status	Vingunguti	Manzese	Hanna Nassif
Paved: Primary Access Road	5.5	2.34	0.98
Un-Paved: Secondary Access Roads	12.7	13.64	21.21
Un-Paved: Tertiary & Footpath	81.8	84.02	77.81

Informal Settlements	Requirements for Education Facilities						Requirements for Health Facilities					
Table 5.1: Existing & Projected Requirements of Education & Health Facilities in Informal Settlements												
	Pre-Primary		Primary School		Secondary School		Dispensaries		Health Centres		Hospitals	
	2016 Existing	2036 Demand	2016 Existing	2036 Demand	2016 Existing	2036 Demand	2016 Existing	2036 Demand	2016 Existing	2036 Demand	2016 Existing	2036 Demand
Hanna Nassif	11	30	4	7	7	8	4	10	1	2	0	1
Manzese	21	58	7	11	13	15	7	17	1	2	1	1
Vingunguti	31	85	11	18	20	23	11	27	2	4	1	1

Source: MLHHSD, (2018).

Figure 5.36: Informal Settlements Road Network Status

5.2. Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam

Before, during, and even after the colonial period, attempts were made to improve informal settlements. Interventions in the informal settlements of Dar es Salaam can be traced back to the colonial era and as early as the 1960s, when the country gained independence. Colonial Urban Planning Policy; Squatter Upgrading Programme of the 1970s and 1980s; Community Infrastructure Development of the 1990s; Community Infrastructure Upgrading Programme of the 2000s; and Regularization and Formalization of Informal Settlements Programs of the 2000s are among the informal settlements interventions that have been implemented and enforced.

5.2.1. Colonial Urban Planning Policy (1891-1960s)

The German colonial administration implemented the first general plan-urban planning policy for Dar es Salaam between 1891 and 1916, and it was sustained by the British colonial administration until 1949 (Halla 2007). Both colonialists concentrated on the central business district (CBD) surrounding the harbour, spatially separating European and African settlements (ibid.). Dar es Salaam was divided into three zones: the central zone housed

European administrative buildings and residences; the next zone, consisted of Arab or Asian farms; and the outer zones, constituted of African or native villages. The central zone legally permitted for the construction of European-style buildings, while the second zone permitted for the construction of mixed-type structures made of sturdy materials. Except for the third zone, all of the zones had building codes that made the construction of African huts illegal. The African zone was characterized by a disorderly built environment, including inadequate housing and poor living conditions, and was under-resourced in terms of social services. As a result, the city's then-European-only areas, such as Oyster Bay, have become middle-to-upper-class residential areas, while African-only areas, such as Kariakoo and Maandazi Road (part of Hanna Nassif), have grown informally (Abebe 2011).

Colonial urban planning policy had laid the groundwork for later urban informality, including the expansion of informal settlements. These colonial administrative and planning frameworks were inherited and inadequately amended during independence, resulting in the consolidation of colonial urban policies. The adopted urban planning policies, when combined with insufficient post-colonial urban governance, contribute to the emergence and development of informal urban processes, including informal settlements. The findings show that the historical evolution and development of the informal settlements corresponds to colonial urban planning policy spatial configurations. According to Vingunguti and Hanna Nassif's development history of informal settlements, these settlements evolved from Asian or European agricultural plantations, and these settlements housed the laborers who later subdivided the land to immigrants while being underserved in terms of social services and infrastructure. Similarly, Manzese informal settlement grew as a result of the city's spatial expansion and peri-industrial development, allowing it to house laborers in the absence of adequate utility services and infrastructure. Therefore, because these settlements were unregulated, lacked planning standards, and were underserved in terms of public services, utilities, and infrastructure, it can be argued that the policy's spatial provisions influenced the development of informal settlements and their endemic social characteristics such as social exclusion, social inequalities, and informal economy.

5.2.2. Squatter Upgrading Strategy (1972-1990)

Prior to the squatter upgrading strategy in the 1960s, slum clearance was the common approach to dealing with the growth of informal settlements in Tanzania, particularly Dar es Salaam. The goal of slum clearance was to rid the city of the eyesores of squatter housing. The government carried out its slum clearance and redevelopment policy by constructing

71

high-quality buildings on cleared sites in order to improve housing for the poor. The intervention was implemented by the National Housing Corporation, but it proved unsustainable. Due to high economic and social costs, it was abandoned by the end of the 1960s. The net increase in housing stock was minor.

In 1972, the government intervened more gently with squatters. Until the late 1980s, the national strategy for managing the growth of unplanned, informal settlements consisted of sites and services, as well as squatter upgrading projects. The World Bank-funded projects aimed to provide basic infrastructure and services like roads, electricity, water, drainage, and waste disposal on public or government-owned or subdivided plots (MLHHD, 2018). The project was supposed to recoup costs by requiring plot prices to cover the cost-of-service provision. The program was created with low-income residents in mind, with the expectation that they would build their own homes based on their income. The strategy was implemented in three stages. Phase I resulted in 6182 serviced plots covering 7600 houses in upgraded areas; Phase II resulted in 14,150 serviced plots covering 9138 households (Ndyuki, 1999); and Phase III resulted in 7000 plots covering 8103 houses, funded by the Tanzanian government. The project benefited Manzese, Buguruni, Vingunguti, Hanna Nassif, Magomeni, and Tandika informal settlements (Magina, et al., 2020).

The strategy was designed to enhance the spatial configuration of informal settlements in order to improve their residents' social well-being. Despite some housing improvements, the program was unable to provide a replicable and sustainable prototype for providing effective and efficient infrastructure in informal settlements. The strategy was implemented as a one-time project to meet housing needs rather than as a demand-driven process, and it did not consider affordability or poverty eradication. A World Bank study of Dar es Salaam's Sites and Services zones found that only 48.3% of developed plots had tenants five years after project completion, 22% had not met liveable standards, and 26.6 percent had not been developed (Magina, et al., 2020In 1988, 3,000 plots assigned between 1979 and 1983 remained undeveloped. (URT, 1992). Due to unsatisfactory results, the project was immediately cancelled in the early 1990s.

Manzese, Vingunguti, and Hanna Nassif were part of informal settlements that benefited from the World Bank's Squatter Upgrading (Site and Service Program) in the 1970s. The project included infrastructure such as access roads, water supply, and community facilities such as schools and health clinics. The program also included house registration, which was

used for property tax purposes, but not tenure regularization. As land was subdivided further, the upgraded services became overburdened. Hanna Nassif's squatter upgrading had principally focused on a single segment, storm drainage, and this "network" infrastructure was built in a less-than-ideal manner in terms of quality and efficiency, as community labor was used (World Bank, 2002b). According to Kaitilla (1991), providing basic amenities did not enhance residents' motivation to improve housing conditions in Manzese, and the program's access roads were barely discernible by 2009 (Mlonda, 2009). Squatter upgrading programs, on the other hand, had reduced flooding in some unexpected areas, such as the Vingunguti settlement, which had previously been prone to flooding (Kiunsi, 2013). In general, the program was characterized by a lack of beneficiary participation in the planning, implementation, and maintenance of services provided, as well as inadequate infrastructure provision by the government.

As a direct consequence, providing basic amenities in squatter settlements did not always improve the social welfare of the informal settlements. Accordingly, the provision of amenities did not appear to contribute to high rates of squatting because these facilities appeared to be less important to the earliest squatters (Kaitilla, 1991). The lack of housing improvements was due in part to institutional inefficiency and technical inadequacy of the strategy. In other words, a scarcity of suitable building materials and construction skills had resulted in lower rates of housing improvement in upgraded squatter settlements (ibid).

5.2.3. Community Infrastructure Programme (CIP) (1990-2000s)

The Dar es Salaam City Council (DCC) developed the CIP as part of the Sustainable Dar es Salaam Project (SDP) in response to requests from several communities for an effective way to enhance and improve infrastructure in their settlements. According to Kyessi (2002), CIP was an operational arm of DCC in implementing a pilot program on community infrastructure provision. CIP had adopted the concept of SDP, and its ultimate goal was to improve the living and economic conditions of Dar es Salaam communities by providing basic infrastructure and services, as well as increasing employment and revenue creation opportunities. The CIP focused on building community capacity, institutional strengthening, and improving infrastructure and services. As a result, the CIP operational framework was developed through collaboration between the public and private sectors. The initiative had collaborated the City Council, utility agencies, CBOs, NGOs, the donor community (Irish Aid & World Bank), and other stakeholders in the development process through partnership, participation, and self-help approaches.

73

Unlike squatter upgrading projects, CIP coordinated and implemented public infrastructure service provision under the program umbrella, employing a demand-driven strategy of community infrastructure provision as opposed to the supply-driven strategy used in the previous model. Communities were required to pay 5% of the capital investment cost of the infrastructure up front. As a result, two paths for infrastructure improvement were established: (1) collaborating closely with CBOs to strengthen their capacities to participate in development programs addressing primary needs in their respective communities; and (2) collaborating with the local authority (City Council) to strengthen its capacity to respond to community requests in a coordinated manner. The initial infrastructure services to be addressed were community water supply, road and drainage improvements, and sewage extensions. The following lessons were learnt through the CIP process: Communities could plan for their own development if they were given the opportunity to identify their concerns and priority areas, and involving all relevant stakeholders was critical to resource mobilization for implementation. In other words, CIP had the social and spatial characteristics required to improve the livelihood of informal communities.

Infrastructure projects, on the other hand, are capital-intensive, and the CIP required a mandatory community contribution. To expand project capacity, ensure sustainability, and foster a sense of ownership, members of the community were required to contribute to infrastructure improvement. As a result, rather than a payment based on a fixed percentage without regard for household ability, the community contribution was determined by the economic status of the community that some households were unable and/or unwilling to contribute (Kyessi, 2002). The challenge for CIP was determining how to internalize the CIP approach of cost sharing for improved infrastructure, as there was no policy or other framework in place to ensure community engagement and increase willingness to contribute to infrastructure costs. Several settlements were intended for the program but implementation did materialize due to financial constraints (Urban Sector Rehabilitation Program funds) (Magina, et al., 2020). As a result of infrastructural shortfalls by servicing agencies, individual homes and grassroots organizations resorted to self-help activities, which contravened CIP requirements. In general, the intervention was unable to meet all of the needs of the community infrastructure. That is, the spatial provisions of the program was inadequate to improve the social characteristics of informal settlements.

In the Hanna Nassif informal settlement, CIP used a Community Based Approach (CBA) and a Labour Based Technologies (LBT) approach. The Community Development Committee

(CDC), a Community Based Organization (CBO), was involved as representatives in the planning, implementation, and future maintenance of roads and storm water drainage channels to be built, as well as community construction contracts to create jobs and reduce poverty in the settlement. All construction work (roads and drainage) was completed by residents under the supervision of a Technical Support Team through community contracts. Not only did the strategy ensure that all investment funds stayed in Hanna Nassif, but it also provided residents with skills that would be useful during the maintenance period. According to Sheuya (1997), by the end of the first phase of the project, the CDC had built 1.5 km of side drains, 1.0 km of murram roads, and 600 m of main drain; 511 different people had been employed; no house had been demolished, despite design standards being circumvented; construction work skills, including bookkeeping training, had been gained and attained; and a legal CDC had been established. The second phase of the project included 6 km of spine roads and storm water drainage (bitumen standard), 9.7 km of conventional sewerage, and 42 km of neighbourhood roads (gravel standard).

In Vingunguti, the CIP project, was carried out in partnership with Plan International, aimed to build labour-based infrastructure using labour-based technologies. In partnering with the communities, Plan International provided investment funds and technical assistance to health, education, economic, and community development projects. The CIP project objectives were to improve: street drainage infrastructure; public spaces and sporting facilities; market places and slaughter houses; construction of sewerage and stabilisation ponds; household water connections and washing stations; and sanitation and solid waste management with low-technology collection systems through a community-based labour-intensive approach through the healthy city project.

In general, labour-based technology and community participation in upgrading unplanned settlements had a significant impact on the informal settlements (Sheuya, 1997). Due to the growing number of NGOs and CBOs, the City Commission could justify using labor-based technologies and involving NGOs and CBOs in settlement improvement. Owing to buildings densities, high unemployment, and lack of access roads, informal settlements were ideal for labour-based technologies in settlement upgrading. That is, the CIP program was created with the intention of incorporating the socio-cultural context into the improvement of settlement spatial quality.

5.2.4. Community Infrastructure Upgrading Programme (CIUP) (2003-2012)

The CIUP was established in 2003 with financial support from the World Bank's International Development Association (IDA), the Tanzanian government, the Dar es Salaam City Council and municipalities, and the beneficiary villages (Mazwile, 2013). The program's goal was to improve the living conditions of low-income residents from unplanned settlements by upgrading existing infrastructure and services and facilitating participation in infrastructure planning, provision, and management in their respective areas (MLHHD, 2018). Alternatively, the program's goal was to reduce poverty and improve the standard of living in low-income communities by increasing community participation in public infrastructure (roads, drains, water supply, solid waste facilities, public toilets, and street lighting) and improving communities' ability to plan and maintain infrastructure. The program improved 31 neighborhoods in Dar es Salaam, covering 1000 hectares and benefiting 420,000 households, including those in the Vingunguti and Manzese informal settlements.

A community upgrading plan (CUP) was developed in each CIUP area in a participatory and demand-responsive manner. The CIUP was designed to ensure an iterative process of consultation and feedback from the start of program preparation to the end of the construction period. In the areas where it had been implemented, CIUP had made a significant difference in the quality of life. The interventions improved access to infrastructure and services such as roads and footpaths, drainage, portable water and sanitation, solid waste, and streetlights; increased the monetary value of houses/properties in project areas; decreased disease incidences; and decreased flooding and related damages.

CIUP improved the settlement's accessibility and environmental quality in Manzese, despite the provision of infrastructure and basic amenities, which increased the settlement's land values. According to Mlonda (2009), the settlement's land use had changed rapidly, with the poor increasingly displaced by the market. Market displacement was especially high for plots along major improved access roads due to their respective strategic locations for commercial activities. Small plots were being joined together to form a larger plot suitable for use as a hotel or office. Prices in less accessible areas were also lower, and land use change was more gradual.

The Vingunguti sub-wards of Mtambani, Mitakuja, Miembeni, and Kombo were chosen for CIUP implementation (URT, 2008). As a result, the project aimed to provide and improve

access to safer water sources, sanitation and solid waste disposal management, waste stabilization pond construction, drainage network channel construction, and construction and rehabilitation of main access roads, including street lighting. These interventions improved the settlement's general environmental problems, general public health and safety, and increased land values, among other things. According to Thunqvist and Ilskog (2010), despite the implementation of CIUP, water production and supply in Vingunguti is less than half of the estimated demand, and the basic infrastructure is characterized by poorly maintained roads with no formal constructed drainage along any of the roads. Drainage is difficult to manage due to the low-lying topography, and flooding is common. Furthermore, the settlement is pervasive with indiscriminate industrial waste disposal.

In general, the CIUP objectives called for improvement of the physical built environment through infrastructure and basic amenities, which would then improve the social well-being of the settlements. The program had a significant effect on the physical environment of the informal settlements, but only a minor impact on the social order of the settlements. That is, the CIUP's spatial attributes failed to improve the social construct of informal settlements, as evidenced by household livelihood displacement and demolition, as well as deplorable living conditions.

5.2.5. Regularization and Formalization of Informal Settlements (2004 to date)

Regularization of informal settlements began in 2004 with the goal of promoting security of tenure and limiting further densification through property formalization (MLHHD, 2018). Regularization facilitates the ability to record, adjudicate, classify, and register occupation and land use, with the ultimate goal of formalizing property rights in informal settlements (URT, 1999; Kyessi & Sekiete, 2014; Schmidt & Zakayo, 2018). Regularization, according to Guevara (2014), is used in informal settlements to strengthen property rights (titling) and provide infrastructure (proper roadways, public lighting, etc.), facilities (police stations, schools, social services), and basic public services (water, energy, sewerage). Tanzanian informal settlements regularization programs primarily focus on providing formal ownership documents such as land titles and residential licenses to property owners (Kusiluka & Chiwambo, 2018). Initiatives to regularize informal settlements are typically carried out through specialized programs implemented across the country through a number of notable projects (ibid.). Planning, surveying, and registering landowners, as well as providing them with land titles after they pay statutory fees and charges, are all part of the projects.

The Dar es Salaam regularization intervention's primary goal was to eventually cover all unplanned areas, with a focus on regularizing land in areas where the CIUP had upgraded essential amenities, such as Vingunguti, Manzese, and Hanna Nassif (Magina, et al., 2020). According to the goals of regularization and a variety of literature, land titling to land occupants in informal settlements legalizes and replaces de facto tenurial titles, providing land occupiers with more tenure security and power (ibid.). In general, regularizing and formalizing informal settlements provides land and property owners with security of tenure through the issuance of Certificates of Right of Occupancy, as well as basic municipal services, thereby formalizing the informal sector. Owners of regularized properties use the Certificates to obtain credit from financial institutions in order to improve their homes or start a small business. By December 2015, approximately 274, 039 properties out of 420,000 had been identified in Dar es Salaam, and a total of 105,000 owners had been issued licenses, with 3% of them using the licenses to access credit in financial institutions (MLHHD, 2018).

Regularization and formalization of the Hanna Nassif informal settlement resulted in land property ownership recognition and a land ownership registry; enabled land property owners to lawfully own their land through Residential Licenses or Certificates of Occupancy, which could be used to guarantee credit from financial institutions; and limited the expansion of informal housing through land parcelling restrictions (Kyessi, 2010). However, in Hanna Nassif, informal settlement regularization and formalization has facilitated, among other things, changes in land use and the forced displacement of original occupants. New structures are being built, and temporary residential structures are being replaced with commercial and other uses.

Property and land titling increased investment in Manzese. Since the government recognized the residents' ownership, the middle and upper classes have invaded the settlement to make investments. As a result of market forces, some residents of the settlements were forcibly displaced or relocated. Despite this, land titling, which was supposed to make it easier for settlement landowners to get loans to invest in their homes and businesses, has failed. Financial institutions do not give credit based solely on a resident's license, but rather on the borrower's ability to repay the loan (Mlonda, 2009). An applicant must have a thriving business in order for the lender to check the cash flow and approve the loan if satisfied with its performance. As part of the formalization of informal settlements, residents in Vingunguti were issued with Residential Licenses, but these licenses did not guarantee access to loans for investment (Shemdoe, 2012).

In general, regularizing and formalizing informal settlements entails improving physical settlement configurations in order to initiate corresponding social relations. That is, the program views the provision of physical infrastructure as well as a cadastral surveying process that results in the issuance of title deeds or residential licenses, among other things, as improving security of tenure and livelihood. However, case settlement findings show that infrastructure provision in informal settlements, such as the issuance of land title deeds or Residential Licenses, is not a necessary factor for ensuring security of tenure and thus subsequent improvement on the land claimed to improve livelihood.

Table 5.3 summarizes the socio-spatial relations of informal settlements interventions.

Table 5.3: Socio-Spatial Relations of Informal Settlements Intervention

Informal Settlements Intervention	Spatial Forms	Social Relations	Socio-Spatial Relationships Implications
Colonial Urban Planning Policy	• Zoning of the city through the 1891 building ordinances • Provision of public housing	• Social segregation	• Social exclusion • Informal economy
Squatter Upgrading Strategy	• Provision and upgrading of physical infrastructures in informal settlements	• Improvement of public health and environment • Promote economic development • Strengthening of the institutions and financial capability of government • Change of legal status of settlements (Security of Tenure) through housing registration	• Socio-spatial inequalities
Community Infrastructure Programme	• Improvement of infrastructures • Provision of basic infrastructures and services	• Creation of employment and income generating activities • Poverty alleviation • Improving the living and economic conditions of the communities • Community capacity building and strengthening of institutional frameworks	• Social inclusion

Community Infrastructure Upgrading Programme	• Upgrading infrastructure and urban services • Improving access of urban infrastructure	• Improvement of the spatial, social, environment and economic situations • Enhanced delivery and management capabilities, productive efficiencies and financial sustainability of local authorities • Alleviate poverty • Improve standards of living • Community participation and capacity enhancement	• Socio-spatial inequalities • Market-led displacement-gentrification
Formalization and Regularization of Informal Settlements	• Provision of public infrastructures and basic urban services • Cadastral surveying and land adjudication	• Land tenure security • Improvement of property value rights • Improved living conditions	• Social exclusion • Accumulation by dispossession • Market-led displacement-gentrification • Informal economy

Source: Author

5.3. Implementation Framework of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam

By and large, informal settlements management is a function of urban governance frameworks and institutions. Informal settlements management in Dar es Salaam is governed by institutional frameworks comprising of governance institutions; organizational frameworks (planning authorities), legislative frameworks (planning laws), and administrative framework (structure).

5.3.1. Governance Institutions Frameworks

Tanzania's governance institutions are divided into two tiers: central government and local governments. Furthermore, local governments are divided into two types: urban (city, municipal, or town councils) and rural (county, municipal, or town councils) (district councils). Village councils are local bodies within district councils, and township authorities can be formed within district councils in specific urban authorities. The regulatory framework is developed and implemented by the Ministry of Lands and Human Settlements Development in particular. Local governments are free to develop their own land use plans, but the central government or authorized employees within local governments who report to

the central government have the final say. Other central government agencies, such as those in charge of water, electricity, and road infrastructure, operate on their own.

Dar es Salaam's Local Government Authority (LGA) is led by the Dar es Salaam City Council (DCC) and includes five Municipal Authorities: Ilala, Kigamboni, Kinondoni, Temeke, and Ubungo, as well as 90 wards including Manzese, Hanna Nassif, and Vingunguti. DCC's key functions include: coordinating municipal council infrastructure functions and addressing cross-cutting issues such as roads, transportation, waste management (dumping sites), fire brigade, bus terminals and markets, and so on; strengthening cooperation between municipal councils and other local government authorities within the city; providing technical support to municipal councils; initiating revenue sources and investment avenues; maintain law and order within the city, to deal with national and international protocol issues, and to prepare a coherent city-wide framework for Sustainable Urban Development.

On the other hand, Municipal Councils are responsible for duties to ensure the orderly development of their area of jurisdiction including: to maintain and facilitate the maintenance of peace, order and good government within its area of jurisdiction; to promote the social welfare and economic wellbeing of all persons within its area of jurisdiction; subject to the national policy and plans for rural and urban development, to further the social and economic development of its area of jurisdiction; to take necessary measures to protect and enhance the environment in order to promote sustainable development; to give effect to meaningful decentralization in political, financial, and administrative matters relating to the functions, powers, responsibilities, and services of all levels of local government authorities; and to promote and ensure democratic participation in and control of decision making by presiding officers; and, establishing and maintaining reliable sources of revenue and other resources to enable local government authorities to perform other functions effectively and to improve LGA financial accountability.

In general, DCC and municipal authorities' duties, responsibilities, and functions include informal settlements management. That is, the objectives of informal settlements intervention are carried out in conjunction with and as a reflection of the respective LGA functions and governance framework. However, the study finds that governance institutions lack adequate human resources and capacity to manage informal settlements, as well as financial resources constraints.

5.3.2. Organizational and Administrative Framework

The organizational framework for informal settlement governance is made up of planning authorities or organizations established by law and appointed by the government to provide urban planning services aimed at the control and management of human settlements development. According to the study, the Ministry of Lands, Housing, and Human Settlements Development, Municipal Councils' respective authorities, and relevant NGO's and CBO's (within respective wards), as well as Ward Councillors including Sub-Ward (Mtaa) leaders, comprise the informal settlements governance line organization framework. However, in addition to the specified organizational frameworks, several government agencies, including Tanzania Electricity Supply Company Ltd (TANESCO), Dar es Salaam Water and Sanitation Authority (DAWASA), Dar es Salaam Water Supply Company Ltd (DAWASCO), Tanzania Roads Agency (TANROADS), and the Surface and Marine Transport Regulatory Authority (SUMATRA), are responsible for the provision of basic utility services in the management of informal settlements. These agencies operate independently of line organizational frameworks and are not subject to their control or jurisdiction.

Municipal councils are typically responsible for the management of informal settlements, and their responsibilities are carried out through the full council constitution, which is led by the mayor, as well as the Ward Development Committees and Sub-Ward (Mtaa) Development Committees, which are led by the Councillor. The Municipal Council Director oversees the administrative operations of the municipal councils' various departments, which are also in charge of managing informal settlements. Figure 5.37 depicts the general organizational structure of Municipal Councils in charge of managing informal settlements.

Figure 5.37: General Organogram for Informal Settlements Management
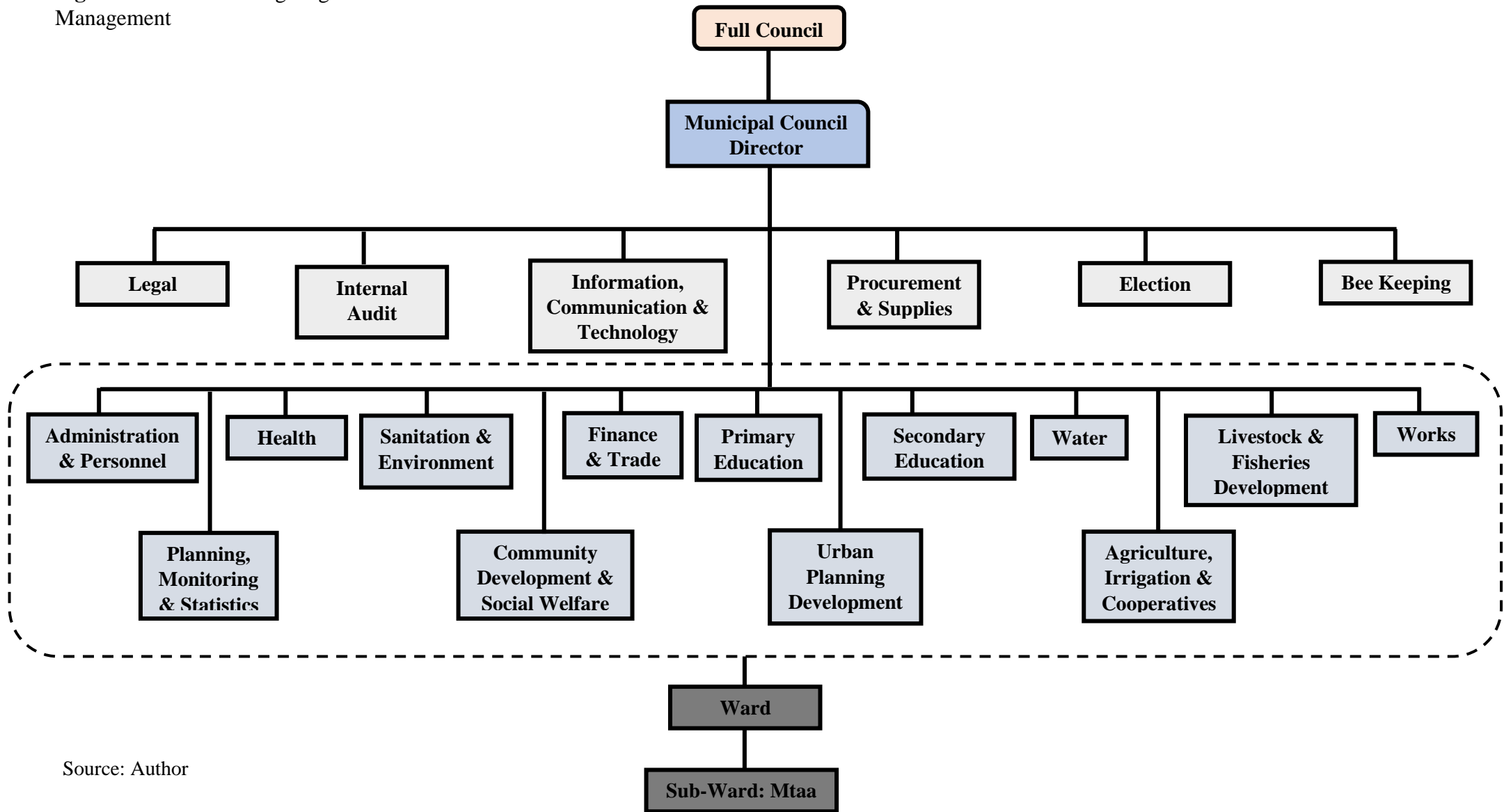
Source: Author

Municipal councils, including utility agencies, are in charge of coordinating and providing basic social and economic services, as well as infrastructure, in informal settlements management. Wards and sub-wards, referred to collectively as the Mtaa, are located beneath each municipal council and are based on the socialist philosophy of ten-cell units to ensure accountability to the people and a local government presence on the ground. Each ward has a Ward Development Committee (WDC), which consists of the following members: A Chairman who is a member of the municipal council representing the ward (i.e. the elected Councilor of the Ward); Chairpersons of the Mtaa within the ward; Councilors of the Municipal Authorities residing in the ward, including those who are nominated; Chairmen of village councils within the ward; Women municipal council members appointed as provided for municipal councils and other invited persons representing a particular group but without voting powers. The government also assigns a Ward Executive Officer, a municipal government employee, to each ward committee who serves as the committee's secretary.

The primary goal of the Ward is to improve efficiency and coordination between the municipal and street levels. The Ward Development Committee is in charge of proposing to the Municipal Council any area development plans as well as implementing municipal regulations, orders, and directives. Nonetheless, the committee's obligations include: develop and implement municipal authority decisions and policies; facilitating the ward's social and economic development; expanding the number of collaborative efforts in the ward, initiating or conducting any task, venture, or enterprise aimed at safeguarding the livelihood and well-being of the ward's residents; coordinating and planning activities of community members of the ward involved in any activity or industry; and providing a forum for community members of the ward participating in any activity or industry.

Mtaa committee members are fully elected, with elections held on the basis of various political parties. Each Mtaa has a chairperson and a committee of six people, including the chairperson. Mtaa committee members are elected by the community, and at least two of them must be women. In addition to the chairperson and committee, the government appoints a Mtaa executive officer to oversee the implementation of municipal regulations. The Mtaa committees are intended to promote citizen participation in local development. As a result, a number of formal and informal institutions have been established among the people to promote dialogue between the Mtaa and the residents of the settlement.

The Mtaa is the lowest level of local government, and its primary responsibilities include carrying out all council plans and overseeing all development activities in the area. The Mtaa committee is in charge of: implementing Council policies; recommending the Council on

matters relating to the Mtaa's development plans and activities; advising the Ward Development Committee (WDC) on matters relating to peace and security in the Mtaa; keeping a proper record of Mtaa residents; carrying out duties conferred upon it by the WDC; coordinating the Mtaa's development plans and activities; ensuring revenue collection and expenditure in accordance with local government regulations; enacting Mtaa bylaws and representing the central government and the council.

According to one Town Planner in municipal councils, institutional or administrative arrangements for the implementation of urban development plans, including interventions in informal settlements, have been bureaucratic and centralized, inadequate, and frequently lacking in coordination between organizational frameworks with competing jurisdiction of authority in the management of informal settlements. Most public agencies in the city that are mandated to provide specific services implement and maintain projects independently of one another. Poor coordination has resulted in duplication of efforts, misallocation of scarce resources, and a lack of accountability.

In general, the informal settlements interventions implemented in respective informal settlements, have been intermittent, inconsistent, and have been deficient in terms of adequate participation. Although interventions improved living conditions in the informal settlements and increased housing accessibility, these gains are limited in scope and scale and cannot be sustained.

5.3.3. Legislative Frameworks

Since the 1990s, the Tanzanian government has established clear policies and legislation, including planning regulations and standards for the governance of informal settlements. Among these are the National Land Policy of 1995, the Land Act of 1999, the National Human Settlement and Housing Development Policy of 2000, the Urban Planning Act of 2007, and a variety of planning regulations, standards, and technical instructions. The regulatory frameworks acknowledge the importance of informal settlements in urban housing provision, but they also coordinate and guide governance.

The National Land Policy of 1995 addresses issues such as land tenure and administration, land surveying and mapping, urban and rural land use planning, land use management, and institutional structure (URT, 1995). The policy aimed to halt the growth of informal settlements by declaring areas for low-income housing with simplified building regulations and affordable services, as well as preserving the existing housing stock within unplanned settlements, which provide a large portion of urban population shelter. As a result, the policy

assumes that the government will ensure that basic services essential to human health are provided to all urban residents through participatory community upgrading. In general, the policy emphasizes that informal settlements should be upgraded and provided with social services, facilities, and infrastructure rather than cleared.

The Land Act of 1999, which was enacted in response to the National Land Policy, recognizes the legalization and regularization of informal settlements; the Act established legislation concerning land rights and the regularization of unplanned areas (URT, 1999). In other words, the Act addresses the issue of informality in the right of occupancy and the distribution of residential licenses as a derivative right.

The overarching objective of Tanzania's National Human Settlements Development Policy of 2000 is to promote sustainable human settlement development and to facilitate the provision of adequate and affordable shelter to all income groups (MLHSD 2000). The Local Government Authority is given responsibility for unplanned areas, which are upgraded by the community with the assistance of NGOs and municipal and local government. To put it another way, the policy advocates for the regularization, upgrading, and incremental formalization of informal settlements.

The Urban Planning Act of 2007 aims to ensure efficient use of land resources, orderly and coherent human settlement growth, and community involvement in urban settlement planning and development. The Act calls for the preservation and enhancement of amenities, as well as the granting of development consent and the exercise of control over land use. According to Kironde (2009), the law requires public consultation in the development of land use plans and the publication of approved plans.

The Planning Regulations and Guidelines are used to improve technical and professional practice, as well as to enhance efficiency, effectiveness, consistency, transparency, coherence, and community participation in urban planning, including the management of informal settlements. These standards make it easier to develop land for residential or human settlements, commercial land uses, and basic utilities like health and education facilities. The regulations also include standards for electricity and water supply way leaves, road width, communication pylons, sewerage treatment plants, ponds, transportation terminals, stream/river buffer zones, beaches, and industrial plots, as well as recommended land use colours.

The regulatory frameworks are generally implemented by the central government, which is represented by the Ministry of Lands, Housing, and Human Settlements Development. The Ministry issues directives or policy guidelines to municipal councils and local governments on the preparation and implementation of planning schemes, including policy interventions on informal settlements. Local governments and municipal councils are then responsible for developing their own planning schemes, which must be approved by the Ministry. Different land professionals, including urban planners, are involved in the regulatory framework's implementation.

Nonetheless, despite these regulatory frameworks, the management of informal settlements is marked by a lack of adequate participation, inconsistency, inefficiency, and ineffectiveness of the rule of law. In other words, frameworks for informal settlements management are not implemented in accordance with legislation and are not responsive to the requirements of the informal settlement's population.

Figure 5.38 illustrates governance framework of the socio-spatial relations of informal settlements interventions.

Figure 5.38: Implementation Framework of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam

Informal Settlements Governance Inputs ▪—▪—▪—▪—▸ *Informal Settlements Dimensions* ▪—▪—▪—▸ *Informal Settlements Governance Process* ▪—▪—▪—▸ *Informal Settlements Expected Governance Outcomes*

Inputs-Socio-Spatial Relations of Informal Settlements Intervention:

- Urban Planning Policy
- Upgrading Programs
- Enabling Participatory Schemes
- Integration programs

Process- Urban Governance (Institutional Frameworks):

- Organizational frameworks
- Legislative frameworks
- Administrative framework
- Institution framework

Output:

Sustainable Human (Informal) Settlements

Social

Spatial

Informal Settlements Interventions

- Colonial Urban Planning Policy
- Squatter Upgrading
- CIP
- CIUP
- Regularization & Formalization

Formulation & Implementation

Actors:

- MoLHHSD
- Development Partners
- Municipal Authorities
- Ward Leaders
- NGO's & CBO's
- Public Utility agencies

Informal Settlements Land Development

Informal Settlements Characteristics:

- Tenure security
- Adequate public & infrastructure services
- Improved accessibility of services
- Improved livelihood

Sustainable Spatial Development of Informal Settlements

88

CHAPTER SIX

ANALYSIS AND DISCUSSIONS

6.0.   Introduction

This chapter discusses the study analysis and the implications of the empirical findings.

6.1. Implications of Socio-Spatial Relations of Informal Settlements in Dar es Salaam

6.1.1.   Informal Settlement Demographic Indicators

Cities around the world have been successful in attracting more than 80% of global economic activity, attributable to high concentrations of people and goods (World Bank, 2013). Largely, these populations are housed in informal settlements. Rapid urbanization frequently has a positive impact on human development. Evidently, highly urbanized countries have higher incomes, more stable economies, and stronger and more effective institutions (UN-Habitat, 2006/2007). However, the role of cities, particularly their productivity and functionality as economic growth engines, is principally determined by the quality of their spatial structure, basic infrastructure, services, and, not least, how they are managed (World Bank, 2013). Therefore, cities with limited access to basic services such as potable drinking water, sanitation, power, accessibility, and stormwater management are frequently congested, have poor housing, and have insecure property rights or tenure. Those very cities are unlikely to attract significant investment to stimulate economic growth and improve residents' well-being. In general, poorly serviced and managed cities have a limited capacity to reap the benefits of urbanization because such cities have narrow windows of opportunity to capitalize on their potential as engines of economic growth (World Bank, 2013).

According to the study's findings, the demographic structure of informal settlements in Dar es Salaam is a mix of deficiencies and improvements of well-being. Informal settlements in Dar es Salaam are typically described as unplanned neighborhoods where middle- and low-income families coexist (Rasmussen, 2013). The settlement's socio-spatial relations structure is a function of formal and informal attributes. Literature shows that contemporary economic processes of globalization and neoliberal urban policy responses (interventions), as well as their effects on urban labor markets, are key drivers of informal sector income- and employment-generating activities (Watson, 2009). That is, interventions (formal) in settlements can both contribute to a better quality of life and aggravate inadequacy. The informal economy employs 60% of Africa's active labor force and creates 90% of new jobs. The majority of residents of informal settlements rely on the informal income and

employment sectors for a living. Despite differing perceptions and ideological stances, the informal sector is rapidly expanding. Informal economy is seen as both a symbol of underdevelopment and a positive and dynamic sector that allows many people to gain access to sources of income in cities (Dewar, 2005). Most importantly, there is a growing trend toward informalization in most developing-country cities including Dar es Salaam (Dodman et al., 2013). Informality is also the primary force driving and facilitating the poor's ability to secure a living space, thereby enhancing their integration and inclusiveness, albeit through precarious forms of employment (Kombe and Kreibich, 2006).

Although informality in terms of income generation, mode of settlement development, or land servicing is unregulated by the state or informal regulatory structures, it is recognized that informal social systems and networks play an important role in organization and support, particularly in informal settlements (Simone, 2004). They facilitate in the reduction of vulnerability and other undesirable consequences of informality. Informal social networks, norms, and structures, for example, play an important role in keeping economies and communities together in the face of daunting economic, political, and environmental challenges (Meagher, 2007). Social systems and regulatory networks have been regulating spatial structure in informal settlements and facilitating land markets in some countries, particularly in Sub-Saharan Africa; they also provide security of tenure. The noble roles of social regulated entities have had an impact in many contexts, making informal settlements appealing not only to the poor but also to the wealthy (Kombe and Kreibich, 2006). In other words, in many developing countries, Tanzania inclusive, informality is steadily becoming a domain for both low- and middle-income households (Roy and AlSayyad, 2005).

6.1.2. Infrastructure Inadequacy in Informal Settlements

Over half of the world's population (56.2%) now lives in cities (Buchholz, 2020), and there is a growing recognition that city growth is unavoidable, and that effective urban planning, infrastructure development, and management are critical to solving urban problems (Asoka et al., 2013). Rapid and often unplanned population growth is frequently associated with population demands that exceed infrastructure and service capacity, resulting in the expansion and proliferation of informal settlements marked by infrastructure shortages. Ijaiya and Akanbi (2009) define infrastructure as facilities and services that are divided into two categories: social infrastructure and physical infrastructure. Social infrastructure includes facilities and services such as health care, educational services, and various types of government structures, among others, and is often referred to as the driving force behind

social and economic activity; whereas physical infrastructure includes physical structures or facilities such as telecommunications, power, transportation system (roads), water supply, and sewerage system. Despite of the fact that informal settlements account for one-third to one-half of urbanized areas, infrastructure services are in short supply and of poor quality in most informal settlements (Akhmat & Khan, 2011), which, according to Glenn & Wolfe (1996), is a manifestation of poor planning and failure of urban governance.

The study concludes that, considering the current and projected population growth trends in the informal settlements, the demand for social infrastructure outstrips the services available. Similarly, the physical infrastructure suffers from insufficient supply and service. Infrastructure serves as society's backbone, connecting various services while ensuring efficiency and ease of operation (Prudhomme, 2004). Infrastructure development is essential for economic development and thus improves people's quality of life (Akhmat & Khan, 2011). Well-constructed road networks promote trade by lowering costs, thereby expanding the size and scope of the respective markets. Households that are well connected can not only benefit themselves, but also significantly increase their overall contribution to the nation's welfare. More infrastructure equals more economic growth, and vice versa, with good infrastructure equalling a higher standard of living (ibid.).

Informal settlements have distinct socioeconomic characteristics that necessitate development efforts tailored to the specific needs of each settlement (Simiyu, et al., 2019). These characteristics should be identified in order to guide infrastructure improvement efforts. In developing countries and informal settlements, infrastructure investments have a 100 percent positive impact on productivity and growth (ibid.). A sustainable city necessitates the development of all critical infrastructures (Burrough, 2008). Some of the shortcomings that contribute to the failure of ongoing infrastructure projects in developing countries and informal settlements include a lack of adequate planning for ongoing operation and maintenance at the facility, a limited sense of ownership by the local community, political intervention, and corruption (ibid.). Despite the fact that infrastructure provision leads to social and economic development, the possibility of development generates additional demand for infrastructure (Asoka et al, 2013), making infrastructure provision in informal settlements an ongoing challenge.

6.1.3. Land and Housing Tenure Insecurity in Informal Settlements

Access to secure land and housing is a prerequisite for long-term urban development, but millions of people are constantly threatened with eviction or lack the security they require to invest what they have in improving their homes. Secure land and housing rights are critical for societies' socio-spatial development. Secure land tenure and housing rights exist in various forms in different countries. Land tenure dualism, or the juxtaposition of customary and modernistic land-management laws, is a common challenge in developing countries when it comes to land access and security (Mends, 2006). Land and housing tenure systems are the result of historical and cultural factors, and they reflect people's, society's, and land's relationships (Payne, 2002). Land tenure refers to the customary and/or legal/statutory rights that individuals or groups have to land and related resources, as well as the social relationships that result from these rights (Kuhnen, 1982). Each country has developed unique land tenure concepts based on historical and contemporary values and norms. The concepts underpin the current tenure systems, which have frequently been shaped by an evolutionary process. Each tenure system and society have its own set of rights, restrictions, and responsibilities. For example, the introduction of colonialism in Sub-Saharan Africa, with its emphasis on large commercial farming, discriminated against customary tenure, and because colonial laws did not govern the ownership and management of customary lands, this situation hampered customary holders' ability to enter into formal land transactions (Quan, et al, 2004).

The study informal settlements have a mixed land-use pattern, with 79% of the land used for residential purposes. 60% of the land in the settlements is held under customary tenure rights, and of the 26% of owned housing units, 44% have lease title documents, 7% have allocation papers and site plans documents each, and 41% have no land tenure entitlement document. Even though the bulk of the population appears to lack land tenure rights, the majority of settlement households (58%) do not fear eviction. Land tenure security in Dar es Salaam is empirically enhanced by long-term occupation and use of the land; social recognition by adjoining land owners and respective local leadership; and social recognition by adjoining land owners and respective local leadership, rather than land tenure entitlements (Wanjohi, 2007). Thus, the findings are consistent with those of Nyametso (2012), who discovered that informal settlements in Accra, Ghana, are characterized by tenure insecurity, but traditional or customary land tenure arrangements in the settlements provide high levels of land tenure security based on de facto recognition of land rights.

Tenure systems, particularly tenure security, reveal a lot about the nature of society, the development and performance of its informal and formal institutions, and how people deal with change as a result of globalization and factor market liberalization (the linking of land to capital markets through collateral delivery) (Kirk, 2014). Modern tenure systems combine formal, statutory, and more informal, customary rules and regulations. The statutory/conventional system usually includes private freehold and leasehold rights, as well as public or state land that is frequently leased out to private concerns. The communal/common regulated tenure or, in the worst-case scenario, open access is the foundation of the customary system. As a result, at the local level, property rights in land or other resources are either ineffective or non-existent, resulting in long-term overuse, resource degradation, and, as a consequence, de facto expropriation of use rights and benefit claims from these lands. The current rate of urbanization in almost all developing and industrializing countries has resulted in an increase in tenure system insecurity, particularly in urban informal settlements (Ibid.).

In informal settlements, land and housing tenure takes the form of non-formal de facto tenure, in which land is acquired, occupied, and used with or without the permission of the owner. In contrast, government interventions have primarily focused on de jure tenure measures aimed at improving tenure security in informal settlements. According to Lamba (2005), formal land administration systems in developing countries have failed to deal with the diverse range of land rights that have emerged as a result of non-formal land tenure arrangements. Urban informal settlements, in particular, pose a challenge to the existing land administration infrastructure in these countries. These settlements' land tenure, land rights, and spatial units are incompatible with existing regulatory frameworks. The nature of physical development in informal settlements influences perceptions of tenure security, implying that the status of land use or occupation in informal settlements influences tenure security (Syagga et al., 2001). Depending on the zoning status of the land, the government has responded to the growth of informal settlements in a variety of ways where there is public land (Lamba, 2005). When land is designated for public use other than residential, the government has evicted and/or demolished settlements to make way for development, whereas when land is zoned for residential development or is quasi-residential, the government has pursued regularization and/or formalization of settlements in some cases. Several court cases concerning the development of informal settlements on private land have been filed. Nonetheless, empirically, interventions aimed at improving tenure security in informal settlements have

exacerbated it and even promoted socio-spatial exclusion and inequalities. As a result, unless a targeted intervention is implemented, tenure insecurity in informal settlements will persist.

6.1.4. Socio-Spatial Morphologies in Informal Settlements

One distinguishing feature of informal settlements is that they emerge and grow outside the control of the state, through generative processes of self-organization and incremental adaptation. In other words, they are built without proper professional guidance; they are mostly built by low-income urban dwellers for whom existing formal avenues are hardly viable options; they are built with local building materials, skills, designs, and technology, and they do not adhere to formal/legal building codes and standards (Fekade, 2000). Unlike slums and squatter settlements, which are generally associated with poor water, housing infrastructure, and sanitation, as well as concerns about the legality of the tenure (Dovey & King, 2012), informal settlements are unauthorized and unplanned settlements created by people who find it difficult to obtain affordable housing in the formal market (Huchzermeyer, 2010). Informal settlements are referred to as "transgressive" because their residents go beyond the boundaries of formally state-based codes in terms of tenure, urban design, planning, and construction (Dovey, 2013). Exploring the socio-spatial morphologies of these settlements in order to understand the generative processes of self-organisation is therefore a necessary condition for unraveling the capacities of urban informality to develop in accordance with incremental upgrading of codes in terms of open spaces, pedestrian networks, constructions, and amenities (Kamalipour, 2020). According to Marshall and Caliskan (2011), morphological analysis of informal settlements can help with future intervention design.

In Dar es Salaam, informal settlements development and urban growth patterns transcend the four main arterial roads that radiate outwards from the city center, forming the backbone of the city road network, which includes informal settlements. These roads include Bagamoyo, Morogoro, Nyerere, and Kilwa. Much of the city's growth, including the resemblance of informal settlements such as Manzese, Hanna Nassif, and Vingunguti, occurs along these radial roads. According to empirical data, approximately 75% of the city's population is housed in informal settlements. Dar es Salaam's rapid unplanned urbanization has resulted in the development of informal settlements in environmentally sensitive areas such as along watersheds or wetlands, exposing the settlements to flooding risks. For example, the studied informal settlements are in flood-prone areas. Since the 1960s, the case study settlements have evolved from primarily agricultural plantation land uses to dominant residential land

uses mixed with commercial land uses, all while remaining under customary tenure and free of eviction. The housing characteristics of the settlements are made of modern or permanent construction materials, and the Swahili typology of housing dominates the settlements, but the building areas and housing types are evolving over time. The spatial neighbourhood designs of the settlements are haphazard and irregular. The settlements, however, are provided with basic social and physical utilities such as electricity, water, health and education services, as well as road networks and drainage systems. Approximately 80% of the settlements are in the informal sector, which is clearly and irregularly located along the settlements' paved road networks, with a lower street intensity in other non-paved road networks.

The study's findings demonstrate how micro-scale analysis of informal morphologies can reveal how urban intensity interacts with density, access, mix, and interface in informal settlements. Despite the fact that informal settlements are unofficial physical phenomena that exist outside of the formal framework, they can be regarded as a source of income and a hub of activity. Roy (2011) points out that informal settlements are places of livelihood, habitation, and vibrant urbanism, not dystopia. Informal urbanism is, in some ways, both a product and a process that requires a comprehensive understanding of how things work in terms of urban informality morphologies. Understanding informal urbanism therefore necessitates a multi-scalar approach to the city's informal and formal relationships. Dovey (2013) defines urban informality as a resource for coping with poverty rather than poverty itself. This is referred to by AlSayyad (2004) as the emergence of a new paradigm for understanding cities, and by Simone (2009) as a type of capacity that allows diverse activities and people to interact and move beyond the imposed regulatory order.

In contrast to the networked and uniform infrastructures enjoyed by the majority of the Global North, the infrastructural realities of the one billion people living in informal settlements (UN Habitat, 2016a) are frequently quite different (Chambers, 2019). Daily interactions with infrastructure are the norm rather than the exception in a city like Dar es Salaam, where approximately 75% of the population lives in informal settlements. In Dar es Salaam and many other cities in the Global South, infrastructures serving informal urban areas and their vital labour force are frequently non-existent or plagued by a variety of problems. Recognizing the infrastructural complexities of these locations is critical in future efforts to develop sustainable and equitable cities, with recurring rates of urbanization and informal urban settlements predicted to absorb large portions of urban population build out

(UN Habitat, 2016a). Despite the fact that informal settlements are traditionally defined as unauthorized settlements with tenure insecurity and a lack of adherence to planning and building regulations (UN Habitat, 2003), uncoordinated provision of infrastructural services is defined as uneven urban geographies, a lack of governmental oversight, and inadequate infrastructural provision. In other words, despite their irregular settings, informal settlements are still serviced independently by various utility institutions. Informal settlements present a difficult operational context for local government service providers due to precarious contextual conditions (Mesgar & Ramirez-Lovering, 2021). For a large portion of the Global South's population, informal housing, which is frequently found in overcrowded, underserved, and disorderly neighborhoods, has proven to be the only affordable housing option left (Owen, Et al., 2013). Due to a lack of regulated and planned upfront provision of necessary infrastructure such as water supply, sanitation systems, footpaths, and drainage, these services must be retrofitted after housing is built, in unplanned and dense conditions (Jones, 2017). With the exception of a few successful examples (Payne, 2004; Hylton & Charles, 2018; Basile & Ehlenz, 2020), local governments have attempted to address this in a variety of ways, but these initiatives have largely failed to be sustained over time (Satterthwaite et al, 2015).

Mchome (2017) discovered that each informal settlement upgrading project and/or program develops its own space standards based on the available space on the ground in a study of space standards for road improvements in informal settlements upgrading projects in Dar es Salaam. Due to a lack of funds to compensate affected properties, the primary objective of using existing space for road improvement is to avoid mass demolition of housing units in the name of road widening by adhering to approved space standards. However, no minimum space requirement exists for road widening to improve transportation in informal settlements. As a result, infrastructure is provided to some informal settlements locations at the expense of others, contributing not only to social segregation but also reinforcing spatial fragmentation within informal settlements (Mohamed et al., 2014). Similarly, providing infrastructure without an adequate maintenance and servicing mechanism or framework renders services ineffective and inefficient.

Furthermore, land tenure considerations with different spatial conditions and informal settlement configurations can have an impact on the feasibility and long-term viability of infrastructure, as well as the overall benefits received by communities from service delivery. The type of land tenure may facilitate or aid land acquisition for infrastructure provision in

informal settlements. Besides, better housing conditions in self-help or informal settlements are associated with tenure security (Turner, 1972; Abrams, 1966). People in informal settlements are discouraged from investing time and money in improving their housing conditions because they are afraid of being evicted; with legalization, this fear goes away, and the new security of tenure encourages housing improvements and settlement consolidation (Varley, 1987). Nonetheless, various studies indicate that, depending on the risk and return level of an investment, both legal and traditional tenure security systems promote housing improvements (Field, 2005; Nakamura, 2016; Nyametso, 2012; Nguyen, 2018). According to Kasimbazi (2017), when land users fear being evicted from their land and livelihood, insecurity of tenure can trigger a response that, when combined with the threat of eviction, can lead to conflict. This suggests that the informal settlements' de facto tenure security system can convey varying degrees of control and use rights, but that these rights may not be legally enforceable. As a result, in order to contribute to the design of infrastructure systems in informal settlements, morphological studies must include these frequently overlooked concerns.

Housing provision in informal settlements is critical in general, given the government's limited capacity to provide shelter for the people. In other words, residents build houses in informal settlements without the assistance of the government. The government can help people by providing basic infrastructure like roads, water, and electricity, as well as access to housing finance, but there are limits to what people can do in the absence of government intervention. When observed, informal settlements may appear disorderly, chaotic, and unplanned, especially in their early stages of development. However, there is some order in reality. These settlements are the result of culturally constructed images of what a home is or can be (Nguluma, 2003). Empirical evidence suggests that informal settlements housing is evolving into different types of housing over time as a result of a combination of economic, social-cultural, and a strong desire for modernization. Housing occupants or owners take the initiative to transform their homes. Nevertheless, transportation infrastructure is a significant driver of land use change (Efthymiou & Antoniou, 2013). Figures 6.1, 6.2, and 6.3 depict the evolution of housing units in Hanna Nassif, Manzese, and Vingunguti, respectively.

Figure 6.1: Built Environment and Transformation in Hanna Nassif
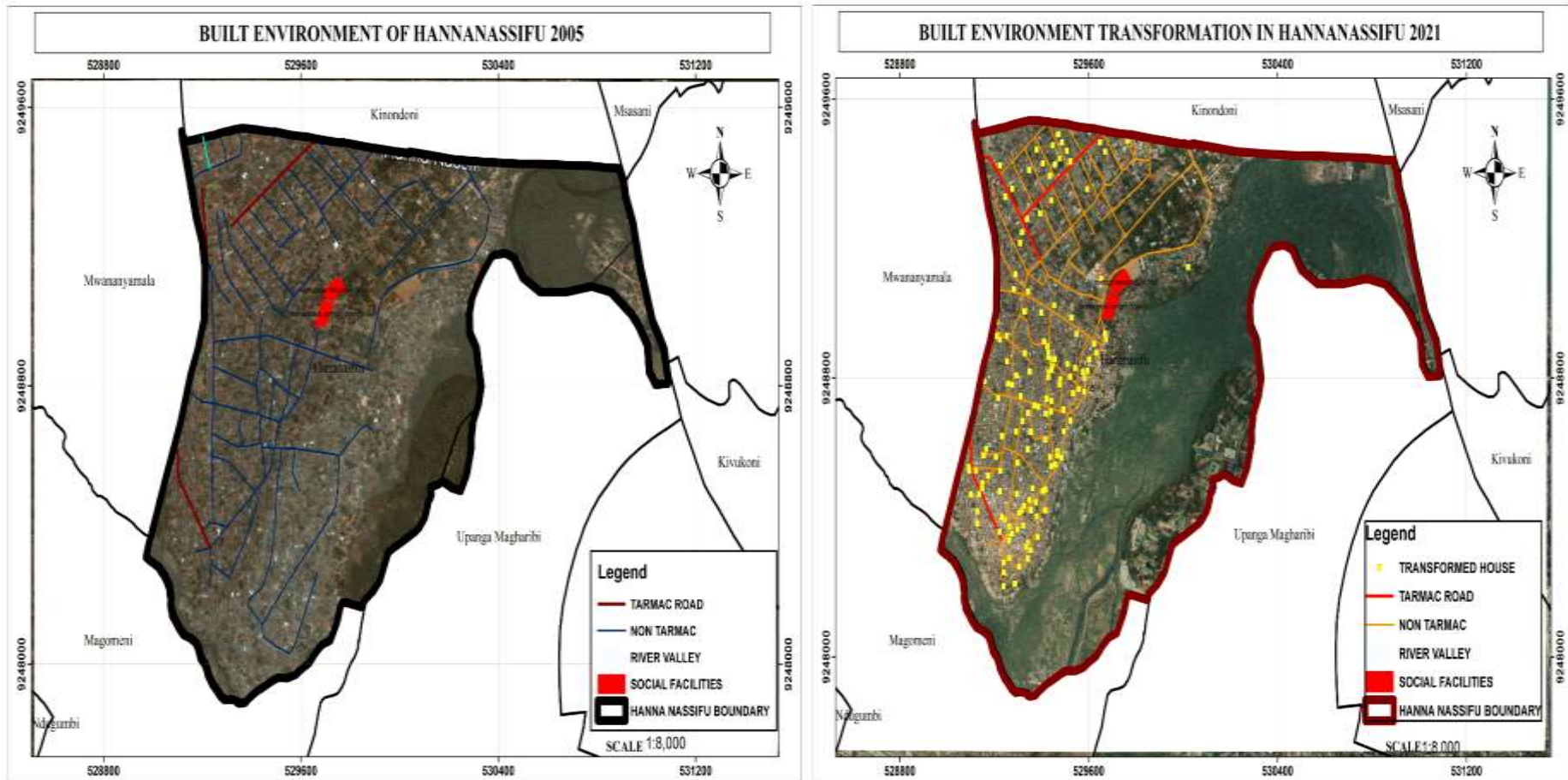
Source: Author

Figure 6.2: Built Environment and Transformation in Manzese
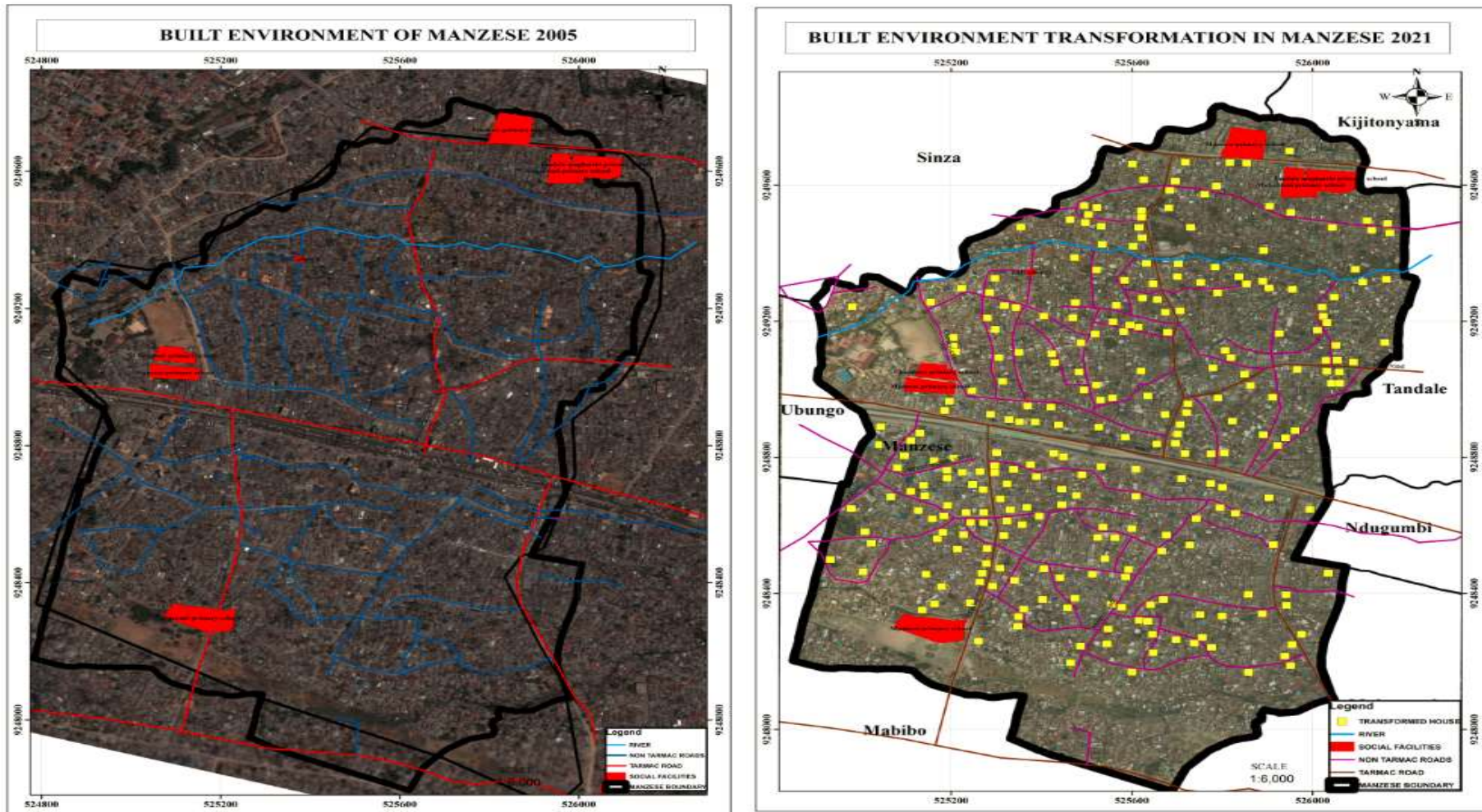

Source: Author

Figure 6.3: Built Environment Transformation in Vingunguti
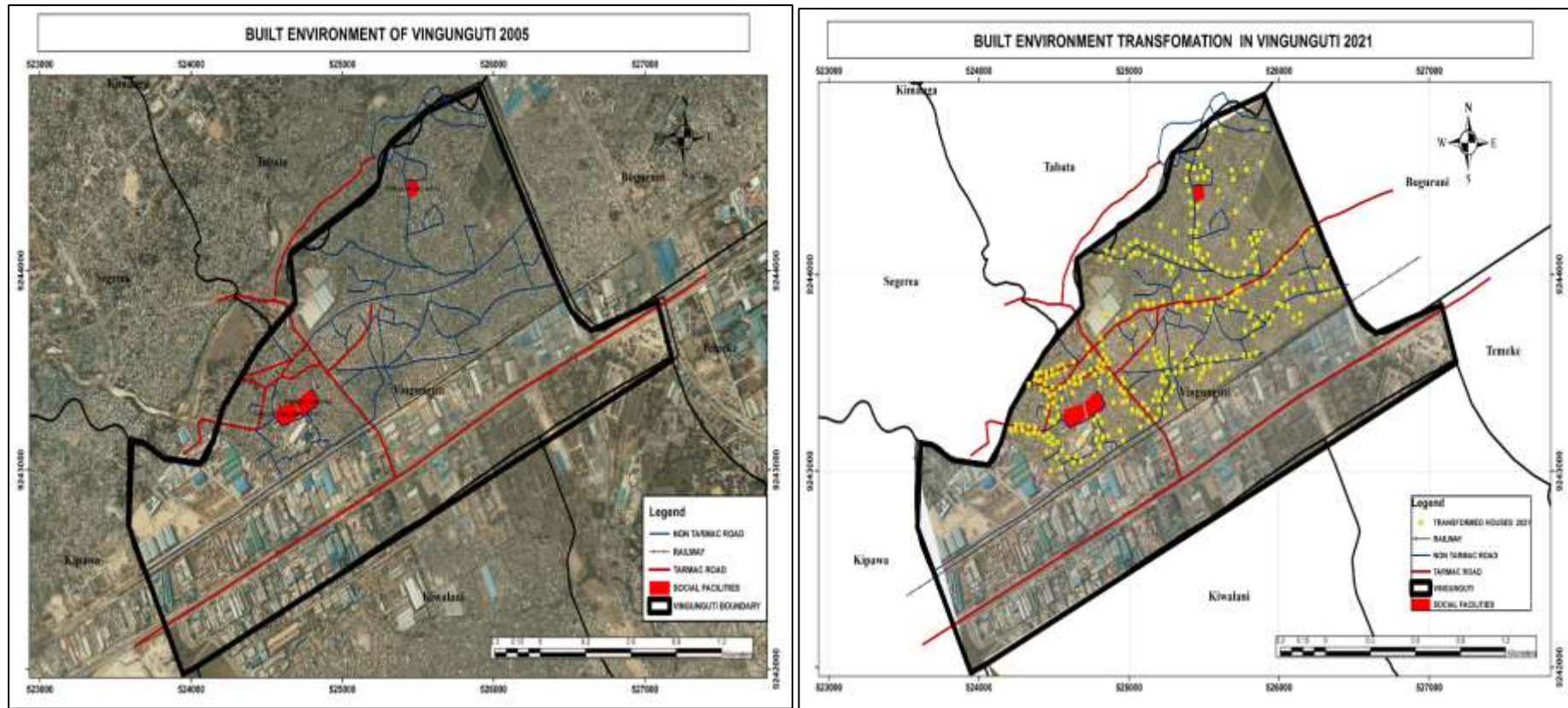
Source: Author

The average-built environment in the studied informal settlements is essentially unchanged and stable, but transformation of housing units is occurring along transportation networks, implying that provision of road infrastructure may have induced the change in housing unit distributions, reflecting the lack of unified planning guidance for the built environment in the settlements. In informal settlements, buildings are usually built first, followed by roads. The road networks are typically complex and irregular, with poor road conditions, lowering residents' quality of life and limiting the settlements' economic development potential. With the increase in the road network density and pavement of the roads, building density tend to increase with change of housing types, that is, from Swahili house to mid-rise apartments.

A careful analysis of urban morphological elements and ordering rules governing them, as the raw-material for design, can inform good urban design and potentially help urban designers to make better design decisions (Kamalipour, 2020). Within the context of informal settlements, any intervention (including basic physical and social infrastructure provision) will gradually be integrated into the existing and future pattern of land use, appropriation and development. Therefore, the potential for these elements to be maintained and sustained over time depends on the extent to which they support necessary daily actions-i.e., accessibility, social interaction, and livelihood activities. The feasibility and sustainability of interventions are also dependent on how existing relationships and rules governing the land-for example, ownership rights, control, use, and management-are respected in design proposals (Ribeiro, 2006).

6.2. Implications of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam

6.2.1. Socio-Spatial Exclusion of Informal Settlements

One of the most visible physical manifestations of social exclusion in African cities is the proliferation of informal settlements (Arimah, 2017). People living in these settlements face the most dreadful living and environmental conditions, including inadequate water supply, squalid sanitary conditions, breakdown or non-existence of waste disposal arrangements, overcrowded and dilapidated human settlements, hazardous location, insecurity of tenure, and vulnerability to serious health risks. Residents of informal settlements are unable to effectively participate in the economic, social, political, and cultural spheres of the city, which define their respective livelihoods. However, this has resulted in the emergence of governance approaches in interventions to improve the socio-spatial characteristics of informal settlements, but the socio-spatial relations of informal

settlements have persisted. Thus, residents of informal settlements, who are already vulnerable to shocks and stress due to their geographical location and corresponding social construct, remain precarious and vulnerable.

According to Satterthwaite (2016), there is a strong relationship between the persistence of informal settlements and the introduction of governance approaches that promote and sustain informal settlement social-spatial exclusion. The study discovers that interventions to informal settlements date back to the colonial era, when residents of informal settlements were spatially and socially excluded from the socioeconomic, cultural, and political setting of the urban landscape, and that this scenario persisted after independence. Attempts to improve the social construct of informal settlements by providing physical infrastructures and social utilities through squatter upgrading schemes only exacerbated socio-spatial inequities because scheme beneficiaries never benefited from the programs. Furthermore, efforts to coordinate and implement a demand-driven strategy for public infrastructure provision fell short of expectations because the CIP intervention could not meet all of the community infrastructure's needs and the program's spatial provisions were insufficient to improve the social attributes of informal settlements. Nonetheless, the CIUP participatory and community-driven approach only resulted in improved access to infrastructure and services such as roads and footpaths, drainage, portable water and sanitation, solid waste, and streetlights; increased the monetary value of houses/properties in project areas; reduced disease incidences; and reduced flooding and related damages; notwithstanding, socioeconomically, the program induced involuntary displacement and resettlement of settlement residents. Similarly, the regularization and formalization of pre-upgraded informal settlements through improved physical configurations and the issuance of land titles and deeds for improved livelihoods has neither improved security of tenure nor provided adequate infrastructure to ignite social development, but instead has resulted in gentrification of the scheme areas (informal settlements).

In general, the socio-spatial relations of informal settlements interventions maintain the endemic socio-spatial exclusion of informal settlements characteristics. These findings are consistent with Rupprecht's (2020) interpretive case study investigation into how the Kenyan Slum Upgrading Programme's (KENSUP) urban design contributes to the maintenance of socio-spatial hierarchies that allow for the exclusion of Kibera's urban residents. According to academic studies, urban planning in colonial and postcolonial Africa is intended to combat the persistence of disorder (Swanson 1977). Neighbourhoods are reclaimed through re-planning mechanisms. Accordingly, Mitchell's 'enframing' theory explains how actors create new hierarchies in social spaces (1991).

That is, by replacing one socio-spatial order with another, enframing as an urban planning tool re-creates hierarchies in a city in favour of some. Those who re-create socio-spatial hierarchies or profit from their demise have only a limited amount of power over others (Mitchell 2002). Mitchell believes that enframing reflects the human desire to control others and that it may be accelerated by modern technological and urban planning aspects (ibid.).

In today's socio-spatial urban planning, enframing is critical for successfully installing power and social order mechanisms, including intervention implementation in informal settlements (Rupprecht, 2020). In an informal settlement's socio-spatial setting, structurally integrated inequalities demonstrate that the built environment includes urban exclusionary patterns and settlement stereotypes. The socio-spatial relationships of informal settlements define their own construct and revolution. Interventions to informal settlements provisions, on the other hand, aim to recreate the socio-spatial relations setting of informal settlements without taking into account the existing socio-spatial hierarchies. In general, interventions to informal settlements attempt to frame socio-spatial settings in accordance with the preferences of urban governance frameworks in connection to a global urban agenda that serves an international and modern legitimation. The interventions design strategies do not adequately engage the voices and priorities of informal settlement residents, while concurrently attempting to establish control over the socio-spatial setting hierarchical system by replacing its informal order, which is justified by contemporary demand for adequate living standards that are not proportionate with the status quo, culminating in the tenacity of socio-spatial exclusion of informal settlements.

6.2.2. Socio-Spatial Inequalities of Informal Settlements

Several interconnected factors contribute to the growth and spread of informal settlements. Informal settlements have been portrayed as a result of institutional framework failures in urban governance, such as rapid urbanization, colonial legacy factors, and an inadequate economy. Therefore, interventions to address the issue of informal settlements have centred on this concept. The interventions to the proliferation of informal settlements have evolved over time. These intervention approaches have evolved from benign neglect to repressive options such as forced eviction and demolition, resettlement or relocation, squatter upgrading programs, and, most recently, the adoption of enabling strategies. Despite their failure to provide long-term solutions to the emergence and spread of informal settlements, many of these approaches have evolved and are still in use. Thus, interventions in informal settlements have not only targeted physical aspects of land, housing, and basic services, but they have also engaged in multiple social dimensions related to finding land and housing solutions, such as improving the access to infrastructure and services,

livelihood and community development opportunities, and adequate institutional and governance arrangements that appropriately support intervention processes. Importantly, these interventions perpetuate informal settlement's socio-spatial inequalities.

Interventions in informal settlements have evolved over time, but they are all based on formalizing the informal. Thus, while informal settlements interventions are aimed at closing the socio-spatial inequality gap between the informal and formal, the intervention outcomes maintain the norm. In general, global interventions in informal settlements have shifted toward land tenure intervention. The most popular governing philosophy in this regard is land titling and formalization, which entails replacing local informal tenure systems with global standards formal models based on western notions of individual property and property registration. Land tilting provides the foundation for increased land market transactions by formalizing ownership rights and establishing property information systems such as a cadastre and land registry to secure tenure and record land transactions. Therefore, the perceived risks associated with informal ownership are removed, allowing market participants to buy and sell land without fear of asset seizure. The widespread use of formal, statutory titles would free up potential local investment for house improvements, increasing property values and thus municipal revenues through higher property taxes (De Soto, 2000).

Title and the reproduction of individual property rights, on the other hand, have been deemed dangerous because they obscure the complexities embedded in local contexts and the contributions of locally evolved property institutions, while also discriminating against other forms of tenure that may be more appropriate for large segments of the population (Payne & Durand-Lasserve, 2013). According to Porter (2011), land formalization policies are based on a liberal-economic property model that disregards the use rights of people living in informal settlements. According to Porter (ibid), use rights are more important than private exchange rights, and formalization can be seen as a form of enclosure and dispossession because it disregards the real property use rights exercised by people living in informality. Formalization, according to this argument, is a control and power grab rather than a liberal attempt to address urban justice issues. Thus, the primary goal of formalization is to reorganize property relations for the purposes of accumulation and control (ibid.). As a result, titling is regarded as a form of accumulation-based dispossession (Harvey, 2004). Incorporating informal property into the formal market enables the conversion of land and houses into commercial assets while also acting as a powerful mechanism for removing social ties to land and housing (Rolnik, 2015). As a result, the tenure security of the urban poor is vulnerable to market forces. According to Payne and Durand-Lasserve (2013), current land liberalization dynamics in

developing countries, as well as systematic land title programs, are increasing market pressure on low-income urban settlements. This has had a significant impact on tenure security, leading to market-based evictions. Market-based evictions are not recorded because they do not necessitate the use of force or compensation, regardless of how fair or equitable it is. Market-driven displacement is outpacing forced evictions globally (ibid). Besides that, the costs of a formalized property can put financial strain on poor households by requiring them to pay taxes and pay for city services. Formalization has a particularly negative impact on renters, as these processes tend to raise rents (Durand-Lasserve & Selod, 2009). Furthermore, the costs of formalized property can place financial strain on poor households by requiring them to pay taxes and city services. Renters suffer the most from formalization because these processes tend to raise rents (ibid).

Despite the apparent entitlements of securing property rights for the urban poor with state support, evidence suggests that approaches to formalize property rights through title have failed in more cases than they have succeeded in their own terms (Hutchison, 2008; Deininger & Feder, 2009; Marx, 2009; Rolnik, 2015). Regardless of the significance of titling, evidence suggests that the most successful land titling programs have necessitated an effective governance environment, an efficient state apparatus, and the distribution of socioeconomic power (Deininger & Feder, 2009), all of which are either absent or inadequate in most developing countries, including Tanzania. Therefore, interventions to informal settlements are unwittingly exacerbating the settlements' socio-spatial inequalities.

6.3. Governance Implications of Socio-Spatial Relations of Informal Settlements Policy Responses in Dar es Salaam

6.3.1. Incoherent Legal and Policy Frameworks for informal settlements

A variety of legal and policy instruments are used by institutions involved in urban planning and informal settlements management. A review of some of the laws and policies reveals a number of inconsistencies, contradictions, and issues with implementation. This analysis includes the Urban Planning Act of 2007, the Land Act of 1999, the Local Government Act of 1982, and the Land Acquisition Act of 1967, as well as the 2018 Urban Planning (planning space standards) Regulations. Land management in Tanzania, including informal settlements in urban areas, is subject to legal pluralism, making it difficult for municipal councils to effectively plan and control development. Failure to harmonize legislative provisions makes it difficult for local governments to carry out their functions of urban governance and informal settlements management effectively.

The 1995 National Land Policy aimed to address land-related issues such as land tenure, land use, and rapid urbanization, as well as land acquisition, compensation, land allocation, the institutional framework dealing with land issues, and dispute resolution mechanisms, to name a few (URT, 1995). The policy had included, among other things, the provision of basic services, special area building regulations with affordable levels of service, and settlement upgrading with local authorities preparing and implementing upgrading plans with the participation of residents and their local organizations. However, reality reveals that service provision is uncoordinated and inadequate; planning space standards regulations are inconsistent with the haphazard spatial configurations of informal settlements for affordable services; and the Ministry of Lands, Housing, and Human Settlements Development prepares settlement upgrading plans or schemes for local authorities to implement without adequate community participation.

Residential areas, unplanned settlements, building height, building lines and setbacks, floor area, plot coverage and plot ratio, health facilities, education facilities, recreation facilities, beach facilities, golf course, passive and active recreation, public facilities by planning levels, public facilities by population size, parking and road width, and agricultural show grounds are all covered by 2018 urban planning regulations. In informal settlements, plot sizes range from 90-300m2, with a maximum single household and building of 80% plot coverage, a maximum plot ratio of 2.5, a maximum number of stores of 4-6, and setbacks of 5m front, 1.5m sides, and 3m rear. Furthermore, the planning regulations provide for right of way of 12-15m for primary access roads, 10-12m for secondary access roads, 4-8m for tertiary access roads (one way), and 2-4m for footpath, with carriageway of 5.0-7.5m, 5.0-6m, 2-3m, and 2m for primary access roads, secondary access roads, Tertiary access roads, and footpath. However, the development of informal settlements is haphazard and uncoordinated. The provision of infrastructure services occurs after the initial settlement development has occurred, and the applicability of the planning regulations is dependent on the availability of space within the settlements, and provision of space for infrastructures would entail displacement or resettlement of settlement households, including livelihood, as required by the Land Acquisition Act of 1967. This implies that the regulations governing planning space are incompatible with the socio-spatial morphology of informal settlements and that alternative solutions must be sought.

The Ministry of Lands, Housing, and Human Settlements Development, as well as Local Government Authorities (Urban Autholities-Municipal Councils), are legally tasked with managing and controlling urban housing, including informal settlements. According to section 8 of the 1999

Land Act, the Minister and/or the Ministry of lands is responsible for policy formulation and for ensuring the execution by officials in the ministry of the functions connected with the implementation of the National Land Policy and of the Act, where as Local government authorities as provided for by section 59 of the 1982 Local Government (Urban Authorities) Act and section 7 of the Urban Planning Act of 2007 as planning authorities are directly responsible for preparation of local detailed plan/schemes and implementation of the same through surveying and allocation of land for urban development. Section 59(e) of the Local Government Act of 1982 (Urban Authorities) empowers urban authorities to prepare detailed planning schemes and submit them for approval to the minister responsible for local governments. Section 17 of the Urban Planning Act of 2007, on the other hand, empowers the Director for Urban Planning to approve detailed planning schemes submitted by planning authorities established by the 1982 Local Government Act, who are technically required by the latter Act to report on the same to the Minister responsible for Local Government for approval. Furthermore, Section 6 of the Land Acquisition Act No. 47 of 1967 empowers the Minister responsible for lands to notify landowners if their land is required for public interest purposes and to notify the President of the intention to acquire it. Similarly, Section 60 of the Local Government Act No. 8 of 1982 empowers the Minister responsible for local governments to acquire land or make a recommendation to the president to acquire land in the public interest. In general, these laws, among others, present competing interests and contradictions that could pose implementation challenges in the context of informal settlements governance.

6.3.2. Multiplicity of Actors, Competing Jurisdictions of Authority and Coordination Failures

According to the study, because of the diversity of regulatory frameworks, informal settlements governance reflects a specific type of institutional weakness resulting from the state's structure. The regulatory framework governing informal settlements allows for various actors to be involved in settlement management. Figure 6.4 depicts the roles of key governance actors in the management of informal settlements.

Figure 6.4: Key Governance Actors Roles in Informal Settlements Management

Key Governance Actors in Informal Settlements	Actor	Roles
	Ministry of Lands, Housing & Human Settlements Development (MLHHSD)	• Initiate & implement regulatory frameworks • Prepare and approve land use planning schemes • Administer land administration & development
	Local Government Authorities (LGA) (Municipal Councils)	• Preparation of local land use planning scheme • Implementation of MLHHSD regulatory frameworks • Prepare & implement by-laws • Enforcing development control and regulating land use development
	Utility Agencies (TANESCO, DAWASCO, TANROADS)	• Provision of basic services (water, power supplies & roads)
	Communities (Councillor, Ward Development Committee, Sub-Ward Development Committee, Residents)	• Proposing community development plans • Implementing municipal council decisions, policies, regulations, orders, & directives • Promoting wards economic and social development • Planning, monitoring & coordinating ward activities
	Development Partners (World Bank, USAID, FAO)	• Building capacity of government & non-state actors • Promoting regulatory framework reforms • Financing policy response interventions • Promoting land access rights
	Civil Society (CBO's, NGO's)	• Policy advocacy & land activisms • Community mobilization & participation • Resource mobilization & implementation of policy responses interventions • Community capacity building
	Private Sector (Investors, Developers, Planners, Lawyers, Surveyors, etc.)	• Land & Housing Financing & Investments • Land & housing service provision • Facilitating land & housing market

Source: Author

Conflicting intentions, preferences, or preconceptions may influence these diverse informal settlement governance actors. Some of these actors may play similar or related roles, while others may play multiple roles; however, they have varying degrees of influence on informal settlement governance issues, despite the fact that some work independently of others. The roles of the actors not only encompass a wide range of activities, relationships, and contexts, but they also frequently

overlap, making informal governance decision-making complex. Conflict and collision between actors may be unavoidable as a result. According to Katundu et al. (2013), actor roles are influenced by the interaction and power dynamics between actors playing different roles. Hilhorst (2010) observes that some actors are influenced by their relationships and dynamics, which are determined by power and authority, which are influenced by politics and financial resources. As noted by Kedogo et al. (2010), certain actors may be included or excluded, consciously or unconsciously, due to inequalities in the distribution of power. Therefore, their contribution to informal settlement governance may suffer as a result (Haapanen 2007). These power dynamics impede certain actors' contributions to informal settlement governance.

The government, for example, serves as a land owner, policy regulator, land administrator, and land-use manager, as well as setting standards and parameters for local governments and other actors to follow in informal settlements governance. Through its line ministries and public utility agencies, the government is also involved in the provision of infrastructure such as housing, transportation infrastructure, water, electricity, and sanitation services, among other things. Due to power overlapping between the MLHHSD and the LGAs, to some extent; both the MLHHSD and the LGAs play similar roles in the regulation of land uses, land allocation, and land development control, and in some cases, their duties and roles overlap, resulting in inefficiency. In relation to neoliberal economic policies embedded in the regulatory framework, private sector actors are driven by the supply and demand for land services facilitated by the government, including land appropriation in informal settlements. In other words, private actors rely on the government to create a favourable environment for their operations.

Similarly, in order not to appear to be interfering with state autonomy, development partners have concentrated their efforts on strengthening local institutions, establishing legal frameworks, and raising citizen awareness (Ravnborg et al. 2016). Globalisation has enabled development partners to implement global strategies to improve the welfare of informal settlements, such as UN-Participatory Habitat's Slum Upgrading Programmes, which began in 2008. These and other strategies, on the other hand, can only be implemented if there is political will and commitment to do so (Wolff et al. 2018). Although civil society organizations (CSOs) are at the forefront of the fight for citizens' land rights and sometimes supplement development partners' efforts to protect citizens' land rights, they are frequently overwhelmed by political sanctions and influence (Haapanen 2007). On the other hand, the government's repressive mechanisms and regulation of CSO activities may impede their efforts. This is consistent with North's (1990) contention that institutions have the ability to limit actors' incentive and disincentive sets. As a result, in order to

avoid conflict with the government, actors are unable to engage in community-transforming initiatives. Furthermore, landowners and local communities are a vulnerable segment of society that is easily exploited by other actors. Investors, for example, are constantly attempting to acquire land at a low cost from land occupiers in order to maximize profit, and residents of informal settlements are either voluntarily or unwillingly evicted, with or without government intervention. Therefore, the government has the ability to influence the decisions of other actors or obstruct effective interactions.

In general, the study discovers that the existence of several actors all involved in the management of informal settlements have overlapping roles and responsibilities, and that the lack of clearly defined boundaries has resulted in inefficiency in informal settlement management. The government and its agencies wield greater power than others, influencing fair interaction and participation in informal settlement governance. The current legal and institutional framework does not foster an environment in which all actors can participate equally. It allows for internal and inter-actor conflict, resulting in conflicting laws and bureaucratic regulations that prevent the central government from sharing power with local governments (Massoi and Norman 2010). It is critical to understand not only the institutional framework that governs informal settlements, but also the various actors' motivations and perceptions of the governance structure. To overcome the power imbalance, significant coordination is required because the actors are not guided by a single strategy or institutional framework. This is critical for providing useful lessons for policy and theory on the general management of informal settlements.

6.3.3. Inadequate Community Participation

As stipulated in the National Land Policy of 1995, the National Land Act No: 4 of 1999, and the Urban Planning Act No: 16 of 2007, community participation is essential for effective informal settlements governance at all stages of the process. Section 19(1b) of the 2007 Urban Planning Act requires all stakeholders in the plan's affected area, including landowners, public and private institutions, community-based organizations, and non-governmental organizations, to participate. However, an observation reveals that local government authorities do not adequately consult the community, particularly indigenous land owners with traditional land rights, during the preparation planning schemes (Nuhu, 2018). Gwaleba and Masum (2018) discovered that in Dar es Salaam, Participatory Land Use Planning (PLUP) approaches are frequently thwarted by a lack of local community participation.

Incorporating local communities into informal settlements management, such as land regularization, is a viable alternative to transitioning from non-participatory to participatory planning approaches, such as master planning (Majani, 2000). Participatory land management approaches, including informal settlements management (which in this context refers to land regularization activities), have become so common and mainstreamed in policy and practice that securing tenure has never been easier (Magigi, 2004; Meshack, 1992; Smith, 1997). According to Clarke (1994), Kombe (2000), and Topfer (2000), despite various planning policy and legislation reforms, participatory planning approaches implementation efforts in developing countries to promote urban development in rapid urbanization cities, including informal settlements management, have been haphazard and disjointed (2002). The haphazard and disjointed efforts appear to have contributed to continued informal settlement, fears of landowner eviction, insufficient manpower and finance mobilization, and political interference in rapidly urbanizing cities (Mabogunje, 1992; UNDP, 1998). These issues highlight the importance of comprehending the growing critique of grassroots institutions' critical role in informal settlement management.

CHAPTER SEVEN
CONCLUSION AND RECOMMENDATION

7.0. Introduction

This chapter provides the conclusion and recommendation of the socio-spatial relation examination of informal settlements interventions in Dar es Salaam.

7.1. Conclusion

Informal settlements in Dar es Salaam have a long history of socio-spatial relations that date back to the colonial period and have continued to expand to this day. The colonial urban planning and administrative framework had established the social and spatial configurations that gave rise to today's informal settlements. Informal settlements' socio-spatial relationships depict a phenomenon marked by inadequate social and physical aspects of what is considered formal or planned. Generally, the socio-spatial relations of informal settlements in Dar es Salaam are a function of social and behavioral perspectives of urban informality. The intricate social activities and actions leading to a notion of empowerment and actualization of the principles of moral economy and social power are means by which informal settlement inhabitants organize and improve their spatial living conditions. This is indicative of production and economic organization in informal settlements, as it relates to a variety of socio-spatial behaviors and practices taking place within the settlements; that is, the informal economy governing the status quo. Informal settlements are defined as forms of income-generating production, services, or settlement practices that are largely unregulated by the state or formal institutions.

In addition, unlike most informal settlements in the developing world, the burgeoning socio-spatial relations behavioral patterns of Dar es Salaam's informal settlements are dynamic and non-static. The settlements' socio-spatial relations are an entwining of the formal and informal, a sort of mobile and elastic way between legal and illegal. In other words, the 'unique' patterns of informality that relate to informal settlements behavior cannot be associated with a particular social group, space, or phenomenon, but rather with a higher level of mobility in which inhabitants switch between formal and informal at various settings and circumstances. The behavioral pattern of informal settlements in Dar es Salaam is 'undefinable' (dynamic), and its present characteristics are seen when inhabitants switch between formal and informal and have both characteristics at the same time. Living in an informal settlement but working or pursuing a livelihood in a formal sector, for example. Informal settlement behaviors manifest in specific activities, preventing a permanent distinction between formal and informal. As a result, both the formal and informal are

interconnected: a dynamic relationship in which behaviors are not static (or permanent), but evolve over time in response to changing conditions and circumstances.

Nonetheless, despite the social-cultural and behavioral socio-spatial relations settings of informal settlements in Dar es Salaam, various interventions, such as squatter upgrading, community infrastructure programs, community infrastructure upgrading programs, and regularization and formalization of informal settlements, have been implemented to address socio-spatial relations disparities. These interventions attempt to improve the social construct of informal settlements in order to trigger corresponding improvements in spatial relations, as well as to develop informal settlement spatial configurations in the intention of triggering social relations improvements. These interventions, regrettably, have failed to improve the socio-spatial relations of informal settlements, instead exacerbating the settlements' socio-spatial exclusion and inequalities.

Informal settlements inhabitants are generally living in deplorable environmental and spatially marginalized conditions, deprived of the socio-spatial relations benefits of interventions objectives. Upgrading informal settlements intervention attempts to provide physical infrastructure amenities that would foster social construct of the settlements only pervaded socio-spatial imbalances as beneficiaries never benefited from the schemes; CIP intervention strategies to coordinate and implement a demand-driven strategy in the provision of public services fell short of expectations, as community infrastructure needs and program spatial provision were insufficient to strengthen the social construct of the settlements; The CIUP intervention improved lifeline utilities but increased property values, and socially, the program induced involuntary displacement and resettlement of inhabitants of informal settlements; and regularization and formalization of previously upgraded informal settlements only improved their physical configuration at the expense of tenure security and adequate infrastructure to spark social development. Generally, interventions envisage on converting informal settlements to formal settlements or quasi-formal regimes. That is, the alienation of traditional (customary) socio-spatial relations that serve as the foundation of the settlements construct in order to advance contemporary or formal standards that are incompatible with the settings of the settlements. As a result, rather than bridging gaps in socio-spatial relations, interventions perpetuate the vulnerable status quo of informal settlements.

In contrast, the governance frameworks of interventions in socio-spatial relations and informal settlements are rigidly aligned with colonial planning regulations and building standards. Since the colonial era, Dar es Salaam's informal settlements have been governed by a state-led, neoliberal-oriented governance system with a limited civil-service governance pattern. An institutional

framework that includes incoherent legal and policy frameworks, inadequate community participation and decision-making structures, coordination failures among stakeholders, a plurality of laws and policies establishing competing jurisdictions of authority, a challenging interface and capacity of municipal authorities, and a centralized and bureaucratic administrative system defines the governance system. In other words, the implementation framework of socio-spatial relations of informal settlement interventions is characterized by weak urban governance, which perpetuates the emergence and proliferation of informal settlements with their respective inherent socio-spatial relations construct.

7.2. Recommendations

The following are the recommendations of the study:

a) Integration of socio-spatial morphologies in informal settlements interventions

Interventions in informal settlements must recognize and integrate the everchanging and non-static socio-spatial relations and behavioural patterns of informal settlements. That is, interventions should not be framed from the standpoint that informal settlements are the polar opposite of formal settlements, as traditional contemporary interventions provide for, but rather from the perspective that informal settlements are a mode that results from the interweaving of the formal and informal, a sort of mobile and elastic way between legal and illegal. In other words, because socio-spatial relations are dynamic and cannot be generalized, interventions should be tailored to the specific socio-spatial morphology of each informal settlement. Instead, they are linked to a particular community, geographic space, or characteristic that is defined by a higher degree of mobility, in which people switch between formal and informal settings or are intertwined in various situations and circumstances. Therefore, deliberate intervention in informal settlement management is required, which recognizes the interdependence of the formal and informal sectors, as well as a dynamic relationship in which socio-spatial relations are not static (or permanent), but evolve over time as conditions and circumstances change.

b) Informal settlements intervention reforms

Dar es Salaam's informal settlements management has been guided by a dualism model that incorporates both economic and legal perspectives since the colonial era. That is, the traditional formal/informal separation theory of classifying urban activities as legal or illegal. As a result, interventions for the management of informal settlements have been developed and implemented in accordance with such perspectives and foundations, with little success. In the formulation and implementation of the interventions, the socio-spatial forces and behavioral perspective balance of informal settlements socio-spatial relations are overlooked. Therefore, urban planners and

policymakers must examine current informal settlements management interventions to ensure that the social and cultural context of informal settlements is considered. The ultimate goal is that without paying special consideration to the social actions and forces that underpin the spatial construct of informal settlements, and a simple classification of formal/informal isolation, interventions for informal settlements in urban areas are grossly inadequate.

c) **Strengthening local governance in implementation of informal settlements interventions**

Local governments become more responsive and accountable as a result of community participation, which is a key factor for effective informal settlements interventions. Community participation results in increased organizational commitment and, ultimately increased citizen control. Citizens' participation in identifying problems and setting priorities may encourage a greater sense of community involvement and, thereby, improve citizen-local authority trust relations. Therefore, policies aimed at improving the supply side of informal settlements management, such as the ability of municipal authorities, elected officials, and services committees to rule in a citizen-centred manner, should be prioritized. This is aimed at addressing issues such as poor implementation of citizen-centred elements of urban planning and informal settlement management, as well as a lack of attention to community level governance. The goal is to ensure that decision makers allocate adequate resources to the creation, strengthening, and capacity building of ward and neighborhood structures, as well as to ensure that necessary participatory planning processes, such as participatory budgeting and town hall meetings, are effectively institutionalized on a regular basis.

7.3. Areas for Further Studies

Further studies are also required to:

1. Exploring the socio-spatial relations of informal settlement intervention reforms for sustainable urban development
2. Analyzing the integration of socio-spatial morphologies in informal settlements management framework for effective policy response

REFERENCES

Abbott J. (2002). *An analysis of informal settlement upgrading and critique of existing methodological approaches.* Habitat Int. 26(3):303–15.

Abbott, J. (2002) A method-based planning framework for informal settlement upgrading. *Habitat International*, Vol. 26, no. 3, pp. 317–333 10.1016/S0197-3975(01)00050-9.

Abdenur, A. (2009). *Global Review of Political Economy of Slum Improvement Schemes: Constraints and Policy Orientati*ons. Washington, DC: World Bank.

Abrams, C. (1966). *Housing in the Modern World*. London: Faber and Faber.

Acioly C. (2002). *The rationale of informal settlements regularisation projects: from settlement upgrading to integration approaches*. Lecture notes. Institute for Housing and Urban Development Studies – IHS; 2002

Acuto, M., Dinardi, C., & Marx, C. (2019). Transcending (in)formal urbanism. *Urban Studies*, 56(3), 475-487. https://doi.org/10.1177/0042098018810602.

Afenah, A., (2009). *Conceptualizing the Effects of Neoliberal Urban Policies on Housing Rights: An Analysis of the Attempted Unlawful Forced Eviction of an Informal Settlement in Accra, Ghana.* University College London

Agbola, T. (1998). The Housing of Nigerians. *A Review of policy Development and Implementation Research Report* 14, Development Policy Centre, Ibadan, Nigeria.

Ajakaiye, O. (2007). *Levelling the playing field -strengthening the role of African research in Policy-making and in and for Sub-Saharan Africa*. In: Ayuk, E.E., & Marouani, M.A., Eds. *The Policy Paradox in Africa: Strengthening Links between Economic Research and Policy Making*. Africa World Press and International Development Research Center, Ottawa, Canada.

Akhmat, G., & Khan, M. M., (2011). Key interventions to solve the problems of informal abodes of the third world, due to poor infrastructure. *Procedia Social and Behavioural Sciences* 19. 56–60. Doi:10.1016/j.sbspro.2011.05.107

116

Alemie, B. K., Bennett, R. M., and Zevenbergen, J., (2015). A socio-spatial methodology for evaluating urban land governance: the case of informal settlements. *Journal of Spatial Science*. http://dx.doi.org/10.1080/14498596.2015.1004654

Alim, M., & Sulaiman, S., (2006). *The causes and consequences of the informal settlements in Zanzibar-Tanzania*. Shaping the Change XXIII FIG Congress Munich, German.

Allen J (2003). *Lost Geographies of Power*. Oxford: Blackwell.

Alonso, R., Dessein, W., & Matouschek, N., (2008). When Does Coordination Require Centralization? *American Economic Review*. 98:1, 145–179

AlSayyad, N. (2004). Urban Informality as a "New" Way of Life. In A. Roy & N. AlSayyad (Eds.), *Urban informality: Transnational perspectives from the Middle East, Latin America, and South Asia* (pp. 7–30). New York: Lexington

Ambrose, P. (1997), "Better Housing as Preventative Medicine". *Housing Review*, Vol. 46 No. 3, pp. 67-72

Amin A (2004). Regions unbound, towards a new politics of place. *Geografiska Annaler*, Series B 86: 33–44

Amnesty International, (2010). *Stop forced evictions in Africa*. Amnesty International

Amnesty International, (2013). *We are like rubbish in this country-Forced evictions in Nairobi, Kenya*. Amnesty International.

Andreasen, M. H., McGranahan,G., Kyessi, A., & Kombe, W., (2020). Informal land investments and wealth accumulation in the context of regularization: case studies from Dar es Salaam and Mwanza. *Environment and Urbanization* Vol 32, No 1, pages 89–108

Anyamba, T., (2011). Informal Urbanism in Nairobi. *Built Environment*. 37, No. 1, 57-77

Arandel, C., & El Batran, M. (1997). *The informal housing development process in Egypt*. University College.

Arimah, B. C., (2017). *Slums as Expressions of Social Exclusion: Explaining the Prevalence of Slums in African Countries*. UN-Habitat, Kenya.

Arku, G., (2009). Housing Policy Changes in Ghana in the 1990s. *Housing Studies,* Vol. 24, No. 2, p.261–272

Armstrong, A. (1987). Master plans for Dar es Salaam, Tanzania. *Habitat International*, 11(2), 133–145

Arnstein S.R. 1969. A ladder of citizen participation. *Journal of the American Institute of Planners,* 35(2):216-224.

Asoka, G. W. M., Thuo, A. D. M., & Bunyasi, M. M., (2013). Effects of Population Growth on Urban Infrastructure and Services: A Case of Eastleigh Neighbourhood Nairobi, Kenya. *Journal of Anthropology & Archaeology* 1(1); June, pp. 41-56

Avis, W. R. (2016). *Urban Governance (Topic Guide)*. Birmingham, UK: GSDRC, University of Birmingham.

Augustinus, C. (2009). Improving Access to Land and Shelter. In *Land governance in support of the MDGs: Responding to new challenges, Proceedings of the World Bank and International Federation of Surveyors Conference*. Washington, DC, USA, 9–10 March 2009; pp. 9–10.

Awofeso, P., (2010). One out of every two Nigerians now lives in a city: there are many problems but just one solution. *World Policy Journal*, 27, 4, 67-73.

Babere, N. J. (2015). Social Production of Space: "Lived Space" of Informal Livelihood Operators; the Case of Dares Salaam City Tanzania. *Current Urban Studies*, 3, 286-299. http://dx.doi.org/10.4236/cus.2015.34024

Basile, P.; Ehlenz, M.M. (2020). Examining Responses to Informality in the Global South: A Framework for Community Land Trusts and Informal Settlements. *Habitat Int*., 96

Beard, V. A. (2018). Community-based planning, collective action and the challenges of confronting urban poverty in Southeast Asia. *Environment and Urbanization*, https://doi.org/10.1177/0956247818804453

Benton, L (1994) 'Beyond Legal Pluralism: Towards a New Approach to Law in the Informal Sector. *Social and Legal Studies* 3: 223–242.

Bhambhri, C. P., (1985). Organisational structure for the management of urban development in India. *The Indian Journal of Political Science*, Vol. 46, No. 1 (January-March 1985), pp. 63-78. Indian Political Science Association Stable URL: http://www.jstor.org/stable/41855150

Blessing, A., (2012). Magical or monstrous? Hybridity in social housing governance. *Hous. Stud.* 2012, 27, 189–207

Boonyabancha, S. (2001). Savings and loans: drawing lessons from some experiences in Asia. *Environment and Urbanization,* 13(2), 9-21.

Boonyabancha, S., & Kerr, T. (2015). Urban poor housing development in Asia: from target group to negotiating partner. In Herrle, P., Ley, A., & Fokdal, J. (2015). *From Local Action to Global Networks: Housing the Urban Poor*. London, New York: Routledge

Bourdieu, P. (1997). Efeitos do Lugar. In: BOURDIEU, P. (Coord.). *A Miséria do Mundo. Petrópolis*: Vozes, 1997. p. 159-166

Brakarz, J. Greene, M., & Rojas, E., (2002). *Cities for all: Recent experiences with neighbourhood upgrading programmes*. Washington DC: Inter-American Development Bank Churchill (1980). Shelter. World Bank, Washington, DC

Brugman, J., (2019). *Understanding formal and informal relationships in settlement upgrading for planning just and inclusive cities: the case of Phnom Penh, Cambodia.* PHd thesis. University of Queensland, Australia.

Buchholz, K., (2020). How has the world's urban population changed from 1950 to today? World Economic Forum. https://www.weforum.org/agenda/2020/11/global-continent-urban-population-urbanisation-percent/

Burns, T., Deinnger, K., Selod, H., & Dalrymple, K. (2010). *Implementing the Land Governance Assessment Framework. 'Facing the Challenges - Building the Capacity'*, FIG, Sydney, Australia.

Burrough E., (2008). *Microfinancing Sustainable Infrastructure in the Developing World*, CVEN 5700: Sustainability in the Built Environment 2008, pp. 1-19.

Burton, A. (ed.) (2002). *The Urban Experience in East Africa c.1750–2000*. Nairobi: The British Institute in East Africa

Castells, M. (1983). *The city and the grassroots: a cross-cultural theory of urban social movements*. Berkeley, California: University of California Press.

Cattaneo, M. D., Galiani, S., Gertler, P. J., Martinez, S., & Titiunik, R., (2009). "Housing, Health, and Happiness." *American Economic Journal: Economic Policy* (1): 75–105.

Chambers, J. (2019). Fluidities and Fixities: Examining the Alignment of Digital Platforms within Nairobi's Heterogeneous Infrastructural Configurations. *Frontiers in Sustainable Cities*, 1. Doi:10.3389/frsc.2019.00008

Chiweza, A.L., (2019). *Political Economy Analysis of Urban Governance and Management in Malawi*. Tilitonse foundation, Zomba

Clarke, G. (1994). Re-appraising the urban planning process as an instrument for sustainable urban development and management. *A Paper Presented in a Reappraisal of the Urban Planning Process*. Habitat, Nairobi.

COHRE [Centre on Housing Rights and Evictions], (1999). *Forced Evictions: A manual for action and human rights*. No 3. COHRE, Geneva

COHRE, (2002). *Forced evictions. Violation of human rights.* No 8. COHRE, Geneva

Cresswell T (2004). *Place: A Short Introduction.* Oxford: Blackwell.

Czischke, D., Gruis, V., Mullins, D., (2012). Conceptualizing social enterprise in housing organizations. *Hous. Stud*. 2012, 27, 418–437.

Dawes, S.S. (2010). Stewardship and usefulness: policy principles for information-based transparency. *Government Information Quarterly*, vol. 27, no. 4, pp. 377–383 10.1016/j.giq.2010.07.001.

Dawson, R., Wyckmans, A., Heidrich, O., Kohler, J., Dobson, S., & Feliu, E. (2014). *Understanding Cities: Advances in Integrated Assessment of Urban Sustainability*, Final Report of COSTAction TU0902 Centre for Earth Systems Engineering Research (CESER), Newcastle, UK.

Debusmann, R. and S. Arnold, Eds. (1996*). Land Law and Land Ownership in Africa: Case Studies from Colonial and Contemporary Cameroon and Tanzania*. Bayreuth African Studies. Bayreuth, Cambridge University Press.

Deininger K, & Okidi J. (2003). Growth and poverty reduction in Uganda, 1999-2000: Panel data evidence, *Development Policy Review*, vol. 21, pp. 481-509.

Deininger, K., & Feder, G. (2009). Land Registration, Governance, and Development: Evidence and Implications for Policy. *The World Bank Research Observer*, 24(2), 233-266. https://doi.org/10.1093/wbro/lkp007

Deininger, K., Selod, H., & Burns, A. (2012). *The land governance assessment framework: Identifying and monitoring good practice in the land sector*. The World Bank.

De Soto, H. (2000). *The Mystery of Capital: Why capitalism triumphs in the west and fails everywhere else.* Great Britain: Bantam Press.

Devoto, F., Duflo, E., Dupas, P., Pariente, W., & Pons, P., (2011). "Happiness on Tap: Piped Water Adoption in Urban Morocco." *American Economic Journal: Economic Policy, American Economic Association* 4(4): 68–99.

Diang'a, S.O., (2011). *Regularizing Informal Settlements for Sustainable Housing Development for the Urban Poor: The Case of Nairobi, Kenya.* Doctor of Philosophy in Architecture in the University of KwaZulu-Natal, Durban

Dovey, K., van Oostrum, M., Chatterjee, I., & Shafique, T. (2020). *Towards a morphogenesis of informal settlements. Habitat International, 104, 102240.* doi:10.1016/j.habitatint.2020.102240

Dovey, K.; King, R (2011). Forms of Informality: Morphology and Visibility of Informal Settlements. *Built Environ*. 2011, 37, 11–29.

Dovey, K. (2013). Informalizing Architecture: The Challenge of Informal Settlements. *Architectural Design*, 83(6), 82–89.

Dovey, K., & King, R. (2012). Informal Urbanism and the Taste for Slums. *Tourism Geographies,* 14(2), 275–293.

Doyle, R., (2017). *Slum Economies: Economic Activity Hubs in Informal Settlements: A Case Study of Dar es Salaam, Tanzania*. Ph.D. thesis. School of Planning and Geography Cardiff University

Dubovyk, O., Sliuzas, R., & Flacke, J. (2011). Spatio-temporal modelling of informal settlement development in Sancaktepe district, Istanbul, Turkey. *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 66, no. 2, pp. 235–246 10.1016/j.isprsjprs.2010.10.002.

Duflo, E., Galiani, S. and Mobarak, M. (2012). *Improving Access to Urban Services for the Poor: Open Issues and a Framework for a Future Research Agenda.* J-PAL Urban Services Review Paper, Cambridge, MA, Abdul Latif Jameel Poverty Action Lab

Durand-Lasserve, A., (2006). *Market-driven evictions and displacements: Implications for the perpetuation of informal. In Informal Settlements: A Perpetual Challenge?* Juta and Company Ltd.: Cape Town, South Africa

Durand-Lasserve, A. and Royston, L. (2002): "International Trends and Country Contexts - From Tenure Regularization to Tenure Security". In: Durand-Lasserve, A. and Royston, L. (eds.) (2002): *Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing Countries,* Earthscan Publications Ltd., UK, pgs 1-34.

Durand-Lasserve, A., & Selod, H. (2009). The formalization of urban land tenure in developing countries. Lall, S.V., Freire, M., Yuen, B., Rajack, R., Helluin, J.J. *Urban Land Markets: improving Land Management for Successful Urbanization*, Springer, 101-132.

Dwyer, D., (1975). *People and Housing in Third World Cities: Perspectives on the Problem of Spontaneous Settlements.* Longman, London.

Efthymiou, D., & Antoniou, C. (2013). How do transport infrastructure and policies affect house prices and rents? Evidence from Athens, Greece. *Transportation Research Part A: Policy and Practice,* 52, 1–22. doi:10.1016/j.tra.2013.04.002

El-Framawy, A., Algohary, S., (2011). *Egyptian approach to informal settlements development*. Informal settlement development facility, Egyptian Cabinet of Ministers.

Ehebrecht, D., (2014). *The challenge of informal settlement upgrading. Breaking new ground in Hangberg, Cape Town.* Universitätsverlag Potsdam

Fang, Y., Fan, J., Shen, M., & Song, M., (2014). "Sensitivity of Livelihood Strategy to Livelihood Capital in Mountain Areas: Empirical Analysis Based on Different Settlements in the Upper Reaches of the Minjiang River, China." *Journal of Ecological Indicators*, Vol. 38, pp 225-235

Fekade, W., (2000). Deficit of Formal Urban Land Management and Informal Responses under Rapid Urban Growth, an International Perspective. *Habitat International*, 24 (2), 127-150.

Fernandes, E., (2011). *Regularization of Informal Settlements in Latin America.* Lincoln Institute of Land Policy

Field, E. (2005). Property rights and investment in urban slums. *Journal of the European Economic Association*, 3(2- 3), 279-290.

FIG/World Bank (2009). *Land Governance in Support of the Millennium Development Goals - A New Agenda for Land Professionals.* FIG Publication No 45, FIG / World Bank Conference the International Federation of Surveyors (FIG), Washington DC, United States of America.

Filandri, M., & Olagnero, M., (2014). Housing Inequality and Social Class in Europe. *Housing Studies,* 29:7, 977-993, DOI: 10.1080/02673037.2014.925096

Flood, J. (2000). Sydney Divided: Factorial Ecology Revisited. Residential Differentiation in Australian cities. ANZRSA Annual Meeting, Hobart.

Forester, J. (1999). *The deliberative practitioner: Encouraging participatory planning processes.* Cambridge, MA: MIT Press.

Foucault M (1980). *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977.* New York, NY: Pantheon.

Foxon, T.J., (2013). Transition pathways for a UK low carbon electricity future. *Energy Policy* 2013, 52, 10–24

Frankenberger, R.T., Luther, K., &Mccaston, M.K., (2002). *"Household Livelihood Security Assessments: A Toolkit for Practitioners."* Tango International Inc., Tucson, Arizona,

Gambo Y.L., Idowu, O.B., & Anyakora I.M., (2012). Impact of poor housing condition on the economy of the urban poor: Makoko, Lagos State in view. *Journal of Emerging Trends in Economics and Management Sciences,* Vol. 3, No. 4. https://hdl.handle.net/10520/EJC126581

Ghafur, S. (2001). Beyond homemaking: The role of slum improvement in home-based income generation in Bangladesh. *Third World Planning Review*. 23(2), 111-135.

Gilbert, L., & Dikeç, M. (2008). Right to the city. Politics of citizenship. In K. Goonewardena, S. Kipfer et al. (Eds.), *Space, difference, everyday life: Reading Henri Lefebvre* (pp. 250-263). New York, NY: Routledge.

Glenn J, & Wolfe J., (1996). The growth of the informal sector and regularisation of spontaneous development, *Third World Planning Review*, p. 59.

Global Urban Observatory (2003). *Slums of the World: The Face of Urban Poverty in the New Millennium*. United Nations Habitat Working Paper.

Goldratt, E.M., (2004). *Essays on the Theory of Constraints*. (Great Barrington, MA): North River Press. ISBN 0-88427-159-5.

Gottdiener, M., & Hutchison, R. (2011). *The New Urban Sociology*. Westview Press, Boulder, CO.

Graham S and Healey P (1999). Relational concepts in time and space: Issues for planning theory and practice. *European Planning Studies* 7(5): 623–646.

Gregory D and Urry J (1985). *Social Relations and Spatial Structures.* Basingstoke: Palgrave Macmillan

Greene, M., (2001). *Housing and Community Consolidation in Informal Settlements: A Case of Movement Economy.* Proceedings, 4th International Space Syntax Symposium, University College London, London.

Grover, R.; Torhonen, M. P.; Palmer, D.; & Munro-Faure, P., (2007). *Good governance in land administration and land tenure.* Food and Agriculture Organization of the United Nations, Rome.

Guevara, N.K.A. (2014). Informality and formalization of informal settlements at the turn of the third millennium: Practices and challenges in urban planning. *Journal of Studies in Social Sciences*, *9*(2), pp.247-299.

Gulyani, S., Bassett, E. M., & Talukdar, D. (2014). A tale of two cities: A multi-dimensional portrait of poverty and living conditions in the slums of Dakar and Nairobi. *Habitat International*, 43, 98–107.

Gupta DK (2001). *Analysing Public Policy. Concepts Tools and Techniques*. N.W Washington. DC., CQ Press A division of Congressional Quarterly Inc.

Gwaleba, M., & Masum, F. (2018). Participation of Informal Settlers in Participatory Land Use Planning Project in Pursuit of Tenure Security. *Urban Forum*, 29(2), 169-184.

Halla, F., (2007). A SWOT analysis of strategic urban development planning: The case of Dar es Salaam city in Tanzania. *Habitat International*, 31, 130-142

Haapanen, T. (2007). *Civil society in Tanzania*. KEPA working papers number 19. Helsinki, Finland: KEPA.

Hardoy J., & Satterthwaite D., (1993). Housing policies: a review of changing government attitudes and responses to city housing problems in the Third World, Urban Management: *Policies and Innovations in Developing Countrie*s, 111-159.

Hart, K. (1973). Informal Income Opportunities and Urban Employment in Ghana. *Mod. Afr. Stud*. 11, 61–89.

Harvey, D. (1973). *Social Justice and the City*. Oxford: Blackwell Publishing.

Harvey, D., & Potter, C. (2009). In The right to the just city. P. Marcuse et al. (Eds.), *Searching for the just city: Debates in urban theory and practice* (pp. 4051). New York, NY: Routledge

Harvey, D. (2006). *Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development.* London: Verso.

Harvey, D. (2012). Rebel Cities: from the right to the city to the urban revolution. London: Verso.

Harvey, D. (2004). The new imperialism: accumulation by dispossession. *Social Register*, Volume 40, 63-87

Hasanawi, A., Masturi, H., & Hasanawi, A., (2019). Improvement of Community Governance to Support Slum Upgrading Programs in Indonesia. *Indonesian Journal of Development Planning*, Volume III No.3-December 2019.

Hassan G. (2011). *Review and re-evaluation of the successive housing policy in Egypt*. Al-Azhar Univ J EAJ.

Hawn, O., Chatterji, A., Mitchell, W., (2011). *Two Coins in One Purse? How Market Legitimacy Affects the Financial Impact of Changes in Social Legitimacy: Addition and Deletion by the Dow Jones Sustainability Index.* Duke University: Durham, NC, USA.

Healey, P. (1997). *Collaborative planning: Shaping places in fragmented societies*. Vancouver: UBC Press.

Healey, P. (2003). Collaborative planning in perspective. *Planning theory*, 2(2), 101-123.

Healey P (2006). Relational complexity and the imaginative power of strategic spatial planning. *European Planning Studies* 14(4): 525–546.

Healey, P., (2006). *Territory, integration and spatial planning*, in Tewdwr-Jones, M. and Allmendinger, P. (2006) *Territory, Identity and Spatial Planning: Spatial Governance in a Fragmented Nation*, London, Routledge pp.65-79

Hernandez, J., & Lopez, C. (2011). Is there a role for informal settlements in branding cities? *Journal of Place Management and Development,* 4(1), 93–109.

Hilhorst, T. (2010). Decentralisation, land tenure reforms and local institutional actors. Building partnerships for equitable and sustainable land governance in Africa. *Land Tenure Journal*, 1(1), 35–59.

Hillier, B., & Hanson, J., (1984). *The Social Logic of Space*, Cambridge University Press, Cambridge.

Hillier, B., Greene, M., & Desyllas, J., (2000). "Self-Generated Neighborhoods: The Role of Urban Form in the Consolidation of Informal Settlements", *Urban Design International 5 (2)*, pp. 61-96.

Hou, J., & Rios, M. (2003). Community-driven place making: The social practice of participatory design in the making of Union Point Park. *Journal of Architectural Education,* 57(1), 1927

Huchzermeyer, M. (2002). "Production and Intervention in Twentieth-Century Brazil and South Africa." *Latin American Perspectives* 29(1): 83-105

Huchzermeyer, M. (2010). Pounding at the Tip of the Iceberg: The Dominant Politics of Informal Settlement Eradication in South Africa. *Politikon,* 37(1), 129–148.

Huchzermeyer, M., & Karam, A., (2006). The Continuing challenge of informal settlements: An introduction, In Huchzermeyer, M, and A. Karam (ed). *Informal settlements, a perpetual challenge.* Cape Town, University of Cape Town.in South Africa. Master thesis. University of KwaZulu Natal, Pietermaritzburg

Hutchison, J. (2008). Land titling and poverty reduction in Southeast Asia: realising markets or realising rights? *Australian Journal of International Affairs*, 62(3), 332- 344. https://doi.org/10.1080/10357710802286791

Hylton, E.; Charles, K.J. (2018). Informal Mechanisms to Regularize Informal Settlements: Water Services in São Paulo's Favelas. *Habitat Int.*, 80, 41–48.

Ibem, E. O., (2011). The contribution of public-private partnerships (PPP) to improving accessibility of low-income earners to housing in southern Nigeria. *Journal of Housing and the Built Environment*, 26, 2, 201-217.

Ife, J. (2016). *Community development in an uncertain world: vision, analysis and practice.* Second Edition. Port Melbourne, Australia: Cambridge University Press.

Ijaiya G. T., & Akanbi S. B., (2009). An empirical analysis of long run effect of infrastructure on industrialization in Nigeria. *Journal of International Economic Review*, 2:135-49.

ILO (2002). *Resolution concerning decent work and the informal economy*. International Labor Organization, Geneva.

Inam, A. (2015). *Informality and urbanism.* http://informalurbanisms.org/informality-and-urbanism-aseem-inam-ph-d/.

Jabareen, Y., & Eizenberg, E., (2020). Theorizing urban social spaces and their interrelations: New perspectives on urban sociology, politics and planning. *Planning Theory Journal*. https://doi.org/10.1177/1473095220976942

Jacopsen, K., S. & Hasan K., (2002). "Building a Foundation. Poverty, Development and Housing in Pakistan." *Harvard International Review* 23(4): 20-24.

Jaitman, L., & Brakarz, J., (2013). *Evaluation of Slum Upgrading Programs: Literature Review and Methodological Approaches.* Inter-American Development Bank

Jessop B, Brenner N and Jones M (2008) Theorizing socio-spatial relations. *Environment and Planning D: Society and Space* 26(3): 389–401.

Johnson, R.W., Henry, Jr., P., (2004). *Towards democratic decentralization: approaches to promoting good governance*. Research Triangle Institute. http://www.rti.org/pubs/towards-demo-decen.pdf

Jones, P., (2017). Formalizing the Informal: Understanding the Position of Informal Settlements and Slums in Sustainable Urbanization Policies and Strategies in Bandung, Indonesia. *Sustainability, 9(8), 1436.* Doi: 10.3390/su9081436

Jones, P. (2012). The Challenges of Implementing Millennium Development Goal Target 7D in Pacific Island Towns and Cities. Asia-Pac. *Dev*. 19, 139–162.

Jones, P. (2012). Pacific urbanization and the rise of informal settlements: trends and implications from Port Moresby. *Urban Policy and Research*, vol. 30, no. 2, pp. 145–160 10. 1080/08111146.2012.664930.

Jordhus-Lier D. & De Wet P.T. (2013). *City approaches to the upgrading of informal settlements*. Chance2Sustain Policy Brief. Bonn, EADI. Available at http://www.chance2sustain.eu/fileadmin/Website/Dokumente/Dokumente/Publications/pub_2013/C2S_PB_No10_WP3_City_Approaches_to_the_Upgrading_of_Informal_Settlements.pdf

Kaitilla, S. (1991). The Upgrading of Squatter Settlements in Tanzania: The Role of Security of Land Tenure and the Provision of Amenities in Housing Improvement. *African and Asian Studies*, 26(3), 220–236. Doi: 10.1163/156852191x00264

Kamalipour, H., & Dovey, K. (2020). Incremental production of urban space: A typology of informal design. *Habitat International, 98, 102133.* doi:10.1016/j.habitatint.2020.102133

Kamalipour, H. (2020). Improvising Places: The Fluidity of Space in Informal Settlements. *Sustainability,* 12(6), 2293. Doi: 10.3390/su12062293

Karimi, K., Amir, A., Shafiei, K., Raford, N., Abdul, E., Zhang, J., & Mavridou, M., (2007). *Evidence-based Spatial Intervention for Regeneration of Informal Settlements: The Case of Jeddah Central Unplanned Areas*. Proceedings, 6th International Space Syntax Symposium, İstanbul.

Kasimbazi, E., (2017). *Land Tenure and Rights for Improved Land Management and Sustainable Development.* Global Land Outlook Working Paper. UNCCD

Katundu, M. A., Innocent, M. A. M., & Mteti, S. H. (2013). *Nature and magnitude of land acquisitions in Tanzania: analysing role of different actors, key trends and drivers in land acquisitions*. A paper presented at the international conference on "the political economy of agricultural policy in Africa" held at the Roodevallei hotel, Pretoria, South Africa, from 18-20th march 2013: South Africa, Future Agricultures Consortium.

Kedogo, J., Sandholz, S. & Hamhaber, J. (2010). Good urban governance, actors' relations and paradigms: Lessons from Nairobi, Kenya, and Recife, Brazil, good urban governance in Nairobi and Recife, *46th ISOCARP congress 2010*. Nairobi: ISOCARP.

Kerr, D. (1994). The Time of Trial by Space? Critical Reflections on Henri Lefebvre's Epoch of Space. Common Sense: *Journal of Edinburgh Conference of Socialist Economists*, 15, 18-35.

Kidder, J. L. (2009). Appropriating the City: Space, Theory and Bike Messengers. *Theory and Society*, 38, 307-328.http://dx.doi.org/10.1007/s11186-008-9079-8

Kirk, M., (2014). *Land Tenure Security in Selected Countries: Synthesis Report*. UNON, Publishing Services Section, Nairobi.

Kironde, J. M. L. (1997). Land policy options for urban Tanzania. *Land Use Policy*, 14, 99–117.

Kironde, J.M.L., (1995). Access to land by the urban poor in Tanzania: some findings from Dar es Salaam. *Urbanization and Environment* 7, 77–95.

Kironde, J.L. (2006). The regulatory framework, unplanned development and urban poverty: Findings from Dar es Salaam, Tanzania. *Land Use Policy*, *23*, 460–472

Kiunsi, R., (2013). The constraints on climate change adaptation in a city with a large development   deficit: the case of Dar es Salaam. *Environment & Urbanization,* Vol 25(2): 321–337.   DOI: 10.1177/0956247813489617

Khadr Z, & Bulbul L., (2011). *Egyptian Red Crescent in Zeinhum: Impact assessment of comprehensive community development model for slums upgrading*. Social Research Centre, the American University in Cairo.

Khalifa, M. A., (2015). Evolution of informal settlements upgrading strategies in Egypt: From negligence to participatory development. *Ain Shams Engineering Journal (2015)* 6, 1151–1159

Kofman, E., & Lebas, E. (1996). Lost in transposition: time, space and the city. In Kofman, E., & Lebas, E. (Eds), *Writings on cities: Henri Lefebvre.* Oxford, UK: Blackwell Publishers Ltd.

Kombe, W. J. & Kreibich, V., (2000). Reconciling informal and formal land management: an agenda for improving tenure security and urban governance in poor countries. *Habitat International* 24 (2000) 231-240

Kombe, W. (2000). Reconciling informal and formal land management. An agenda for improving   tenure security and urban governance in poor countries. *Habitat International,* 24, 231–   240.

Konadu-Agyemang, K., (2001). A Survey of housing conditions and characteristics in Accra, an African city. *Habitat Int.* 25, 15–34.

Kusiluka, M. M., & Chiwambo, D. M. (2018). Assessing land titles application and uptake in regularised informal settlements in Tanzania. *International Journal of Urban Sustainable Development,* 10, 279-291. https://doi.org/10.1080/19463138.2018.1536661

Kyessi, A.G. (1997): *Shelter Development in Tanzania: Urban Development Policy Considerations.* National Workshop on Urban Development Policy for Tanzania, Dar es Salaam, Tanzania, 12-14 May 1997.

Kyessi, A. G., (2010). Enhancing Security of Land Tenure in Informal Settlements: The Case of Wat-Human Settlements Trust in Hanna Nassif Settlement, Dar es Salaam, Tanzania. *Utafiti Journal*, University of Dar es Salaam, Tanzania, Vol. 8.1, pp. 87-104, June 2010.

Kyessi, A., & Sekiete, T., (2014). Formalising property rights in informal settlements and its implications on poverty reduction: the case of Dar es Salaam, Tanzania. *Journal of Business and Economics* Vol 5, No 12, pages 2352–2370

Lai, L. W. (2015). Squatting by the privileged? A Hong Kong study on the innovations and ambiguity of property rights of irregular development. *Habitat International*, 50, 317–325.

Lamba, A. O. (2005). *"Land tenure management systems in informal settlements: A case study in Nairobi.* Unpublished Thesis for Master of Science in Geo-information Management"*, International Institute for Geo-information Science and Earth Observation, Enschede, Netherlands

Lefebvre, H. (1967). The Right to the City. In: KOFMAN, E.; LEBAS, E. (Ed.). *Writings on Cities*. London: Blackwell, 1967. p. 63-184.

Lefebvre, H. (1991). *The Production of Space*. Oxford: Blackwell Publishing.

Lefebvre, H. (2008). *Espaço e Política*. Belo Horizonte: Ed. UFMG..

Lefebvre, H. (1996).*Writings on cities*. Chichester: Wiley.

Lefebvre, H. (1996). The right to the city. In Kofman, E., & Lebas, E. (Eds), *Writings on cities: Henri Lefebvre.* Oxford, UK: Blackwell Publishers Ltd.

Lefebvre H (2003). *The Urban Revolution*. Minneapolis, MN: University of Minnesota Press.

Lewis, W.A. (1954). Economic Development with Unlimited Supplies of Labor. *Manch. Sch.* 22, 139-191.

Lombard, M. (2014). Constructing ordinary places: Place making in urban informal settlements in   Mexico. *Prog. Plan.* 94, 1–53.

Mabogunje, A. L. (1992). *A new paradigm for urban development*. Washington, DC: The World Bank.

Magigi, W. (2004). *Local community involvement in managing land development and management in Tanzania; The case of Ubungo Darajani Informal Settlements in Dar es Salaam City.* M.Sc. UPM dissertation, (UCLAS), University of Dar es Salaam.

Magina, F. B., Kyessi, A., and Kombe, W. J., (2020). *Benefits and Burdens Accrued in Community-Led Informal Settlements Regularisation in Tanzania: The Case of Magengeni in Dar es Salaam City*. https://www.researchgate.net/publication/346592620

Majani, B. B. (2000). Institutionalizing environmental planning and management. The Institutional Economics of Solid Waste Management in Tanzania. Ph.D. thesis, *Spring Research Series:* Vol. 28, Dortmund

Marcuse, P. (2009). From justice planning to commons planning. In P. Marcuse et al. (Eds.), *Searching for the just city: Debates in urban theory and practice* (pp. 91102). New York, NY: Routledge.

Marcuse, P (2012). Whose Right(s) to What City? In: Brenner, N.; Marcuse, P.;   Mayer,   M. *Cities for People, Not for Profit*. London: Routledge, 2012. p. 24-41.

Mardeusz, J., (2014). *"Housing Policy and Formalization Strategies in Africa's Growing Cities: A Case for the Informal Settlement"*. The Trinity Papers (2014). Trinity College Digital Repository, Hartford, CT. http://digitalrepository.trincoll.edu/trinitypapers/32

Marshall, S.; Çaliskan, O., (2011). A Joint Framework for Urban Morphology and Design. *Built Environ.* 37, 409–426.

Marx, C. (2009). Conceptualizing the potential of informal land markets to reduce urban poverty. *International Development Planning Review*, 31(4), 335-353.

Mason, S., and Fraser, C., (1998). Image sources for informal settlement management. *Photogramm*. Rec., 16, 313–330.

Massey, R.T. (2015). Integral Theory: A Tool for Mapping and Understanding Conflicting Governmentalities in the Upgrading of Cape Town's Informal Settlements. *Urban Forum* 2015, 26, 303–319.

Massey D (1994). *Space, Place and Gender.* Cambridge: Polity.

Massoi, L., & Norman, A. S. (2010). Dynamics of land for urban housing in Tanzania. *Journal of Public Administration and Policy Research*, 2(5), 74–87

Mazwile, M. (2013). *Community Infrastructure Upgrading Project.* https://locs4africa.iclei.org/wp-content/uploads/2013/11/Margareth-Mazwile-Community-Infrastructure-Upgrading-Program.pdf

Mbazor, D.N. (2018). "Assessment of housing quality and environmental conditions in selected areas of Akure, Nigeria", *International Journal of Development and Sustainability*, Vol. 7No. 3, pp.1049-1061.

Mbiba, B. (2014). Urban solid waste characteristics and household appetite for separation at source in Eastern and Southern Africa. *Habitat International*, 43, 152–162.

McCall, M.K., & Dunn, C.E. (2012). Geo-information tools for participatory spatial planning: fulfilling the criteria for 'good' governance? *Geoforum*, vol. 43, no. 1, pp. 81–94 10.1016/j. geoforum.2011.07.007.

McFarlane, C. (2012). Rethinking informality: Politics, crisis and the city. *Planning Theory and Practice,* 13, 89-108.

McFarlane, C., & Waibel, M. (2012). *Urban Informalities: reflections on the formal and informal Farnham.* England: Ashgate.

Mchome, E. E., (2017). Assessment of Space Standards that are used to Improve Roads Network in Upgrading Informal Settlements: The Case of Dar es Salaam City, Tanzania. *International Journal of Business and Social Science*, Vol. 8, No. 5.

Melcher, K. (2013). Equity, empowerment, or participation: Prioritizing goals in community design. *Landscape Journal*, 32(2), 167-182.

Mends, T. M., (2006). *Customary land tenure and urbanization with a case study on peri-urban area of Accra, Ghana.* International Institute for Geo-information Science and Earth Observation.

Meribole, J., (2020). *Slums in Ghana: Challenges with growth.* Https://borgenproject.org/fwd-slums-in-ghana/

Mesgar, M.; Ramirez-Lovering, D. (2021). Informal Land Rights and Infrastructure Retrofit: A Typology of Land Rights in Informal Settlements. *Land*, 10, 273. https://doi.org/10.3390/land10030273

Meshack, M. V. (1992). *Planning from below-myth and change*. Dortmund.

Ministry of Lands, Housing and Human Settlements Development (2019). Ministerial Annual Budget to 2018/19 Parliament Session, United Republic of Tanzania

Ministry of Lands, Housing and Human Settlements Development (2018). *Dar es Salaam City Master Plan 2016-2036*. Dar es Salaam City Council.

Mitlin, D. (2008). With and beyond the state: co-production as a route to political influence, power and transformation for grassroots organizations. *Environment and Urbanization*, Vol. 20, 339-360.

Mlonda, B. G., (2009). *The Future of Land Titles Informal Settlements in Prime Areas: A Dilemma for Residents of Manzese, Dar es Salaam*. MSc. Thesis. Lund University. Sweden.

Mohamed, A. A., Van Nes, A., Salheen, M. A., Khalifa, M. A., & Hamhaber, J. (2014). Understanding urban segregation in Cairo: The social and spatial logic of a fragmented city. *Proceedings of the 1st International Conference of the CIB Middle East and North Africa Research Network' Smart, Sustainable and Healthy Cities', Abu Dhabi*, (UAE), 14– 16 December 2014. http://repository.tudelft.nl/view/ir/uuid:8dd70034-c44e-4cb3- b54e-0650642d140b/

Mottelson, J., (2020). A New Hypothesis on Informal Land Supply, Livelihood, and Urban Form in Sub-Saharan African Cities. *Land*, 9, 435; Doi: 10.3390/land9110435

Muchadenyika, D. (2015). Slum upgrading and inclusive municipal governance in Harare, Zimbabwe: New perspectives for the urban poor. *Habitat International,* 48, 1–10. doi:10.1016/j.habitatint.2015.03.003

Mukumba, C. P., (2019). *Enablement approaches to the upgrading of informal settlements: A Case Study of Misisi Compound in Lusaka, Zambia*. University of the Free State, South Africa.

Mushi, D., L., M., (2011). *Resettling Displaced Residents from Regularized Settlements in Dar es Salaam City, Tanzania: The case of Community Infrastructure Upgrading Program (CIUP).* Licentiate Thesis in Infrastructure Planning and Plan Implementation. Stockholm, Sweden.

Mwaihuti, M., (2008). The urban land management system and the proliferation of informal settlements and slums in Dar es Salaam, Tanzania. *Tanzania Journal of Development Studies.* Vol. 16 No. 1 (2018)

Nakamura, S. (2016). Revealing invisible rules in slums: The nexus between perceived tenure security and housing investment. *Habitat International*, 53, 151-162.

Nassar, D. M., & Elsayed, H. G. (2017). From Informal Settlements to sustainable communities. *Alexandria Engineering Journal.* doi:10.1016/j.aej.2017.09.004

Ngau, P. M., & Blanco, Z. G. (2019). The Production of Space and Place in Informal Settlements: A Case Study of Mukuru Kwa Njenga, Nairobi. *Africa Habitat Review* 13(1) (2019) 1561-1573

Nguluma, H. M., (2018). Modernization of Houses in Informal Settlements through Housing Transformation in Tanzania. *International Research Journal of Engineering and Technology (IRJET)* Volume: 05 Issue: 03

Nguluma, H. M., (2003). *Housing Themselves Transformations, Modernisation and Spatial Qualities in Informal Settlements in Dar es Salaam, Tanzania.* Doctoral thesis. Royal Institute of Technology, Stockholm

Nguyen, Thu Anh, (2018). Tenure Security and Housing Investment: A Study of Bangladeshi Poor Settlements. *All Theses.* 2867. https://tigerprints.clemson.edu/all_theses/2867

Niebergall, S., & Loew, A. (2008). Integrative assessment of informal settlements using VHR remote sensing data—the Delhi case study. *IEE*, vol. 1, no. 3, pp. 193–205.

Nijman, J. (2009). A study of space in Mumbai's informal settlements. *Tijdschrift voor Economische en Sociale Geografie*. 101(1), 4

North, D. (1990). *Institutions, institutional change and economic performance*. Cambridge: University Press

Nuhu, S., (2018). Peri-Urban Land Governance in Developing Countries: Understanding the Role, Interaction and Power Relation among Actors in Tanzania. *Urban Forum* 30:1–16 https://doi.org/10.1007/s12132-018-9339-2

Nwokoro, I., Lawanson, T., Ebuethi, O., Fadare, S., Agwu, J., & Soyinka, O. (2015). Socioeconomic dynamics and environmental health outcomes in informal settlements of Port Harcourt, Nigeria. *Journal of Construction Project Management and Innovation*, 5(1), 1064–1081.

Nyametso, J. K. (2012). The link between land tenure security, access to housing, and improved living and environmental conditions: A study of three low-income settlements in Accra, Ghana. Norsk Geografisk Tidsskrift - *Norwegian Journal of Geography*, 66(2), 84–98. doi:10.1080/00291951.2012.665079

Okyere, A.S., & Kita, M., (2015). Rethinking urban informality and informal settlement growth in urban Africa: A Literature discussion. *J. Sustain. Dev. Afr.* 17, 101–124.

Oluwafemi, O., (2013). "Poverty Alleviation In Lagos Urban Informal Settlements: A sustainable Livelihood Approach", A Paper Presented at the *49th Isocarp Congress on Sustainable Livelihood Approach to Poverty Alleviation*, (Http://Www.Isocarp.Net/Data/Case_Studies/2374.Pdf).

Omollo, W. O., (2019). Solid Waste Management in the Informal Settlements: A Land Use Planning Perspective. *World Environment* 2019, 9(1): 19-27. DOI: 10.5923/j.env.20190901.03

Ono, H. & Kidokoro, T., (2020). Understanding the development patterns of informal settlements in Nairobi. *Journal of Architecture and Planning*. https://doi.org/10.3130/aija.83.83

Osuide, S. O. and Dimuna, K. O. (2005). Effects of Population Growth on Urbanization and the Environment in Nigeria. Pg. 27-33. In: *Proceeding of year 2000 National Seminar on Population, Growth, Architecture and the Environment*. S. O. Osuide (ed.) Rasjel Publishers, Ekpoma.

Owen, C.; Dovey, K.; Raharjo, W., (2013). Teaching Informal Urbanism: Simulating Informal Settlement Practices in the Design Studio. *J. Archit. Educ*. 67, 214–223.

Owusu, G., (2020). *Coping with Urban Sprawl: A Critical Discussion of the Urban Containment Strategy in a Developing Country City, Accra*. Available online: http://ugspace.ug.edu.gh/bitstream/handle/123456789/6236/Coping%20with%20Urban%20Sprawl%20A%20critical%20discussion%20of%20the%20urban%20containment%20strategy%20in%20a%20developing%20country%20city%20Accra,.pdf?sequence=1

Pahl-Wostl, C. (2009). A conceptual framework for analyzing adaptive capacity and multi-level learning processes in resource governance regimes. *Global Environmental Change*, vol. 19, no. 3, pp. 354–365 10.1016/j.gloenvcha.2009.06.001.

Payne, G. K., (1984). *Low-income housing in the developing world: the role of sites and services and settlement upgrading*. Wiley.

Payne, G. (2002). *Land, Rights and Innovation: Improving tenure security for the urban poor*. ITDG Publishing, London.

Payne, G. (2004). Land Tenure and Property Rights: An Introduction. *Habitat Int*., 28, 167–179.

Payne, G., & Majale, M., (2004). *The Urban Housing Manual: Making Regulatory Frameworks Work for the Poor.* Earthscan, London, Sterling, VA, US.

Payne, G., & Durand-Lasserve, A. (2013). *Holding on: Security of tenure, types, policies, practices   and challenges.* Research Paper prepared for the Special Rapporteur on Adequate Housing.   Retrieved   from: https://www.ohchr.org/Documents/Issues/Housing/SecurityTenure/PayneDurandLasserve   -BackgroundPaper-JAN2013.pdf:

Porter, L. (2011). Informality, the Commons and the paradoxes for planning: concepts and debates for informality and planning. *Planning Theory & Practice*, vol. 12, no. 1, pp. 115–153 10.1080/14649357.2011.545626.

Prudhomme R., (2004). *Infrastructure and Development*, Washington DC, Paper prepared for the ABCDE (Annual Bank Conference on Development Economics), May 3-5, 2004.

Quan, J., Tan, S., and Toulmin, C., (2004). *Land in Africa Market Asset or Secure Livelihood?* Proceedings and summary of conclusions from the Land in Africa Conference held in London November 8-9, 2004. Russell Press. London, UK.

Rakodi, C., & Lloyd-Jones, T., (2002). "*A Livelihoods Approach Conceptual Issues and Definitions.*" In Rakodi, C., & Lloyd-Jones, T., (Eds.): *Urban Livelihood; A People Centred Approach To Reducing Poverty*. Taylor & Francis Group.

Rasmussen, M.I., (2013). "The Power of Informal Settlements. The Case of Dar-es-Salaam, Tanzania." *Journal of Urbanism*, Vol. 01, (26).

Ravnborg, M. H., Spichiger, R., Broegaard, B. R., & Pedersen, H. R. (2016). Land governance, gender equality and development: past achievements and remaining challenges. *Journal of   International Development,* 28(3), 412–427.

Republic of Kenya (2014), *National Bureau of Statists, Facts and Figures 2014.* Government Press

Ribeiro, G.; & Srisuwan, A. (2005). Urban Development Discourses, Environmental Management and Public Participation: The Case of the Mae Kha Canal in Chiang Mai, Thailand. *Environ. Urban.* 17, 171–182.

Ribeiro, G. (2006). Urban Makings and the Formalisation of Informal Settlements. In *Doing Things with Things: The Design and Use of Everyday Objects*. Ashgate Publishing, Ltd.: Farnham, UK; pp. 225–237

Rizzo, A. (2014). Rapid urban development and national master planning in Arab Gulf countries. Qatar as a case study. *Cities*, 39, 50–57.

Roitman, S. (2019). Yogyakarta: slum dweller's strategies and tactics in Yogyakarta, Indonesia. In Rocco, R., & Ballegooijen, J. (Eds), *The Routledge handbook on informal urbanisation*. New York, Oxon: Routledge

Rolnik, R. (2014). Place, inhabitance and citizenship: the right to housing and the right to the city in the contemporary urban world. *International Journal of Housing Policy*, 14(3), 293-300. https://doi.org/ 14616718.2014.936178

Rolnik, R. (2015*). La guerra de los lugares: la colonización de la tierra y la vivienda en la era de las finanzas.* Brazil: Descontrol.

Roy, A., (2011). Slumdog cities: Rethinking subaltern urbanism. *International Journal of Urban and Regional Research*. 35(2), 227.

Roy, A., & AlSayyad, N. (2004). *Urban informality: Transnational perspectives from the Middle East, Latin America, and South Asia.* New York: Lexington.

Roy, A., (2009). Why India cannot plan its Cities: Informality, Insurgence and the Idiom of Urbanization. *Plan. Theory*. 8, 76–87.

Roy, A. (2005). Urban informality: toward an epistemology of planning. *Journal of the American Planning Association,* vol. 71, no. 2, pp. 147–158 10.1080/01944360508976689.

Ruiz-Tagle, J. (2013). A theory of socio-spatial integration: problems, policies and concepts from a US perspective. *International Journal of Urban and Regional Research*, vol. 37, no. 2, pp. 388–408 10.1111/j.1468-2427.2012.01180.x.

Rupprecht, M., (2020). *The Paradox of Kenyan Slum Upgrading Programme: An interpretative case study about socio-spatial exclusion in the informal settlement of Kibera.* Malmo University.

Saane, B (2005). *The impact of informal settlements areas on the land reform programme in South Africa. Master thesis.* University of KwaZulu Natal, Pietermaritzburg

Sana, O., & Okombo, O., (2012). *Taking stock of socio-economic challenges in Nairobi slums.* Friedrich-Ebert-Stiftung (FES), Nairobi.

Santos Junior, O. A. dos. (2014). Urban common space, heterotopia and the right to the city: Reflections on the ideas of Henri Lefebvre and David Harvey. *URBE-Revista Brasileira de Gestão Urbana, 6(541), 146.* doi:10.7213/urbe.06.002.se02

Satterthwaite, D., (2016). *Successful, Safe and Sustainable Cities: Towards a New Urban Agenda;* Background Paper; Commonwealth Local Government Forum. London, UK.

Satterthwaite, D.; Mitlin, D.; Bartlett, S. (2015). Is It Possible to Reach Low-Income Urban Dwellers with Good-Quality Sanitation? *Environ. Urban.* 27, 3-18.

Sheuya, S., (1997). *Employment-intensive upgrading of urban unplanned settlements by communities: Practices and opportunities in Dar es Salaam, Tanzania.* International Labour Organisation

Schmidt, S., & Zakayo, E., (2018). Land formalization and local leadership in Moshi, Tanzania. *Habitat International* Vol 74, pages 18–26.

Scholz, W. (2008). *Challenges of Informal Urbanization. The Case of Zanzibar, Tanzania.* SPRING, Research Series, No. 50. University of Dortmund, Germany

Schubeler, P., (1996). *Conceptual Framework for Municipal Solid Waste Management in Low Income Countries.* UNDP/UNCHS/World Bank-UMP, Nairobi

Seawright, J. & Gerring, J., (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly*, 61(2), pp. 294-308.

Shabane, I., Nkambwe, M., & Chanda, R. (2011). Land use, policy, and squatter settlements: the case of peri-urban areas in Botswana. *Applied Geography*, vol. 31, no. 2, pp. 677–686 10.1016/j.apgeog.2010.03.004.

Shemdoe, R. S., (2012). The Role of Housing Licenses in Accessing Loans as a Strategy to Urban Poverty Alleviation. *ICBE-RF Research Report No. 15/12*. Ardhi University. Dar es Salaam.

Shrestha, R., Zevenbergen, J., Masum, F., and Banskota, M., (2018). "Action Space" Based Urban Land Governance Pattern: Implication in Managing Informal Settlements from the Perspective of Low-Income Housing. *Sustainability* 2018, 10, 2202; Doi: 10.3390/su10072202

Shrestha, R., Tuladhar, A., Zevenbergen, J., Banskota, M., (2016). Urban land governance: "Action space", legitimacy of and intervention strategies for urban informal settlements in Nepal. *Nord. J. Surv. Real Estate Res.* 2016, 11, 20–50.

Sietchiping, R. (2004). *Calibration and Validation of a Proposed Informal Settlement Growth Model.* 7th AGILE Conference on Geographic Information Science 29 April-1 May 2004, Parallel Session 2.2-Urban Modelling I. Heraklion, Greece, Department of Geography and Geology, University of the West Indies, Mona Campus, Kingston 7, Jamaica, WI

Simiyu, S., Cairncross, S., & Swilling, M., (2019). Understanding Living Conditions and Deprivation in Informal Settlements of Kisumu, Kenya. *Urban Forum,* 30:223–241 https://doi.org/10.1007/s12132-018-9346-3

Simone, A & Pieterse, E. (2017). *New Urban Worlds: Inhabiting Dissonant Time*s. Cambridge: Polity Press.

Simone, A. (2009). *City life from Jakarta to Dakar: movements at the crossroads.* New York: Routledge.

Sirueri, F.O. (2015). *Comparing Spatial Patterns of Informal Settlements between Nairobi and Dar es Salaam.* Master's Thesis, Faculty of Geo-Information Science and Earth Observation (ITC) of the University of Twente, Enschede, The Netherlands, February 2015.

Skinner R, Taylor J, & Wegelin E. (1987). *Shelter upgrading for the urban poor: evaluation of third world experience*. Island Pub. House

Smith, T. (1997). Factors relating to misanthropy in contemporary. *American Societal*, 26, 170–196

Soja, E. W. (1989). *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. New York: Verso

Soja, E. (1999). "Third space: Expanding the Scope of the Geographical Imagination." In *Human Geography Today*, ed. Doreen B. Massey, John Allen, and Phil Sarre, 260–278.

Soja, E. (2010). *Seeking Spatial Justice*. Minneapolis: University of Minnesota Press.

Soyinka, O.; Siu, K.W.M., (2018). Urban informality, housing insecurity, and social exclusion; concept and case study assessment for sustainable urban development. *City Cult. Soc. 15*, 23–36.

Srivinas, H., (2005). *Urban Squatters and Slums*. GDRC Organisation.

Staff, G., (1993). Claiming a space in a changing South Africa: The "squatters" of Marconi Beam, Cape Town. *Annals of the Association of American Geographers,* 86(2), 235-255. Blackwell, Cambridge, Massachussetts.

Suchman, M.C., (1995). Managing legitimacy: Strategic and institutional approaches. *Acad. Manag. Rev*. 1995, 20, 571–610.

Swanson, M., (1977). "The Sanitation Syndrome: Bubonic Plague and Urban Native Policy in the   Cape Colony, 1900-1909," *Journal of African History* 18:387-410.

Syagga, P. M., Mitulla, W. V., and Gitau, S. K., (2001). *Nairobi situation Analysis- a Consultative   Report*. GoK/UNCHS, Nairobi.

Taubenböck, H.; Kraff, N.J. (2013). The physical face of slums: A structural comparison of slums in Mumbai, India, based on remotely sensed data. J. Hous. *Environ. Res.* 2013, 29, 15–38.

Thomas, C., (2013). The Concept of Legitimacy and International Law. *SSRN Electronic Journal*. doi:10.2139/ssrn.2265503

Thunqvist, E., & Ilskog, E., (2010). *Study on Access to Services in Peoples Settlements: Interdisciplinary Perspectives on Infrastructure Issues in Kenya and Tanzania*. Royal Institute of Technology. Stockholm.

Tiraki, M. J. M., Mustafa, R. A., Marzbali, M. H., Aldrin, A., Arriffin, J., (2011). Challenges of informal settlements in developing countries cities: Case study of Iran. *World Applied Sciences Journal,* 12(2), 160-169.

Topfer, K. (2002). *Re-assessment of urban planning and development regulations in Africa cities.* UN-Habitat, Nairobi.

Tripp, A. M., (1997). *Changing the rules: the politics of liberalization and the urban informal economy in Tanzania*. Berkeley: University of California Press.

Turley, R., Saith, R., Bhan, N., Rehfuess, E., & Carter, B. (2013). *Slum upgrading strategies involving physical environment and infrastructure interventions and their effects on health and socio-economic outcomes.* Cochrane Database of Systematic Reviews. doi:10.1002/14651858.cd010067.pub2

Turner J.F.C. (1976). *Housing by people: Towards autonomy in building environments*. New York: Pantheon Books

Turner, J.F.C. (1972) 'Housing as a Verb', in J.F.C. Turner and R. Fichter (eds) *Freedom to Build: Dweller Control of the Housing Process*. New York: Macmillan.

UN-DESA (2018). *World Urbanization Prospects*. UN-DESA Population Division. Available at: http://esa.un.org/unpd/wup

United Nations Development Programme (UNDP) (1998). *Human development report*. London: Oxford Press.

UNECE (2009). *Self-Made Cities: In Search of Sustainable Solutions for Informal Settlements in the United Nations Economic Commission for Europe Region*. UNECE, New York and Geneva.

UN-Habitat (1996). *An Urbanizing World: Global Report on Human Settlements*. Oxford University Press, Oxford

UN-HABITAT, (2003). *Challenges of slums: Global report on human settlements*. Earthscan Publications Ltd London and Sterling, VA

United Nations Human Settlement Programme (2010). *The State of African Cities 2010: Governance, Inequality and Urban Land Markets*. Nairobi: UN Habitat.

United Nations Human Settlements Programme (2001): *"Cities in a Globalising World". Global Report on Human Settlements.* Earthscan Publications Ltd.

UN-Habitat, (2018). *Human Rights in Cities: Alternative Solutions to Forced Evictions and Slum Demolitions-Case Studies from Africa, Asia, North and South America*. Nairobi, UN Habitat

UN-Habitat, (2008). *State of the World's Cities.* UN-Habitat

UN-Habitat, (2014). *The Evolution of National Urban Policies: A Global Overview.* UN-Habitat: Nairobi, Kenya.

UN-Habitat. (2015). *Informal Settlements*. Paper 22. Habitat III Issue Papers. New York: UN-Habitat.

UN-Habitat. (2015a). *Global report 2015: Increasing synergy for greater national ownership*. Nairobi: UN-Habitat.

UN-Habitat (2010a). *Egyptian experience strategy for intervention in informal areas.* From Bonah.org:http://www.bonah.org/social/file/read/4021/egyptian-experience-strategy-forinterventionin-informal-areas

UN-Habitat (2006). *State of the World's Cities 2006/2007: The Millennium Development Goals and Urban Sustainability*. Earthscan, London

UN-Habitat (2016). *Urbanization and development: Emerging futures* (World cities report 2016). Nairobi: UN-Habitat.

UN Habitat (2016a). *Slum Almanac 2015–2016: Tracking Improvement in the Lives of Slum Dwellers. Participatory Slum Upgrading Programme.* UN-Habitat

UNDP & MLHUD (2008). *National slum upgrading strategy and action plan. Kampala*: UNDP and Ministry of Lands, Housing and Urban Development.

United Nations. (2018). *Report of the Special Rapporteur on adequate housing as a component of   the right to an adequate standard of living, and on the right to non-discrimination in this context.* A/73/301/Rev.1. United Nations General Assembly

URT, (1999). *The Land Act, No 4*. Government Printer, Dar es Salaam

URT. (1982a). *Local Government (Urban Authorities) Act No. 8.* Dar es Salaam: Government Printers.

 URT. (1982b). *Local Government Authorities Act (District Authorities Act No. 7*. Dar es Salaam: Government Printers.

URT. (2007a). Land use planning act. Dar es Salaam: Government Printers.

URT. (2007b). Urban planning act. Dar es Salaam: Government Printers.

URT, (2008). *Dar es Salaam Transport Policy and System Development Master Plan: Technical Report 1-Urban and Regional Planning.* Dar es Salaam City Council. Dar es Salaam.

URT, (2000). *National Human Settlements Development Policy*. Government Printer, Dar es Salaam Tanzania.

URT (2012). *Makongo Juu Detailed Layout Plans.* Dar es Salaam: Ministry of Lands, Housing and Human Development.

URT (2013). *Basic Facts and Figures on Human Settlements: Tanzania Mainland*. Dar es Salaam: National Bureau of Statistics, Ministry of Finance

URT (2016). *Habitat III National Report, Tanzania*: Ministry of Lands, Housing and Human Development.

URT (2018). *2017 National Environment Statistics Report*. National Bureau of Statistics

Uzun B, C., Ete, M., & Palancıoglu H., (2010). Legalizing and upgrading illegal settlements in Turkey. *Habitat Int* 2010; 34 (2):204–9.

Van der Molen, P. (2014). Rapid urbanization and slum upgrading: what can land surveyors do? *Survey Review* [In Press] 10.1179/1752270614Y.0000000125.

Varley, A., (1987). The Relationship between Tenure Legalization and Housing Improvements: Evidence from Mexico City. *Development and Change*, Vol. 18 (463-481).

Vis, B.N. (2012). *Boundary concepts for studying the built environment: a framework of socio-spatial reasoning for identifying and operationalizing comparative analytical units in GIS.* 'CAA' Southampton

Visagie, J. & Turok, I., (2020). Getting urban density to work in informal settlements in Africa. *Environ. Urban.* 32, 351–370.

Wanjohi, M. W., (2007). *Investigating the effects of Property Rights Formalization on Property Market in Informal Settlements: The case of Dar es Salaam City, Tanzania*. International Institute of Geo-Information Science and Earth Observation. Enschede, Netherlands

Wapwera S.D. (2015). Institutional framework and constraints in the urban and regional planning system in Jos Metropolis, Nigeria. *Journal of Geography and Regional Planning* Vol. 8(10), pp. 244-260.

Wekesa, B.; Steyn, G.; Otieno, F., (2011). A review of physical and socioeconomic characteristics and intervention approaches of informal settlements. *Habitat Int*. 35, 238–245.

World Bank, (2002). *IPEA Urban Research Symposium: Land Development, Urban Policy and Poverty Reduction*. Brasilia, Brazil, World Bank

World Bank. (2002a). *Upgrading low-income urban settlements: Country assessment report - Zambia*. Washington DC: The World Bank African Technical Unit 1 & 2. http://web.mit.edu/urbanupgrading/upgrading/case-examples/overviewafrica/country-assessments/reports/Zambia-report.html

World Bank. (2002b). *Upgrading low income urban settlements: Country assessment report - Tanzania*. Washington DC: The World Bank African Technical Unit 1 & 2. http://web.mit.edu/urbanupgrading/upgrading/case-examples/overview-africa/country-assessments/reports/Tanzania-report.html

World Bank. (2013). *Building sustainability in an urbanizing world*. Ed. Daniel Hoornweg, Mila Freire, Julianne Baker-Gallegos, & A. Saldivar-Sali. World Bank: Washington, DC, USA, No. 17, 216.

Wolff, M. S., Kuch, A., & Chipman, J. K. (2018). Urban governance in Dar es Salaam: actors, processes and ownership documentation. Working paper reference number C-40412-TZA- 1. International Growth Center

Wubneh, M. (2013). Addis Ababa, Ethiopia-Africa's diplomatic capital. *Cities*, 35, 255–269.

Wright, Q., (1930). *Mandates under the League of Nations*. Chicago: The University of Chicago Press.

Yazdani, S., Yusof, M. J. M., Azizi, M. M., & Ali, A. A. A. (2015). An Agent-based Framework to Improve Coordination in the Process of Urban Infrastructure Provision in Iran. *International Journal of Environmental Planning and Management*, 1 (1), 18-32.

Zhang H, Zhang Z, Dong J, Gao F, Zhang W, Gong, W. (2020). Spatial production or sustainable development? Empirical research on the urbanization of less-developed regions based on the case of Hexi Corridor in China. *PLoS ONE* 15(7): e0235351. https://doi.org/10.1371/journal.pone.0235351

Zhang, J., Shuang Chen, S., Gao, Q., Shen, Q., Kimirei, I. A., & Mapunda, D. W. (2020a). *Morphological Characteristics of Informal Settlements and Strategic Suggestions for Urban Sustainable Development in Tanzania: Dar es Salaam, Mwanza, and Kigoma. Sustainability, 12(9), 3807*. doi:10.3390/su12093807

APPENDICES

APPENDIX 1A: CONSENT LETTER 1

UBUNGO MUNICIPAL COUNCIL
ALL CORRESPONDENCES TO BE ADDRESSED TO THE MUNICIPAL DIRECTOR

Tel: 0222-926341
Fax: 0222-926342

E mail info@ubungomc.go.tz
Website: www.ubungomc.go.tz
In reply please quote:

P. O. BOX 55068
DAR ES SALAAM.

Ref. AB.27/333/18

DATE: 13/04/2021

Nsimemye Mwafongo,
Ardhi University,
P.O. Box 35176,
DAR ES SALAAM.

RE: **RESEARCH ATTACHEMNENT**

Refer to the above heading.

I am pleased to inform you that your above request has been considered by the Municipal Director, and has offered you a place to research attachment from **14/04/2021, to 17/04/2021** concerning **"A study on the Social – Spatial Relations of Policy Responses; Case Study of Manzese Informal Settlement"**

Upon receipt of this letter, please report to the, **Ward Executive Officer – Mazense** for commencement of your research.

During the period of research, you are required to obey the rules and regulations of the institution.

Yours Sincerely.

For: MUNICIPAL DIRECTOR
UBUNGO MUNICIPAL COUNCIL
DAR-ES-SALAAM

Y. C. Lwamlema
For: **THE MUNICIPAL DIRECTOR**
UBUNGO

Copy: Deputy Vice Chancellor Academic Affairs,
Ardhi University,
P.O. Box 35176
DAR ES SALAAM.

148

APPENDIX 1B: CONSENT LETTER 2

HALMASHAURI YA JIJI LA DAR ES SALAAM

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA JIJI

SIMU NA. 2128800
2128805
FAX NO. 2121486

OFISI YA MKURUGENZI
I MTAA WA MISSION
S.L.P 20950
11883 – DAR ES SALAAM

REF. NO. DCC/ AF.3/31

01/04/2021

AFISA MTENDAJI

KATA YA VINGUNGUTI

HALMASHAURI YA JIJI LA DAR ES SALAAM.

MEO's wote toeni ushirikiano wenu ikifa nikisha hii Shughi

AFISA MTENDA KATA YA VINGUNGU

YAH: KUWATAMBULISHA/KUMTAMBULISHA.. NSIMENTE MWAFONZ 8/4/04

Tafadhari rejea somo tajwa hapo juu.

Halmashauri ya Jiji la Dar es Salaam imemruhuru/waruhusu wanafunzi/mwanafunzi
toka.... _Ardhi University_ ....Kufanya
Project/Fiel/Research juu ya... _Managing Urban Informal_
Settlements: Case of Vingunguti ....
amekubaliwa kufanya Project/Field/Research juu ya ....
katika ofisi yako."Project/Field/Research" itaanza tarehe 01/5 /2021.. had 30/5 2021

Majina yao/Jina lake ni kama ifuatavyo:-

1. NSIMENTE MWAFONZO 2......................................
3... 4......................................
5... 6......................................
7... 8......................................
9... 10.....................................

Tafadhali wape ushirikiano.

Nakutakia kazi njema.

Kny: MKURUGEZI WA JIJI
Kny: MKURUGENZI
HALMASHAURI YA MANISBAA YA ILALA

149

APPENDIX 2A: DATA COLLECTION MATRIX

Specific Objectives	Variables	Data Required	Data Source	Data Collection Method	Data Collection Tools	Data Analysis Techniques
1. To identify the socio-spatial relations of informal settlements in Dar es Salaam	• Social and Spatial attributes of informal settlements	• Livelihood strategies (occupation) • Housing security • Social organization • Public and social utility services • Built environment design • Land use tenure	• Community leaders • Community households • National Bureau of Statistics (NBS) reports • Municipal lands departments	• Household surveys • Interviews • Document review • Open Street Mapping	• Household questionnaire • Interview guide • Observation checklists • Google earth	Descriptive analysis
2. To examine the socio-spatial relations of informal settlements interventions in Dar es Salaam	• Slum Clearance Programme • Squatter Upgrading Strategy • Environmental Planning and Management (CIP & CIUP) • Regularization and formalization of informal settlements	• Socio-spatial relations of the interventions (empirical findings)	• Intervention documents and reports • Key informants • Community leaders • Municipal officials • Community households	• Document review • Interviews • Household surveys	• Household questionnaire • Interview guide	Cross-Case Content Analysis
3. To investigate the implementation framework of the socio-spatial relations of informal settlements interventions in Dar es Salaam	• Governance frameworks • Administrative framework • Legislative framework • Organization framework	• Regulatory instruments • Institutions administrative set-ups • Levels of Governments • Authorities responsible for management of informal settlements	• Intervention documents and reports • Key informants • Community leaders • Municipal officials • Community households	• Document review • Interviews • Household surveys	• Household questionnaire • Interview guide	Thematic Content Analysis

I am **Nsimenye Mwafongo**, a student at Ardhi University pursuing Master of Science in Urban Planning and Management. In partial fulfilment of my degree, am conducting a study on *Assessment of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam.* Therefore, I would like to seek for information that will help me study and analyse the subject aforementioned. The information provided and collected will be treated with high confidence and will be strictly for academic purposes. Your assistance will be of great importance.

1. What are the informal settlements intervention which could have taken place in _____ informal settlement?

………………………………………………………………………………………………

2. How did the informal settlement intervention conducted?

………………………………………………………………………………………………

3. What were the institutional and/or operational frameworks that were (are) used in the intervention aforementioned?

………………………………………………………………………………………………

4. What has been the benefits or achievements of the intervention to the aforementioned settlement (emphasis on urban economy and social well-being including spatial planning)?

……………………………………………………………………………………………

5. What were (are) the challenges of intervention implementation to the aforementioned settlement?

………………………………………………………………………………………………

6. What were the mechanisms or strategies that were (are) adopted to deal with the challenges of the intervention to the aforementioned settlement?

………………………………………………………………………………………………

Other Information-Checklist

- Interventions reports or documents
- Maps (shape files, inventory maps, etc.)
- Drawings (Proposed or Approved)
- Plans (Detailed Plans or Survey Plans)

APPENDIX 2C: MTAA AUTHORITY QUESTIONNAIRE &/OR INTERVIEW GUIDE

I am **Nsimenye Mwafongo**, a student at Ardhi University pursuing Master of Science in Urban Planning and Management. In partial fulfilment of my degree, am conducting a study on *Assessment of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam.* Therefore, I would like to seek for information that will help me study and analyse the subject aforementioned. The information provided and collected will be treated with high confidence and will be strictly for academic purposes. Your assistance will be of great importance.

1. How did the_____ intervention(s) of _____ informal settlement conducted (emphasis on the entire process and community engagement?

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

2. Have there been any improvements in the settlement due to the _____*intervention (s)* of the settlement (emphasis on the livelihood of the settlement; infrastructure and physical improvements; social services provision; security of tenure; land use conflict and disputes resolutions; social cohesion or inclusion; community or settlement economic activities enhanced; promotion of equity, fairness and impartiality; including social security)?

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

3. What were (are) the challenges to intervention(s) of the informal settlement interventions?

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

4. What were the mechanisms or strategies that are adopted to deal with the challenges of the settlement intervention of the informal settlement?

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

Other Information-Checklist

- Intervention reports or documents
- Maps (shape files, inventory maps, etc.)

- Drawings (Proposed or Approved)
- Plans (Detailed Plans or Survey Plans)

APPENDIX 2D: KEY INFORMANTS QUESTIONNAIRE &/OR INTERVIEW GUIDE

I am **Nsimenye Mwafongo**, a student at Ardhi University pursuing Master of Science in Urban Planning and Management. In partial fulfilment of my degree, am conducting a study on *Assessment of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam.* Therefore, I would like to seek for information that will help me study and analyse the subject aforementioned. The information provided and collected will be treated with high confidence and will be strictly for academic purposes. Your assistance will be of great importance.

1. How has interventions to informal settlement been effective and/or efficient in Dar es Salaam (emphasis on provision and improvement of social services and infrastructure; security of tenure; land use conflict and dispute resolution; accessibility; urban economy improvement; urban poverty reduction; social inclusion or cohesion; social security; social and spatial equality; civic engagement; including spatial planning)?

……
……

2. What are the general challenges to informal settlement interventions in Dar es Salaam?

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

3. What can be done for effective and efficient interventions to informal settlements in Dar es Salaam?

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

Other Information-Checklist

- Published documents recommended by the informants

APPENDIX 2E: PHYSICAL OBSERVATION & MAPPING CHECKLIST

I am **Nsimenye Mwafongo**, a student at Ardhi University pursuing Master of Science in Urban Planning and Management. In partial fulfilment of my degree, am conducting a study on *Assessment of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam*. Therefore, I would like to seek for information that will help me study and analyse the subject aforementioned. The information provided and collected will be treated with high confidence and will be strictly for academic purposes. Your assistance will be of great importance.

- Maps of the informal settlement
- Satellite images i.e. before and after policy responses of the informal settlement
- Town Planning Drawings of the informal settlements
- Plans i.e. approved or proposed
- Photographs of the informal settlements
  - Accessibility infrastructure
  - Social services facilities
  - Housing and ancillary infrastructures and facilities
  - Settlements livelihood activities
  - Et cetera

APPENDIX 2E: HOUSEHOLD SURVEY QUESTIONNAIRE GUIDE

Consent

I am **Nsimenye Mwafongo** from Ardhi University, pursuing Masters of Science in Urban Planning and Management (MSc. UPM). In partial fulfillment of my degree, I am conducting a research **on** *Assessment of Socio-Spatial Relations of Informal Settlements Interventions in Dar es Salaam.* In this survey I am gathering information on livelihoods, housing conditions, access to basic services and the impact of regularization scheme to the households. The responses that your household and other surveyed households provide will be used for academic purposes and later may inform the Tanzanian Government to design better policies to improve livelihoods and access to basic services for people living in informal settlements in cities or urban areas of Tanzania.

Your household has been selected randomly from a list of households in this neighborhood. There was no specific reason why your household was specifically chosen and all households in this area had the same chances of being selected.

I would like to ask questions to you as the head of household or senior member of the household. Before I start, do you have questions or is there anything I have said you would like any further clarification? May I proceed interviewing you?

Do you agree to answer the survey questions?
(Please tick mark on the right box depending on the respondent consent)

Yes, agreed ☐

Not agreed ☐

Interviewer's Signature...

Household Demography		
S.N.	**Question**	**Answer Code**
1	Household Identification Number	o Number
2	Household Size	o 1 o 2 o 3 o 4 o 5 o 6 o 7+
3	Marital Status	o Married o Single o Divorced/Separated o Widow/Widower
4	Religion	o Muslim o Christianity o Other
5	Nationality	o Tanzanian o Other
6	Level of Education of Household Head	o No Education/Pre-Primary o Some Primary o Secondary o Tertiary
7	Source of Income (Occupation)	o Employment (Formal industry) o Self-Employed (Business/Informal industry) o Agricultural Production o Others
8	Household effects (possessions)	o Radio o Television o Mobile Phone o Computer o Non-mobile telephone o Refrigerator

HOUSING TENURE CHARACTERISTICS		
S.N.	**Question**	**Answer Code**
1	How long have you lived in this settlement? (Years)	o 0-5 o 5-10 o 10-15

		o 15-20
		o 20+
2	Ownership of the settlement household land	o Statutory
		o Customary
		o Don't know
3	Type of household land use	o Residential
		o Commercial
		o Others
4	Ownership of the household structure	o Own
		o Rented
		o Free occupant
		o Family owned
		o Other
5	If owned, what document do you have to show entitlement	o Lease title
		o Site plan
		o Allocation papers
		o Others (specify)
		o None
6	How is the overall feeling of the housing security from eviction (Does the household fear any risk of eviction of the settlement)	o Yes
		o No
TYPE OF HOUSE, CONSTRUCTION MATERIALS & ENERGY SOURCE
1	Type of house structure **(Observation)-Picture Option**	o Compound
		o Detached
		o Semi-detached
		o Multi-storey
2	What is the construction materials of the house walls **(Observation)-Picture Option**	o Grass
		o Poles and mud
		o Sun dried bricks
		o Baked bricks
		o Cement bricks
		o Other
3	What is the construction material of the roof **(Observation)-Picture Option**	o Glass/leaves/Mud
		o Iron sheets
		o Tiles/concrete/asbestos
		o Other
4	What is the construction material of the floor **(Observation)**	o Earth and Sand
		o Ceramic tiles
		o Vinyl or Asphalt Strips
		o Cement
		o Carpet
	ENERGY SOURCE	
1	What is the source of lighting	o Kerosene

		o Electricity
		o Solar
		o Acetylene lamp
		o Candles
		o Paraffin
		o Torch/Rechargeable Lamps
2	What is the main source of cooking energy	o Gas
		o Electricity
		o Firewood
		o Charcoal
		o Solar
		o Paraffin
3	Place of cooking	o In-house
		o Separate building
4	How is the energy sources supplied	o Private
		o Government
		o Others

	WATER SOURCE	
S.N.	**Question**	**Answer Code**
1	What is the main source of water	o Piped into dwelling/yard/plot
		o Public tap
		o Neighbor's tap
		o Open well in dwelling/yard/plot
		o Open public well
		o Neighbor's open well
		o Protected well in dwelling/yard/plot
		o Protected public well
		o Neighbor's borehole
		o Spring
		o River, stream
		o Pond/lake/dam
		o Tanker truck
		o Water vendor
		o Others
2	Who provides (constructed) the water service	o Private
		o Government
		o Others
3	What is the nature of ownership of the water facility	o Private
		o Government
		o Community/Settlement
		o Other
4	Was the settlement involved in the provision of the water facility	o Yes
		o No
5	If yes, in what ways did the	o Financial contribution

	settlement contribute	o Resource contribution
		o Committee membership
		o Consultation
		o Community/Settlement Initiative

SANITATION

S.N.	Question	Answer Code
1	What type of toilet facility do you have **(Observation)-Pictures Option**	o Flush toilet o Traditional pit latrine o Ventilated improved pit latrine o No facility (Bush/field)
2	Where is the toilet located **(Observation)**	o In-house o Outside house

REFUSE MANAGEMENT

S.N.	Question	o Answer Code
1	How do you dispose-off your refuse	o Burying o Indiscriminate disposal o House to house refuse collection o Burning o Public dump/collection site
2	Who is responsible for refuse management in the settlement	o None o Sanitation management committee o Community leaders o Waste department/assembly o Community members (users) o Owner/Private o Other
3	What are challenges of refuse management	o Poor practice or inappropriate alternative waste management methods o Lack of sites designated for carrying out waste activities o Shortage of proper vehicles for waste collection, waste haulage and dumping of solid and liquid waste o Poverty

TRANSPORT INFRASTRUCTURE

S.N.	Question	Answer Code
1	What is the daily means of transportation	o Bicycle o Motorcycle o Car/Truck o Public Transport (Daladala) o DART o Walking
2	Has the settlement contributed to	o Yes

	maintaining transport infrastructure (road)	o No	
3	If yes, in what ways did the settlement contribute	o Financial contribution	
		o Resource contribution	
		o Committee membership	
		o Consultation	
		o Community initiative	
4	If no, who is responsible for the maintenance of the infrastructure	o Community/Settlement Committee	
		o Private (Household)	
		o Government	

DRAINAGE SYSTEM		
S.N.	**Question**	**Answer Code**
1	Does the settlement have drainage infrastructure **(Observation)- Picture Option**	o Yes
		o No
2	Has the settlement contributed in maintaining the drainage systems of the settlement	o Yes
		o No
3	If yes, in what ways did the settlement contribute	o Financial contribution
		o Resource contribution
		o Committee membership
		o Consultation
		o Community initiative
4	What challenges does the community face concerning drainage systems	o Settlement flooding
		o Poor sanitation
		o Increased disease outbreak
		o Inaccessibility of social and economic services
		o Impassable road networks

HEALTH FACILITY & ACCESSIBILITY		
S.N.	**Questions**	**Answer Code**
1	What type of health facility is near or within the settlement	o Dispensary
		o Health Centre
		o Hospital
2	What is the nearest health facility (Name)	o Name of the facility
3	How do you get to the health facility (accessibility)	o Walking
		o Bicycle
		o Motorcycle
		o Car/Truck
		o Public Transport (Daladala)
		o DART
4	Who is the service provider of the health facility	o Private
		o Government

		o Other
6	If provided by government, were the residents involved in its provision	o Yes o No
7	If yes, in what way did the residents contribute to the provision of the facility	o Financial contribution o Resource contribution o Committee membership o Consultation o Community initiative

EDUCATION FACILITIES & ACCESSIBILITY		
S.N.	**Questions**	**Answer Code**
1	What type of education facility is near or within the settlement	o Nursery (Pre-primary) o Primary o Secondary o Tertiary
2	What is the nearest education facility in the settlement (Name)	o Name of the facility
3	How do you get to the school facility (accessibility)	o Walking o Bicycle o Motorcycle o Car/Truck o Public Transport (Daladala) o DART
4	Who is education service provider	o Private o Government o Other
5	Was the settlement residents involved in its provision	o Yes o No
6	If yes, in what ways did the residents contribute to the provision of the facility	o Financial contribution o Resource contribution o Committee membership o Consultation o Community initiative