Village housing investments of multi-locational households and their spatial and environmental impacts: Case study of Kilimanjaro region, Tanzania.

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Village housing investments of multi-locational households and their spatial and environmental impacts: Case study of Kilimanjaro region, Tanzania.

By

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DECLARATION

I hereby declare that this doctoral dissertation is the result of an independent investigation. Where it is indebted to the work of others, acknowledgements have duly been made.

Kessy Jerome Melkiory

Dortmund, 12 September 2017

DEDICATION

This piece of work is dedicated to Kessy family, spatial planners, rural-urban sociologists, environmentalists, architects and all multi-locational households in the world.

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While acknowledging the contributions of the mentioned and unmentioned individuals in my PhD dissertation, I declare that I am solely responsible for any shortcomings that may be noted in this dissertation.

ABSTRACT

In recent years there has been a booming and unguided 'modern' residential housing investments in most of the villages on the slopes of Mount Kilimanjaro, Tanzania. This was a phenomenon which motivated me to conduct this study in order to investigate the motives behind such investments, including the spatial and environmental challenges contribute by such investments. The idea is to conserve the nature in the villages on the slopes of Mount Kilimanjaro, including the mountain and its forest.

The literature in Tanzania has shown that there have been inadequate studies carried out in the area of multi-locality and rural-urban linkage. This implies that, there is little knowledge known about multi-locational households, including their impacts, especially those which are related to housing investments in their villages of origin. This study has revealed that, the village housing investments as a 'socio-cultural motive' of multi-locational households which is currently booming in the villages on the slopes of Mt. Kilimanjaro and of course in other villages in Tanzania is likely to, on the one hand; improve the village housing (e.g. Reduce the existing housing poverty), increase asset ownership, enhance social status (prestige) and cultural values at household, family and community levels. However, on the other hand and when not guided by the legal instruments and organs; it contributes to environmental challenges (e.g. over-exploitation of building materials such as timber, sand, bricks, etc. causing deforestation and soil erosion) and spatial challenges (land fragmentation e.g. reduction of the farming land resulting from an excessive subdivision of the family land for housing investments).

In understanding this problem, this study has employed both quantitative and qualitative approaches. The case study area (Sango Village) was the source of empirical evidence. The study has captured the socioeconomic and the qualitative data of 64 households who own 'modern' residential houses in Sango Village (it is one of the villages which lay on the slopes of Mount Kilimanjaro). It was then followed by an in-depth interview of 8 multi-locational households who own 'modern' houses in Sango Village in order to capture their exceptional motives behind such investments. The information was also captured from the government officials and academics. Then, the analysis and interpretation of the data were done.

The results have shown that, most of the 'modern' residential houses that we see in the villages on the slopes of Mount Kilimanjaro are because of multi-locational households. It has also been established that, there are significant and very convincing reasons/motives raised by multi-locational households on why they need to invest in 'modern' residential houses in their villages of origin. The motives behind such investments include: social status (prestige), event use (Christmas, Easter and burial ceremonies), culture to own a house in the village of origin, taking care of the elderly and a place to retire. This research has again shed light on the positive contributions of multi-locational households, especially in addressing the village housing poverty. It has further highlighted the spatial and environmental challenges resulting from the 'modern' residential housing investments in the villages on the slopes of Mount Kilimanjaro. The emerged challenges include: farming land transformation, scattered houses and cemeteries, accumulation of ghost houses, over exploitation of building materials causing deforestation and soil erosion.

It is, therefore, argued that, in order to achieve more positive impacts than the negative ones, there are land and housing policies and institutional loopholes at the central and local government authorities that need urgent attention. For instance, the one that needs attention here, include the need of a provision of spatial planning and housing section/institution/committee at the ward or village level. It is a hope that, this could be a better way of creating healthier and planned villages which are the towns and cities of tomorrow. This is possible if spatial planning becomes one of the central and local government priority areas. Again, this study has revealed that, the multi-locational households have positive and negative impacts in both the place of origin and destination. Thus, their inclusion in the development agenda, including in the population and housing census reports and curriculum in the universities is essential. In this way it will be easier to address their negative impacts in their villages of origin at the same time appreciate their positive impacts for the betterment of the village communities and the country at large.

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ABBREVIATIONS

COP	Conference of the Parties
DED	District Executive Director
FAO	Food and Agriculture Organisation
GSS	Global Strategy for Shelter
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HBS	Household Budget Survey
KINAPA	Kilimanjaro National Park
KKKT	Kanisa la Kiinjili la Kilutheri Tanzania
MDGs	Millennium Development Goals
MLHs	Multi-locational Households
MLHHSD	Ministry of Lands, Housing and Human Settlements Development
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania
MKURABITA	Mkakati wa Kurasimisha Rasilimali na Biashara za Wanyonge Tanzania
NBS	National Bureau of Statistic
PhD	Doctor of Philosophy
SDGs	Sustainable Development Goals
TAMISEMI	Tawala za Mikoa na Serikali za Mitaa
TANAPA	Tanzania National Park
TANESCO	Tanzania Electric Supply Company
TU	Technische Universität
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCHS	United Nations Centre for Human Settlements
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNESCO	United Nations Educational, Scientific and Cultural Organisation
URT	United Republic of Tanzania
VEO	Village Executive Officer
WEO	Ward Executive Officer
ZECO	Zanzibar Electricity Company

CHAPTER ONE

MOTIVATION AND THE STATEMENT OF THE PROBLEM

1.1 Introduction

This chapter presents the motives for carrying out this research, the research background, the statement of the problem, the significance of this research and lastly, it provides the report structure.

1.2 Motivation

My motivation began in the mid-90s when I was living with my grandmother in the Iwa village. It is one of the villages on the slopes of Mount Kilimanjaro in Kilimanjaro region, Tanzania. I grew up in a "Kitongoji" called "Tella Kati" in Iwa village, in Kirua Vunjo Magharibi ward, Moshi district, Kilimanjaro region, Tanzania. It is my village of origin that I really love and belong to. When I was a child, I used to live with my late grandmother (Bibi Agnes) in a mud and a pole house in Iwa village. This traditional house was built by her late husband (Jerome Ngauti Kyara). Fortunately, she had a last born (son now also the late) who I will call uncle *"Baba mdogo"*. Because he was the last born, according to the Chagga tradition, he inherited the piece of land with a traditional house where his parents used to live. Though, he used to live and work in Arusha, sometimes in a year (mostly Christmas, Easter and other ceremonies) he used to visit his mother. During his lifetime, he also managed to build a "modern" house for taking care of his mother (who the researcher will call "*Bibi"*). I can recall at that time my late grandmother, who was very happy saying: "… *Lopata bloku mchukuu…"* which is from the Chagga language meaning that: "... *Now we have a block (a modern) house, my grandchild…"* At that time I had a thought that it was a sign of victory and status change. My father (the late Mzee Kessy) had also worked in Arusha and he had a small block house and a 'transition to modern house'. Honestly speaking, at that time it was very rare to find "modern" houses in most of the villages on the slopes of Mount Kilimanjaro. Few of them could only be found in school teacher's domiciles *"nyumbani kwa walimu",* business households and multi-locational households. I can even list a few of the teachers, such as Mwl. Francis Leweri, Mwl. Antony Njau, etc. It was because of the teacher's good salaries at that time, which had value and/or also they had a chance to travel from a rural to an urban area when they had travelled for salary collection in Moshi town. While for the business households and multi-locational households, they also had a good income and a chance to travel and conduct business around and across the regions. In the end, they were able to see the nice houses (modern) in town/urban areas and wanted to have one for their families and of course in order to be acknowledged in the family and the village or community level.

However, as time went on, and especially in recent years, I was surprised to see a mushrooming of 'modern' residential houses in most of the households in the villages on the slopes of Mount Kilimanjaro. Truly, this is an unprecedented phenomenon, especially in developing countries and particularly in Tanzania. Indeed, what really shocked me as a spatial planner and environment activist is that, this development is happening without any government control. As a result, it has posed environmental (over-exploitation of hills/rocks and timbers as main sources of building materials) and spatial (reduction of farming land, scattered cemeteries, unbalanced land use etc.) challenges in the villages on the slopes of Mount Kilimanjaro. Regarding this situation, I was motivated and interested to know why housing investments in the villages on the slopes of Mount Kilimanjaro are happening at a higher pace than ever before. Also, in line with the global agenda of the new Sustainable Development Goals 2030 adopted at the United Nations Headquarters in New York on 26 September 2015, especially goal no. 13 (climate action: take urgent action to combat climate change and its

impacts) and goal no. 15 (life on land: sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss), including goal no. 10 (reduce inequalities: in this study, it will mean reducing inequalities between urban and rural territories) becomes the motivating entry point for this research. The idea was to pledge something on the environment and space use, particularly in the villages surrounding Mount Kilimanjaro in order to protect the nature in the villages surrounding Mount Kilimanjaro including its forest. It should also be noted that, the Kilimanjaro mountain, including its forest is one of the UNESCO World Heritage Sites. It is, so to say that, the observed spatial and environmental challenges contributed by housing investments in the villages on the slopes of Mount Kilimanjaro are what exactly motivated this study. Therefore, it requires special and urgent attention from diverse professions to intervene.

Fortunately, in 2014, I secured an opportunity to pursue PhD studies at TU-Dortmund University, Germany. Here I managed to share the topic with potential academicians and supervisors. These include Prof. Dr. Ing. Sabine Baumgart, Prof. Dr. Einhard-Schmidt Kallert, Prof. Dr. Volker Kreibich, Dr. Eva Dick and PhD colleagues at Dortmund University. They are enriched with an excellent background on the topic; therefore, they had provided pretty good insights on the topic. While at the university I also got an opportunity to attend several conferences, workshops and colloquium. One of the best conferences that helped me to shape the phenomenon under study was the International Conference on Multi-locality in the Global South and North: Factors, features and policy implication which was held at TU-Dortmund University, Germany on 18-19 September 2014. During and after this conference, I then wondered whether what I saw in the villages on the slopes of Mount Kilimanjaro was because of the 'multi-locational households'. This wonder becomes the motive to embark on this study in order to understand the multi-locational household phenomenon, including its positive and negative impacts, especially those related to housing investment in the villages of origin. This understanding will shed light on ensuring housing investments continues without impeding the nature on the slopes of Mount Kilimanjaro.

I have a background in rural and urban spatial planning, housing and environmental expertise, especially in developing countries. Therefore, I am also motivated to contribute knowledge in these fields. I hope that this dissertation will be useful to the government of the United Republic of Tanzania, decision makers, academicians, researchers, practitioners and university students.

1.3 Background of the study

The global environment and climate issues have been a critical challenge over the last century or so. Its history can be traced back to the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, in 1992. This conference, popularly known as the Earth Summit, paved the way for what are now the most important global environmental conventions on biodiversity, climate and combating desertification. Agenda 21- the programme of action on environment and development adopted in Rio - enabled the idea of sustainability to reach a wide audience. Ten years later at the World Summit on Sustainable Development, at Johannesburg in 2002, the Johannesburg Declaration determined the future path for implementing sustainable development. Consequently, the green economy was one of the key themes at Rio+20, the United Nations Conference on Sustainable Development, Rio+20 held in June 2012. The conference's outcome document underlines the importance of the green economy in promoting sustainable development and poverty reduction.

Today, two decades after the first Rio Earth Summit, we are witnessing mixed feelings. On the plus side, many successful steps towards sustainable development have been taken. On the negative side, the challenges are greater than ever before: excessive consumption of natural resources, a growing world population, the effects of climate change and a global economic crisis are among the most urgent problems. Studies such as the 2006 Stern report and the report published by the United

Nations Environment Programme (UNEP) in 2011, entitled 'Towards a Green Economy', makes it unequivocally clear that our current economic system is neither environmentally sound nor economically efficient. Its entire *"modus operandi"* is wrong: political and economic incentives to promote environmentally sound activity have not yet been established.

Indeed, the Kyoto protocol, held in Kyoto, Japan, in 1997 and the recent COP21 (Paris agreement), held in Paris, France in 2015, were also among the solutions towards addressing the global issue of environment and climate change. The Millennium Development Goals, 2000, which had just ended in 2015 with some promising results, had also led to the adoption of the new and ambitious development blueprint known as the 2030 Agenda for Sustainable Development named Sustainable Development Goals (SDGs), 2015. This was also a step ahead towards addressing the issues of environment, climate change and sustainable development in both developed and developing countries.

Without a doubt, the highlighted approaches were a milestone towards addressing the underpinning environmental impacts on natural resources (land, forest, water, etc.), spatial challenges, economic impacts and climate changes in both developed and developing countries. However, the problems have been observed more critical in developing countries where existing capacities in terms of human, financial and other resources to deal with the challenges are very limited (Kessy, 2014). It has also been observed that, much effort in terms of researches and solutions for the observed global challenges, have been invested more in urban areas than in the rural (village) areas. Though, more challenges have also been observed in the rural (village) areas. This is a result of inadequate priority both at the international and national levels.

For example, the available literature (Arnold, 2000 and FAO, 2007 cited in Kessy, 2016 and Malimbwi, 2014) suggests that, agriculture is estimated to be the proximate driver for around 80 percent of deforestation worldwide. Commercial agriculture is the most important driver of deforestation in Latin America (around 2/3 of total deforested area). In Africa and (sub) tropical Asia it accounts for around 1/3 of deforestation and is of similar importance to subsistence agriculture. Mining, infrastructure and urban expansion are important, but less prominent (Kessy, 2016:99). Though, it should not be ignored. The share of housing investment as one of the drivers of deforestation and land transformation needs also not to be excluded.

Tanzania, like many other developing countries has also experienced a lot of environmental and sustainable land management challenges both in the urban and in the rural (village) areas. It has also become clear that, more challenges have been witnessed in the village areas. For example, Malimbwi, (2014) cited in Kessy, (2016) asserted that, Tanzania has about 48 million hectares of forest cover which is approximately 55 percent of its forest and woodland cover. Adding that, deforestation and forest degradation are some of the challenges facing the forest sector in the country (Kessy, 1998; Malimbwi, 2014 cited in Kessy, 2016).

In Kilimanjaro region, there has been an abundant spatial and environmental challenges contributed by human development activities, especially in the villages on the slopes of Mount Kilimanjaro. And this has been a result of the institutional weaknesses (see chapter seven and twelve). Despite the fact that, the issues of natural resources and environmental protection in the villages on the slopes of Mount Kilimanjaro have been widely explored (see, for example, Magimbi, 2007; Meena and O'Keefe, 2007; Newmark, 1991; Soini, 2005; etc.), though, their linkage to multi-locational households and rural (village) housing investments are less understood. This information gap does not only lead to over-generalization and simplifications of the issues related to natural resources use (land, forest, water, etc.), protection and management, but also escapes the attention of spatial (land) planning and environmental protection and management in the villages on the slopes of Mount Kilimanjaro consequently escalating the problem of village space use and nature protection.

As Whande (2009:3) put it clear that, not only are multi-locational households remitting money, they can also lead to challenges for sustainable land management through deforestation as lands are cleared for agriculture, housing and land use intensification (ibid.: 3). The foreseen challenge is how to ensure housing investments proceed without imposing stress on the nature and the use of natural resources (land, forest and water) in the villages of origin of multi-locational households on the slopes of Mount Kilimanjaro.

Padoch et al. (2008:3) had documented the similar challenges posed by multi-locational households in the Amazonia forest in Brazil. Based on their research they had conducted in several regions of Amazonia, they had suggested that complex demographic flows between rural and urban areas and 'multi-sited households' characterized communities in the Amazon floodplain are affecting both the extent and the nature of forests in these long-settled areas of Amazonia (Padoch et al., 2008:3). Adding that, households of the Amazon like their counterparts in Africa and Southeast Asia continue to move to cities, redefining what it is to be urban as well as rural, and thereby transforming the forest and cities of Amazonia (Padoch et al., 2008:10).

Some scholars have also claimed that, multi-locational households have negative impacts and this is depending on the setting (see Schmidt-Kallert, 2009:332). Yohlung (2014:8) has also provided evidence that, the then existing thick and dense forests with diverse flora and fauna in Manipur-India has substantially declined due to overwhelming demand of supply like timber and firewood for various developmental purposes affecting the social ecology, food-chains and even leading to scarcity of drinking water. Adding that the destruction of forest and biodiversity in Manipur is the result of excessive deforestation for firewood, timber and encroachment of forest land multifarious and developmental works like the establishment of a housing colony, road construction, dam construction, etc. These are the effects of population growth, which gives a great pressure on forests and biodiversity (ibid: 9).

The literature has also shown that, the rural (village) housing situation in developing countries has been so poor (UNCHS, 1995:1). On the other hand, the literature on multi-locational households and rural-urban linkage has shown that, multi-locational households are the key players in addressing the claimed rural (village) housing poverty (see Deshingkar and Farington, 2009; Krüger, 1998; Schmidt-Kallert and Franke, 2013:13; Smit, 1998 and Tacoli, 2008). Despite showing promising results in terms of rural (village) housing investments, improvements or transformations still little is known about the spatial and environmental challenges that emerge in a village of origin of multi-locational households, especially where spatial planning and development controls are missing.

This research, therefore, connects the multi-locational households, housing investments, space use and nature protection in the village of origin on the slopes of Mount Kilimanjaro. This connection is fundamental in ensuring sustainable housing investments and land use without jeopardizing the nature (Mount Kilimanjaro, including its forest and the existing natural resources) in the villages on the slopes of Mount Kilimanjaro.

1.4 The statement of the problem

Creswell (2014:78) claimed that, the statement of the problem section includes the actual research problem as well as four other aspects. It, therefore, composed of the topic, the research problem (in this study, the natural resource use, environmental impacts on the natural resources and spatial planning problems in the villages on the slopes of Mount Kilimanjaro), a justification of the importance of the problem as found in the past research and in practice, the deficiencies in our existing knowledge about the problem, and concluding by the audience that will benefit from a study of the problem (ibid: 78).

In the same logical way of thinking, it has been revealed that, the current research indicates a rapid increase in both the quantitative and the qualitative importance of the multi-locality phenomenon and at the same time a lack of research into many of the issues (Wood et al., 2015:363). Indeed, most of these researches focused on multi-locational household livelihood strategies and rural-urban linkages (see Franke and Schmidt-Kallert, 2013; Schmidt-Kallert, 2009; Deshingkar and Farington, 2009; Tacoli, 2008; Bah et al, 2003; Rakodi and Lloyd-Jones, 2002; Krüger, 1998; Tacoli, 1998; Smit, 1998). Schmidt-Kallert and Franke, (2013:102), for example, have argued that, one of the strategies of multi-locational households is the practice of house building in one's home village or in the nearby township.

Though, Schmidt-Kallert warned that, depending on the setting, this may be advantageous or detrimental to the environment (Schmidt-Kallert, 2009:332). Adding that, frequent trips between the rural and urban homes have a negative impact on the migrant's ecological footprint (ibid: 332). He further claimed that, members of multi-locational households take advantage of the opportunities of two or more locations (rural and urban). This means by implications that they utilize the natural resources at both places; they make an impact on the environmental conditions at each location. Just as they spread the risks in their household economy, they also spread the environmental impacts of their economic activities (ibid: 332). Whande (2009:6) added that the historical significance of intra-regional migrations in shifting rural land uses and impacts on natural resources management is little explored. This means that there is a knowledge gap which this study needs to address. For example, the missing of evidence (vivid examples, especially those contributed by housing investments in the village of origin of multi-locational households) from the literature to influence decision making on natural resources use, space use and nature protection in the rural-urban continuum. But, it should be noted that, the focus of this study is in the village (rural) of origin of multi-locational households.

In Tanzania, the literature (for example; Bah et al., 2003 and Lwamayanga, 2010) has shown that there are inadequate studies done in the area of multi-locality and rural-urban linkage. This implies that, there is little knowledge known about multi-locational households, including their impacts, especially those which are related to housing investments in their villages of origin. It is a thought that, the village (rural) housing investments as a socio-cultural motive of multi-locational households which is currently booming in the villages on the slopes of Mount Kilimanjaro is likely to, on the one hand; improve the village (rural) housing (reducing the housing poverty in the villages), increase village (rural) asset ownership and enhance social status (prestige) and cultural values at household, family and community levels. However, on the other hand and when not guided by the legal instruments and organs; it is likely to contribute to environmental challenges (e.g. over-exploitation of building materials such as timber, sand and rock bricks, etc. causing deforestation and soil erosion) and spatial challenges (e.g. Reduce the farming land resulting from excessive sub-division of family land for housing investments, escalate scattered informal houses and cemeteries). This study explores and proposes solutions to address this spatial planning problem.

Creswell (2014:73) reminded us that we study research problems so we can assist policy makers when they make decisions. It also helps professionals and officials solve practical problems, and provide researchers with a deeper understanding of spatial planning and environmental issues related to housing investments. This research, is timely and is in line with the United Nation Sustainable Developments Goal 10 (reduced inequalities); goal 13 (action on climate) and goal 15 (life on land); and UNESCO on protecting nature and Mount Kilimanjaro. As Soini (2005:320) pointed out that, planning is also required to guide the future development of the semi-urban landscapes on the slopes of Mount Kilimanjaro, and multi-disciplinary approaches are needed in guiding the recreation of the landscapes without undermining the natural resource base.

This study, therefore, intends to explore the multi-locational households, including their motives behind housing investments in their village of origin, including on how has that investment contributed to the spatial and environmental challenges in the villages on the slopes of Mount Kilimanjaro, Tanzania. It is the researcher's hope that this piece of work will contribute knowledge that will make policy makers, researchers, politicians, practitioners and academics better informed in order to ensure sustainable development in all the villages surrounding Mount Kilimanjaro and other villages of similar character in Tanzania and in the global south.

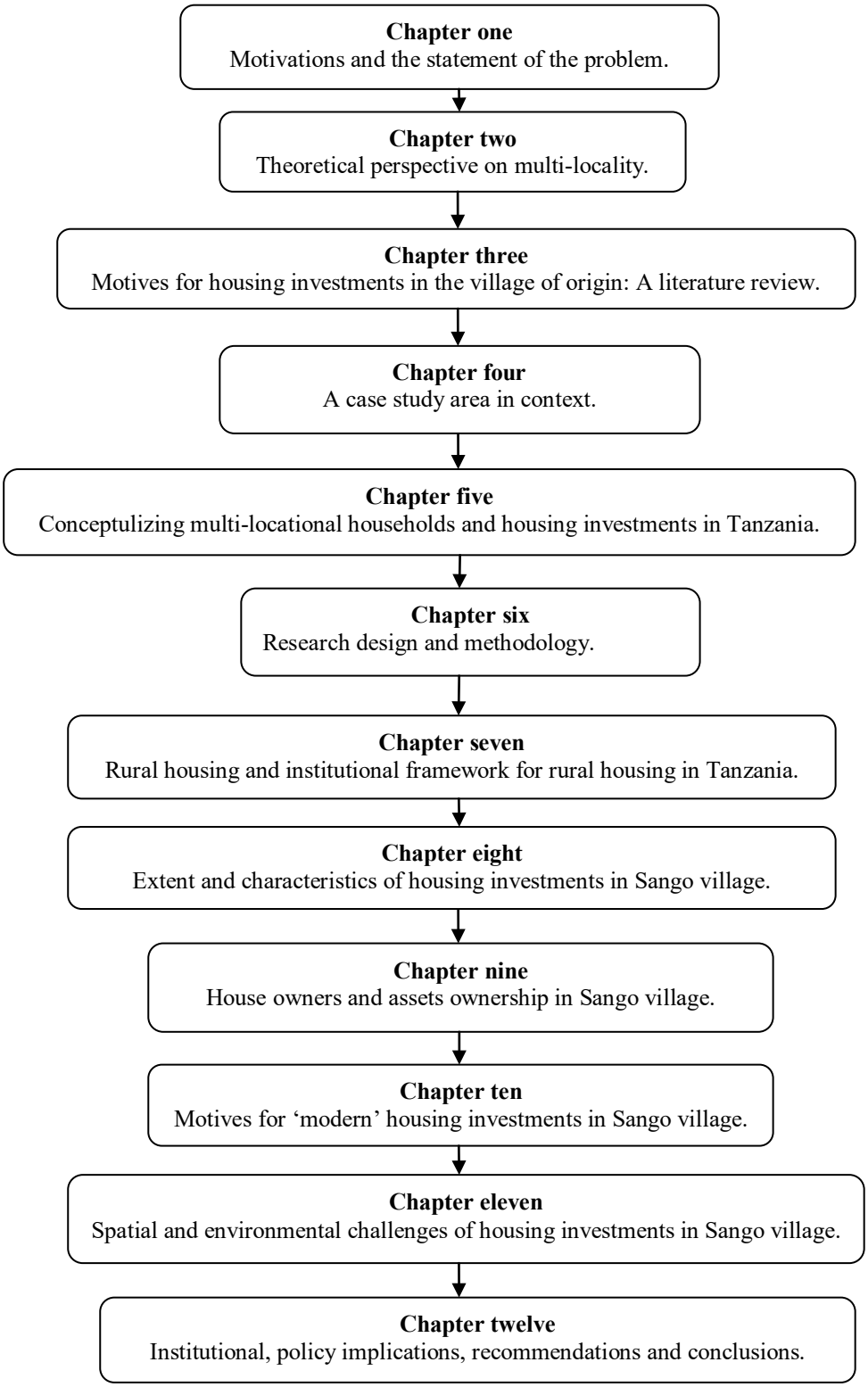
1.5 Significance of the study

The literature has been reported that, the villages in developing countries have been characterized by poverty in terms of income and housing (see for example, World Bank and UN Habitat reports). However, in some of the villages, especially those inhabited by multi-locational households' things have changed. The literature on multi-locality has become apparent (see Schmidt-Kallert and Franke, 2013; Deshingkar and Farington, 2009; and Smit, 1998) that multi-locational households have major impacts (positive and negative) in their villages of origin. This paradigm shift has to be incorporated in spatial planning, housing and environmental policies in order to conserve nature and ensure sustainable development in the villages, especially those inhabited by multi-locational households such as those on the slopes of Mount Kilimanjaro. The attitude of continuing thinking that, the villages are dormant areas is not valid today. This study, therefore, is timely and contributes knowledge that will (as mentioned before) make policy makers, researchers, politicians, practitioners and academics better informed about the linkage between multi-locational households and their villages of origin, including their impacts, especially those which are related to housing investments in their villages of origin and particularly on the slopes of Mount Kilimanjaro, Tanzania. The understanding of the magnitude of the problem will shed light on taking measures to protect the nature in the villages on the slopes of Mount Kilimanjaro and Tanzania as a whole.

1.6 Structure of the report

This dissertation is organized into twelve chapters (see figure 1.1). Chapter one provides the general introduction to the topic by highlighting the motivations and the problem statement as well as the significance of this study. Chapter two gives a theoretical departure/perspective on multi-locality. Chapter three provides the evidence from the literature on the motives for housing investments in the villages of origin of multi-locational households. Chapter four describes the case study area. While chapter five, conceptualises multi-locational households and housing investments in their villages of origin in Tanzania. It also pinpoints the research questions that this study needs to answer. This is followed by chapter six, which explains the research design and methodology within which the study was conducted, outlining the processes involved and emphasizing the mixed methods research design. Then chapter seven depicts the village (rural) housing condition and the institutional framework for village (rural) housing in Tanzania. The analytical chapters begin with the extent and characteristics of housing investments in Sango village in chapter eight. Chapter nine explores the house owners and assets ownership in Sango village. The motives for 'modern' housing investments are discussed in chapter ten and followed by the spatial and environmental challenges in chapter eleven. Finally, the summary of the key findings, including the issues of institutional, policies, spatial planning and housing implications, conceptual and methodological reflections is discussed in chapter twelve. It also provides recommendations, suggests areas for further research, concludes the study and proposes an action plan. The theoretical perspective on multi-locational household is presented in the next chapter.

Figure 1.1: The structure of the dissertation report.



Source: Author's own construct, 2017.

CHAPTER TWO

THEORETICAL PERSPECTIVE ON MULTI-LOCALITY

2.1 Introduction

The researcher argues that, the booming housing investments which are happening in the villages on the slopes of Mount Kilimanjaro and other villages of the same kind in the global south is a phenomenon of its kind which cannot fully be understood without employing the concepts of multi-locality and multi-locational household. This chapter, therefore, gives some theoretical insights from the literature in order to understand the phenomenon under study.

The term theoretical perspective was used in this study because it has been popularly used as a required section for scientific researches (Creswell, 2009:52). Creswell recommended that, a general guide is to introduce the theory early in a plan or study: in the introduction, in the literature review section, immediately after hypotheses or research questions (as a rationale for the connections among the variables) or in a separate section of the study (ibid: 57). Though, each placement has its advantages and disadvantages. I write the theory into a separate section in this research so that readers can clearly identify the theory from other components. Such a separate passage provides a complete explication of the theory section, its use, and how it relates to the study (Creswell, 2009:57 modified by the researcher to suit this study).

Creswell (2009:58) further claims that, we should limit the number of theories and try to identify one overarching theory that explains the central hypothesis or major research questions. Therefore, the main concept and theory used to guide this study is multi-locational household concept and social network theory. These theories were developed, extended and used by Deshingkar and Farington (2009); Padoch et al (2008); Krüger (1998); Schmidt-Kallert and Franke (2013); Schmidt-Kallert (2009); Smit (1998); and Tacoli (2008) to understand the multi-locational households and their livelihood strategies such as rural housing investments and rural-urban linkages in different developing countries in Latin America, Asia and Africa. But, before we go into detail into specific theories, first we need to understand the multi-locality concept; multi-locational households; asset ownership and rationale as well as strategies of multi-locational households in the selected relevant countries in the global south.

2.2 Multi-locality concept

The conventional paradigm of urban transition assumed that migrants all over the world take a once-in a-lifetime-decision to leave their home village and to settle in the city and that, by the second generation at the latest, the transition from a rural to an urban lifestyle would be complete (Schmidt-Kallert, 2009:334). It was generally assumed that those who left the old world never returned (Gmelch, 1980:135). This mode, however, does not hold true in Africa, Asia and parts of Latin America and Eastern Europe (Schmidt-Kallert, 2009:334). Indeed, as early as 1885, Ravenstein (1885) had already noted the principle of return migration in his renowned list of migration laws: "Each main current of migration produces a compensating counter-current" (Gmelch, 1980:135). Rhodes (1979) had suggested one reason for the neglect of return migration, is the argument that, the massive urbanisation occurring in most parts of the world led to a "rural-urban" analytical framework in which geographical movements were viewed as occurring in one direction only-rural to urban (Gmelch, 1980:135). However, cities in sub-Saharan Africa have always been somewhat ruralized and social groups affected by this process actually live in, as Gugler put it, dual worlds-the rural sphere and the urban society (Krüger, 2009:365). Sometimes this process of ruralisation has been described as something totally new, based on the assumption that African cities were not under rural influence

earlier in the century and have never before been part of intense urban-rural interactions. This assumption is wrong (ibid: 365). Indications are that seasonal, circular and other forms of temporary migration have become the dominant type of migration in the developing world (see for example; Baumgart (2016); Deshingkar and Farington (2009); Krüger (1998); Schmidt-Kallert and Franke (2013); Schmidt-Kallert (2009); Smit (1998); and Tacoli (2008).

Crush et al. (2007) cited in Whande (2009:7) concur with the scholars of multi-locality that, despite predictions of uni-directional rural-urban migrations, circular and seasonal migrations are still prominent. This has given rise to a distinct strand of research on new forms of urban transition, temporary migration, and multi-locality in many Asian and African countries (Schmidt-Kallert and Franke, 2013:13). In this study, we see evidence of the practice of multi-locality in the global south from the relevant and available literatures as explained below:

In South America; for example, in Brazil, Padoch et al. (2008:4) observed that, many newly urban households are "multi-sited", "multi-local", or "dispersed", maintaining houses and commonly, economic activities in rural areas as well as in the city. Citing Stearman (1985), the authors argued that, although multi-sited households are not new to Amazonia, recent changes in communications and transportation, markets, and labour opportunities have greatly amplified the prevalence of this residence and economic pattern. Nugent (1993) again described how several such large extended families, or "Kindreds", in the region of Santarem maintained firm residential bases in both city and village, relying on the resources of both (cited in Padoch et al., 2008:4). Further, WinklerPrins (2002, 2006) has described smaller groupings or households that maintain such dual residence patterns in the Santarem area. She describes not only frequent demographic movements between urban and rural places, but also complex and multi-functional networks of support and interaction that link residents of Santarem with their rural kin in an "economy of affection" (WinklerPrins and de Souza, 2005 cited in Padoch et al., 2008:4). Two-way flow of food and other resources-of people, as well as of news and knowledge-reinforce this "economy of affection", continue to blur rural-urban distinctions, and render rural urban migration a drawn-out process rather than a simple event (ibid.). Padoch et al. (2008:10) again found out that the new urbanities maintenance of ties to rural homes and persistence of rural preferences, tastes, and housing patterns has been in some senses a "ruralization" of Amazonian cities. The authors concluded that, the researchers worldwide have pointed out that, rural–urban movements in developing countries are now typically impermanent or circular, and multi-sited or dispersed households that continue rural production yet also depend on off-farm, often urban incomes, are increasingly the norm (Krüger, 1998; Rudel et al., 2002; Tacoli, 2002; Rigg, 2003; Dufour and Piperata, 2004 cited in Padoch et al., 2008). In Peru, circular migration is a way of maintaining work alternatives across a number of economic sectors (Laite, 1988 cited in Smit, 1998:80). For example, in case of drought, the rural household can survive temporarly on an urban income; when an urban income is lost, the household can rely on subsistence agriculture for a time (ibid: 80).

In Asia; there is a long tradition of temporary migration as a coping strategy (Black, 2001; Findley, 1998 cited in Tacoli, 2008:7). The overall increases in circular and temporary migration suggest that migration is part of wider household strategies that involve multi-activity-including farm and non-farm income sources-over multiple locations (Tacoli, 2008:8). Migrant members contribute to their households' welfare and return on a regular basis (Bah et al., 2003 cited in Tacoli, 2008:8). See, for example, the empirical evidence from India (Deshingkar and Farington, 2009) and from Bangladesh (Dannecker, 2012 and for observational findings Baumgart, 2016).

In Africa; circular migration is the predominant form of movement in many nations and regions (Tacoli, 2008:7). While limited infrastructure and transport links often increase the costs of movement and force migrants to stay away for longer periods of time, economic insecurity and poor living conditions in many urban centers reinforce the long-term linkages of migrants with their home areas

(ibid.). Members who have migrated not only face a "new way of life" in town, but must also cope with the fact that the rest of their family, household or clan probably lives hundreds of kilometers away (Krüger, 2009:364). Many of the migrants wish to keep in touch with those left behind in the home village. But maintaining a strong binding to the rural areas is also an absolute necessity (ibid: 364). A lot of migrants still look upon the city as their second home, their true home being the village where they were born (Krüger, 2009: 364).

In a survey Krüger conducted in Botswana it was revealed that many migrants indicated that they always planed, and would still like, to move back as soon as possible although they had already been in the city for decades. In fact, in order to secure a living in the urban setting, many in-migrants preserve rural attitudes and close linkages to the home villages of migrants remain present and active for many years (ibid.: 364). Schmidt-Kallert, (2009: 320) added that in many African countries, there are large numbers of people who have lived in the Metropolis all their lives, even in the second or third generation, but when asked to name their homes, they will invariably give the name of a remote village in the hinterland. And indeed, when such a person dies, the village folks will come to the mortuary in Kumasi or Dar es Salaam for the dead body, which will then be taken to the home village for a funeral (ibid.). Generally, people who are looking for survival options in the urban sector do not normally cut all ties with their rural base, rather, they return to their villages in a certain times of the year (ibid.: 321).

In a case study on Harare, Deborah Potts and Chris Mutambirwa could confirm that only a minority of migrants planned to remain permanently in the town. According to their survey, there was a strong perception that, maintaining the rural linkages was essential as economic security for the eventualities of old and unemployment (Potts and Mutambirwa, 1990:677 cited in Schmidt-Kallert, 2009: 321).

In addition to economic reasons for circular migration, there are also cultural aspects (Smit, 1998:80). In her study, she had conducted in Durban, South Africa; she had quoted Russell, 1993 who had claimed that, although families from Swaziland may include a number of temporary urban households, they also form part of an extended family united by strong ties to the same rural homestead (Russell, 1993 cited in Smit, 1998:80). Adding that, some studies have also shown that some migrants are more susceptible to embracing modern urban-industrial culture than others (Ibid: 80). Among the Xhosa people in South Africa, for example, two opposing ideologies of dealing with contact with Western culture emerged: the amaqaba migrants maintained their traditional customs and way of life based on the rural homestead while the amagqoboka migrants were far more likely to aspire to a westernised urban lifestyle (Mayer, 1980 cited in Smit, 1998:80).

In South Africa; circular migration was reinforced and perpetuated by the apartheid migrant labour system. Although there are no longer any more restrictions on urbanisation, circular migration and migrant labour continue to exist due to the economic and cultural factors discussed above (ibid: 80). Studies of households in South Africa have found complex social patterns with constant movement of people between rural areas, informal settlements, hostels and residential townships, as extended families attempt to make the best of life in severely constrained circumstances (Dewar et al, 1991 cited in Smit, 1998:80). See also empirical evidence in Southern Africa (Lohnert, 2002; Greiner, 2008; Steinbrink, 2009 and Whande, 2009).

Crush et al. (2007) cited in Whande (2009:8) indicates ways by which migrants maintain social links with their villages. Social, family functions and rituals play a critical role in migrants maintaining strong rural links as they attend weddings, funerals and harvests (ibid cited in Whande, 2009:8).

In Zimbabwe, for example, many migrants return to their home villages during big holidays such as Christmas and Easter (SPT, 2009 cited in Whande, 2009:8). These social relations are located in

the rural-urban network than spatially in rural agricultural production and are important for the social security of rural-urban migrants (Whande, 2009:8). However, the linkages between migrant households and non-migrant households are not always strong, especially where migrants have limited or no access to rural assets such as natural capital, especially land (because of their gender, income, ethnicity or religious and/or political affiliation) and as a result has little reason to maintain links or invest in their home areas. Nevertheless, there is ample evidence to show that in many circumstances multi-spatial households are able to secure access to a range of assets encompassing both rural and urban locations, which in turn can provide safety-nets or opportunities for cross-sectoral investment (Rakodi and Lloyd-Jones, 2002:55).

In Kenya, circular migration shows little sign of decreasing (Elkan, 1959 cited in Smit, 1998:79), although one study found that successful urban migrants in Western Kenya have increasingly cut their material links with the rural areas (Francis et al., 1993 cited in Smit, 1998:80).

In Tanzania, there has been a rural-urban linkage study (see Bah et al., 2003), however; this study provides empirical evidence of the practice of multi-locality. For example, one of the strategies for bridging this rural-urban gap is through housing investments in the village of origin. The survey, conducted in a Sango village in Kimochi ward, Moshi district, Kilimanjaro region revealed that those households who invest in these 'modern' houses are multi-locational households. The majority men and very few women work and live in urban areas such as in Dar es Salaam, Arusha, Moshi, Morogoro etc., just to name a few. It was easier to see a 'modern' residential house, especially for those households with at least one member who is a multi-locational household. However, it was hard to find a 'modern' house in those households without multi-locational household members (see evidence in chapter nine and chapter ten).

2.3 Multi-locational households, asset ownership and their rationale in the village of origin

Multi-locational households not only routinely return to their village of origin and consider it as their main place of domicile, but they also invest in village assets such as land, housing and livestock as a safety net (Krüger, 1998; and Smit, 1998 cited in Tacoli, 2008:7). Rakodi and Lloyd-Jones, (2002) added that, investing in property such as housing, land or cattle in the home area is often an important element of a household livelihood strategy, and relatives and kin are those most likely to take care of these assets in the multi-locational household absence (Atsar, 1999; Krüger, 1998; and Smit, 1998 cited in Rakodi and Llyord, 2002:55). This practice is also valid in Tanzania because there is a rural-urban link with the remained relatives/villagers who most of the times take care of the village house and ensure that the village house is well protected in the absence of the owners who mostly visit the village house once or twice a year, especially at Christmas, Easter or when there are wedding/burial ceremonies of relatives, neighbours and friends. Multi-locational households also maintain their village homes as a safety net against urban job insecurities and for affordable retirement (Whande, 2009:2). Indeed, one element of what has often been called "ruralization" of the African city is the fact that, village assets serve as safety valves for urban dwellers (Krüger, 2009: 365). The maintenance of rural-urban linkages and of rural assets as an emergency reserve is at most ubiquitous in sub-Saharan Africa (ibid: 365). Du Toit and Neves, (2009) cited in Whande (2009:8), show that the rural-urban networks in South Africa are used to improve conditions in the rural areas. The investment in a rural homestead is more affordable than attempting to purchase or build a house in the city where the property market value generally excludes the majority of rural migrants (ibid.).

Investing in rural homesteads is also seen as a way of ensuring respect and dignity among the rural peers, but also as preparation for eventual retirement (Du Toit and Neves, 2009). A similar situation is observed in Botswana (Krüger, 1998) and Namibia (Greiner, 2008) where migrants

maintain strong rural-urban links and invest in livestock in small agro-towns and rural homes (cited in Whande, 2009:8). Migrants in Botswana enter formal employment but also invest in land and livestock activities in their home village as a security against possible loss of urban income (Krüger, 1998 cited in Whande, 2009:7).

The point here is not so much that these linkages exist, as they did in the past, but that they indicate a continuation of migration strategies to distribute livelihood shocks and opportunities on the rural-urban continuum (Whande, 2009:8). In Mozambique and Swaziland, migrants invest in agricultural land and homesteads in their rural homes to prepare for retirement (Hughes et al, 2007 cited in Whande, 2009:10) while in Botswana and Namibia livestock constitutes a central avenue of investing remittances (ibid.). The actual investments, however, might be mediated by a family's particular livelihood situation and the actual amount of money a migrant earns (ibid: 10). Rural-urban migrants distribute assets between their rural homes and urban work places and this minimizes their vulnerabilities to shocks such as drought, floods and loss of jobs. Working in the urban areas contributes to cash income for investing in land, agriculture, livestock and rural homes (Whande, 2009:11).

In the context of Tanzania, the motives behind village asset investments do not differ much from those of the rest of the global south, though, they are also unique (see chapter ten). The literature has also shown that, the most preferred assets owned by multi-locational households in their village of origin are land and house. Therefore, the researcher selected a house (see the methodology chapter) to guide the phenomenon under study. The strategies pursued by multi-locational households to achieve their goals are also discussed.

2.4 Strategies of multi-locational households

Initially, multi-locational livelihood strategies were conceived as being associated with the poor (Schmidt-Kallert, 2009:329). However, it is important to note that multi-locational households are not only the poor (Tacoli, 2008:8). In fact, they are more likely to be characteristic of better-off groups, and in many cases the poorest households are those that are unable to diversify and mobilize their labour in order to make the most of opportunities (Bah et al., 2003; Baker, 1995; Hoang, Dang, and Tacoli, 2005; Hoang et al., forthcoming cited in Tacoli, 2008:8). More recently some authors have differentiated between ‘coping’ and ‘accumulative’ strategies (Deshingkar and Farrington, 2009:18-19; Steinbrink, 2009:53ff).

While the former focuses on the strategy for survival of the poor, the latter refers to strategy of the more educated and better-off, allowing the accumulation of assets, savings and investments (Schmidt-Kallert, 2009:329). Further, asserts that households who involves in ‘coping’ strategies live next door to those pursuing ‘accumulative’ strategies (ibid.: 329). Again, Rakodi and Lloyd-Jones, (2002: 7) argued that households change over time, as they evolve through a life-cycle, as their member age and their status change in culturally prescribed ways, and as decisions are made about the movement of their members. The household composition is both a determinant of the capabilities, choices and strategies available to a household, and may be an outcome of strategic decisions about fertility or where members of the family reside. The authors further claimed that for individual households or groups of households in settlements or regions, their strategies which they are able or choose to adopt vary over time and according to circumstances.

A strategy is a series of choices constrained to a greater or lesser extent by macroeconomic circumstances, social context, cultural and ideological expectations and access to resources (Wolf, 1990 cited in Rakodi and Lloyd-Jones: 2002:8). Thus, households, communities or regions may experience different pathways of chronic or transient poverty, impoverishment or improved well-being (Rakodi, 1999 cited in Rakodi and Lloyd-Jones, 2002: 14). This means that the multi-locational

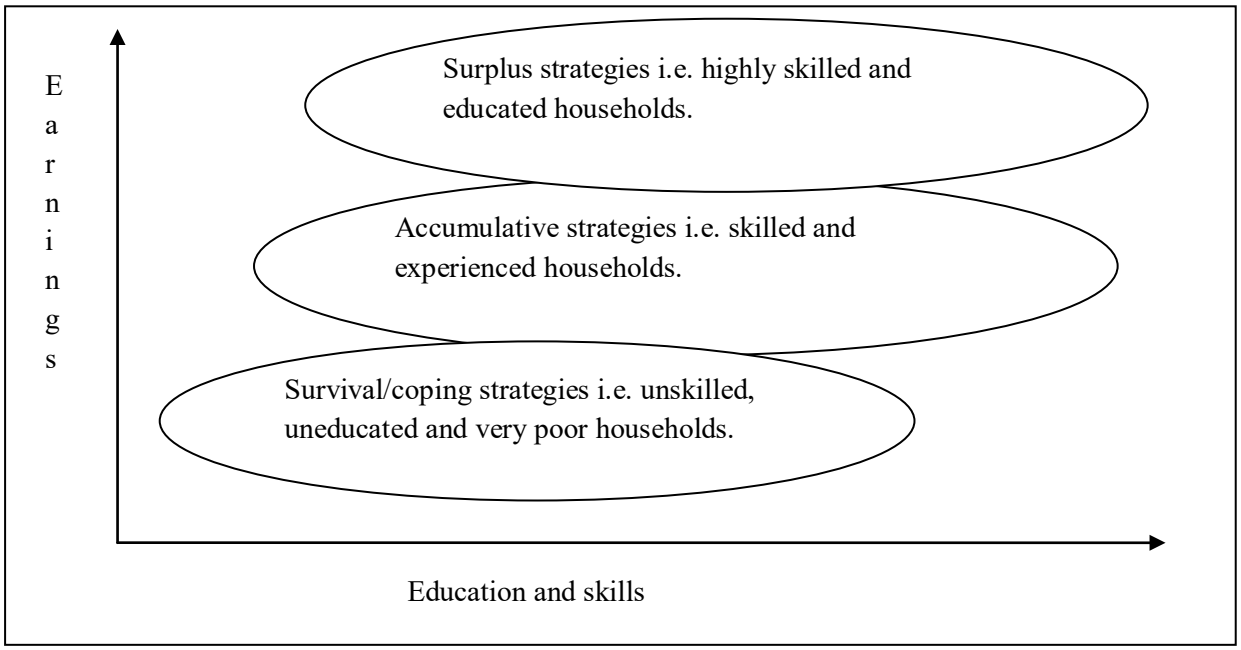
households who decide to invest the first house either in urban or/and a second house in the village of origin always do it with a strategy. In the urban it is for living and other livelihood strategies (e.g. Renting). However, in the village of origin the strategies are different. Evidences have been provided within this chapter, chapter three and chapter ten (case study area).

Deshingkar and Farrington (2009) based on the findings of their study, they had conducted in rural India, added that for a small minority of multi-locational households with land, supportive family structures, other social assets and/or other sources of income, remittances may remain available for investing in agriculture or to make an impression through conspicuous consumption (ibid: 19). The authors further argued that knowledge and experience gained over time may allow a multi-locational household to move up the ladder from 'coping/survival' to 'accumulative' strategies (see figure 2.1).

Accumulation implies an increase in assets. These may generate further income streams-as, for instance, with investment in livestock-or may contribute to the well-being of the household with only indirect impacts on earning capacity, such as improvement to the family home (ibid: 19). The coping multi-locational household streams can become accumulative when work became available more regular, when skills are acquired leading to better wages and improved security and/or when workers deal with employers directly rather than through middlemen and agents (ibid.). These strategies hold water in Tanzania, for example, for those multi-locational households who invest housing in their village of origin. This means that one of the strategies could be from owning the first house in urban follow up by the need for a second house in the village of origin and vice versa (see chapter nine).

Deshingkar and Farrington provided evidence that, those multi-locational households in India with more skills, education, and social networks are able to find better jobs in large cities such as Delhi and Mumbai in rapidly expanding industrial, manufacturing, and services sector (ibid: 22). Adding that, the migration is long distance and long term and multi-locational household return for major festivals or family events. The money sent is invested in the farm or in buying/upgrading other assets. Examples include the BCs in Bihar, the Vadis (also BCs) in Andhra Pradesh and skilled mason from MP (again mainly BCs) who work in urban centres in Gujarat (ibid: 22). Several migration streams may exist in a single village. These are shaped by numerous factors, including historical precedent, skills associated with certain ethnic groups and emerging employment opportunities in the region. Different household members may participate in different migration streams, but they work towards a common goal which is portfolio diversification and risk spreading (ibid: 23).

Figure 2.1: The types of multi-locational household strategies.



Source: Deshingkar and Farrington, 2009: 20 modified by the author, 2014

Figure 2.1 above contains a schematic representation of the types of multi-locational household strategies. The vertical axis represents earnings and the horizontal axis represents skills and education. The multi-locational household strategy for survival/coping usually involves those who belong to historically disadvantaged groups or the poor while the accumulative and surplus strategies are pursued by the skilled and educated households. It is so evident that those multi-locational households who invests on housing in their villages of origin fall under 'accumulative or surplus strategies' because they have good skills, money and/or education. Therefore, they have good jobs or/and good business, and, they are able to invest in modern residential housing in their village of origin. This has also been reflected in the case study area (see the findings chapters).

In addition to that, a study conducted by Schmidt-Kallert and Franke (2013) in China found out that, there are three distinct forms of multi-locational household strategies. First, a multi-locational household strategy in which economic reciprocity is the dominant feature. The authors argued that, another important dimension of economic reciprocity is the practice of house building in one's home village or in the nearby township (Schmidt-Kallert and Franke, 2013:102). Second, strategies in which, in addition to the material flows, the exchange of non-material services (e.g. caring for the elderly or for school children) plays an important role. And, third, strategies in which the reciprocity of economic flows and non-material services is complemented with the transfer of knowledge, beliefs and values (Schmidt-Kallert, 2009:324; Schmidt-Kallert and Franke, 2013:102). These strategies are fundamental and have also been reflected in the case study area. However, the housing investments in the study area are more associated with social and cultural values than economic values.

Generally, this study has realized that, there are different strategies employed by different multi-locational households from different parts of the world in order to accomplish their goals. In China, for example, their strategies were to invest in rural farming, taking care of elderly, education for children and investing in housing in the village or township of origin (Schmidt-Kallert and Franke, 2013). In India, their strategies were to invest in village or rural farming, business and village housing (Deshingkar and Farrington, 2009). In South Africa, their strategies were to invest in education for

children, taking care of village parents and children and village (rural) housing investments (Smit, 1998). In Botswana, the strategies were to invest in livestock (Krüger, 1998). Therefore, basing on the empirical findings, it appears that housing investments was mostly mentioned as an investment priority in the village of origin of multi-locational households. Therefore, the housing investments as an investment priority asset in the village of origin of multi-locational households guided this study. The theoretical perspective sheds light on why we see modern residential houses in the village of origin of multi-locational households, particularly in the villages on the slopes of Mount Kilimanjaro in Tanzania.

2.5 Theoretical perspective on multi-locational households

A theory is a collection of concepts which all together provides an understanding of how a phenomenon is built up and how it can be classified and used (Nachimias and Nachimias, 1996). In short, theories and concepts are tools for human thinking. In the same way, instruments for human action (ibid.). A theory might appear in a research study as an argument, a discussion, or a rationale, and it helps to explain (or predict) phenomena that occur in the world (Creswell, 2009:51). Therefore, the booming 'modern' residential housing investment that we see in the villages on the slopes of Mount Kilimanjaro and other villages of the same kind in the global south is a phenomenon that is related to concepts and theories such as multi-locational household concept and social network theory. The detailed explanations of these theories are provided within this chapter.

In qualitative research (inductive "bottom up" approach), the use of a theory is much more varied. The inquirer may generate a theory as the final outcome of a study and place it at the end of a project, such as in grounded theory (Creswell, 2009:49). From other qualitative research it comes at the beginning and provides a lens that shapes what is looked at and the questions asked, such as in ethnographies or in advocacy research (ibid). Qualitative inquirers use theory in their studies in several ways. First, much like in quantitative research, it is used as a broad explanation for behaviour and attitudes, and it may be complete with variables, constructs, and hypotheses (ibid: 61). For example, ethnographers employ cultural themes or "aspects of culture" (Wolcott, 1999:113 cited in Creswell, 2009:61) to study in their qualitative projects, such as social control, language, stability and change, or social organisation, such as kinship or families (see Wolcott's 1999 discussion about texts that address cultural topics in anthropology). Second, researchers increasingly use a theoretical lens or perspective in qualitative research, which provides an overall orienting lens for the study of research questions. This lens becomes an advocacy perspective that shapes the types of questions asked, informs how data are collected and analysed, and provides a call for action or change (Creswell, 2009:6). Third, distinct from this theoretical orientation are qualitative studies in which theory (or some other broad explanation) becomes the end point. It is an inductive process of building from the data to broad themes to a generalized model or theory (see Punch, 2005 cited in Creswell, 2009:63). Fourth and finally, some qualitative studies do not employ explicit theory. However, the case can be made that no qualitative study begins from pure observation and that prior conceptual structure composed of theory and method provides the starting point for all observations (Schwadt, 1993 cited in Creswell, 2009:64). The theories guiding this study come from the literature and from the ground, i.e. deductive and inductive approaches respectively.

In quantitative research (deductive "top down" approach), some historical precedent exists for viewing a theory as a scientific prediction or explanation (see Thomas, 1997, for different ways of conceptualizing theories and how they might constrain thought). For example, Kerlinger's (1979:64) definition of a theory is still valid today. He defined a theory as "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena". In this definition, a

theory is an interrelated set of constructs (or variables) formed into propositions, or hypotheses that specify the relationship among variables (typically in terms of magnitude or direction) (cited in Creswell, 2009:51).

Loboritz and Hagedorn (1971) add to this definition the idea of a theoretical rationale, which they define as "specifying how and why the variables and relational statements are interrelated" (ibid: 17). Why would an independent variable, X, influence or affect a dependent variable, Y? The theory would provide the explanation for this expectation or prediction (Creswell, 2009:51-52). In quantitative studies one uses theory deductively and places it toward the beginning of the proposal for a study. With the objective of testing or verifying a theory rather than developing it, the researcher advances a theory, collects data to test it and reflects on its confirmation or disconfirmation by the results. The theory becomes a framework for the entire study, an organizing model for the research questions or hypotheses and for the data collection procedure (ibid: 55). However, the focus of this study is more on qualitative (exploratory descriptive) rather than quantitative theories (comparing variables, i.e. dependent and independent variables). It also neither intends to develop nor to test a theory, but rather to explore the motives behind 'modern' residential housing investments and their implication on the space and the environment in the village of origin of multi-locational households. The multi-locational household and social network theories guided the researcher to explain this phenomenon under study.

2.5.1 Multi-locational household concept

The concepts used to describe this rural-urban households linkage phenomenon are: 'multi-locational households' 'dual-locational households' (Schmidt-Kallert, 2009, Schmidt-Kallert and Franke, 2013); 'multiple-home households' (Smit, 1998); 'multi-local households' or 'split households' or 'multi-spatial households' (Schmidt-Kallert, 2009; Krüger, 1998; Tacoli, 1998; Smit, 1998); multi-spectral households (Rakodi and Lloyd-Jones, 2002); and 'multi-sited households' or 'multi-local households' or 'dispersed households' (Padoch et al, 2008). However, it appears that the term most commonly used is 'multi-locational households' (Lohnert, 2002; Schmidt-Kallert and Kreibich, 2004; Deshingkar and Farrington, 2009 cited in Schmidt-Kallert, 2009:323).

Therefore, the researcher adopted the term 'multi-locational households' to understand the booming housing investments in the villages of origin of multi-locational households in the villages on the slopes of Mount Kilimanjaro, Tanzania.

In most countries and cultural settings the household is defined as a basic unit of reproduction, whereby a number of people (usually from the same kin, often at least two generations) share the same living quarter and pool their economic resources (monetized and non-monetized) (Schmidt-Kallert and Franke, 2013:19). Rakodi and Lloyd (2002:7) also define a household as a person or co-resident group of people who contribute to and/or benefit from a joint economy in either cash or domestic labour–that is a group of people who live and eat together. The two definitions are relevant in Tanzania. For example, the 2012 Tanzania Population and Housing Census report, defines a household as a person or group of persons who reside in the same homestead or compound, but not necessarily in the same dwelling unit, having the same cooking arrangements, and are answerable to the same household head. However, for the purpose of this study an extended notion of a household which takes into account the spatial arrangements of multi-locational household is used.

A household is, therefore, made up of members from the same family or kin pooling their economic resources and planning together the expenses for the purpose of reproduction of all household members, but the members may well live in two or more spatially split locations (Schmidt-Kallert and Franke, 2013:19). The definitions of household have conventionally emphasised co-residence, sharing the same meals -"cooking from one pot"- and undertaking joint or co-ordinated

decision-making; and rural households have been regarded as the centre of rural social systems (ibid). Recent concepts of the household broaden the definition to allow for overlapping social groupings, including family or other members who may be physically dispersed but socially interdependent. Seasonal (and permanent) migration of individuals and households has been and is presently a significant feature of Tanzania life. This broader definition which includes migrants, who contribute to or call upon household resources, would thus seem more appropriate (Mung'ong'o, 1997: 66 cited in Morris et al., n.d: 4).

Therefore, the researcher adopted the term multi-locational households to understand their motives for housing investments in the villages of origin in Tanzania. This is because it includes an extended notion of a household, which takes into account the spatial arrangements of multi-locational households.

Initially, the concept used by Smit (1998) was "multiple-home households" who had argued that, multiple-home households generally consist of the following components: A household located in an urban area, where the economically active members, their spouses and most of their children's lives; and a household located in a rural area where the non-economically active members' lives, i.e. the parents and siblings of the head of the urban household with their spouses/partners and children. Heads of owner/contributor households usually have children living in the second home while heads of owner-only households usually do not (ibid: 83).

Again, Schmidt-Kallert (2009:335) claimed that, a key element in the contemporary research on the urban transition is the concept of multi-locational households. These households consciously live in two locations, a rural and an urban one, which are often far away from each other and take advantage of both urban and rural opportunities. Social networks enable the individual household to bridge the gap between the two locations (Schmidt-Kallert, 2009: 319). Also, Dittrich-Wesbuer (2016) citing Wood et al. (2015) defined residential multi-locality as a social practice of everyday life whose participants have at their disposal two or more dwellings in different places where they reside in alternating rhythms. Although this definition refers to the global north (developed countries), it also holds water in the global south.

Though, it is still not easy to determine exactly, for how long an individual multi-locational household should be regarded as a member of his or her original household. The distinction remains fluid to some extent (Schmidt-Kallert and Franke, 2013:19). Indeed, the meaning of 'to live' is to some extent contradictory in the sense that it does not state clearly the criteria to qualify it, the researcher opted the word 'to reside or to have domicile' to replace the word 'to live'. Therefore, from the above point of views we can define the multi-locational households in relation to this study as the households who have domiciles in two locations, a village (rural) and an urban one, which are often far away from each other and take advantage of both urban and rural opportunities and social networks to enable the individual household to bridge the gap between the two locations.

Strictly speaking one would have to describe them as 'dual-locational', but truly multi-locational household arrangements are common in some parts of the world as well (Schmidt-Kallert, 2009:323). The role of social capital and migrant networks in tying together rural people and multi-locational households has been found to be of utmost importance (ibid: 335). The intensity of linkages between the two parts of the household varies from one setting to another, and it is also subject to variations over time (ibid: 335). There may be very rigid joint planning in order to meet certain short-term objectives, there may also be a tacit agreement over the frequent exchange of monies or/and services for each other, i.e. investing on housing, investments in small businesses and agricultural goods or machinery, harvesting, looking after children at different stages in their upbringing and education, marriage, overcoming certain hardships like illness with high medical costs or loss of property and

taking care of the elderly. In these cases one can definitely speak of a multi-locational household (Schmidt-Kallert, 2013: 19).

In 1999 Martin Raithelhuber also completed an empirical study on urban-rural linkages in Nepal (Raithelhuber, 2001). He conducted field research in several villages in the western part of the country, one of which was more than five hours walking distance away from the next road. Even in this particular isolated village Raithelhuber found multi-locational households (Schmidt-Kallert, 2009:329). This argument concurs with the empirical findings that have been revealed in Tanzania, especially in the villages on the slopes of Mount Kilimanjaro. Evidences have shown that, the modern residential houses that we see in the villages are mostly because of multi-locational households. This means that the multi-locational households choose to start to own the first house either in urban or/and a second house in the village of origin for different motives (see evidence under chapter ten).

Additionally, Schmidt-Kallert and Franke (2013: 101) based on the findings of their study, they had conducted in rural China they had argued that, those households who have urban household members and can count on remittances are more resilient than the few households who are not part of multi-locational household arrangement.

This argument also holds water in Tanzania. For example, through observation, standardised household survey and interviews conducted in Sango village, Moshi district, Kilimanjaro region, Tanzania; it has revealed that, those families which are well-off have multi-locational members who live and work in cities in Tanzania and abroad. It is also easier to see modern residential houses especially for those households with at least one member who is a multi-locational household. However, for those families without a member who is a multi-locational household it was difficult to see these changes (see chapter nine).

In addition to that, in Tanzania there are multi-locational households who don't have parents in the village, but still there is a good link with the remained relatives and villagers who sometimes take care of the village land, house and other properties. Also, the remittances are sent in the form of salary to ensure that the village properties are maintained in the absence of the owners who mostly visits the village once or twice a year and especially during Christmas and Easter or when there are wedding/burial ceremonies of relatives, neighbours and friends.

Therefore, the multi-locational household's concept/theory is a vital lens to help in understanding the phenomenon under investigation. It tells us that, the multi-locational households in the global south and particularly in Kilimanjaro region, Tanzania want to return to their roots when they are 'alive' and when they are 'dead'. Though, the phenomenon cannot be well understood without employing also the social network theory.

2.5.2 Social network theory

A network is a collection of points or nodes linked through some type of association (McCulloh et al., 2013: 4). These points or nodes can represent any object or subject (e.g., people, places, and resources) and the links can represent any relationship between them (e.g., route, distance, family membership, and reporting structure) (ibid).

A network in this study means the relationship between multi-locational households and their villages of origin. On the other hand, social networks are graphs that contain a finite set or sets of actors which we call agents and the relationship defined between them (ibid). A social network would then be comprised of nodes representing people with the corresponding links representing the relationship between the people (ibid: 4). So, the link may be defined as anything that meaningfully represents the relationship (ibid: 6).

Thus, a social network in this study it means the link between multi-locational households themselves together with their village counterparts and their particular village of origin. The existing

relationship to a large extent influences multi-locational households to invest in 'modern' residential houses in the village of origin (see evidence in chapter ten). For a network to exist, the nodes must be linked by some kind of flow or relationship (McCulloh et al., 2013: 6).

Social exchange theory was first presented by Homans (1958) cited in McCulloh et al. (2013:111) and it suggests that all human relationships or social interactions are exchanges based upon an analysis of costs and benefits as well as analysis of alternatives. This theory evaluates the social associations analyzed in terms of the value of giving and receiving, and when the costs outweigh the benefits, then the relationship breaks down (ibid: 111). Based on this theory, and in the context of Tanzania and particularly in Kilimanjaro region, we see a continuous relation between the multi-locational households and their villages of origin because there are mutual benefits. For example, at some time in a year those households who live in urban wants to go to their village of origin to meet their parents, relatives and friends whom they had hardly missed a year or so. The benefits that are exchanged before, during and after home visits include remittances, foods, norms, rituals, etc. Therefore, the housing investments as one of the strategies of multi-locational households have been associated with some socio-cultural and economic values. Though, in the case study area, the socio-cultural values overweigh the economic values (see chapter ten).

Blau (1994) cited in McCulloh et al. (2013:111) believes that the initial drive for social interaction is initiated by the perceived exchange of benefits, both intrinsic and extrinsic, regardless of cultural norms. Molm et al. (2000) on negotiated and reciprocal, direct exchange showed that reciprocal exchanges produced stronger trust and commitment than negotiated exchange, and that behaviors indicating or confirming the partner's trustworthiness had a greater influence upon trust in the reciprocal exchange (McCulloh et al., 2013:111).

Therefore, the social network theory is very important in shedding light on the phenomenon of multi-locational households and their motives behind housing investments in their villages of origin. It is evident that, there are closer mutual/reciprocal exchanges between these households and their villages of origin which can last longer. These links have some housing, spatial and environmental implications in the villages of origin in the village of origin of multi-locational households (see the case study area).

McCulloh et al. (2013:113) further claimed that there are key social forces that drive the formation of social links: homophily, reciprocity, proximity and prestige. All of these drivers of link formation represent costs and benefits associated with establishing and maintaining links in a network (ibid: 113). The understanding of these forces is vital to this study.

First, homophily deals with the tendency of individuals to form relations with those like themselves (Blau, 1977; McPherson et al., 2001). If actors share common interests, beliefs, goals, race, gender, and/or culture, they are more likely to form connections than if they shared no common interests or features. This is often commonly termed "birds of a feather flock together" (McCulloh et al., 2013:113). This is similar to the African societies, for example, the "Chagga" tribe in Kilimanjaro region, Tanzania has households who most of them have similar characters and culture of maintaining links with their village of origin and their village colleagues. This practice has implications in the village of origin.

Second, reciprocity is whether agents tend to form direct relationships with the others who initiate relationships with them. From a utility perspective, it is easier to maintain a social relationship, when the other actors take an active role in reaching out and reciprocating the relationship. Reciprocity may partially be an emergent property of homophily if two similar agents develop a reciprocal relationship due to their shared attributes (McCulloh et al., 2013:113). In closely knit groups based upon homophily the lack of reciprocity can weaken the ties between group members, making the group more fragile as members do not abide by the expected norms of the group

(ibid: 114). In line with this argument the global south households e.g. the "Wachaga" households in Tanzania have still maintained their rural-urban linkage because of their strong reciprocity. This spirit continues to flourish because of the inherited common rules, norms and sanctions; connectedness and networks.

Again, proximity is the organisational or physical distance between nodes. This can be organisational or physical (McCulloh et al., 2013:114). In either case, the closer actors are to one another, the more likely they are to interact and form relationships. Greater physical distance incurs a cost of link maintenance in terms of time to reach another node or in terms of the technical effort, such as a phone or email (ibid: 114). In the same line of thinking and in relation to this study, it can be argued that, those multi-locational households who live for example closer to Moshi will possibly visit their villages of origin mostly as compared to those who lives far.

And as groups form, social norms are established. A norm is a value of appropriate or inappropriate placed upon feeling, thought, or behavior (McCulloh et al., 2013:114). Friedkin (2001) suggests that shared beliefs in these values with influential others reinforces and validates the beliefs, thus creating the group norm. He further suggests that these norms provide an informal set of expectations, which provide opportunities for individuals to validate their sense of self-worth within the context of the group or social circle. An individual's choice to conform with the group is driven by their need for social acceptance and validation and a perception of how well the group's norms align with their positive attributes. Group membership can form an integral part of a person's individual identity (ibid: 114). This argument is evidently revealed in the case study area.

Also, prestige is another very important social force that drives the formation of social links. It is therefore very important to provide its meaning here because it has been identified as one of the motives behind housing investments in the village of origin of multi-locational households. McCulloh et al. (2013:114) claimed that, the establishment of social norms provides a mechanism for two important concepts in social psychology, prestige and social conformity/traditional values. Individuals who epitomize the social norms and values of the group not only derive a personal sense of self-worth, but also are perceived by others to be valuable. These individuals have high prestige and hold greater influence over the attitudes and ideology of group members (ibid: 115). They are also able to influence group norms that may emerge in the future. Other members of the group will often choose to link to high prestige nodes for greater validation of their own self-worth (ibid: 115).

Again, perceived motivation can influence individual status within the group as well (Ridgeway, 1978; 1982 cited in McCulloh et al., 2013:115). It has been observed that, the prestige demand at households, family/clan and community levels perpetuate the escalation of 'modern' residential housing investments in the villages of origin of multi-locational households on the slopes of Mount Kilimanjaro, in Kilimanjaro region, Tanzania. So, low status individuals who are perceived to be group-oriented combined with reasonable task proficiency tend to attain higher status levels over time. By contrast, individuals who are low status and are perceived to be self-oriented tend to remain low status. High status individuals tend to remain high status regardless of their motivation as long as their task proficiency remains high.

Prestige can also be achieved in terms of an individual's access to resources, knowledge, and other social circles. Within this context prestige can be deliberately improved. These people also must maintain social norms in order to retain their prestige within the group. This can sometimes be challenging if prestigious individuals choose to affiliate with social circles that may have competing social norms (ibid: 115). In the same line of thinking, this also applies to the households in the villages on the slopes of Mount Kilimanjaro, Tanzania. The results have revealed that prestige was

one of the very main motives behind 'modern' residential housing investments in the villages of origin of multi-locational households on the slopes of Mount Kilimanjaro, Tanzania.

In addition to that, the most distinctive feature of multi-locational households networks is that they exist across two or more locations, but they also tend to be somewhat limited and specific in terms of the ties that they are comprised of (Poros, 2011). Such ties could be based on family, kinship, hometown, schools attended, and friendship, among others but often changes over time. The strength of networks also depends on the extent to which multi-locational households integrate into their destinations while still maintaining a connection to their origins (Tamanja, 2014:10). Social networks enable the individual household to bridge the gap between the two locations (Schmidt-Kallert, 2009:319). These connections have been reflected in the case study area.

Moreover, networks are weakened and sometimes break up when multi-locational households are assimilated into their host communities at the destinations and break ties with their homesteads, as was the case in Europe, North America and Japan during their urban transition processes (Schmidt-Kallert, 2009: 319; Tamanja, 2014:10). However, in other contexts such as in Africa, where ethnic and hometown based ties are still very strong and define the identities of people, multi-locational households are hardly assimilated but are identified by their origins and ethnic orientations (ibid.). Such networks remain strong and last longer.

As Schmidt-Kallert pointed out that, in many African cities, there are large numbers of people who have lived in the metropolis all their life, even in the second or third generation, but when asked to name their home village, they will invariably give the name of a remote village in the hinterland. And indeed, when such a person dies, the village folks will come to the mortuary in Kumasi or Dar es Salaam for the dead body, which will then be taken to the home village for the funeral (Schmidt-Kallert, 2009: 320).

This theoretical argument is very relevant in the case study area. For example, for the 'Wachagga' multi-locational households it is argued that, they will return when they are 'alive' or when 'dead'. This means that when 'alive', there is an ensured sustainable social network through economic reciprocity (such as constructing a house in the village of origin, sending remittances, etc.) and transfer socio-cultural values (home visits, attending events etc.). Indeed, when dead, they prefer to be buried in their villages of origin than place of destination. This is because of the existing social network. It can also be reasonably inferred from this argument, that ethnic based networks have strong and long lasting ties (Tamanja, 2014:11).

In the global south, the social network theory has been reported in various studies (see, for example, Deshingkar and Farington, 2009; Krüger, 1998; Schmidt-Kallert and Franke, 2013; Schmidt-Kallert, 2009; Smit, 1998; Tacoli, 2008 and Tamanja, 2014). Though, the literatures on social networks in relation to multi-locational households in Tanzania have never or inadequately been reported.

Therefore, studying networks, particularly those linked to family and households, permits the understanding of migration and multi-locational households as a social product not as the sole result of individual decisions made by individual actors, not as the sole result of economic or political parameters, but rather as an outcome of the interaction of a range of factors (Boyd, 1989: 642 cited in Tamanja, 2014:11). Consequently, some households maintain spatially split components-with some members located in the village while others in urban areas-and migrate between the localities to

enhance their livelihoods (ibid). Today, the social network (rural-urban linkage) in Africa is still strong. This has implications in the village (rural) and urban territories.

2.6 Concluding remarks

The theoretical perspective chapter has been able to give some reflections on the concept of multi-locality. It has also shed light on the two theories (multi-locational household concept/theory and social network theory) which are very important for understanding this study. Therefore, the understanding of the theoretical perspective of the phenomenon under study allows us now to provide a summary of evidence of the existence of multi-locational households, including their motives for housing investments in their villages of origin from the available literature in the global south (developing countries). The global south literature is relevant to the case study area (Tanzania). This is provided in the following chapter.

CHAPTER THREE

MULTI-LOCATIONAL HOUSEHOLDS AND THEIR MOTIVES FOR HOUSING INVESTMENTS IN THEIR VILLAGES OF ORIGIN: A GLOBAL SOUTH OVERVIEW

3.1 Introduction

This chapter presents the practice of multi-locational households, especially residential housing investments in their villages of origin, particularly in the global south. The literature has shown that this practice has been there for several decades ago. The chapter provides available vivid examples from the countries in the global south such as in South America, Asia and Africa. The literature has revealed that, there have been quite a number of scholars who have documented on this topic. For example, in South America (Padoch et al., 2008), while in Asia (Baumgart, 2016; Dannecker, 2012; Deshingkar and Farrington, 2009; Schmidt-Kallert and Franke, 2013; and Schmidt-Kallert, 2009), and in Africa (Dick, 2012; Krüger, 1998; Rakodi and Lloyd-Jones, 2002; Smit, 1998; Tacoli, 1998; and Whande, 2009).

Though, there are quite a number of knowledge gaps which were not addressed. One of these gaps which this research is going to address is the link between multi-locational households and housing investments in their villages of origin, including their impacts on the village land space and the environment in their villages of origin especially where spatial planning is missing.

3.2 Multi-locational households and housing investments in the village of origin

Over the last decade or so, there has been an increasing awareness and acceptance of the fact that rural and urban areas have strong linkages and interconnections, which not only make them dependent on one another, but which should be taken advantage of (Schmidt-Kallert, 2009:331). This reversal has been very apparent at the level of the big organizations of development cooperation. In 2004 UN Habitat celebrated World Habitat Day under the theme "Cities-Engines of Rural Development" (UN Habitat, 2004). Simultaneously, FAO discovered the importance of rural-urban linkages (see, for example, Schmidt-Kallert, 2004 cited in Schmidt-Kallert, 2009). In 2005 the German development cooperation agency (GTZ) puts the strengthening of rural-urban linkages on their agenda (Hutter, 2005). Likewise, the World Bank, where for a long time rural development and urban management programmes had existed side by side, had just published the World Development Report, 2009 under the theme of urban-rural inter-connectivity (World Bank 2008 cited in Schmidt-Kallert, 2009). And the recently, 2015 UN sustainable development goals (Agenda 2030) and specifically goal number 10 on reducing inequality within and among countries and the UN New Urban Agenda passed in Quito-Ecuador in October 2016.

All these organizations now argue that the future of both urban and rural areas will largely depend on the linkages between them. Where these linkages are not well established and strengthened, the rural areas are likely to face further impoverishment, isolation and marginalization in a globalizing world (Schmidt-Kallert, 2009:331). For the time being the discovery of the rural-urban interface is merely a change at the level of public pronouncements; to what extent this will translate into concrete policies and projects remains to be seen. More importantly, there is a need for a reversal in perspective: from the bird's eye view to the actors' and the households' point of view (ibid: 331). Though, the study of rural-urban linkages and multi-locational households are no longer a new field, more research is still needed on several aspects (Schmidt-Kallert, 2009:331). In the first place, more comparative studies on multi-locational household's strategies are needed, so as to be able to develop a typology of the motives and purpose behind such strategies (Schmidt-Kallert,

2009:331-332). Insisting that, such studies ought to be conducted in different regions of the world, and, wherever possible, also at different points in time or in diachronic perspective (ibid: 332).

In line with this argument, a number of scholars have contributed to this phenomenon (see the contributions of scholars in this chapter). Though, in recent years the concept of multi-locational household has dramatically captured the attention of diverse researchers both in the global north and south. Though, it should be noted that, the focus of this study is on the global south as explained below:

First, Deshingkar and Farrington (2009) in their study, they had conducted in India was a source of evidence and knowledge gap in this study. The authors had claimed that, the multi-locational households' money is being used to invest in housing, agriculture-for leasing-in land, drilling tube wells and purchasing inputs. Further, argued that, better established and higher earning migrants are able to spare money to invest in housing and farming (ibid: 163). Also, added that, multi-locational households have been using remittances mainly to repair old ''Kutcha" houses (houses made with mud and thatch) or to convert them into "Pucca" houses (houses made with bricks and mortar). Their study had revealed that, around 10-12 multi-locational households had bought land for housing or farming (ibid: 163). However, the authors did not explain the spatial and environmental challenges contributed by these housing investments in the rural India. Again, the reasons for investing modern housing in the village of origin might be different because in India there is social class segregation, especially between the poor and the rich (caste system- upper and lower caste categories). This study fills the knowledge gaps of spatial and environmental challenges contributed by housing investments in the villages of origin, especially in an area where spatial planning is missing.

Second, Franke and Schmidt-Kallert (2013) gave some insights on the multi-locational households, including their motives for housing investments in the villages of origin in China. In this book, the authors claimed that, one important dimension of economic reciprocity is the practice of house building in one's home village or in the nearby township (ibid: 102). Further, argued that most of respondents' savings, especially for house building or the renovation of houses were kept separate from the money which was used for the regular upkeep of the family (ibid.). The authors managed to highlight the existing rural-urban households' linkages in China, including the motives for housing investments in the villages of origin see the next section (on the motives for housing investments in the village of origin) for additional information. Though, the understanding of the motives for housing investments in the villages of origin in the context of Tanzania is vital as well. The underpinning motives/reasons are different because the Chinese findings were mostly affected by the "Hukou" registration system which segregates/divides the urban and the rural households in China. For example, the system automatically forces the village/rural households to invest housing in their village of origin. The study in Tanzania has revealed some unique findings as explained under chapter ten. The authors also caution us that multi-households have negative impacts see also Schmidt-Kallert (2009:332). However, the evidence of spatial and environmental challenges contributed by housing investments in the villages of origin was not highlighted. These knowledge gaps could challenge decision making or policy recommendations in the village/rural areas, especially in areas where spatial planning is missing. Therefore, these gaps become the entry point for conducting this study in Tanzania.

Again, Dannecker (2012:11) explores the motives and strategies of multi-locational households in Bangladesh arguing that, the multi-locational households focus is on remittances and the possible economic benefits of buying land, constructing houses, investing in businesses or improving the living standards for rural areas. Further, claimed that, the empirical data had shown that through the migration process and the urban experiences abroad for most male migrants, their rural areas of origin are imagined as an ideal place to live. This attributed to the fact that, in particular, male migrants

returning from Malaysia experienced discrimination in social, religious, as well as cultural ways, as Nayeem puts it. “People in Malaysia think we are backward since we are coming from a poor country and rural areas”. Thus, while being abroad, they were building up strong networks in Malaysia with co-workers from their areas of origin and they were drawing a border between themselves and the ‘others’: the different local and migrant groups in Malaysia (ibid: 12). The author observed that, multi-locational households are actively changing the rural landscapes, including transgressing the dichotomy between cultural and social changes. She further, claimed that for the male migrants, the urban space abroad was perceived as a space where they experienced discrimination of different levels. Thus, the rural area became the imagine ideal place to live (ibid: 13). The researcher had shown the gender relations between the multi-locational households and rural-urban linkages in Bangladesh including the motives for housing investments in the villages of origin. However, the changing landscapes in terms of space and environment in the rural Bangladesh were not captured. This study suggests a link between multi-locational households, space and the environment, especially in the migrants’ village of origin. As Petra Dannecker put it: studies focusing on the rural context and the changes in the village areas due to migration processes tend to focus on economic aspects of remittances (ibid: 10). This study suggests that this view has to change or add new aspects.

In addition to that, Smit (1998) in her study, she had conducted in Durban-South Africa, had also been appreciated as a source of evidence for this study. In her article, had argued that, although most of the expenditure and investments of which she had named “multiple-home households” was in the urban area, there were also substantial expenditure and investment in the village/rural area. Further, claimed that the multiple-home households prefer to invest in village housing because of: safety nets during times of crisis, i.e. escape from violence either in the city or in the countryside (for example, during the apartheid regime in urban South Africa) they were sure of a better place to live in the village. Also, for retiring to the village homestead after they have reached the end of their employment careers. Including, fortify rural-urban links, for example, those who live in town they can send their kids in the village because their siblings in the village can take care of them (Smit, 1998:82-83). However, like Dannecker (2012); Deshingkar and Farrington (2009); and Schmidt-Kallert and Franke (2013), the author did not explain the spatial and environmental challenges contributed by these housing investments in the village of origin in South Africa. Also, the reasons for investing in a ‘modern’ house in the village of origin are different when compared to other countries because her findings emerged during the apartheid regime in South Africa. These findings had called for a study in Tanzania.

In Tanzania there are inadequate literatures on multi-locational households and rural-urban linkage studies. For example, Bah et al. (2003) showed the existence of multi-locational households and rural-urban linkages in Tanzania. Though, the focus was more on rural-urban linkages through sending remittances in the villages of origin. Another available literature is Lwamayanga (2010). A PhD study, he had conducted in his home village in Kagera. He argued that, the rural-urban linkage, which is still strong in Tanzania, is even stronger in the Kagera region (ibid: 184-185). Adding that, the urban dwellers from this region usually regard life in towns to be semi-permanent. They retain both a socio-cultural and physical link to the village/rural areas. While they are essentially exposed to modern urban structures, they also cling to traditional cultural practices. They build modern houses in towns by pulling together most of their economic resources; and the few who are more able economically, do the same in the villages (ibid.). However, most people build remodelled vernacular houses for their village homes. When they retire from their urban occupations, they finally relocate to their houses in the countryside (ibid.). The author explains in a nutshell the indoor spatial implications of the “vernacular houses” and the “remodelled vernacular houses” invested in the villages of origin in Kagera region, Tanzania. However, he could not manage to explain in detail and provide evidence

of the spatial and environmental challenges contributed by the modern housing investment in Kagera region, Tanzania.

Therefore, the literature has shown that in both cases except in Tanzania, the multi-locational households' motives and strategies to build houses and ensure networks with their villages of origin were mostly influenced by social-class segregation. Also, the focus of the previous literatures was more on livelihood (economic) strategies. In this viewpoint there is a deficiency in information on the motives of multi-locational households in a situation where social-class segregation (political motives) does not exist. It makes sense to conduct this study in order to explore the motives and/or strategies for housing investments in the villages of origin in the context of Tanzania.

The understanding of the underpinning motives and purpose behind such investments is vital because they have implications on the land space and the environment in the villages of origin, especially where spatial planning and development control is missing. The researcher concurs with Schmidt-Kallert (2009: 331) that, more comparative studies on multi-locational household strategies are needed so as to be able to develop a typology of motives and purposes behind such strategies. Such studies ought to be conducted in different regions of the world, and, wherever possible, also at different points in time or in diachronic perspective (ibid: 332). The next section summarizes the motives for housing investments in the village of origin of multi-locational households from the available literature in the global south.

3.3 Motives for housing investments in the village of origin

The literature has shown that multi-locational households have several motives/reasons behind housing investments in their villages of origin. These motives/reasons have been grouped and named as economic motives, social motives, cultural reasons, and political reasons. In line with this argument lively examples from Asia and Africa have also been provided. The countries of these continents were selected because they have findings similar to the phenomenon under study.

3.3.1 Economic motives

The economic motives behind housing investments in the village of origin have been highlighted by different authors from different parts of the world. These can be explained as follows:

In China, Schmidt-Kallert and Franke (2013), for example, provided potential evidence from their study; they had conducted in China as to why the multi-locational households in China are motivated to invest in 'modern' residential housing in their village of origin. The authors claimed that another important dimension of economic reciprocity is the practice of house building in one's home village or in the nearby township (ibid: 102). Adding that, most of the respondent's savings, especially for house building or the renovation of houses were kept separate from the money which was used for the regular upkeep of the family. They were never counted as part of remittances sent to the home village. The house building was an integral part of joint planning in nearly every multi-locational household (ibid). Emphasizing that, respondents (with the exception of the very young ones) had invested between 20,000 and 100,000 Yuan in house building during their working life and in exceptional cases even more, depending on the year of construction and the size of the house (ibid: 102). Apart from building their own house, many of them were also involved in helping with physical labour or with money in the construction of the houses of their close relatives. House building also comes in phases; major repairs, improvements or extensions are made in line with changes in the family life cycle (Franke and Schmidt-Kallert, 2013:102).

Moreover, some respondents preferred to build their house in the nearby town, in order to assist with the longer secondary school education of their children or because they plan to retire to the

township rather than to the village, but among the respondents this was still a minority (ibid: 102). The authors provided potential evidence as to why the multi-locational households in China prefer to invest in village housing, for example, quoted Mr. Sun, who had responded that:

"In 1999 I built my own house in the village. In the rural area peasants normally build houses on a private plot of land, but the building needs to be approved by the village committee. It took me a long time to have mine approved. I had filled my application six years before it was finally approved. Then all my efforts paid off and I managed to get my site. Now the house is ten years old, my son is grown up, and that's why my house needs to be expanded. Obviously, I have to invest all my savings in the house, all the money I have earned, but I have no choice. A while ago my son told me: I don't care whether you expand the house or not. But then the other day he called me saying: dad, my friend's house has been expanded! I had to ponder over his words for a long time, and honestly speaking, his words put a lot of pressure on me". To show the importance of investing in village housing Mr. Sun continued narrating that:

"*… There is one man in my village who sold his house, but now he has nowhere to go. It is so much easier to sell a house rather than build a new one. We never think very much about our future. I can't really say for sure how much longer I am going to stay in the city or whether I will ever go back to my village. If I can't find a good place in the city, I wouldn't mind staying here. But as a migrant worker, you never know for sure. So if I fail in the city, I would rather go back home because, in the home village I still have my house and plot of land, and I can live there in peace"*- Mr. Sun said (Schmidt-Kallert and Franke, 2013:191).

Therefore, from the study conducted by Schmidt-Kallert and Franke (2013) we can see that there are significant economic motives/reasons behind housing investments in the village of origin in the context of China. These economic motives/reasons are summarized below:

- First, housing investments in the village of origin as a livelihood coping strategy. For example, when it comes to economic crisis in urban areas they are sure of a place to go.

- Second, caring for children and the elderly, i.e. houses built in the nearby town or in the village of origin in order to assist children to access education.

- Lastly, a strategy to retire to the township, while others in the village of origin because of economic reasons.

In India, Deshingkar and Farrington (2009) highlighted some findings from India, arguing that the multi-locational household's money is being used to invest in housing, agriculture-for leasing-in land, drilling tube wells and purchasing inputs. Better established and higher earning multi-locational households are able to spare money to invest in housing and farming in their village of origin (ibid: 163). Providing statistical evidence that, roughly 5-10 percent of migrating households have invested in land (buying, sharing-in, or leasing-in) through migration. These appear to be mainly OBCs (Other Backwards Castes) from large families who have more than one person working in relatively remunerative work (especially 'factory' work). For example, in Hariharpur village, Dumra block, Sitamarhi, remittances was used previously for loan repayment and consumption. But as the families became wealthier they have started investing in land. More than 50 percent of migrants have acquired some land in the last 7-8 years. In Gaya remittances have allowed people to lease in land and buy inputs for growing vegetables. Vegetable farming is growing in the region and this will eventually create local jobs (ibid: 163-164).

Also, migrants have been using remittances mainly to repair old '*kutcha'* houses (houses made with mud and thatch) or to convert them into '*pucca'* houses (houses made with bricks and mortar). Around 10-12 have bought land for housing or farming (ibid: 163). For example Manoj Kumar

Sharma (OBC, 32years, 10+2 educated, 5brothers): Jhikatiya village, Gaya. Manoj first migrated in 1995 to Ambala (Punjab) with a friend who had worked there for several years. He worked there in a small scale bicycle manufacturing unit for Rs 1,500/month. After working there for six months he returned to the village with no savings. He migrated again in 1999 to Delhi for work in another factory through some other friends and came back soon without any savings. He then learnt about jobs in Vishakhapatnam, a coastal town in Andhra Pradesh, and went there to work for a public sector petroleum company where he was paid Rs 80 per day. But he came back to the village after six months as the work was finished. He heard about the work in Daman, Gujarat through some friends and migrated once again in February 2000 to work in a PVC pipe producing factory for Rs 55/day with the possibility of working 4 hours overtime every day. The factory provided accommodation and food. The factory moved to another town in Gujarat and he went to work there. He found work there for all three of his brothers in 2005. Now together they send home Rs 1,000-2,000 each month. Although much of this money is spent on consumption, some are left over. This year they are converting their village house into a 'pucca' house and have invested some money in their farm as well. They plan to drill a tube well next year (ibid: 156). Also, Siya Ram Rajvanshi, (65 years, illiterate, landless snack vendor) has four sons and all are vendors for the same earnings in the same block. He has used migration money for buying land and converting his '*kutcha'* house into a '*pucca'* house. He inherited 2 bighas of land 40 years ago and bought another 4 bighas in the last 10 years. One brother works as a *zari* (embroidery using metallic thread) worker in Mumbai for last 10-12 years for Rs 100-50/day. But the brother does not have sons who earn well and has not been able to build assets like him. Most of his remittances are used by his family living in the village for everyday expenses and social functions (ibid: 158).

The economic motives in the context of India include:

- The motive for putting up a 'modern' house in the village of origin was to be used as a future investment/asset i.e. as a livelihood strategy.
- Also, to be used by family members and multi-locational households themselves when they go back to their village of origin (i.e. When the life is not economically stable in urban areas and after retirement).

In South Africa, Smit (1998) realizes that, low income 'multiple-home households' were motivated to invest on both rural and urban housing. She argued that, although most of the expenditure and investment of the 'multiple-home households' was in the urban area, there were also substantial expenditure and investment in the village/rural area (ibid: 83). The author further claimed that the 'multi-locational households' whom she called 'multiple-home households' prefer to invest housing in the village of origin because of the following economic reasons:

- Livelihood coping strategies (i.e. When it comes to economic crisis in urban areas they are sure of a place to go).
- Life after retirement (the evening of life). Retiring to the village homestead after they have reached the end of their employment careers. For example, referring her research she had conducted in Durban, she found out that of all respondents in multiple-home households, 26 percent intended to return to the village home upon retirement while 26 percent said they would never return (Smit, 1998: 85). Again, when asked whether they would prefer to spend the government housing subsidy at their urban or village home, 61 percent said they would prefer to spend it at their urban home, mainly because of ownership, and 34 per cent said they would prefer to spend it in the rural home, mainly because that is where the person intended to retire to (ibid: 85). Also, most multiple-home households (57 percent) preferred the urban home, mainly because of better access to services and facilities (61 per cent), and better job

opportunities (44 percent); however, they did not like the poor quality of informal houses in urban areas (19 per cent) or the high cost of formal urban houses (11 per cent). Only 32 percent preferred the rural home, mainly because of the opportunity to practice agriculture (43 percent) and a perceived better lifestyle (19 percent); however, poor services and facilities (43 percent) and poor job opportunities (38 percent) were seen as negative aspects.

- Also, fortify rural-urban links, for example, those who live in town they can send their kids in the rural because their siblings in the rural can take care of them (Smit, 1998:82-83). For example, of all the migrant households in the sample, 48 percent still had strong rural links, 32 percent had weak rural links and 19 percent no longer had rural links (Smit, 1998:82). These statistical evidences mean that the economic reciprocity in Africa is still strong today. Therefore, addressing the challenges underpinning this phenomenon (rural-urban linkage) in both urban and in rural areas is paramount.

In Tanzania, Lwamayanga (2010) claimed that the rural-urban linkage, which is still strong in Tanzania, is even stronger in the Kagera region (ibid: 184-185). He added that, the urban dwellers from Kagera region build modern houses in towns by pulling together most of their economic resources; and the few who are economically well-off, do the same in the villages. However, most people build 'remodelled vernacular houses' for their rural homes. When they retire from their urban occupations, they finally relocate to their houses in the countryside.

Therefore, the economic motives for investing a modern house in the village of origin are a practice of many countries in the global south. Though, for this study China, India, South Africa and Tanzania were provided as sources of evidence because they have literature relevant to the phenomenon under study. In the context of Tanzania (case study area) similar motives were observed. Though, they are less related to economic motives as explained under chapter ten. It has also become clear that there are also social motives which motivate multi-locational households to invest in residential housing in their village of origin.

3.2.2 Social motives

The literatures have also shown that, the housing investments in the village of origin are also done with some social motives. The social motives were named as strategies for caring the elderly and children (see, for example, Schmidt-Kallert, 2009; Schmidt-Kallert and Franke, 2013; and Smit, 1998). This spirit is observed as a social role in most of the African society, part of Asia, Latin America and Eastern Europe. The housing investment in the village of origin is done as a household social role and strategy (i.e. To help, receive blessings and appreciations from the family and the society). For example, the study conducted by Schmidt-Kallert and Franke (2013) in china made it clear that, multi-locational households built houses in their village of origin as a strategy for caring the elderly and children. The authors claimed that, in the absence of everyday care, support through house construction becomes even more important.

A majority of multi-locational household workers make considerable efforts to build a house either in their village or in the nearby township. Though, this house is meant for their own old age, they are well aware that they will not live in that house for many decades to come. The people who will first occupy the house and enjoy the amenities will be the aging parents and their grandchildren (Schmidt-Kallert and Franke, 2013:124). It is also clear that the moment individual households own a modern house in his/her village of origin, he/she receives social recognition, appreciation and respect. This is not only in his/her clan/family, but also, at the community level. The other social motive which influences multi-locational households to own houses in their place of origin is to get a place to go during holidays (Christmas and Easter) and on leave. For example, the study conducted by Smit,

(1998) in South Africa revealed that multi-locational households do that as a strategy to have a place to go on leave (Smit, 1998: 84).

The social motive is a practice of most of the global south countries (see evidences from scholars in this topic). In the context of Tanzania similar motives were observed, though, there are significant and unique reasons as explained under chapter ten. The literature has also shown that there are motives which are related to culture.

3.2.3 Cultural reasons

The literature has also shown that cultural reasons were also motives for housing investments in the village of origin. These were named as strategies for transfer of beliefs and values (Schmidt-Kallert, 2009:324; Schmidt-Kallert and Franke, 2013:79). Culture is the way of life, especially the general customs and beliefs, of a particular group of people at a particular time (http://dictionary.cambridge.org). The study conducted by Franke and Schmidt-Kallert (2013), in China, for example, had revealed that, houses are built in the village of origin under the argument that, our roots are from the village. Therefore, we do that so we can go there at some times (probably Christmas and Easter) in a year to share those traditional and cultural values. Schmidt-Kallert and Franke (2013) father provided evidence by quoting one of the respondents, who had asserted that:

"*… These days it takes hundreds of thousands of Yuan to build a proper house. One of my friends said: why should we build houses in our villages, why not buy a flat in the city? Definitely, he had a point. We worked in the city for most of our life, so why should we build our house in the village? But still, the village is where our roots are, and we need at least a place to go back to"*- Mr. Sun said (Schmidt-Kallert and Franke, 2013:191).

In the same literature, it was also found out that, houses were built in the village as a criterion for marriage (marriage reasons). The authors claimed that, it is important for a young man to have a house of his own in order to find a wife. Noting that, some parents were worried about their sons' prospects of finding a good wife if they didn't have a good house (Franke and Schmidt-Kallert, 2013:102). In the context of Tanzania and particularly in the case study area similar motives were observed. Though, they are unique as explained under chapter ten. The literature has also highlighted some political reasons.

3.2.4 Political reasons

The analysis of the literature has also shown that there are also political reasons which motivate people to invest on housing in their villages of origin. In the case of China, for example, it is no doubt that, the Chinese findings were affected by the "hukou" registration system. This is a registration system which segregates/divides the urban and the rural households in China. It forces the multi-locational households to invest housing in their villages of origin. Therefore, the motives for housing investment in the villages of origin in the context of China, for example, were mostly influenced by political reasons/settings.

Again, in the case of India we see the problem of social class segregation. For instance, the lower castes (e.g. Shudra) have little chances to access urban land. The available option is the rural land where they can use for housing and farming investments. Therefore, the findings which were reported by Deshingkar and Farrington (2009) are affected by the political settings in India.

Also, Smit (1998) in her study, she had conducted in South Africa had claimed that, multi-locational households were motivated to invest in housing in their village of origin because of safety nets during times of crisis, i.e. escape from violence either in the city or in the countryside (for

example, during the apartheid regime in urban in South Africa) they were sure of a better place to live in the rural/village. She had argued that, the main advantages of multiple-home ownership, as seen by multiple-home households are the opportunity to escape violence either in the city or in the countryside (41 percent). The reasons why people prefer the rural life to urban life vary, but they usually relate to considerations such as peace and tranquillity (ibid: 84-85). Quoting for example, Mhlaba, who has a rural/village home in KwaNgolosi, says he and his family visit there at the end of every month because they"...like to spend as much time as they can there, away from city life." Adding evidence that, a few years ago, Eliot's children lived with him for a while in Durban, but they went back home because of the violence. Eliot says "...the experience puts them off urban living for good." They come from a peaceful rural area that never experienced any violence and Eliot says that it "...is a place that gives us peace in our minds." (ibid: 85). Multiple-home households who struggle to find a secure foothold in the city maintain links to a rural/village home because it provides a safety net (ibid: 86). Again, in the event of displacement from the urban home - either through loss of income or through violence, the rural home provides a place to which the household can retreat and recover. The respondents' commitment to urban life suggests that a household which has been displaced will probably at some point in the future make another attempt to establish itself in the urban area. It is, therefore, in the best interests of multiple-home households to maintain both sets of homes - urban and rural (ibid: 86). Although the apartheid policies that reinforced circular migration in South Africa no longer exist, multiple-home ownership and circular migration are perpetuated by customary tenure in the former homeland areas, urban housing shortages, high unemployment and poverty and high levels of political and criminal violence (ibid: 86). Violence and conflict are obvious major reasons for severing rural links. Sometimes, the conflict can be personal and relatively low-key, as in the case of Dumisani who moved from Newcastle to Durban in 1984. He and his wife still visit every Easter and Christmas, and his children stay and go to school there. Also, Ernest still owns a house at the rural homestead in Ndwedwe, where he and his family visit during Easter and over Christmas (Smit, 1998: 85).

It has, therefore, become so clear from the literature that, there are several interesting reasons/motives behind housing investments in the villages of origin of multi-locational households. Though, we cannot conclude or generalise based on the findings from China, India and South Africa because the motives/reasons for housing investments in the villages of origin pinpointed, have originated from different multi-locational households who have different motives/reasons, background, traditions, identities, potentials and challenges. In China, for example, the "Hukou" registration system that segregates the rural migrant which sometimes becomes difficult to invest in urban house and therefore they have to invest in the village of origin because they seem to belong to the village.

In India, because of the classes for instance, the Backwards and Forwards Castes have little chances to access urban land therefore the easier option is the village land where they can use for housing and farming investment. In South Africa, again, the apartheid regime and frequent urban violence might have spearheaded them to invest in the village. However, in Tanzania the motives/reasons for such investments are unique and important (see chapter ten) and therefore, have different implications which requires different approaches to embedded for the development of the rural/village territories.

3.3 Decision of multi-locational households' to invest in housing in the village of origin

Migration is seen not as the decision of the individual alone, but of the family that he or she belongs to, in order to minimize risks, diversify income sources, and ease the financial constraints (Stark and Lerhari 1982; Stark and Katz 1986; Taylor 1996) and the decision to migrate depends on the 'relative deprivation' of the household (Stark et al., 1986; Stark and Taylor 1987, 1989 cited in Deshingkar and Farrington, 2009: 4). The entire family shares both the costs and rewards of migration (Stark, 1991).

Migration is thus a form of portfolio diversification by families. Remittances play an important role and represent an inter-temporal contractual arrangement between the migrant and the family. Family first invest in the migrants, but do so in the expectation of returns in the form of remittances (Deshingkar and Farrington, 2009: 4). It also includes socioeconomic returns such as housing investments in the village of origin. The motives (economic, social, cultural or political reasons) for housing investments in the village of origin depend on the context.

From the literature we see that the decision to invest in housing or in other assets in the village of origin of multi-locational households are mostly influenced by an individual multi-locational household (e.g. appreciation of income advancement and personal motives), followed by family members and sometimes by a particular community or society or tribe.

In the context of Tanzania and particularly in the case study area, we see mixed reactions. For example, the individual household is a key player, although, there is also an external pressure from the relatives/family/clan members or the community/society/tribe members. For instance, the family, relatives or the community might pose different claims such as 'your neighbour has built a 'modern' residential house, you should do the same' or might challenge its group members that 'it is a shame if we live in 'modern' residential houses in urban areas while we don't have 'modern' residential houses in our home village'.

Thus, the decision influencing factors have some components of economics, social, culture and politics. The literature has also noted that, multi-locational households have positive and negative impacts in their village of origin.

3.4 Multi-locational households' impacts in the village of origin

The literature has shown that, multi-locational households have positive and negative impacts both in their village of origin and at their destination (urban). Deshingkar and Farrington (2009), in their study, they had conducted in India, for example, argued that, circular migration, much of it seasonal, is now an integral part of the livelihood strategies pursued by a large number of multi-locational households living in agriculturally marginal areas in India.

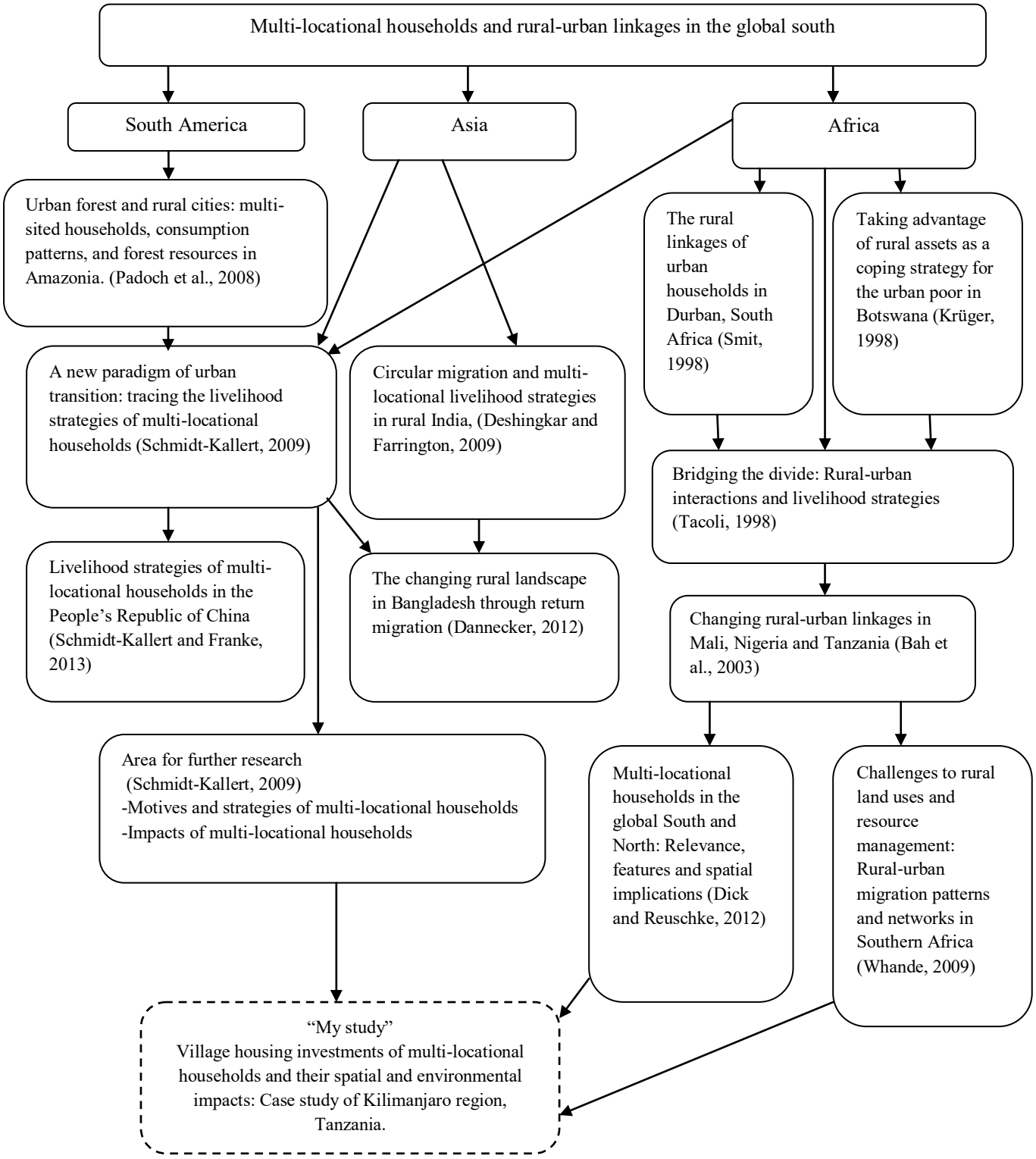
The circular migration is defined as a temporary move from, followed by return to, the normal place of residence, for purposes of employment. The circular migration showed how important migration has become in sustaining and improving rural/village livelihoods in India (ibid: 1). Added that, the in-depth case studies conducted from states that have a high incidence of circular migration, such as Madhya Pradesh, Bihar, and Rajasthan provide evidence of the substantial contribution made by migrants to the national economy (ibid).

The authors assert that, earnings and savings from migration show tremendous variation by ethnic group, gender, occupation, wage rates, living costs, contracting arrangements and debts. Some households barely manage to raise themselves above existing survival levels, while others accumulate wealth over time, but what is clear is that most would be worse off if they were depending solely on local employment (ibid: 1). It has also become clear that the multi-locational households are playing a

key role in addressing the housing poverty in the village of origin (see Smit, 1998; Lwamayanga, 2010; Schmidt-Kallert and Franke, 2013; and the case study area).

Apart from the positive impacts, the scholars have also cautioned us that multi-households have negative impacts. Schmidt-Kallert (2009:332), for example, claimed that, the members of multi-locational households take advantage of the opportunities of two or more locations (basically rural and urban). This means by implication that they utilize the natural resources at both places; they make an impact on the environmental conditions at each location. Just as they spread the risks in their household economy, they also spread the environmental impact of their economic activities. Depending on the setting, this may be advantageous or detrimental to the environment. For example, frequent trips between the rural and urban home have a negative impact on the migrant's ecological footprint (ibid: 332). Though, the spatial and environmental challenges contributed by housing investments in the villages of origin were not highlighted in the literature. These knowledge gaps become the entry point to pursue this study (see chapter eleven). The figure 3.1 shows the current outlook of the literature on multi-locational households and rural-urban linkage in the global south.

Figure 3.1: The current outlook of the literature on multi-locational households and rural-urban linkage in the global south.



Source: The model adopted from Creswell (2014:112) and modified by the author, 2015.

The understanding of the motives/reasons for housing investments in the villages of origin in the global south is to some extent clear. Though, we should also get some insights on the rural/village housing situation in the global south before we go into detail in the case study area.

3.5 An overview of the rural housing situation in the global south

More than half of the world population of about 3.3 billion people is presently living in urban areas (UN-Habitat, 2008). This implies that the remaining 3.7 billion (out of 7 billion) people are now living in rural areas. Yet, the large majority of the rural inhabitants of developing countries still lives in inadequate housing-inadequate in terms of security of tenure, quantity of the shelter and its physical quality (UNCHS, 1995:1). One of the most visible ways in which rural poverty is manifested is poor housing; hitherto very few developing countries have explicit and coherent rural housing policies (ibid). The principal reason for this is the fact that the majority of rural inhabitants in developing countries are able to provide their own housing, largely within the context of subsistence economies, even though such housing may be of poor quality. In that sense, housing has traditionally been considered from the consumption rather than from the production perspective. For these reasons, housing development has generally been relegated to the bottom end of the rural development priorities (UNCHS, 1995:1).

In addition to that, housing in developing countries is generally of poor quality and many houses are constructed of impermanent, fire-prone building materials, or are old, dilapidated and often under maintained (World Bank, 1993:27). In many of these countries, low quality housing is available and is often cheap, allowing low income households to spend a relatively low proportion of their household income on housing, leaving a larger amount for other expenditures such as food, health care and education (ibid: 28). Basically, housing quality is measured by four key indicators: floor area for each person at 6 square meters; permanent structures (percentage of houses using permanent materials); water connection (percentage of dwelling units with a water connection on the plot they occupy); and unauthorized housing (percentage of housing not in compliance with current regulations) (Spence and Wells, 1993).

In many of these developing countries, government housing departments tend to concentrate on urban housing, partly in response to the politically more organised pressure from the urban populace. Indeed, where rural housing has been included in development plans, the institutions and finance necessary for rural housing policy implementation are very often not created or provided (UNCHS, 1995:1). In other countries, particularly in Asia, Africa and Latin America, many rural inhabitants are landless and, in these situations, rural housing programmes can only be implemented within the overall context of agrarian reform (ibid).

Moreover, information on rural housing and financial needs is often lacking, partly as a result of inadequate means of communication, including roads, railways, public transport and telecommunication services. These and other factors have generally kept housing finance institutions away from rural areas (ibid). On top of that, studies have demonstrated that the construction sector, of which a large component is housing, can play an important role in stimulating and sustaining economic growth, in creating employment in both urban and rural areas and significantly improving the health of rural inhabitants (Strassman, 1970 and 1985 cited in UNCHS, 1995).

To address these housing challenges the Global Strategy for Shelter to the Year 2000 (GSS) was launched in 1988 as a guiding framework for national housing policy formulation. Also, the Global Agenda 21 and the Earth Summit of 1992 underscore increased global awareness of housing issues. The earth summit held in Rio de Janeiro in June, 1992 was a milestone event bringing together the Heads of State and Chiefs of Governments. The declaration of Rio de Janeiro contains fundamental principles on which all nations can base their future decisions and policies, considering the environmental implications of socioeconomic development and which can become the basis for sustainable human settlement development. The formulation of the Millennium Development Goals

(MDGs) in 2000 and now the Sustainable Development Goals (2015) and the New Urban Agenda (2016) was vital as well.

Despite considerable progress since then, many developing countries still do not have explicit policies on rural housing (UNCHS, 1995). Many national housing policies cover urban housing only and it is assumed that there are no significant rural housing problems and that rural inhabitants will, in one way or another, manage to provide their own housing without assistance from government or other formal institutions (ibid). In the context of Tanzania this argument still holds water today.

On the other hand, the literature, for example UN-Habitat has claimed that, housing, is no longer regarded as simply a roof over one's head, housing today plays a crucial role in achieving sustainable development – as envisaged by the idea of sustainable housing (UN-Habitat, 2012: 1). Housing means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and reliability; adequate lighting, heating and ventilation; adequate basic infrastructure such as water-supply, sanitation and waste-management facilities; sustainable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost (ibid: 4). While sustainable development means meeting the needs of the present generation without compromising the ability of the future generations to meet their own needs (UN-Habitat, 2012: 4). Sustainable housing is, however, yet to gain its due prominence in developing countries (ibid). It is rare that the social, cultural, spatial, environmental and economic facets of housing are addressed there in an integrated policy (ibid). Housing is one of those basic social conditions that determine quality of life and welfare of people and places. Where homes are located, how well designed and built and how well they are weaved into the environmental, social, cultural and economic fabric of communities are factors that, in a very real way, influence the daily lives of people, their healthy, security and wellbeing and which, given the long life of dwelling as physical structures, affect both the present and future generation (UN-Habitat, 2012: 3).

Housing is also part of the relationship between society and the environment. On the one hand, housing construction and operation consumes large amounts of natural resources (land, energy, water, and building materials), while producing waste, air and water pollution. On the other hand, housing itself is exposed to a variety of environmental impacts and hazards, including those associated with natural disasters and climate change. These aspects are also significant considerations for sustainable development (UN-Habitat, 2012: 3). Thus, housing is defined first as a physical structure-residential buildings/shelters, their design, material qualities, their arrangement in space and their ecological interactions with the physical environment; and second, as a social structure – residence based activities, their character, social qualities and their socioeconomic interactions in space with the immediate communities and wider society (UN-Habitat, 2012: 4). Through both of these functions, housing represents a system of social and material relationships which is simultaneously arranged at the different spatial scales (homes, surrounding neighbourhoods, settlements, regions and countries) and which, therefore, requires a corresponding hierarchy of policy interventions (ibid: 4). This thought is yet to be reflected in the housing policy in Tanzania.

3.6 Concluding remarks

This chapter has shown that, there is a rural-urban linkage, which is still strong in the global south. This has motivated multi-locational households to continue investing in housing in their village of origin. Though, the housing situation in the global south and especially in the rural is still not promising, it is likely that the multi-locational households are the part of the solution for this problem provided that the responsible authorities take them on board. This will minimize their negative impacts and give more positive impacts. The next chapter gives some detailed information about the case study area.

CHAPTER FOUR

A CASE STUDY AREA IN CONTEXT

4.1 Introduction

This chapter provides some insights about the case study area. It starts by explaining Tanzania in brief, followed by Kilimanjaro region, Moshi municipality and Moshi district narrowed down to Sango village.

4.2 Tanzania in brief

Tanzania is the land of Serengeti National Park, Mount Kilimanjaro and Zanzibar. It is the United Republic of Tanzania Mainland and Tanzania Zanzibar. It lies on the East of Africa. On the east it is bordered by the Indian Ocean; on the north by Kenya and Uganda while on the west it is bordered by Rwanda, Burundi, Congo and Zambia; and, on the south by Malawi and Mozambique. The total land area of Tanzania is 883,749 square kilometres, of which 881,289 square kilometres are Tanzania Mainland and 2,460 square kilometres are Tanzania Zanzibar (URT, 2006:12 census analytical report).

Tanzania has a total population of 44,928,923 of which 43,625,354 are from Tanzania Mainland and 1,303,569 are from Tanzania Zanzibar (URT, 2014). The projected population in 2015 was expected to be 48,775,567 of which 47,351,275 are from Tanzania Mainland and 1,424,292 are from Tanzania Zanzibar. The statistical evidences have shown that, the population in Tanzania Mainland has been on the increase over the years. For example, in 2012 there was 43.6 million, while in 2014 there was 46.1 million and the projected population in 2015 was 47.4 million (NBS report, 2015). The census results have also shown that, the Tanzania Mainland population growth rate has been fluctuating from 1967 to 2012. For example, the population decreased from 3.2 percent in 1967-1978 to 2.8 percent in 1978-1988 and then increased to 2.9 percent in 1988-2002 before decreasing to 2.7 percent in 2002-2012 (URT census report, 2012). The population growth rate again rose to 2.8 percent in 2014/15 (NBS report, 2015). In addition to that, the average annual intercensal growth rate (2002-2012) was 5.2 percent in urban while 1.8 percent in the rural. Moreover, the 2012 census report had shown that, Tanzania mainland is sparsely populated with population density of 51 persons per square kilometres with variation across regions. These data have implications on the natural resources (land, forest, ecology, etc.) and climate change because of the development activities of this added population. It, therefore, demands attention from policy makers and practitioners from diverse sectors such as spatial planning and housing.

The Gross Domestic Product (GDP) of Tanzania Mainland has been also growing at a good pace, though fluctuating over the years. These are 5.6 percent (2008), 5.4 percent (2009), 6.4 percent (2010), 7.9 percent (2011), 5.1 percent (2012), 7.3 percent (2013), 7.0 percent (2014) and 7.0 percent (2015 projected) (NBS report, 2015). The GDP based on the year 2007 (in millions Tanzania shillings) was: 35,936,459 (2012); 41,231,365 (2014) and 44,100,809 (2015 projected). On the other hand, the GDP per capita of Tanzania Mainland based on the year 2007 also grows at a good pace: 823,751.7 (2012); 894,987.1 (2014); and 931354.2 (2015 projected). The inflation rate has also kept fluctuating over the years. These are 16 percent (2012), 6.1 percent (2014), and 5.6 percent (2015 projected). The trend is to some extent promising.

The 2012 population and housing census report have also shown that, Tanzania had 30,298,817 population aged 10 years and above. Of this population: 60.4 percent were employed, 3.5 percent

unemployed, 14.9 percent home maintenance (cooking, hygiene and caring), 17.6 percent full-time students and 3.5 percent unable (URT, 2014:111-119). The same report revealed that, Tanzania had 18,295,288 employed population aged 10 years and above. This means the employer (0.4 percent), employee (11.6 percent), own non-agriculture (17.6 percent), own agriculture (62.8 percent), family worker (7.1 percent), apprentices (0.2 percent) and other (0.3 percent). Basing on this statistical evidence it has become clear that most of the Tanzanians (63 percent) are employed in the agricultural sector. The same report showed that, the main employment industry was commercial agriculture, food crops and forestry (62.1 percent) followed by trade and commerce (6.2 percent); domestic services (5.5); fishing, hunting, livestock and other related (3.6 percent); raw food sales/uncooked food (3.3 percent); manufacturing (3.2 percent); mining and quarrying (2.6 percent); construction (2.4 percent); services for food hotels and lodges (1.8 percent); education services (1.5 percent); haulage and storage (1.3 percent); public administration and security services (1.1 percent); services for clean water, sewerage and environment (0.9 percent); financial institution and insurance (0.8 percent); health and social welfare services (0.5 percent); electricity, gas and steam (0.4 percent); information and communication (0.4 percent); other activities not listed (2.3). This means that the economy of Tanzania, including the majority of its people still depend on agriculture. Thus, land use planning and management is essential.

It was also revealed that, the contributing sectors to the economy (the GDP) of the country for example, in 2014 was services (44.2 percent); agriculture, forest and fishing (31.1 percent); industry and construction (24.7 percent). However, in 2015 it was agriculture (29.0 percent), construction (13.6 percent), financial and insurance (10.7 percent), public administration and defense (6.4 percent) and others (59.7 percent) (NBS report, 2015). The statistical evidences provided have implications on the phenomenon under study such as space for farming and housing investments.

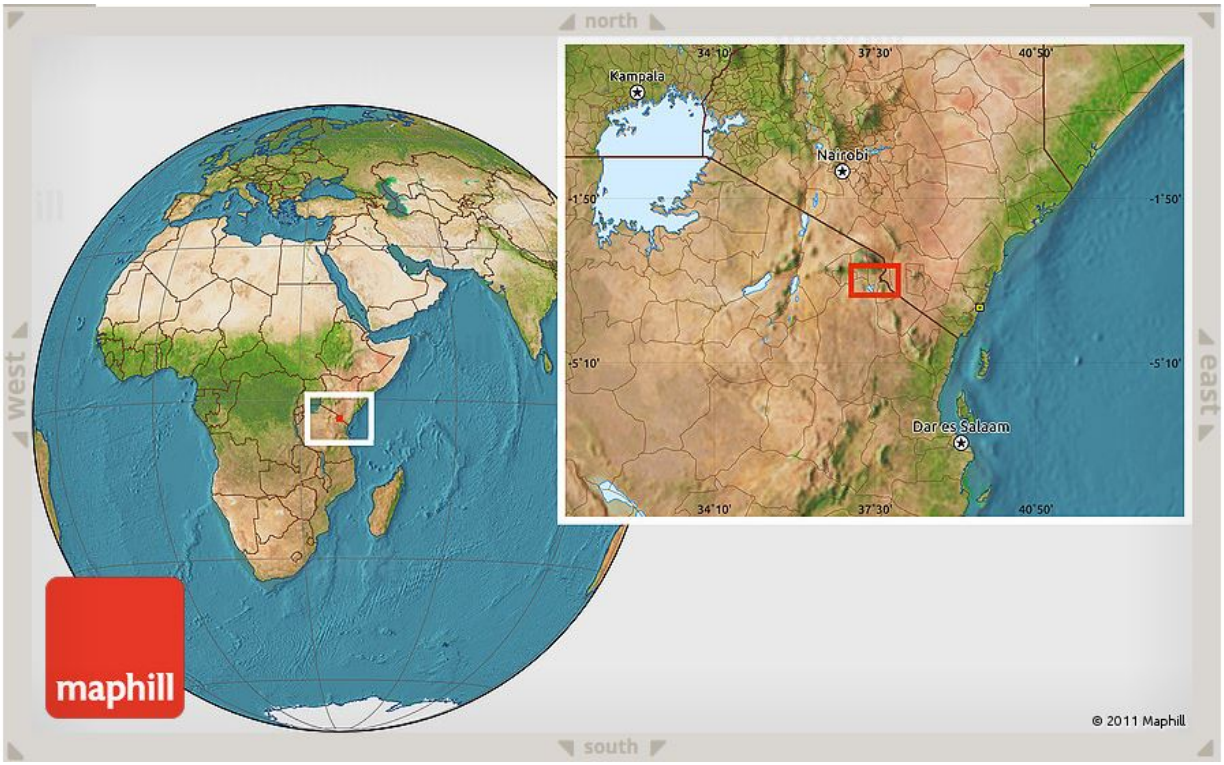
Tanzania was formerly colonised by Germany followed by the British. It got its independence from Britain in 1961. Its administrative capital is Dodoma while its commercial capital is Dar es Salaam. It is divided into 31 regions and subdivided further into 185 authorities. Of the 185 authorities 48 are urban units. “A statement issued by Permanent Secretary in the President’s Office (Regional Administration and Local Government), Engineer Mussa Iyombe, said of the 185 DEDs, five would serve in big cities, 21 in municipalities, 22 in town councils while 137 others have been posted to 137 district councils.” (Source: http://www.dailynews.co.tz/index.php/home-news/51454-120-new-faces-as-magufuli-picks-185-in-ded-line-up published and accessed online on 08 July 2016). Districts are further divided into wards. The wards in urban areas are made up of streets/“mitaa” while in the rural they are made up of villages. The village is made up of “vitongoji”. It is vital to trace the case study area from the national, narrowed down to regional until to the local level. The regional level in this study is Kilimanjaro region. The selection criteria of the region are provided within the methodology chapter (chapter six) and also in this chapter.

4.3 Kilimanjaro region

Kilimanjaro region is the home of Mount Kilimanjaro. The mountain has three peaks Kibo, Mawenzi and Shira. Its highest peak Kibo, towers as high as 5,895 meters above the sea level snow-capped throughout the year. Kilimanjaro Mountain is the first highest mountain in Africa and fourth in the world after Denali, Cerro Aconcagua and Mount Everest. Kilimanjaro region is located in the north-eastern part of Tanzania Mainland. The region lies on the southern foothills of Mt. Kilimanjaro and south of the Equator between latitudes 2º 25′ and 4º 15′. Longitudinally, the region is between 36º 25′ 30″ and 38º 10′ 45″ east of Greenwich. The region is bordered to the north and east by Kenya, to the

south by Tanga region, to the southwest by Manyara region, and to the west by Arusha region. Kilimanjaro region was established in the early 1960s, until then it was part of the Northern Province (Kilimanjaro socioeconomic profile, 1998, Moshi municipality environmental profile, 2008 and Kilimanjaro regional secretariat five year strategic plan, 2011).

Figure 4.1: The location of Kilimanjaro region, Tanzania.



Source: Maphill, 2011accessed by author, 2015

Land area and administrative units

Kilimanjaro region is one of the smallest regions in Tanzania. Its capital is called Moshi. It covers a land area of 13,209 square kilometres, which is 1.4 percent of the whole land area of Tanzania Mainland (Moshi municipality environmental profile, 2008). The densely populated Kilimanjaro region is divided into seven administrative authorities, namely: Moshi municipality, Moshi district, Rombo district, Same district, Mwanga district, Hai district and Siha district (table 4.1 and figure 4.2).

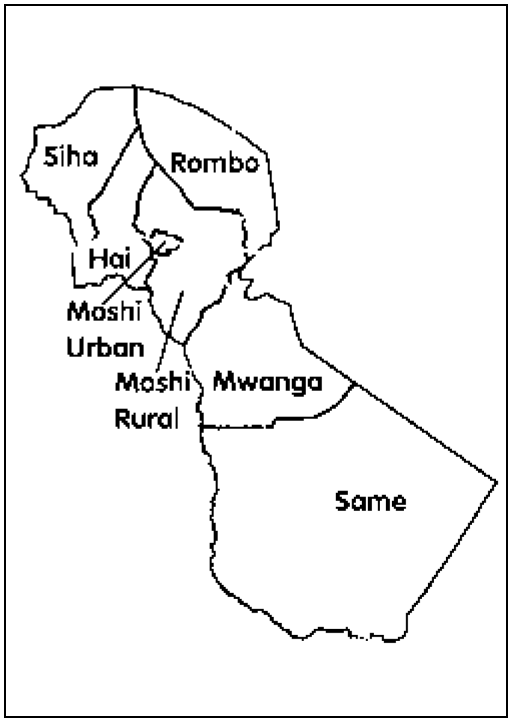
Table 4.1: The land area and administrative units of Kilimanjaro region.

S/n	District	Area sq. km	Administrative units		
			Divisions	Wards	Villages
1	Moshi municipality	58	2	21	-
2	Moshi district	1,713	4	31	150
3	Rombo district	1,442	5	20	57
4	Same district	5,186	6	24	72
5	Mwanga district	2,698	5	16	58
6	Hai district	2,112	4	11	65
7	Siha district	-	-	-	-
	Total	**13,209**	**26**	**123**	**402**

Source: Kilimanjaro socioeconomic profile, 1998; Moshi district report, 2011; URT, 2012

Note: Siha district was generated out of Hai district between 2002 and 2012.

Figure 4.2: The districts in Kilimanjaro region.



Source: Fieldwork, 2015

Ethnic groups

In Kilimanjaro region, there are two main ethnic groups. These are Chagga's (Wachagga), who are the majority followed by the minority Pare's. Though, there are other small ethnic groups who reside in the region, like Wakahe and Wakwavi. Within these two main ethnic groups there are sub-ethnic groups sometimes identified by their different dialects. For example, Wagweno among the Pare, who speak "Kipare" and "Kigweno" reside in the northern part of the Pare Mountains. Also, the different dialect among the Chagga's which are identified according to the geographical identity who speaks "Kichagga". For example, "Wachagga Wamachame" or "Wachagga Wakibosho" may be differentiated from "Wachagga Wakirua or Wachagga Wamarangu" through their way of speaking and other linguistic characteristics. However, "Kiswahili" is the main language of communication among the various groups. Socially, there is little separation between the two main tribes and intermarriage is a common phenomenon. Invariably both tribes are energetic, industrious, thrifty and enterprising (Kilimanjaro socioeconomic profile, 1998 modified by author, 2014).

Early contacts with Europeans

The region, contact with Europeans could be traced back to the 1840's with the advent of Missionaries. In 1848, the two Missionaries Rebman and Krapf visited the area and thus became the first Europeans to see Mount Kilimanjaro. This history of early contact with European missionaries gave the region a start in the establishment of education and health services over much of the rest of Tanzania. The arrival of missionaries was followed by the establishment of trade relationship in the 1880's. In May 1885, the Germans established a protectorate over Kilimanjaro, but concerned as they were with consolidating their hold on the coast, they did little to quell the territorial feuds in the region. The Germans enforced a harsh rule in Kilimanjaro which resulted in clashes with the Wachagga. At first the Germans were defeated, but in 1893 Mangi, the leader of Wachagga was defeated and the Germans took over, but again in 1916 the Germans were ousted when the British troops occupied Kilimanjaro (Kilimanjaro socioeconomic profile, 1998: 3).

Economy

The 2012 population and housing census report had shown that, Kilimanjaro region had 1,206,556 population aged 10 years and above. Of these population, 60.5 percent were employed, 2.6 percent unemployed, 12.7 percent involved in home maintenance (cooking, hygiene and caring), 20 percent full-time pupils/students and 4.2 percent unable (URT, 2014:111). In the same report it shows that, Kilimanjaro region had 729,528 employed population aged 10 years and above. Of these population, 0.5 percent were employer, 14.8 percent employee, 16.5 percent own non-agriculture, 62.1 percent own agriculture, 5.7 percent family worker, 0.3 percent apprentices, and 0.3 percent others (URT, 2014:113). Again, the report had shown that, commercial agriculture and food crops employed more people (60.9 percent) followed by trade and commerce (6 percent); domestic service (7 percent); raw food sales/uncooked food (3.4 percent); fishing, hunting, livestock and other related (3.3 percent); manufacturing (2.4 percent); construction (2.4 percent); education services (1.5 percent); mining and quarrying (2.2 percent); haulage and storage (1.4 percent); services for food hotels and lodges (1.2 percent); public administration and security services (1 percent); services for clean water, sewerage and environment (0.8 percent); financial institution and insurance (0.8 percent); health and social welfare services (0.7 percent); electricity, gas and steam (0.4 percent); information and communication (0.3 percent); other activities not listed (3.4). This means that the larger population (62.1 percent) is still heavily dependent on agriculture as their main source of food and income. This has implication in spatial planning, especially in the rural/village where a larger portion of land is still needed for farming.

The main cash crops in the region include coffee, which is grown in plantations as well as by small holders. Wheat and barley are grown in the state farms. Cardamom, sisal, cotton, sunflower and groundnuts are gaining ground for expansion. The region is a major coffee producer and its production accounts for an average of 30 percent to 36 percent of the total national coffee production (Kilimanjaro socioeconomic profile, 1998:30). Livestock is ranked as a second vital economic activity in the region. Modern dairy farming is practiced in the highlands and intermediate zones whereas the people in the lowlands zones are engaged in "unscientific" ranching. Apart from agriculture and livestock, which contributes about 60 percent to the Regional GDP, there are also varied industrial and commercial activities undertaken in the region (ibid).

The Region's Gross Domestic Product trend for the last 15 years (1980-1994) portrays a gradual but significant increase. GDP earnings accrued in the region increased from 1,950 TZS million in 1980 to 72,898 TZS million in 1994 (ibid). The Kilimanjaro Region GDP in 1994 was 72,898 TZS million, while at the national level was 1,659,929 TZS million. Also, the Per Capita Income of Kilimanjaro Region was 55,716 TZS million, while at the national level in 1994 was 62,138 TZS million. Again, the average percentage annual GDP contribution in 1994 was 3.67 and the GDP contribution was ranked number 10 among all regions in Tanzania (Kilimanjaro socioeconomic profile, 1998:34). The per capita income in the region was 445,463 TZS (in 2005) which was above the national per capita income, which was 360,892 TZS as shown in table 4.2.

Table 4.2: Regional per capita GDP at prices in millions TZS.

Region/year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005p**
Tanzania mainland	**170,720**	**193,169**	**210,232**	**231,866**	**259,044**	**286,612**	**321,300**	**360,892**
Kilimanjaro	116,973	132,047	139,179	152,772	255,071	306,299	377,349	445,463

Source: Moshi municipality profile, 2008:16

In addition to that, the 2012 census report has shown that, the Gross Domestic Product (GDP) in Kilimanjaro region has increased from 714.7 million in 2005 to 1.4 billion in 2012 while the average per capita income has reached 881,884 TZS from 497,788 TZS over the same period. Reviewing the regional achievements attained over the last 50 years, the Kilimanjaro Regional Commissioner, Mr Leonidas Gama, said the current per capita income in the region was above the national average of 770,464 TZS see table 4.3 (Source: http://www.jamiiforums.com/threads/tanzania-kilimanjaro-region-records-impressive-gdp-growth.368488/).

Table 4.3: The GDP of Kilimanjaro region.

Socioeconomic indicators	Tanzania mainland	Kilimanjaro region
Economy		
Regional GDP (TZS millions) (2012)	44,717,663.3	1,438,637 (2011)
Per Capital Income/GDP per Capita (TZS) (2012)	1,025,038.4	945,432 (2011)
GDP Growth Rate (percentage) (2012) (2016)	6.9, 7 respectively	?

Source: Compiled data from different sources, 2015

However, the decline of coffee production has forced many people from the rural areas to move to town to look for employment. This has resulted in a high rate of unemployment and increased poverty. Over 90 percent of the population depends on income generation activities in the informal, micro and small scale enterprises. The growth of the informal sector has been facilitated by the free market economy policy and privatization of public enterprises. The major sources of income of the people are from private employment, public employment and self-employment. Regionally, the main sources of income are mainly from agriculture, industry, tourism and commercial sectors (Kilimanjaro socioeconomic profile, 1998).

Demography

Humans have continuously occupied the slopes of Mount Kilimanjaro for the last 2000 years (Newmark, 1991:1). The relatively abundant precipitation and fertile soils have been very important in attracting various human development activities. The dramatic increase in human population, however, is a phenomenon of the last 60 to 90 years (ibid.). Like many other regions in Tanzania, the population of Kilimanjaro region is also on the increase since 1948 (see table 4.4 and figure 4.3).

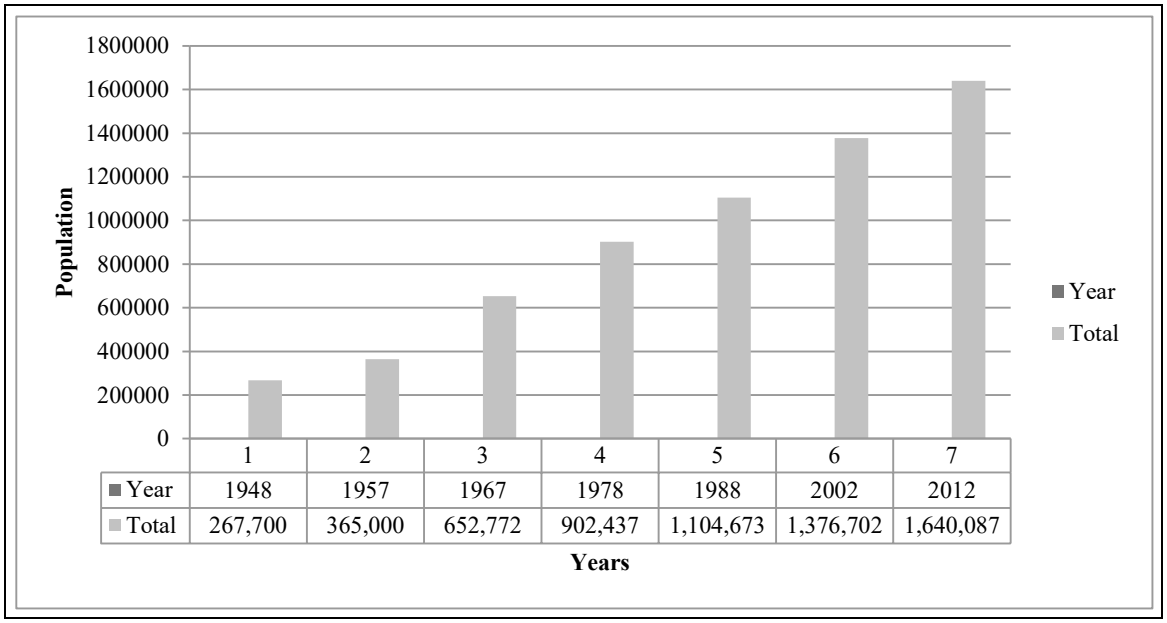
According to the 2002 Tanzania population census report, the population in Kilimanjaro region was 1,376,702, again, the 2012 census report shows that the population was 1,640,087 of which 793,140 were males and 846,947 were females. This two census reports tell us that, from 2002 to 2012 (i.e. within ten years) there was an increase of 263,385 populations. This added population has implication on Mount Kilimanjaro forest, land, ecology and other natural resources in the region.

Table 4.4: The population change in Kilimanjaro region from 1948-2012.

Year	1948	1957	1967	1978	1988	2002	2012
Males						664,853	793,140
Females						711,849	846,947
Total	**267,700**	**365,000**	**652,772**	**902,437**	**1,104,673**	**1,376,702**	**1,640,087**

Source: Central Bureau of Statistic, 1968a, 1968b; Tanzania Bureau of Statistic, 1978, 1988, 2002 and 2012; and Newmark, 1991.

Figure 4.3: The population change in Kilimanjaro region from 1948-2012.



	1	2	3	4	5	6	7
Year	1948	1957	1967	1978	1988	2002	2012
Total	267,700	365,000	652,772	902,437	1,104,673	1,376,702	1,640,087

Source: Author's own construct based on census data.

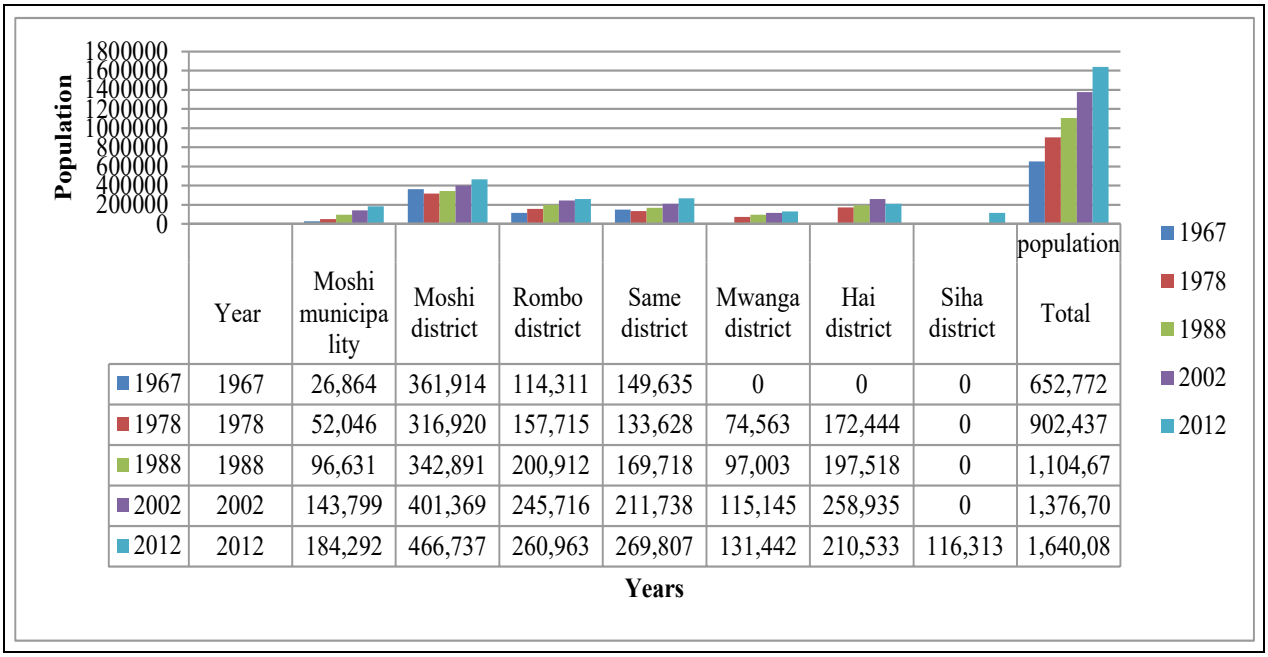
The population of Kilimanjaro region has been on the increase over the years. Though, some of its districts have been growing at a larger pace than the others. For example, the population of Moshi district has been growing faster than the rest of the administrative authorities (Moshi municipality and the other six districts) see table 4.5 and figure 4.4. Therefore, Moshi district requires more attention from diverse sectors (such as planning and control of the development activities of the increased population for the sake of nature).

Table 4.5: The population of Kilimanjaro region by districts from 1967-2012.

Year	Moshi municipality	Moshi district	Rombo district	Same district	Mwanga district	Hai district	Siha district	Total Population
1967	26,864	361,914	114,311	149,635	-	-	-	**652,772**
1978	52,046	316,920	157,715	133,628	74,563	172,444	-	**902,437**
1988	96,631	342,891	200,912	169,718	97,003	197,518	-	**1,104,673**
2002	143,799	401,369	245,716	211,738	115,145	258,935	-	**1,376,702**
2012	184,292	466,737	260,963	269,807	131,442	210,533	116,313	**1,640,087**

Source: URT, 2002, 2006 and 2012.

Figure 4.4: The population of Kilimanjaro region by districts from 1967-2012.



Year	Year	Moshi municipality	Moshi district	Rombo district	Same district	Mwanga district	Hai district	Siha district	population Total
1967	1967	26,864	361,914	114,311	149,635	0	0	0	652,772
1978	1978	52,046	316,920	157,715	133,628	74,563	172,444	0	902,437
1988	1988	96,631	342,891	200,912	169,718	97,003	197,518	0	1,104,67
2002	2002	143,799	401,369	245,716	211,738	115,145	258,935	0	1,376,70
2012	2012	184,292	466,737	260,963	269,807	131,442	210,533	116,313	1,640,08

Source: Author's own construct based on census data.

Like many other regions in Tanzania, it has also been evidenced that the region has more women than men and the average household size is 4.3 see table 4.6. The majority of women are also seen in Moshi district. This has also implications in the development of the region.

Table 4.6: The population of Kilimanjaro region by sex, average household size and sex ratio in 2012.

Serial no.	Municipality/District	Population (Number)			Average household size	Sex ratio
		Total	Male	Female		
		1,640,087	**793,140**	**846,947**	**4.3**	**94**
1	Moshi municipality	184,292	89,174	95,118	4.0	94
2	Moshi district	466,737	225,767	240,970	4.2	94
3	Rombo district	260,963	124,528	136,435	4.4	91
4	Same district	269,807	131,515	138,292	4.5	95
5	Mwanga district	131,442	63,199	68,243	4.4	93
6	Hai district	210,533	102,457	108,076	4.2	95
7	Siha district	116,313	56,500	59,813	4.3	94

Source: URT, 2012.

Population growth rate

The population growth rate varied considerably between rural and urban areas in Kilimanjaro region. For example, for the inter-censal period 1978-1988; Moshi district, Hai district, and Rombo district had annual growth rates of 1.0 percent, 1.6 percent, and 2.7 percent respectively. The overall doubling time for these three districts was expected after 39 years (Newmark, 1991:3). All rural districts showed a decrease in population growth rate between censal periods of 1967-1978 and 1978-1988 see table 4.7. Although the data on the birth and death rates and in-and out-migration based upon the 1988 national census were not yet available for the Kilimanjaro region, the decrease in the annual growth rate between the inter-censal periods 1967-1978 and 1978-1988 was most likely due to an increase in the out-migration rather than a decrease in either the birth rate or an increase in the death rate.

It was also observed that, the average annual growth rate of Kilimanjaro region dropped from 2.9 percent (1967-1978) to 2.0 percent (1978-1988) and 1.6 percent (1988-2002) then rose a bit to 1.8 percent (2002-2012) see table 4.7; 4.8; 4.9 and 4.10. This implies that out-migration is on the increase in Kilimanjaro region. The decrease in the annual growth rate between the inter-censal periods 1967-1978 and 1978-1988 was most likely due to an increase in the out-migration rather than a decrease in either the birth rate or an increase in the death rate (Newmark, 1991:4).

Table 4.7: The Kilimanjaro region administrative authorities' population growth rates and expected doubling in 1967-1978 and 1978-1988.

Municipality/district	1967-1978 (%)	1978-1988 (%)	Expected doubling time (Years)
	2.9	**2.0**	
Moshi municipality	7.0	8.6	8
Moshi district	2.6	1.0	70
Rombo district	3.4	2.7	26
Hai district	4.3	1.6	44

Source: Newmark, 1991:4; Bureau of Statistic, 1978, 1988.

In the 1978 census, the Kilimanjaro region had an annual net out-migration of -0.6% (Mbaruku, 1982 cited in Newmark, 1991:4). Between 1967-1978 Kilimanjaro region had the second highest region natural growth rate (3.5 percent) after Dar es Salaam region (ibid: 4). In contrast to the decreasing rate of growth in the rural areas, Moshi urban experienced an increased growth rate between the censal periods of 1967-1978 and 1978-1988 (Newmark, 1991: 4). The net out-migration from rural areas has most likely contributed to the rapid population growth in Moshi urban. Assuming the growth rate remained constant the population of Moshi urban would have double to 193,676 in eight years. This means that Moshi urban population in 1988 was 96,838 then in 1996 it was supposed to be 193,676. However, until 2012 it was 184,292. Indeed, according to Newmark projections, the Moshi rural population should by 2058 count 685,106. However, this is also not so realistic because until 2012 it was 466,737. This implies that the population in Kilimanjaro region is increasing, however, due to scarcity of land and opportunities, the out-migration is attracted by other towns and cities in Tanzania and beyond.

The Kilimanjaro region, rural population migrates to Moshi town and in big cities such as Dar es Salaam, Arusha, Tanga, Mbeya and Mwanza and in neighbouring regions searching for both formal and informal employments, including involvement in livelihood activities (businesses) and buying housing land in urban areas due to scarcity of land in Kilimanjaro region. However, people from Moshi still maintain their rural-urban linkages and this is through contesting to be attached to their family land *"Kihamba"*.

Table 4.8: The average growth rates for the intercensal periods 1967-1978, 1978-1988, 1988-2002 and 2002-2012.

Region	Average growth rate (percent)			
	1967-1978	1978-1988	1988-2002	2002-2012
Kilimanjaro	2.9	2.0	1.6	1.8

Source: URT, 2006

Table 4.9: The population of Kilimanjaro region and average growth rate, 2002-2012.

Region	Population (number)			Population increase	Average Annual Growth Rate (Percent)	
	2002 Census Counts	2012 Projected Population	2012 Census Counts	2002-2012 (Number)	1988-2002	2002-2012
Kilimanjaro	1,376,702	1,702,207	1,640,087	263,385	1.6	1.8

Source: URT, 2002, 2006 and 2012.

Table 4.10: The average growth rates of Kilimanjaro region districts for the intercensal periods 1967-1978, 1978-1988, 1988-2002 and 2002-2012.

Region	Municipality/ District	Population 1967	Population 1978	Population 1988	Population 2002	Population 2012	Average growth rate (%) (1967-1978)	Average growth rate (%) (1978-1988)	Average growth rate (%) (1988-2002)	Average growth rate (%) (2002-2012)
Kilimanjaro		**652,772**	**902,437**	**1,108,699**	**1,376,702**	**1,640,087**	**2.9**	**2.0**	**1.6**	**1.8**
	Moshi Municipality	26,864	52,046	96,631	143,799	184,292	7.0	6.2	2.8	2.47
	Moshi district	361,914	316,920	342,553	401,369	466,737	2.6	1.9	1.1	-
	Rombo district	114,311	157,715	200,859	245,716	260,963	3.4	2.4	1.4	-
	Same district	149,635	133,628	170,053	211,738	269,807	-	1.4	1.6	-
	Mwanga district	-	74,563	98,260	115,145	131,442	-	4.7	1.2	-
	Hai district	-	172,444	200,136	258,935	210,533	4.3	1.3	1.9	-
	Siha district	-	-	-	-	116,313	-	-	-	-

Source: URT, 1988, 2002, 2006 and Kilimanjaro socioeconomic profile, 1998

Rural-urban population

The 2002 census report shows that the urban population in Kilimanjaro region was 288,091 while in the rural was 1,088,611. Again, the 2012 census report shows that 397,375 lived in urban while 1,242,712 in the rural see table 4.11 and 4.12. These statistical evidences tell us that, the majority population in Tanzania and in Kilimanjaro region in particular, still lives in the rural (village). This implies that planning for this growing population is essential. It will ensure sustainable rural/village development through the utilization and management of natural resources (forest, land, etc.) in the region. The implementation of the planning legislations, thinking of alternative building materials, and designing of appropriate planning and housing standards and guidelines for all the villages in Tanzania and those surrounding Mount Kilimanjaro in particular needs to be appreciated.

Table 4.11: The rural-urban distribution of population in Kilimanjaro region, 2002 and 2012.

Regions	Census 2002			Census 2012		
	Total population	Urban population	Rural population	Total population	Urban population	Rural population
Tanzania	34,443,603	7,943,561	26,500,042	44,928,923	13,305,004	31,623,919
Tanzania mainland	33,461,849	7,554,838	25,907,011	43,625,354	12,701,238	30,924,116
Zanzibar	981,754	388,723	593,031	1,303,569	603,766	699,803
Kilimanjaro	1,376,702	288,091	1,088,611	1,640,087	397,375	1,242,712

Source: URT, 2002, 2006 and 2012

Despite the fact that, the UN-Habitat has projected that, by 2030 half of the population in the world will be living in urban. However, the 2012 Tanzania census report still shows that the majority of the

population (almost 70 percent) in Tanzania still lives in the rural (village) see table 4.11 and 4.12. In a real sense the rural (village) areas, especially in developing countries and Africa in particular will still be the home for the majority. This is mainly because of the rural-urban linkage, which is still strong today.

Table 4.12: The change in percentage of urban population in Kilimanjaro region, 1978-2012.

Regions	1978	1988	2002	2012	Change (1978-2012)
	Percentage urban population	Percentage urban population	Percentage urban population	Percentage urban population	Percentage urban population
Tanzania	13.8	18.8	23.1	29.6	15.8
Tanzania mainland	13.3	17.9	22.6	29.1	15.8
Zanzibar	32.6	31.8	39.6	46.3	13.7
Kilimanjaro	7.5	15.2	20.9	24.2	16.7

Source: URT, 2002 and 2006.

Population density

According to the 2002 census report it has shown that, Tanzania mainland has 3 regions with the highest population density. These are Dar es Salaam (1,786 inhabitants per square kilometres), Mwanza (150 inhabitants per square kilometres) and Kilimanjaro (104 inhabitants per square kilometres). Again, the 2012 census report shows that; Dar es Salaam, Mwanza and Kilimanjaro are densely populated regions with population densities of 3,133; 293; and 124 inhabitants per square kilometres respectively. It has also evidently shown that, Moshi Municipality is leading, followed by Moshi district (see table 4.13 and 4.14 and figure 4.5).

Therefore, the increase in population densities from 104 inhabitants per square kilometre in 2002 to 124 inhabitants per square kilometre in 2012 implies that in a difference of 10 years there were 20 inhabitants added on a 1 (one) square kilometre and compete for this scarce space of land in Kilimanjaro region. Therefore, after another 10, 20 or 30 years there will be more inhabitants added to contest for these scarce resources. This trend is sending signals to the responsible authorities, including spatial planning authorities to act immediately in order to reduce stress on the nature in the slopes of Mountain Kilimanjaro, including deforestation, soil erosion, land use conflicts and other spatial competing challenges associated with the development activities of the increasing inhabitants. It should also be noted that, Kilimanjaro region is a unique case in the sense that every family member is contesting to be attached to his/her inherited family land *"Kihamba"* especially through building a house in his/her village of origin.

Table 4.13: The population density of Kilimanjaro region 2002 and 2012.

Country/ Region	Population			Land area (in sq.km)	Population density (per sq.km) 2002	Population density (per sq.km) 2012	Average household size (2002)	Average household size (2012)
	Population 2002	Population 2012	Population increase					
Tanzania	**34,443,603**	**44,928,923**	**10,485,320**	**883,749**	**39**	**51**	**4.9**	**4.7**
Kilimanjaro	1,376,702	1,640,087	263,385	13,209	104	124	4.6	4.2

Source: URT, 2002 and 2006; URT, 2012 and 2014

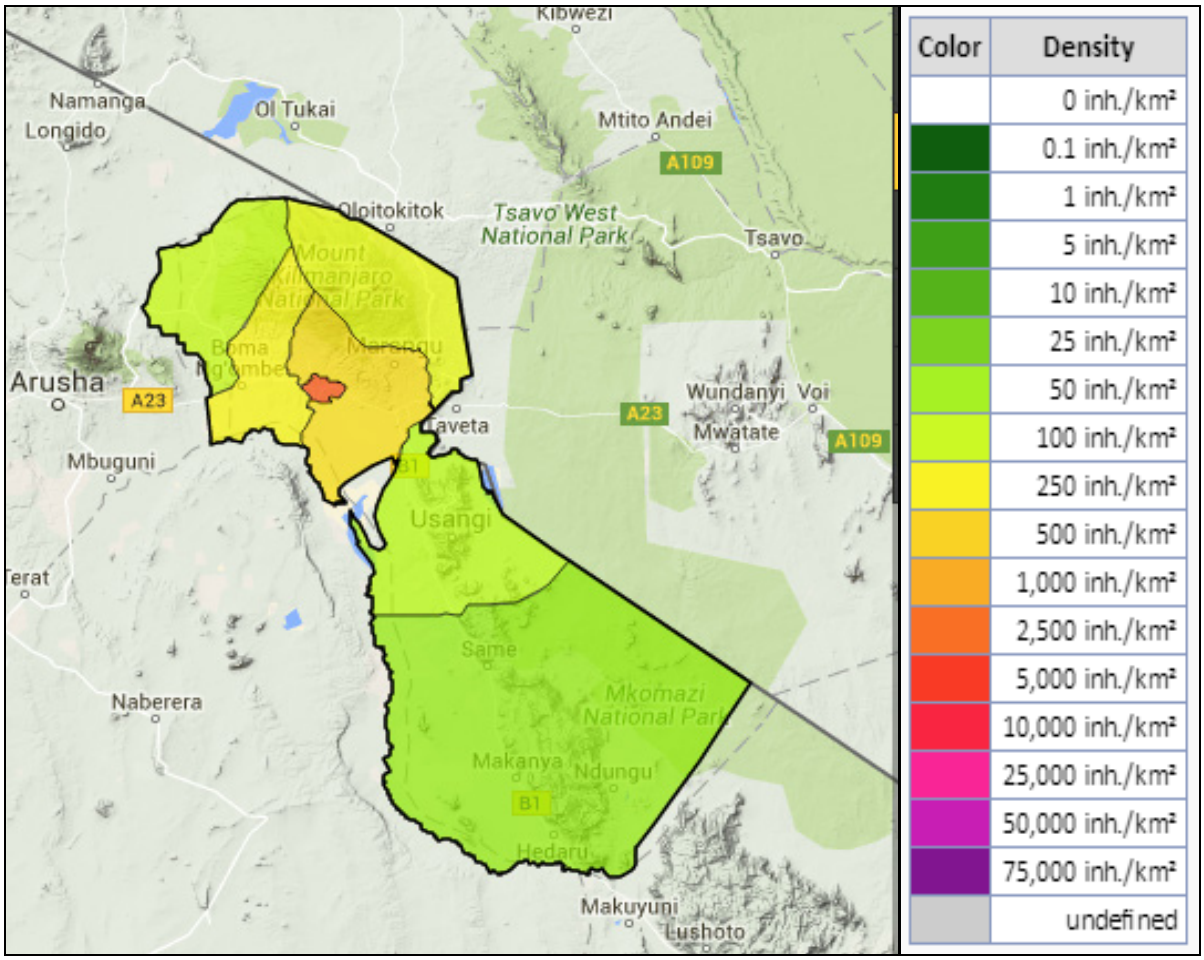
Also, the data have shown that Moshi municipality has more population density followed by Moshi district (see table 4.14 and figure 4.5).

Table 4.14: The population density of Kilimanjaro region by districts, 1967, 1978, 1988, 2002 and 2012.

Region/District	Area sq. km	Population Density (Inhabitants per sq.km) 1967	Population Density (Inhabitants per sq.km) 1978	Population Density (Inhabitants per sq.km) 1988	Population Density (Inhabitants per sq.km) 2002	Population Density (Inhabitants per sq.km) 2012
Kilimanjaro region	**13,209**	**49.42**	**68.32**	**83.63**	**104**	**124**
Moshi municipality	58	463.17	897.34	1666.05	2479.29	3177.45
Moshi district	1,713	211.27	185	200.17	234.31	272.47
Hai district	2,112	-	81.64	93.52	122.60	99.68
Rombo district	1,442	79.27	109.37	139.33	170.40	180.97
Same district	5,186	28.85	25.77	32.73	40.83	52.03
Mwanga district	2,698	-	27.64	35.95	42.68	48.72

Source: Author's own construct and computation, data extracted from census reports, 2002 and 2012

Figure 4.5: The population density by municipality/district in Kilimanjaro region, in 2013.



Source: www.citypopulation.de/php/tanzania-admin.php?adm1id=3

Household size

According to the Tanzania National Census report of 2012, it shows that the household number increases from 297,439 in 2002 to 384,867 in 2012 while the average household size decreases from 4.6 in 2002 to 4.3 in 2012 see table 4.15. This implies that there are split households' because of out-migration or/and the increase of households in the region.

Table 4.15: The average household size of Kilimanjaro region in 2002 and 2012.

Region	2002 Census			2012 Census		
	Population (Number)	Households (Number)	Average Household Size	Population (Number)	Households (Number)	Average Household Size
Kilimanjaro	1,376,702	297,439	4.6	1,640,087	384,867	4.3

Source: URT, 2012; URT, 2014

Working age population

According to the census report of 2002, it indicates that the working population (15-64years) in Kilimanjaro region was 702,601. This is about 51 percent of the total population in the region. Again, the 2012 census report shows that the working population has increased from 51 percent in 2002 to 55.1 percent in 2012 (see table 4.16 and 4.17). These results have positive impacts in the development of the region.

Table 4.16: The population by broad age groups in Kilimanjaro region, 2002.

Country/ Region	Number				Percentage		
	All ages	0-14yrs	15-64yrs	65yrs+	0-14yrs	15-64yrs	65yrs+
Tanzania	34,443,603	15,238,612	17,857,906	1,347,085	44.2	51.8	3.9
Kilimanjaro	1,376,702	592,759	702,601	81,342	43.1	51.0	5.9

Source: URT, 2002 and 2006.

Table 4.17: The population distribution by age groups in Kilimanjaro region, 2012.

Region	Population	Population 0-4 Years (% of Total)	Population 0-14 Years (% of Total)	Population 0-17 Years (% of Total)	Population 15-64 Years (% of Total)	Population 65+ Years (% of Total)	Age Dependency Ratio	Women of Reproductive Age (% of Total Female Population)
Tanzania	44,928,923	16.2	43.9	50.1	52.2	3.9	91.5	47.3
Tanzania Mainland	43,625,354	16.2	43.9	50.1	52.2	3.9	91.7	47.2
Kilimanjaro	1,640,087	11.7	37.8	44.9	55.1	7.0	81.4	46.4

Source: URT, Population distribution by age report, 2013

Literacy and education status of people

The 2002 census report shows that the literacy rate of population in Kilimanjaro region is very good compared to all the regions in Tanzania mainland (see table 4.18, 4.19 and 4.20). This implies that the large proportion of the population in Kilimanjaro has a good education. This has positive implications on the regional development. For instance, the housing improvements/investments in the village.

Table 4.18: The literacy rates of population aged 10 years and above in Kilimanjaro region, 1978, 1988 and 2002.

Country/ Region	Percentage literate				Rank		
	Kiswahili language			Other language			
	1978	1988	2002	2002	1978	1988	2002
Tanzania	51.5	61.2	69.8	70.5			
Kilimanjaro	74.1	80.8	88.9	89.5	1	1	2

Source: URT, 2002 and 2006.

Literacy rates of population 10 years of age and above by language, by region are given in table 4.19. On literacy rate by language type, Kilimanjaro region has the highest percentage of people who are literate in Kiswahili only (72.1 percent) compared to only 48.6 percent in Tabora on Tanzania

Mainland. This means that the literacy rates in Kilimanjaro are really promising when compared to other regions in Tanzania.

Table 4.19: The literacy rates of population 10 years of age and above by language in Kilimanjaro region, 2002 in percentage.

Country/Region	Total literate	Kiswahili only	English only	Kiswahili and English	Other language
Tanzania	70.4	60.1	0.4	9.7	0.2
Kilimanjaro	89.5	72.1	0.5	16.8	0.1

Source: URT, 2002 and 2006.

Again, the 2012 census reports had shown that, the regions with the lowest illiteracy rate in Tanzania mainland was Dar es Salaam (6.4 percent) followed by Kilimanjaro (10.2 percent) see table 4.20. Therefore, Kilimanjaro region is the second region (89.8 percent) in Tanzania with highest literate population. This is the sign of development which can be reflected at household level and in the whole region at large.

Table 4.20: The literacy status of the population aged 5 years and above in Kilimanjaro region, 2012.

Country/ Region	Literacy status (in percentage)						
	Literacy in						
	Kiswahili only	English only	Both English and Kiswahili	Other language(s)	Total literate	Illiterate	Total
Tanzania	57.4	0.8	13.4	0.2	71.8	28.2	36,872,944
Kilimanjaro	66.6	1.2	21.9	0.1	89.8	10.2	1,411,198

Source: URT, 2012 and 2014.

The comparison of adult literacy rates across regions between 2002 and 2012 censuses further shows significant increase in Kilimanjaro region see table 4.21. All these statistical evidences have implications on the development of the region.

Table 4.21: The comparison of literacy rates for persons aged 15 years and above in Kilimanjaro region, 2002 and 2012.

Country/ Region	Literate rate						Percentage change		
	2002 census			2012 census					
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Tanzania	69.4	77.5	62.2	78.1	83.4	73.3	12.5	7.6	17.9
Tanzania mainland	69.4	77.5	62.1	77.9	83.2	73.1	12.3	7.4	17.7
Kilimanjaro	87.9	91.2	85.0	92.2	94.4	90.3	4.9	3.5	6.3

Source: URT, 2014:82.

Education of people

Education is one of the most important aspects of social and economic development. Education improves the capabilities and is highly associated with various socioeconomic variables such as lifestyles, incomes and fertility for both individuals and societies (URT, 2014:88). In this regard, table 4.22 shows that 24.5 percent of Tanzania population aged 5 years and above was attending school while 42.7 percent had attended school: either had completed or had dropped out, and 32.8 percent had never attended school. Therefore, according to the census report 2002, Kilimanjaro region had taken the first position with the highest percentage (32.5) of persons who had attended school compared to other regions in Tanzania. And the second (43.1 percent) after Dar es Salaam (55.8 percent) of persons who have completed school.

Table 4.22: The school attendance status of persons aged 5 years and above in Kilimanjaro region, 2002 by percentage.

Country/Region	Total	Never attended	Attending school	Having attended	
				Dropped out	Completed
Tanzania	100	32.8	24.5	8.9	33.8
Kilimanjaro	100	14.0	32.5	10.4	43.1

Source: URT, 2002 and 2006.

The 2006 census analysis report also shows that, the persons aged 25 years and above in Kilimanjaro region who have attained primary, secondary and university education are higher compared to other regions in Tanzania see table 4.23.

Table 4.23: The level of educational attainment for persons aged 25 years and above in Kilimanjaro region, 2002 in percentage.

Country/Region	Never Attended	Primary		TP (1)	Secondary		TS (2)	University
		Std I-IV	Std V-VI		I-IV	V-VI		
Tanzania	**34.3**	**12.1**	**45.1**	**0.2**	**5.8**	**0.7**	**0.5**	**0.4**
Kilimanjaro	**14.7**	**16.9**	**57.5**	**0.4**	**7.7**	**1.0**	**0.6**	**0.4**

Source: URT, 2002 and 2006.

Again, the 2012 census report further shows that, the Net Enrolment Rate (NER) in primary school in Kilimanjaro region both in urban and in rural areas is higher than all the regions in Tanzania see table 4.24. The Net Enrolment Rate is the number of children aged 7-13 years who are attending primary school (primary education) divided by the total number of children in that age group. The 7-13 year age group is the official primary school age in Tanzania (URT, 2014:93). All these socioeconomic data are essential in understanding the phenomenon under this study.

Table 4.24: The net enrollment rates in primary schools in Kilimanjaro region, census 2012.

Country/ Region	Total			Rural			Urban		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Tanzania	76.8	75.2	78.4	72.3	70.4	74.2	90.6	90.4	90.9
Tanzania mainland	76.6	75.0	78.25	72.1	70.3	74.0	90.5	90.3	90.7
Kilimanjaro	94.1	93.7	94.5	93.7	93.2	94.2	95.7	95.8	95.5

Source: URT, 2014:97

Education services

The education services in Kilimanjaro region are also promising when compared to other regions in Tanzania see table 4.25. The demand for land for such services is also on the rise in Kilimanjaro region. This requires attention from the spatial planning sector.

Table 4.25: The education services in Kilimanjaro region.

Socioeconomic indicators	Tanzania mainland	Kilimanjaro region
Education		
Number of Primary Schools (1994)	10,454	701 (933 in 2011)
Number of Secondary Schools (1994)	405	91 (313 in 2011)
Teachers Training Colleges (2011)		7
Vocational Training Centres (2011)		77
University Colleges (2011)		5

Source: Compiled data, author, 2014/2015

Health services

With regard to health, Tanzania has made significant progress in the last decade (Tanzania Human Development Report, 2015: xii). The 2012 Census results show that, the life expectancy at birth for Tanzanians has increased from 50 years in 1988 to 61 years in 2012. The results further show that female life expectancy at birth is higher (63 years) than that of males (60 years). The increase in life expectancy over a decade is attributed to increased economic growth and reduced income poverty (URT, key findings, 2014). The 2012 Census results on infant mortality revealed an infant mortality rate of 45 deaths per 1,000 live births. The infant mortality rate was higher among male than female infants. Likewise, the observed infant mortality rate for males was 51 deaths per 1,000 live births compared with 42 deaths per 1,000 live births for females. The result further revealed that the infant mortality rate in Tanzania has declined from 115 deaths per 1,000 live births in 1988 to 45 deaths per 1,000 live births in 2012 (ibid). The MDG of reducing infant mortality down to 38 deaths per 1000 live births by 2015 thus seems achievable (Tanzania Human Development Report, 2015: xii). The table 4.26 provides some available data in Kilimanjaro region. The improvement of health services has also implications in the development of the region (at household to regional level). This is because of the improvement of human capital (human resource). The areas for building health services are also needed due to the increased population.

Table 4.26: The health services in Kilimanjaro region.

Socioeconomic indicator	Tanzania mainland (in percentage)	Kilimanjaro region
Health		
Life expectancy	50 (1988); 51 (2002); 61 (2012)	61 (2012)
Infant mortality rate	115 (1998); 95 (2002); 45 (2012); 38 (2015)	92 (1994)
Number of Dispensary	3,014 (1994)	361 (1997)
People per dispensary (National target 5000-10,000 per dispensary)	-	3962 (1997)
Number of health centres	276 (1994)	18 (1997); 36 (2011)
People per health centres (National target 50,000 people per health centre)	-	79,463 (1997)
Number of Hospitals	175 (1994)	16 (1997); 19 (2011)
People per hospital (National target 100,000 people per hospital)	-	89,396 (1997)
People per doctor (National average 24,930 people per doctor)	-	31,785 (1997)

Source: Compiled data from 2002 census report; Kilimanjaro socioeconomic profile, 1998

Sources of drinking water

The 2012 census report has also revealed that the main sources of drinking water in Kilimanjaro region are piped water. The access to modern sources of water in Kilimanjaro region is quite well compared to other regions in Tanzania (see table 4.27). This has implications to the health of the people and the development of the region.

Table 4.27: The percentage of households' access to the main sources of drinking water in Kilimanjaro region, 2012 Census.

Region	Total	Main source of water												
		Piped water into dwelling	Piped water to yard/ plot	Public tap/ stand pipe	Tube well/ borehole	Protected dug well	Unprotected dug well	Protected spring	Unprotected spring	Rain water collection	Bottled water	Cart with small tank/drum	Tanker truck	Surface water (river dam lake etc.)
Tanzania	**9,276,997**	**11.6**	**7.9**	**17.4**	**7.8**	**7.6**	**19.1**	**2.2**	**10.1**	**1.2**	**0.3**	**2.5**	**1.4**	**10.9**
Kilimanjaro	381,526	31.7	21.6	24.8	1.6	1.4	1.4	1.5	8.7	0.4	0.1	1.4	0.2	5.1

Source: URT, 2014:144-145

Source of energy

The 2012 population and housing census collected information about the household's main source of energy for lighting and cooking. The information collected indicates the access and availability of modern source of energy (electricity, solar energy and gas) (ibid: 147). Kilimanjaro region has also shown very promising results in the sources of energy for lighting, however, firewood is still the main source of energy for cooking. This has negative implications on the environment (see table 4.28 and 4.29).

i. Source of energy for cooking.

Table 4.28 shows the percentage of households' access to the main sources of energy for cooking in Kilimanjaro region.

Table 4.28: The percentage of households' access to the main sources of energy for cooking in Kilimanjaro region, 2012 Census.

Region	Total	Main source of energy for cooking												
		Electricity (TANESCO/ ZECO)	Solar energy	Generator/ private sources	Gas (industrial)	Gas (Biogas)	Electricity (wind)	Paraffin	Coal	Charcoal	Firewood	Wood/farm residuals	Animal residuals	Not applicable
Tanzania	**9,276,997**	**1.6**	**0.1**	**0.1**	**0.9**	**0.04**	**0.03**	**2.4**	**0.1**	**25.7**	**68.5**	**0.2**	**0.1**	**0.4**
Kilimanjaro	381,526	1.7	0.1	0.0	1.5	0.1	0.0	4.9	0.2	10.9	79.8	0.3	0.1	0.3

Source: URT, 2014:148-149

ii. Source of energy for lighting

Table 4.29 presents the percentage of households' access to the main sources of energy for lighting in Kilimanjaro region.

Table 4.29: The percentage of households' access to the main sources of energy for lighting in Kilimanjaro region, 2012 Census.

Region	Total	Main source of energy for lighting											
		Electricity (TANESCO/ZECO)	Solar energy	Generator/ private sources	Gas (industrial)	Gas (Biogas)	Electricity (wind)	Acetylene	Kerosene (lantern/ chimney)	Kerosene (wick lamps)	Candles	Firewood	Torch/ rechargeable lamps
Tanzania	**9,276,997**	**19.5**	**1.4**	**0.3**	**0.0**	**0.0**	**0.0**	**2.7**	**17.5**	**40.7**	**1.3**	**2.0**	**14.5**
Kilimanjaro	381,526	26.7	3.5	0.2	0.0	0.0	0.1	3.2	30.9	31.8	0.7	0.6	2.4

Source: URT, 2014:151-152

Type of toilet facility

The main type of toilet facility used by households in Kilimanjaro region is traditional pit latrine. Though, the 2012 census report shows some improvement (see table 4.30). This is because of modernity driven by multi-locational households and the improvement of household income.

Table 4.30: The percentage of households' access to the type of toilet facility in Kilimanjaro region, 2012 Census.

Region	Total	Main type of toilet facility											
		Flush/pour water to piped sewer system	Flush/pour water to septic tank	Flush/pour water to covered pit	Flush/pour water to somewhere else	Ventilated improved pit latrine	Pit latrine with washable slab with lid	Pit latrine with washable slab without lid	Pit latrine without washable/ soil slab	Pit latrine without slab/open pit	Composting/Ecosan latrine	Bucket	No facility /bush/field/beach
Tanzania	**9,276,997**	**1.7**	**4.0**	**7.2**	**1.3**	**1.5**	**8.6**	**10.9**	**30.1**	**26.8**	**0.2**	**0.0**	**7.8**
Kilimanjaro	381,526	1.9	3.1	9.4	1.6	2.9	18.2	14.8	26.7	18.7	0.2	0.0	2.6

Source: URT, 2014:156-157

Refuse disposal

The main methods for refuse disposal in Kilimanjaro region are not friendly to the environment see table 4.31.

Table 4.31: The percentage of households by type of refuse disposal in Kilimanjaro region, 2012 Census.

Region	Total	Main source of waste disposal					
		Regularly collected	Irregularly collected	Burnt	Roadside dumping	Burying/ pit	Other dumping
Tanzania	**9,276,997**	**5.4**	**3.1**	**22.6**	**1.2**	**36.2**	**31.6**
Kilimanjaro	381,526	3.6	1.2	47.4	0.5	20.6	26.6

Source: URT, 2014:159

Housing

The Tanzania population and housing census reports (2002 and 2012) show that, the housing condition in terms of building materials used in roofing, walling, and flooring in Kilimanjaro region is also promising (see explanation and evidences below).

Building materials

In 2002, the percentage distribution of private households by main building materials used for roof, wall and floor in Kilimanjaro region is shown in table 4.32. Dar es Salaam recorded the highest percentage of private households using iron sheets for roof (90.4 percent), followed by Kilimanjaro (88.5 percent). While a very high percentage of households using iron sheets for the roof of their houses were recorded in Kilimanjaro region, the use of poles and mud as building materials for the wall was more prevalent than cement bricks and percentage of mud floor was higher than the cement floor (URT, 2006: 176-177). Though, not so bad if compared with other regions in Tanzania.

Table 4.32: The percentage of households by building materials of housing in Kilimanjaro region, 2002.

Region	Roof			Wall				Floor	
	Iron sheets	Grass	Grass and mud	Cement bricks	Sun-dried bricks	Baked bricks	Poles and mud	Cement	Mud
Tanzania Total	46.3	41.1	11.2	15.5	33.0	14.0	34.4	26.4	73.0
Tanzania Mainland	45.9	41.2	11.5	14.9	33.8	14.3	34.2	25.6	73.7
Kilimanjaro	88.5	8.9	0.9	29.5	15.7	10.9	33.4	45.2	53.8

Source: The United Republic of Tanzania 2002 Population and Housing Census and URT, 2006.

However, the 2012 population and housing census report revealed some better progress as compared to the 2002 population and housing census report (see explanations below). This means that the housing sector improves as the economy of people improves as well as the advancement in technology and the practice of modernity.

Building materials for roofing

Kilimanjaro region has still shown better progress from 88.5 percent of households who had used iron sheets as a roofing material in 2002 to 91.8 percent in 2012 see table 4.33.

Table 4.33: The percentage of households by region and type of materials used for roofing; Tanzania, 2012 Census.

Region	Total	Roofing materials of the main dwelling unit							
		Iron sheet	Tiles	Concrete	Asbestos	Grass/ Leaves	Mud and Leaves	Plastic/Box Paper	Canvass
Tanzania	9,276,997	65.4	0.4	0.3	0.3	25.4	7.9	0.2	0.1
Kilimanjaro	381,526	91.8	0.3	0.1	0.2	5.6	1.4	0.5	0.1

Source: URT, 2014:135

Building materials for flooring

Kilimanjaro region has shown a good progress from 45.2 percent of households who had used modern flooring materials in 2002 to 58 percent in 2012 see table 4.34.

Table 4.34: The percentage of households by region and main material used for flooring in Tanzania, 2012 Census.

Region	Total	Flooring materials of the main dwelling unit								
		Cement	Ceramic tiles	Parquet or Polished wood	Terrazzo	Vinyl or asphalt strips	Wood planks	Palm/ bamboo planks	Earth/ Sand	Animal dung
Tanzania	9,276,997	37.2	1.3	0.0	0.2	0.0	0.2	0.3	60.0	0.6
Kilimanjaro	381,526	56.0	1.2	0.3	0.2	0.0	0.8	0.3	40.6	0.5

Source: URT, 2014:137

Building materials for the walls

Kilimanjaro region has also shown some good progress compared to all the regions in Tanzania. There has been a slight change from 29.5 percent (use of cement bricks) in 2002 to 33.5 percent in 2012 (see table 4.35).

Table 4.35: The percentage of households by region and type of wall materials used in Tanzania, 2012 Census.

Region	Total	Walling materials of the main dwelling unit								
		Stones	Cement bricks	Sun-dried bricks	Baked bricks	Timber	Timber and iron sheets	Poles and mud	Grass	Canvass
Tanzania	9,276,997	1.0	20.3	26.3	26.3	0.6	0.3	23.5	1.6	0.1
Kilimanjaro	381,526	2.1	33.5	11.8	22.3	8.7	0.9	20.1	0.6	0.1

Source: URT, 2014:139

Rooms for sleeping

Kilimanjaro region has shown to have more households (8.5 percent) with more rooms (5 rooms) for sleeping than all the regions in Tanzania mainland see table 4.36. This has been reflected in the case study area. For example, some of the reasons for this include social status, for use in occasions, culture and the practice of extended Chagga families.

Table 4.36: The percentage of households by number of rooms for sleeping in Tanzania, 2012 Census.

Region	Average household size	Total	Number of rooms for sleeping					Average number of rooms for sleeping
			1	2	3	4	5	
Tanzania	4.7	9,276,997	28.4	33.2	22.0	9.7	6.6	2.4
Kilimanjaro	4.2	381,526	19.5	32.3	26.1	13.5	8.5	2.6

Source: URT, 2014:142

Asset ownership

The 2002 population and housing census had documented the key assets owned by households in Kilimanjaro region see table 4.37.

Table 4.37: The proportion of private households owning selected assets in Kilimanjaro region, 2002.

Region	Radio	Telephone	Bicycle	Hand hoe	Wheelbarrow	Charcoal or electric iron	Electricity
Tanzania Total	51.2	3.8	33.8	77.2	15.6	4.3	9.5
Tanzania Mainland	50.6	3.6	33.5	77.2	15.0	4.3	9.1
Kilimanjaro	72.4	4.7	23.4	54.6	10.4	14.9	16.1

Source: URT, 2006:188.

Again, the 2012 population and housing census had revealed that, Kilimanjaro region has a promising proportion of households who owns assets compared to all the regions in Tanzania see table 4.38. The table also shows that, most of the households in Tanzania and in Kilimanjaro in particular prefer to own houses and land/farm. The economist might argue that, this is because the value of these assets keeps on appreciating over time. Though, the findings might challenge this expression. Therefore, this study has selected housing as an asset in order to understand why households prefer to own it and particularly in their village of origin (see chapter ten).

Table 4.38: The percentage of households by ownership of assets in Kilimanjaro region, 2012 Census.

Region	Total	Households main asset ownership											
		Radio	Mobile phone	Motor vehicle	Motorcycle/ Vespa	Television	Electric iron	Charcoal iron	Refrigerator/ freezer	Cooker (electric or gas)	Computer/ laptop	House	Land/ farm
Tanzania	**9,276,997**	**61.6**	**63.9**	**2.6**	**5.0**	**15.6**	**10.0**	**20.2**	**3.3**	**6.8**	**2.7**	**74.8**	**70.4**
Kilimanjaro	381,526	75.3	79.0	3.9	7.4	19.5	15.1	39.6	5.7	7.7	2.8	79.5	76.8

Source: URT, 2014:160

Land use patterns and utilization

The area between 1,100 and 1,800 meters above the sea level around the slopes of mount Kilimanjaro and Pare mountains are suitable for agricultural production with favorable living environment. Because of the population pressure the type of cultivation has the following characteristics.

- Cultivation and housing are very dense in the highland zones with a cultivation rate of 98 percent and population density above 20 persons per square kilometers.
- Net agricultural hectare on average was 0.66 hectares per household.
- Over 65 percent of the small holders live and are engaged in cultivation of banana and coffee, while livestock is stall feed. The same small holders own pieces of agricultural land in the lowlands for the annual crops, where maize, beans and oilseed are grown (Kilimanjaro socioeconomic profile, 1998:27-28).

Between 900-1100 meters above the sea level rate of cultivation was about 35 percent, while the population density was around 60 persons per square kilometers. Gross agricultural is about 2.72 ha/household. Mixed farming is practiced by small holder farmers.

In the lowlands the rate of cultivation is very low, less than 10 percent of the total activities and the population density was 25 persons per square kilometers with an average hectare of 1.27 ha/household. Due to the nature of the land, majority of livestock keepers are found in the lowlands,

and grazing is their dominant economic activity (Kilimanjaro socioeconomic profile, 1998:28). However, in recent years the extent of land transformation has changed more compared to the past. See, for example, the case of Sango village discussed under chapter eleven.
The classification of the land use in the region see table 4.39.

Table 4.39: The land use pattern and utilization in Kilimanjaro region in 1990/91.

S/No.	Land use	Area (sq.km or ha)
1	Agricultural and cultivated land	6,433sq. km.
2	Government forest reserves	333,640 ha.
3	Local authority forest reserves	212,880 ha.
4	Forest plantations	5,750 ha.
5	Game reserves	373,000 ha.
6	Controlled area and woodlands	276,800 ha.
7	Marginal lands settlement	64,700 ha.
	Total	**1,342,370 ha.**

Source: Kilimanjaro region development plan, 1990/91 in Kilimanjaro socioeconomic profile, 1998

Land scarcity

Crop production and agricultural expansion in the region is likely to face physical limitations (arable land is only 48.7 percent of the total land area). In the highland areas, for instance, a family owns an average of 0.5 of a hectare while in lowland area a family owns 1.5 hectares. The scramble for land and scarcity of land in Kilimanjaro region is thus being experienced day after day. In addition, environmental degradation is increasingly taking place due to a poor farm management system such as non-use of soil erosion control methods. In this regard, the region needs to intensify land management practices in order to improve land productivity per unit area. Generally, the experience of land limitation is the factor which most contributes to the movement of people out of the region (Kilimanjaro socioeconomic profile, 1998:29). This study has provided some empirical evidences on the trend of land scarcity using Sango village (see chapter eight and eleven).

Migration

The focus of this study is on multi-locational households. Therefore, understanding the migration trend in Kilimanjaro region is important. The 2002 census report had shown that, Kilimanjaro region had the out migration amounting to 48,019 migrants which was about 3.6 percent of its total population see table 4.40 and table 4.41.

Table 4.40: The inter-regional migration in Kilimanjaro region in 2001-2002.

Country/ Region	In-migrants	Out-migrants	Net Migration	Turnover	Rates in percentage			
					In	Out	Net	Turnover
Tanzania	1,044,059	1,055,251	-11,192	2,099,310	3.2	3.3	0.0	6.5
Kilimanjaro	41,340	48,019	-6,679	89,359	3.1	3.6	-0.5	6.7

Source: URT, 2002 and 2006:140.

Table 4.41: The population born in the same region, born in other regions and born outside Tanzania, in Kilimanjaro region, 2002.

Country/Region of Residence	(A) Population	(B) Born in the same region	(C) Born in other regions	(D) Born outside Tanzania	Percentage of population		
					(B)(A)	(C)(A)	(D)(A)
Tanzania	34,443,603	28,619,454	5,304,209	236,872	83.1	15.4	0.7
Kilimanjaro	1,376,702	1,208,471	148,238	5,399	87.8	10.8	0.4

Source: URT, 2006:144

Note: Population born in the same region, population born in other regions and population born outside Tanzania do not add up to the total population due to the existence of those whose birthplace was not specified.

Lifetime migration

According to the census report 2002, the region that showed the highest lifetime out-migration rate in Tanzania mainland was Pwani (26.4 percent) followed by Kilimanjaro (25.4 percent), Lindi (21.0 percent) and Singida (20.9 percent). In Tanzania mainland, Kilimanjaro, Iringa, Mara and Singida showed high rates of net losses of lifetime migrants: -19.1 percent, -14.7 percent, -14.0 percent and -13.9 percent respectively (see table 4.42 and 4.43). This statistical evidence shows that Kilimanjaro region has the highest net migration losses than all the regions in Tanzania mainland. Some of the reasons for this are land scarcity and looking for livelihood activities in other parts within and outside Tanzania.

Table 4.42: The lifetime migrants in Kilimanjaro region in 2002.

Country/ Region	In-migrants	Out-migrants	Net migration	Turnover	Rates in percentage			
					In	Out	Net	Turnover
Tanzania Mainland	5,044,080	5,050,913	-6,833	10,094,993	15.1	15.3	0.0	30.2
Kilimanjaro	148,238	411,735	-263,497	559,973	10.8	25.4	-19.1	40.7

Source: URT, 2006:144.

Table 4.43: The distribution of lifetime net inter-regional migration rates in Tanzania, 2002.

Life net migration rate		No of regions	Regions (Net migration rates in percentage)
Positive (Net gains)	30% and above	2	Dar es Salaam (39.0%), Urban West (30.6%)
	20-30%	1	Manyara (21.5%)
	10-20%	0	N/A
	0-10%	7	Tabora (6.4%), Arusha (6.3%), Rukuwa (3.4%), Mbeya (3.3%), Shinyanga (2.3%), Kagera (1.2%)
Negative (Net losses)	-10-0%	6	Mwanza (-0.7%), Ruvuma (-4.7%), Pwani (-6.4%), Kigoma (-9.1%), South Unguja (-9.4%), Tanga (9.9%)
	-20- -10%	8	Lindi (-10.1%), Dodoma (-10.7%), Mtwara (-11.9%), Singida (-13.9%), Mara (-14.0%), Iringa (-14.7%), South Pemba (-15.9%), Kilimanjaro (-19.1%)
	Under -20%	2	North Pemba (-22.4%), North Unguja (-24.9%)

Source: URT, 2006:148.

Again, the Index of Relative Representation (IRR) for a region is defined as the ratio of the percent share of in-migration or out-migration of the region to the percent share of the population of the region, multiplied by 100. It is a measure of migration used to estimate the share of migration to the total population size of the region. The index controls for the relative population size of the regions, while examining their share of inter-regional in- and out-migration. Theoretically the IRR ranges from 0 to the infinity. If the IRR is more than 100 it signifies that the relative share of in- or out-migration of the region is higher than what it represents in the country's population and vice versa. For out-migration, therefore, there are 9 regions in Tanzania Mainland that have the IRR higher than 100. They are Kilimanjaro (194), Pwani (180), Singida (153), Lindi (148), Mara (143), Iringa (130), Dodoma (123), Tanga (117) and Mtwara (108) see table 4.44. These regions contribute more to out-migration than what they contribute to the national population. Kilimanjaro region is the highest contributor to out-migration than all the regions in Tanzania mainland.

Table 4.44: The effectiveness index, percent shares of the population, in-migrants and out-migrants, and index of relative representation (IRR) in Kilimanjaro region, 2002.

Region of Residence	Effectiveness index	Percentage share (Percentage)			Index of Relative Representation	
		Population	In-migrants	Out-migrants	In-migration	Out-migration
Tanzania		100.0	100.0	100.0		
Kilimanjaro	47.1	4.0	2.8	7.8	70	194

Source: URT, 2006:149

Dar es Salaam is the region that had the largest net lifetime migration. There were big gaps between the numbers of lifetime in-migrants and out-migrants. Lifetime in-migrants to Dar es Salaam considerably outnumbered lifetime out-migrants from Dar es Salaam for all regions. Dar es Salaam recorded the largest lifetime in-migrants from Pwani (202 thousand) followed by Tanga (111 thousand), Kilimanjaro (104 thousand) and Morogoro (98 thousand) see table 4.45. The number of lifetime migrants from these four regions that are connected with Dar es Salaam by highways totalled 514 thousand, accounting for 42.6 percent of total lifetime in-migrants to Dar es Salaam. In contrast, the number of lifetime out-migrants from Dar es Salaam to these four regions totalled 101 thousand, which make the gain of lifetime migrants of 413 thousand (URT, 2006:150). This data tells us that most of the migrants from the Kilimanjaro region live in Dar es Salaam. Though, part of this population does return to their village of origin at some points in a year. This fact has been reflected in the case study area (Sango village).

Table 4.45: The lifetime inter-regional migration, Dar es Salaam, 2002.

Regions	In-migrants	Out-migrants	Net migration	Turnover	Percentage		Effectiveness Index
					In-migrants	Out-migrants	
All Regions	1,208,479	237,446	971,033	1,445,925	100.0	100.0	67.2
Pwani	201,701	51,624	150,077	253,325	16.7	21.7	59.2
Tanga	110,963	12,388	98,575	123,351	9.2	5.2	79.9
Kilimanjaro	103,592	9,512	94,080	113,104	8.6	4.0	83.2
Morogoro	97,961	27,277	70,684	125,238	8.1	11.5	56.4
Lindi	89,144	8,850	80,294	97,994	7.4	3.7	81.9
Dodoma	74,198	10,562	63,636	84,760	6.1	4.4	75.1
Mara	71,993	4,929	67,064	76,922	6.0	2.1	87.2
Urban West	8,649	12,538	-3,889	21,187	0.7	5.3	18.4

Source: The United Republic of Tanzania 2002 Population and Housing Census, URT, 2006:150

According to the census analytical report of 2006 it also shows that in three northern regions: Arusha, Manyara and Kilimanjaro, there were extensive lifetime inter-regional migration between them. In Arusha for example, about a half of the total lifetime inter-regional in- and out-migrants were from and to Kilimanjaro and Manyara. Lifetime in-migrants from these two regions accounted for 54 percent of the total lifetime inter-regional in-migrants in Arusha, and lifetime out-migrants from Arusha to those two regions accounted for 50 percent of the total lifetime inter-regional out-migrants from Arusha. The similar tendency was observed in Manyara. Lifetime in-migrants from Arusha and Kilimanjaro accounted for 39 percent of the total lifetime inter-regional in-migrants in Manyara, and lifetime out-migrants from Manyara to these two regions accounted for 77 percent of the total lifetime out-migrants from Manyara. For Kilimanjaro, one half of the total lifetime inter-regional in-migrants were from Arusha and Tanga: 20 percent and 30 percent, respectively, and one half of the total lifetime inter-regional out-migrants from Kilimanjaro were directed to Arusha and Dar es Salaam (i.e. 25 percent each) see table 4.46.

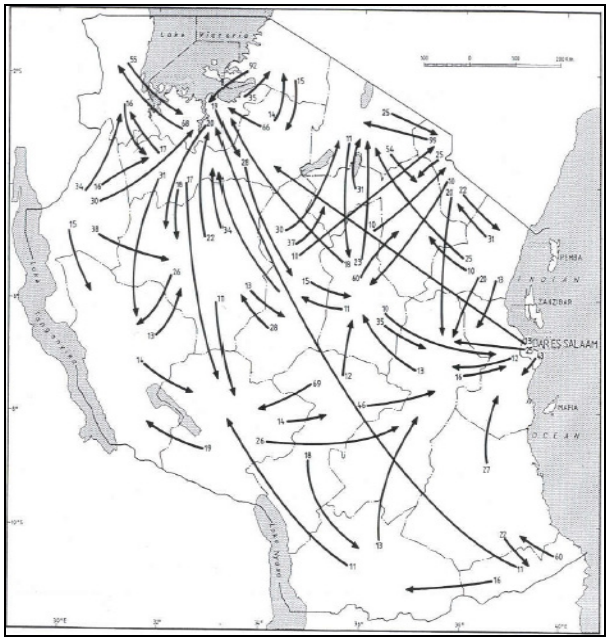
Table 4.46: The lifetime inter-regional migration, Arusha, Manyara and Kilimanjaro in 2002.

From/To	In-migrants	Out-migrants	Net migration	Turnover	Percentage		
					In-migrants	Out-migrants	Effectiveness Index
Arusha							
All regions	264,978	183,250	81,728	448,228	100.0	100.0	18.2
Kilimanjaro	103,405	29,593	73,812	132,998	39.0	16.1	55.5
Manyara	40,657	61,950	-21,293	102,607	15.3	33.8	20.8
Singida	30,278	7,288	22,990	37,566	11.4	4.0	61.2
Manyara							
All regions	278,472	55,446	223,026	333,918	100.0	100.0	66.8
Dodoma	78,907	4,207	74,700	83,114	28.3	7.6	89.9
Arusha	61,950	40,657	21,293	102,607	22.2	73.3	20.8
Kilimanjaro	45,438	1,775	43,663	47,213	16.3	3.2	92.5
Singida	42,410	3,710	38,700	46,120	15.2	6.7	83.9
Kilimanjaro							
All regions	148,238	411,735	-263,497	559,973	100.0	100.0	47.1
Tanga	43,834	29,569	14,265	73,403	29.6	7.2	19.4
Arusha	29,593	103,405	-73,812	132,998	20.0	25.1	55.5
Dar es Salaam	9,512	102,592	-93,080	112,104	6.4	24.9	83.0
Manyara	1,775	45,438	-43,663	47,213	1.2	11.0	92.5

Source: The United Republic of Tanzania 2002 Population and Housing Census, URT, 2006

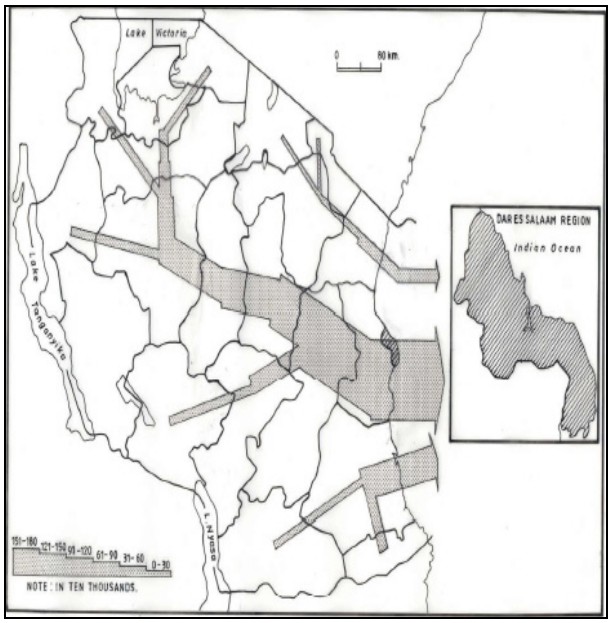
The above analysis of lifetime migration flows in Tanzania shows that migration in Tanzania is not determined by general concepts like labour reserve and population pressure only. This is because there is a very intensive migration flows between neighbouring regions, indicating that proximity is a major determinant of population redistribution in Tanzania. For example, around Lake Victoria there is an intensive inter-regional migration between Mwanza and other regions like Kagera, Mara and Shinyanga. The same process occurs in the north where there is heavy population redistribution among regions like Arusha, Kilimanjaro and Manyara. In the south there is intensive migration flows between Lindi and Mtwara and also between Mtwara and Ruvuma. The same process occurs in the east, central, southern highlands and western parts of the country see figure 4.6 and 4.7. Nonetheless, long distance migration streams are observed from Mtwara region to Mwanza region and from the Dar es Salaam region to Shinyanga region that is largely caused by the presence of gold mines in both Mwanza and Shinyanga regions. The other long distance migration stream is from Shinyanga to Mbeya that is largely caused by the heavy out-migration of the Sukuma to the Usangu plains, Mbozi and Chunya districts in Mbeya region. The Sukuma's have migrated in large numbers in search of lands for settlement and grazing their livestock. The other long distance more associated with the hunt for better employment opportunities is from Tanga region to Arusha region (URT, 2006:153-154).

Figure 4.6: The inter-regional migration flows of Tanzania mainland in 2002.



Source, URT, 2006:153

Figure 4.7: The migration flow from different regions to Dar es Salaam in 2002.



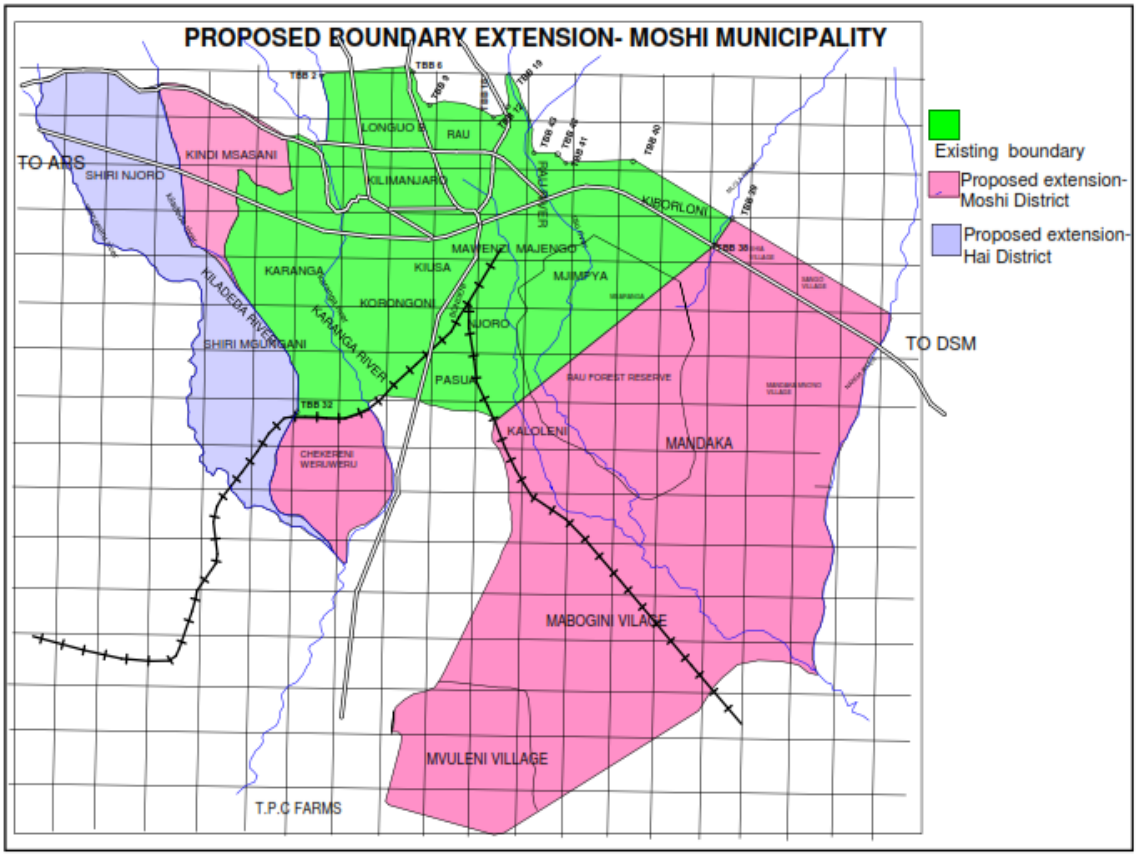
Source, URT, 2006:153

This section provides some essential secondary empirical data (database of households' socioeconomic indicators) in Kilimanjaro region. It is vital to provide this information because it helps to understand the phenomenon under study. In short, the data has shown that the households living in the rural/village areas in Kilimanjaro region have better access to housing and social services like water, health and education compared to other regions in Tanzania. Therefore, Kilimanjaro region was selected based on the socioeconomic data provided in this chapter and in the methodology chapter. Moshi town is a capital of Kilimanjaro region. Therefore, it is important to provide brief information about it.

4.4 Moshi town in a nutshell

Moshi town is the capital of Kilimanjaro region. Currently, it has an area of 58 square kilometres. The Moshi authority has proposed to extend its boundary to have an area of 142 square kilometres. The additional area will be engulfed from Moshi district and Hai district, see figure 4.8. The reasons for such extension include growth of Moshi town due to population increase, development activities and the intention to attain a city status. According to the 2012 census report, Moshi town had a population of 184,292. It is also the town in Tanzania with the highest population density of about 3177.45 inhabitants per square kilometres. However, it was not selected because it does not suit the phenomenon under study (see the methodology chapter and this chapter).

Figure 4.8: The proposed boundary extension of Moshi town in 2014/15.



Source: Moshi municipality report, 2012/13

Moshi is a good-looking town which accommodates both internal and external tourists who mostly visit and climb Mount Kilimanjaro. It is a commercial town characterised by commercial and residential housing see figure 4.9. It grows from the centre along the trunk roads (Moshi-Arusha & Moshi-Dar es Salaam) and towards the villages on the slopes of Mount Kilimanjaro.

Figure 4.9: The Moshi town centre.

Source: Fieldwork, January 2015

The extension of Moshi town boundaries will engulf part of Moshi district and Hai district. Therefore, basing on the criteria set on table 4.47, it had appeared that Moshi district had qualified to provide evidence for the phenomenon under study.

Table 4.47: The criteria for selecting Moshi district.

Districts selection criteria	Moshi municipality	Moshi district	Rombo district	Hai district	Siha district	Mwanga district	Same district
Highest population size (URT, 2012)	2	5	3	3	2	2	4
Highest population density (URT, 2012)	5	4	3	3	2	2	2
The district with many villages (URT, 1998)	-	5	3	3	2	3	4
The district with villages proposed to be part of Moshi Town (Moshi municipality officials and report 2012/13)	-	5	1	4	2	1	1
The extent of unguided spatial expansion and environmental challenges in the villages on the slopes of Mt. Kilimanjaro (Moshi officials and researcher)	3	5	4	4	4	3	3
The availability of satellite images/maps for showing the trend of land use changes over the years (Researcher and Google Earth)	5	5	3	3	3	3	3

A district near Moshi Town and Mount Kilimanjaro (Researcher, maps and Moshi officials)	5	4	3	4	3	2	2
The extent of existence of 'modern' houses (Researcher and Moshi officials)	5	4	4	4	4	3	3
Extent of urban characteristics (Researcher and Moshi officials)	5	3	3	3	3	2	2
Total points score	30	40	27	31	25	21	24

Source: Author, 2015 based on district/municipal officials and censuses report compilation.
Key: 5-Very strong; 4-Strong; 3-Moderate; 2-Weak; and 1-Very weak

4.5 Moshi district

Moshi district is one of the six districts of Kilimanjaro region. It lies between longitude 37° to 38° East and latitude 2°30'50''South of the Equator (Moshi district profile, 2011). The district is boarded to the north and east by Rombo district and Mount Kilimanjaro, to the west by Hai district, to the southeast by Mwanga district and Manyara region (Simanjiro district) to the south. The district also surrounds Moshi town on the north, east and south see figure 4.2.

Administrative structure

Moshi district was established in January, 1984 by the provisions of section 8 and 9 of the Local Government (District Authorities) Act 1982. According to the 2011 Moshi district profile, the district has 4 divisions, 31 wards, 150 villages and 689 hamlets see table 4.48.

Table 4.48: The land area and administrative units of Moshi district.

District	Area in square kilometres	Administrative units		
		Divisions	Wards	Villages
Moshi district	1,713	4	31	150

Source: Kilimanjaro socioeconomic profile, 1998; Moshi district profile, 2011; URT, 2012

Land area

The district covers an area of 1,713 square kilometres (171,300 hectares), of which, 124,254 hectares is arable land; 38,126 hectares land is covered by natural forests (37,019 hectares Kilimanjaro Forest Reserve, 570 hectares Rau forest, 885 hectares Kahe I, 202 hectares Kahe II) and 8,920 hectares is non arable land occupied by rocks, hills and gullies (Moshi district profile, 2011).

Social-cultural aspects

The Chagga and the Pare make up the two main ethnic groups in the district. The Chagga live mostly in the mountain areas and the Pare occupies part of the lowlands. The small groups are Wakahe and the Wakwavi who are also residing in the lower zones. Also, the Chagga and the Pare are sub-divided further into different dialects and clans such as Wamachame who speak Kimachame and the Wagweno who speak Kigweno, etc. However, socially there is little separation between these two main groups. For example, intermarriages are quite common.

It is-so to say-that, Moshi district is made up of several tribes such as Chagga, Pare, Taveta and Taita. However, the dominant tribe in the District is Chagga. The Chagga (also called Wachaga, Chaga or Wachagga) are Bantu-speaking indigenous Africans and the third largest ethnic group in Tanzania. They traditionally lived on the southern and eastern slopes of Mount Kilimanjaro and Mount Meru and Moshi. Early migration patterns of the Niger–Congo Bantus led the Chagga to settle in the North Pare Mountains. This is the home of the ancestral Chagga. Their population growth by about the eleventh or twelfth century led a number of people to begin looking for new lands. They

found it on the nearby and, in those days, still heavily forested southern and eastern slopes of Mount Kilimanjaro. The language spoken is Kichagga but it differs from one district to the other. These are Kikirua, Kimarangu, Kirombo, Kimachame, Kisiha, Kikibosho, Kiuru, Kioldimoshi, and Kingassa. Chagga legends centre on "Ruwa" and his power and assistance. "Ruwa" is the Chagga name for God. "Ruwa" is not looked upon as the creator of humankind, but rather as a liberator and the provider of sustenance. He is known for his mercy and tolerance when sought by his people. Some Chagga myths concerning "Ruwa" resemble biblical stories of the Old Testament.

Economy

In the past, chiefdoms had chiefs who rose to power through war and trading. Some famous past chiefs include Orombo from Kishigonyi, Sina of Kibosho, Mashingia of Kirua Vunjo and Marealle of Marangu. In many parts of Africa, certain ethnic groups have developed particular skills (and reputations) as entrepreneurs; the Igbo in Nigeria and the Chagga in Tanzania (Baker and Pedersen, 1992:22). Baker also shows how urban-based Gurage (Ethiopia) maximise their economic opportunities and enhance their status by maintaining close links with their villages/rural areas of origin. This is true that many of the Chagga people are involved in business activities (as livelihoods activities) in different cities and towns in Tanzania and abroad. Therefore, most of them are economically well-off compared to other tribes in Tanzania. Also, their relative wealth comes from the favourable climate of the area and successful agricultural methods, which include extensive irrigation systems, terracing, and continuous organic fertilization methods practiced for thousands of years. In additional to that, they were one of the first tribes in Tanzania to be converted into Christianity. This may have given them an economic advantage over other ethnic groups, as they had better access to education and health care as Christians. The existing religious in the district today includes: Roman Catholic, Lutheran, Protestant, Sabbath, Anglican, Salvation and the minority Muslim.

The land currently under cultivation is 108,389 Hectares or 87.2% of the total arable land (124,254). About 68,718 households engaged full in agriculture. Agriculture is the major economic activity of the district see table 4.49.

The Chagga way of life is based primarily on agriculture, using irrigation on terraced fields and oxen manure. Although bananas are their staple food, they also cultivate various crops, including yams, beans, millet, maize (corn), beans, and cassava. In agricultural exports, the Chagga are best known for their Arabica coffee, which is exported to American and European markets, resulting in coffee being a primary cash crop (ibid). The Chagga are also famous for a traditional and main brew known as "Mbege". It is made from a special variety of bananas and millet. They also keep cattle, goats, and sheep. Due to limited land holdings and grazing areas, most Chagga people today maintain zero grazing and purchase meat from butcher shops. The Chagga practice zero grazing a system that is old as the Chagga community itself (O'kting'ati and Kessy, 1991 cited in William, 2003). The Chagga cuisine includes: Shiro, Ndafu, Kia, Mbala, Makashi, Somi and Memba.

Traditionally, Chagga work has been centred on the farm and is divided by gender. Men's work includes feeding goats, building and maintaining canals, preparing fields, slaughtering animals, and building houses. Women's work includes firewood and water collection, fodder cutting, cooking, and cleaning the homestead and stalls. Women are also in charge of trading in the marketplace. Many Chagga young people work as clerks, teachers, administrators and many engage in small-scale business activities. Women in rural areas are also generating income through activities such as crafts and tailoring. The Chagga are known for their sense of enterprise and a strong work ethic. The Chagga are now modern wage earners in large modernised cities or abroad and entrepreneurs in the tourism industry around Kilimanjaro and Arusha areas (ibid).

Table 4.49: The employment/economic activities of people in Moshi district.

Type of employment/economic activities	Percentage
Agriculture	73
Business operations	12
Elementary occupation	6.85
Office work	5.21
Plant operations/assemblies	1.21
Fishing	1.11
Livestock keeping	0.85

Source: Moshi district profile, 2011

It is also to be noted that, Tanzania embarked on economic reforms in 1980s under the Structural Adjustment Programs following the deterioration of the state of the economy (William, 2003). Measures to revamp the national economy were a necessity. The first phase of the Economic Recovery Program (ERP I) was accompanied with market liberalization, rolling back the state in the provision of agricultural subsidies, price and institutional reforms. These had significant impacts on land use and resource management practices as they influenced land use, cropping pattern, resource allocation and the quality of natural capital (ibid). According to Peters and Sankhayan (1994) cited in William, (2003) claimed that while formulating and implementing the economic reforms, no special attention was paid to the effects on the natural resource use and the quality of the environment. The remove of agricultural subsidies, for example, resulted into failure of peasants in Moshi district to manage coffee trees. Prior to the 1980s, coffee performed well as some of the necessary farm inputs were subsidized by the government (Bagachwa et al., 1995; Maro, 1974; Sevaldsen, 1997; Larsson, 2001) in William, (2003:36-37). But since the 1980s the same crop has lost its role, due to, among other reasons, removal of government subsidies on farm inputs, which have led to low returns from coffee growing (ibid).

Ideally, market liberalization was expected to improve prices for inputs through suppliers competition, instead the prices for such farm inputs as insecticides have hiked and have become un-affordable to a peasant farmer (Larsson, 2001) cited in William (2003). As a result Coffee Berry Disease (CBD) has widely spread, lowering coffee productivity. This has been detrimental not only to the individual household economy, but has also led to changes in cropping patterns. Villagers have changed their cropping patterns by uprooting or ignoring coffee trees and concentrating on food crops like bananas, maize and vegetables. Banana is an important food and cash crop for which there is a reliable market. Larson (2001) in William, (2003) observed a similar diversification strategy on the slopes of Mount Kilimanjaro where vegetables and bananas have replaced 'permanently' uprooted coffee. Also, vegetables, particularly in Moshi district are highly in demand in Moshi, Tanga, Dar es Salaam, Himo, Tarakea, Holili and Nairobi. Other villages have farms in the lowlands "Porini" where they cultivate millet, maize, beans and other cereal crops. In addition to low produce from coffee growing, coffee prices are low, making sales from coffee less and less profitable. Under such circumstances, the peasant farmers have been forced to diversify their livelihood strategies, for example household's involvement in entrepreneurial activities (ibid). Therefore, the economy of Moshi district depends mostly on agriculture and business.

Demography

The 2012 census report reveals that since 1967 Moshi district population has been on the increase than all the districts in Kilimanjaro region see table 7.50. According to Maro (1974) cited in William (2003), claimed that several reasons explained this trend of population increase. These include the evolution of agriculture from subsistence to coffee cash crop economy that resulted into supra

carrying capacity of population. Other factors include change from traditional cash crops such as coffee to dairy farming and market gardening, improved use of irrigation furrow system that enables farmers to grow crops several times a year, and improved social services like medical services, schools, etc. Others include the development of commuting to the lowlands to cultivate cereal crops but retaining residence in the core areas in the highlands, and in-migration from other parts of the country during the boom of plantation economy (ibid). This argument holds water in the case study area, though today, there have been some (spatial, economic and social) changes.

Table 4.50: The population of Moshi district from 1967-2012.

Year	Moshi municipality	Moshi district	Rombo district	Same district	Mwanga district	Hai district	Siha district	Total Population
1967	26,864	361,914	114,311	149,635	-	-	-	**652,772**
1978	52,046	316,920	157,715	133,628	74,563	172,444	-	**902,437**
1988	96,631	342,891	200,912	169,718	97,003	197,518	-	**1,104,673**
2002	143,799	401,369	245,716	211,738	115,145	258,935	-	**1,376,702**
2012	184,292	466,737	260,963	269,807	131,442	210,533	116,313	**1,640,087**

Source: URT, 2002, 2006 and 2012.

It has also been revealed that the district has more women than men and the average household size is 4.2 see table 4.51.

Table 4.51: The population of Moshi district by sex, household size and sex ratio in 2012.

Region/district	Population (Number)			Average household size	Sex ratio
	Total	Male	Female		
Kilimanjaro region	**1,640,087**	**793,140**	**846,947**	**4.3**	**94**
Moshi district	466,737	225,767	240,970	4.2	94

Source: URT, 2012.

Population growth rate

The population growth rate of Moshi district has been fluctuating over time see table 4.52.

Table 4.52: The average growth rates in the Moshi district for the inter-censal periods 1967-1978, 1978-1988, 1988-2002 and 2002-2012.

District	Population 1967	Population 1978	Population 1988	Population 2002	Population 2012	Average growth rate (%) (1967-1978)	Average growth rate (%) (1978-1988)	Average growth rate (%) (1988-2002)	Average growth rate (%) (2002-2012)
Moshi district	361,914	316,920	342,553	401,369	466,737	2.6	1.9	1.1	-

Source: URT, 1988, 2002, 2006 and Kilimanjaro socioeconomic profile, 1998

Population density

Moshi district is reported by various studies, such as Gamassa (1991), Katigula (1992), Harrison (1987) and Mbonile (1999) as cited in William, (2003) and Tanzania censuses reports to be the most densely populated districts see table 4.53. The high population density in the study area, particularly in the villages on the slopes of Mount Kilimanjaro has created pressure on the existing natural resources leading to environmental and spatial challenges. These factors and those listed under table 4.47 made it to be selected to provide evidence for the phenomenon under study.

Table 4.53: The population density of Moshi district, 1967, 1978, 1988, 2002 and 2012.

District	Area sq. km	Population Density (Inhabitants per sq.km) 1967	Population Density (Inhabitants per sq.km) 1978	Population Density (Inhabitants per sq.km) 1988	Population Density (Inhabitants per sq.km) 2002	Population Density (Inhabitants per sq.km) 2012
Moshi district	1,713	211.27	185	200.17	234.31	272.47

Source: Author owns construct and computation, data extracted from census reports, 2002 and 2012

Literacy and school enrolment rates

The literacy and enrolment rates in the district are also pretty good (see table 4.54). These educational statistical evidences have implications in the development of the region.

Table 4.54: The literacy and school enrolment rates in Moshi district in 2002.

Indicator	Percentage
Literacy rate	**85**
Male	87
Female	83
Net Enrolment Rate (NER)	**93**
Males	92
Females	93

Source: Moshi district profile, 2011

The primary school enrolment is good despite of the existence of dropouts caused by poverty and involvement in business see table 4.55. For example, the pupils who sat for standard seven examinations in 2010 were 12,197 (6,006 males and 6,191 females). However, pupils who passed standard seven exams were 7,491 which were 61.4 percent. The pupils selected to join form 1 in public school were 7,491 (3,505 males and 3,986 females) which is 81 percent (Moshi district profile, 2011).

Table 4.55: The primary school enrollment compared with dropouts from 2000 to 2011.

Year	Enrollment			Dropouts			Percentage of dropouts
	Boys	Girls	Total	Boys	Girls	Total	
2000	28888	39519	78407	979	810	1789	2.33
2001	40536	40597	81133	825	666	1491	1.90
2002	46422	45899	92321	468	386	854	1.05
2003	49980	48619	98599	451	360	811	0.87
2004	50149	49825	99974	423	347	770	0.78
2005	50236	49237	99473	329	254	583	0.58
2006	49,546	48,457	98,003	340	298	638	0.64
2007	47,909	47,007	94,916	164	140	304	0.32
2008	46,668	45,807	92,475	146	113	259	0.28
2009	43,457	42,805	86,262	-	-	-	-
2010	40,624	39,703	80,327	-	-	-	-
2011	38,526	37,951	76,477	-	-	-	-

Source: Moshi district profile, 2011

Educational facilities

The educational facilities in Moshi district are also promising when compared with other districts in Tanzania see table 4.56. They have implications on the development trend we see in Kilimanjaro region and Tanzania in general.

Table 4.56: The education facilities in 2011.

S/n	Sector	Government	Private	Total
1	Pre-primary school	232	6	238
2	Primary school	252	14	266
3	Secondary school	59	36	95
4	Technical college	3	-	3
5	Folk development college	1	-	1
6	VETA	-	17	17
7	Other institutes	-	3	3
8	Universities	1	3	4

Source: Moshi district report, 2011

Health facilities

The health services in the district have challenges, but are also promising compared to other villages in Tanzania see table 4.57, 4.58 and 4.59.

Table 4.57: The essential health indicators in 2010.

Indicator	District	National
Infant Mortality Rate	5/1000	62/1000
Under 5 Mortality Rate	1/100,000	191/1000
Maternal Mortality Rate	54/100,000	257/100,000
Fertility rate	18%	22%

Source: *Moshi district profile, 2011*

Table 4.58: The ratios of people per doctor in 2010.

Ratios	District	National
Number of people per doctor	1:200,685	1:450,000
Number of people per Hospitals	1:100,342	1:250,000
Number of people per RHC	1:80,274	1:50,000
Number of People per Dispensary.	1:4,836	1:10,000

Source: Moshi district profile, 2011

Table 4.59: The available health facilities in 2011.

Hospitals	No	Rural Health	No	Dispensaries	
District designated hospitals	2	Council RHC	7	Council dispensaries	32
Institutional hospitals	3	Private	1	Religious dispensaries	24
Private hospitals	1			Private dispensaries	16
Total	**6**	**Total**	**8**	**Total**	**72**

Source: Moshi district profile, 2011

Sources of drinking water

Moshi district gets its water from rivers and springs originating from Mt. Kilimanjaro. These are the major sources of water gravity system in the district see table 4.60. Unfortunately, about 98 percent of its sources have been destroyed. This has led to low volume of water in rivers and springs (Moshi district profile, 2011). The district has signed an agreement since April, 2007 with a German organization KfW, which is almost complete (90 percent) of the Kirua-Kahe water project, upon completion new sources and distribution networks to supply water to 74 percent of the population will be accessible (ibid). In 2011 there were already 75 percent of people who had access to protected piped well and spring water as the main sources of water.

Table 4.60: The sources of water in 2011.

S/n	A source of water	Percentage of people access to water
1	Piped water	70
2	Gravity water systems	36
3	Shallow wells	30
4	Bore holes	3

Source: Moshi district profile, 2011

Sources of energy for lighting and cooking

The 2011 Moshi district report shows that, the source of energy for lighting in the district is electricity (12 percent) and the main source of energy for cooking is still firewood (98 percent) see table 4.61. This has implications on the environment.

Table 4.61: The type of energy for lighting and cooking.

Type of source of energy for lighting and cooking	Percentage
Electricity as the main source of energy for lighting	12
Firewood charcoal as the main source of energy for cooking	98

Source: Moshi district profile, 2011

Toilet facility

In recent years, there has been an improvement (new toilet facilities e.g. flash toilets and Improved Pit Latrines), though, the 2011 district report has shown that, the main toilet facility used in the district is traditional pit latrine (94 percent) see table 4.62.

Table 4.62: The type and access to toilet facilities in 2011.

Type of toilet facility	Percentage
Traditional pit latrines as the main type of toilet facility	94
Percent with no toilet facility	2.14

Source: Moshi district profile, 2011

Roads

The district has a total of 640.7 kilometres of road network out of these; 240 kilometres are district roads while 400km are minor (feeder) roads. About 240 kilometres are at gravel level, which are passable throughout the year. The 400 kilometres of the roads are clay soils most of which are not passable during rainy season. Almost 80% of Moshi roads are mountainous terrain with volcanic clay (Moshi district profile, 2011).

Housing

The use of 'modern' housing building materials by households in the district is also promising in the district see table 4.63. This has become possible because of good education and income of the people in the district. The presences of multi-locational households have also to a large extent contributed to the improvement of the village housing.

Table 4.63: The building materials used in the main residential housing.

S/n	Building materials for walls, floor and roof	Percentage
1	Cement baked bricks as main building materials used for walls	33
2	Cement as main building materials used for flooring	43
3	Corrugated iron sheets, tiles as main building materials used for roofing	92

Source: Moshi district profile, 2011

Asset ownership

Land is the highly dependent asset in the district, 98 percent of the total population in the district depends on it. It has also become clear that most of the households inherited their village land from their ancestors. Therefore, most of the land in the district is under customary ownership.

Land use patterns and utilization

The district has 3 agro-ecological zones as follows;-

The lower zone (lowlands)

It is the zone with the altitude ranging from 700–900 meters above sea level where people are engaged in paddy production by irrigation, maize and open cattle grazing. The area is sparsely populated with populations ranging between 15–30 people per square kilometer as compared to other areas. As, for instance, in the highlands where the population per square kilometer is even higher that of the district average (ranges between 400–800 people per square kilometers) which is an indication of land shortage.

The middle/ central zone

Zone with the altitude ranging from 901–1500 meters above sea level where people are engaged in agriculture, the main crops are coffee, maize, beans, fruits and dairy cattle keeping at zero grazing system. This is less populated as compared to the highlands.

The upper zone (highlands)

The zone is located in the slope of Mt. Kilimanjaro and most densely populated areas with the altitude ranging from 1501–5895 meters above the sea level. People in this zone are engaged in agriculture. The main crops are coffee, banana, fruits and dairy cattle (see table 4.64).

Table 4.64: The three agro ecological zones in Moshi district.

Zone	Altitude meters	Rainfall (mm)	Major crops grown in the area
(i) Lower Zone (Lowland)	700 - 900	400 - 800	Paddy, maize, sugar cane by irrigation
(ii) Middle/Central Zone	901 – 1500	900 – 1400	Maize, bananas, beans, dairy cattle keeping
(iii) Upper Zone (Highland)	1501 – 5895	1401 – 2000	Coffee, bananas, maize, avocados, beans, natural forest.

Source: Moshi district profile, 2011

Moshi district has three (3) wards which are proposed to be part of Moshi municipality. Therefore, the expansion of Moshi town boundaries had demanded a piece of land from the three (3) wards (i.e. Kimochi, Oldmoshi West and Mabogini) in Moshi district and two (2) wards (Kindi and Machame Kusini) in Hai district. The idea was to select a Ward/Village, which has been proposed to be part of the Moshi municipality so it is in somehow become easier to implement the proposed solutions in order to address the issue under study. Thus, based on the criteria set under table 4.65 it had appeared that Kimochi ward qualified to provide a village which can provide evidence for the phenomenon under this study.

Table 4.65: The criteria for selecting Kimochi ward.

Wards/ Criteria	Kimochi	Old Moshi West	Mabogini
Population size (URT, 2012)	4	3	5
The number of villages proposed to be included in Moshi Municipality (Moshi officials/report 2012/13)	4	2	4
The villages on the slopes of Mt. Kilimanjaro (Researcher/maps)	5	2	2
The extent of existence of modern houses (Researcher and Moshi officials)	5	5	5
The extent of unguided spatial expansion and environmental challenges on the slopes of Mt. Kilimanjaro (Moshi officials and researcher)	5	5	3
The availability of satellite images/maps for showing the trend over the years(Researcher/Google Earth)	5	4	3
Extent of economic/ urban characteristics (Researcher and Moshi officials)	4	4	5
Distance (farthest/away) from Moshi Town and on the slopes of Mount Kilimanjaro (Researcher, maps and Moshi officials)	5	5	3
Total points score	37	30	30

Source: Author, 2015 based on district/municipal officials and censuses report compilation.
Key: 5-Very strong; 4-Strong; 3-Moderate; 2-Weak; and 1-Very weak

4.6 Kimochi ward

Kimochi ward has two (2) villages (Sango and Shia) which are proposed to be part of Moshi town. Its population see table 4.66.

Table 4.66: The population of the Kimochi ward by sex, household size and sex ratio.

District	Ward	Total population			Average household size	Sex ratio
		Total	Male	Female		
Moshi district	Kimochi	13,562	6,476	7,086	4.1	91
	Mabogini	28,992	14,320	14,672	4.2	98
	Old Moshi West	8,100	4,036	4,064	4.3	99

Source: URT, 2012

Therefore, in the same logical way of selection, some criteria were set and Sango village was selected see table 4.67.

Table 4.67: The criteria for selecting Sango village.

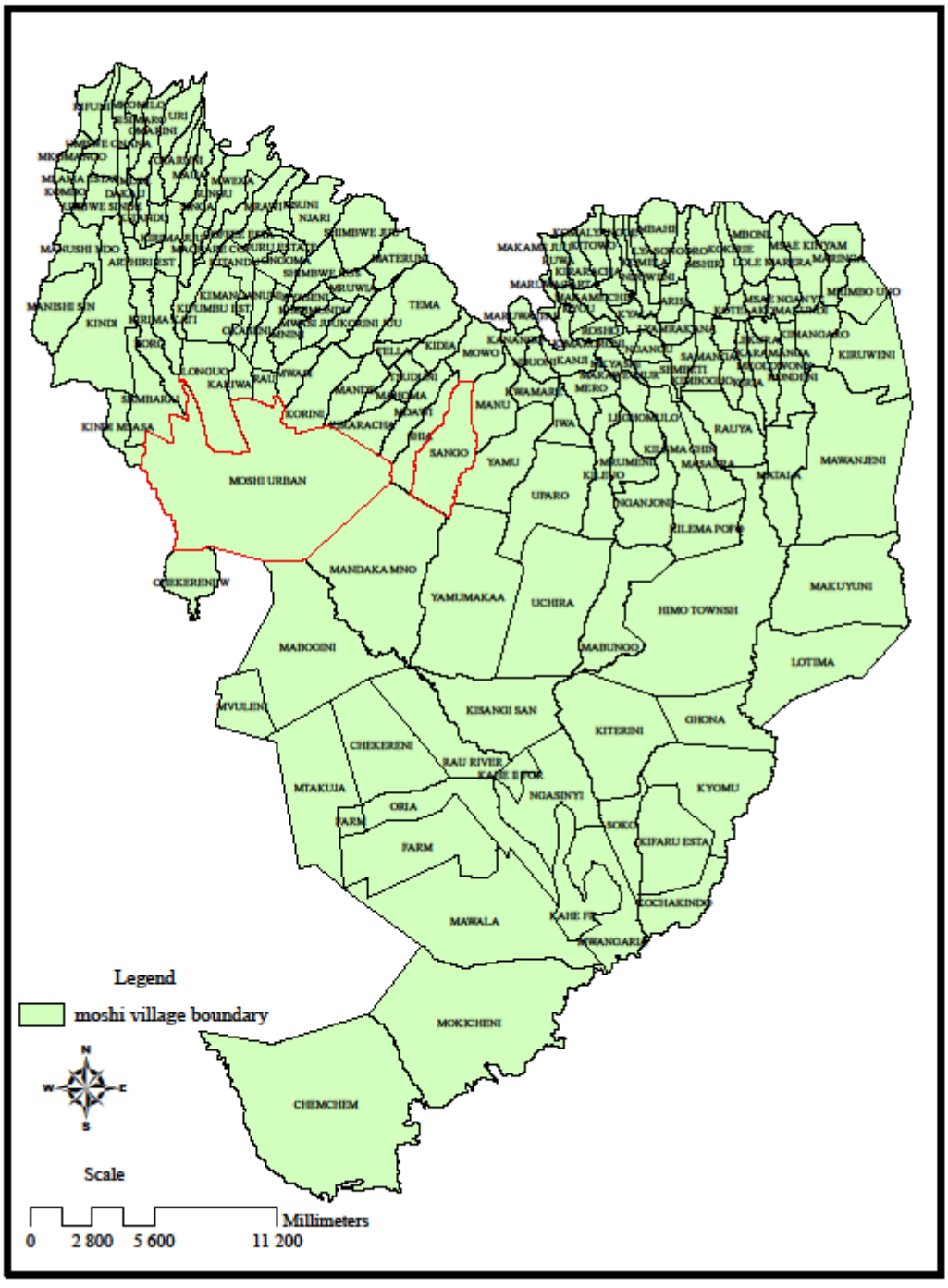
Village/ Criteria	Kimochi Ward	
	Sango Village	Shia Village
Population size (URT, 2012)	5	4
Size of the village (Moshi officials/report 2012/13)	5	3
The villages on the slopes of Mt. Kilimanjaro (Researcher/maps)	5	5
The extent of existence of modern houses (Moshi officials, households and researcher)	5	3
The extent of unguided spatial expansion and environmental challenges on the slopes of Mt. Kilimanjaro (Moshi officials and researcher)	5	5
The availability of satellite images/maps for showing the trend over the years(Researcher/Google Earth)	5	4
Extent of economic/ urban characteristics (Researcher and Moshi officials)	5	3
Distance (farthest/away) from Moshi Town and on the slopes of Mount Kilimanjaro (Researcher, maps and Moshi officials)	5	4
Total points score	40	31

Source: Author, 2015 based on district/municipal officials and censuses report compilation.
Key: 5-Very strong; 4-Strong; 3-Moderate; 2-Weak; and 1-Very weak

4.7 Sango village-a case study area

Sango village is one of the villages on the slopes of Mount Kilimanjaro in Kimochi ward in Moshi district, Kilimanjaro region-Tanzania. It is located about 10-15 kilometres from Moshi town Central Business District (MoCBD) see figure 4.10 and figure 4.11. The village registration number is KM./Vc.96 with an area of 10.289 square kilometres (Ministry of Lands, Housing and Human Settlements Development; Moshi district land officer-Mr. Sanga and Sango Village Executive Officer-Mr. Minde). Also, according to the Tanzania Population and Housing Census Report, 2012 and Sango Village Executive Officer, the village has the population size of 4,013. Its household number is 704 while its household size is 4.2 (ibid). The village administration is under opposition party known in Kiswahili as Chama cha Demokrasia na Maendeleo (CHADEMA) i.e. Party for Democracy and Progress (Sango Village Executive Officer and Sango Village Chairman-Mr. Tenga). Additionally, according to the Moshi municipal officials, the Moshi town has been proposed to become a city by 2016. Therefore, it extends its boundary and engulfs part of the Sango village (the area adjacent to Moshi-Dar es Salaam road) and other villages surrounding Moshi town see figure 4.8.

Figure 4.10: The location of Sango village.



Sources: Ministry of Lands, Housing and Human Settlements Development, 2015 modified by author, 2016.

Figure 4.11: The Sango village office.

Source: Fieldwork January-April, 2015

The village economy relies on agriculture. The lowland area of the village is used for growing maize and beans once per year while the highlands area is used for growing coffee and banana as permanent crops and maize and beans twice a year.

The households are also involved in business and livelihood activities (entrepreneurship) which are conducted in the village, Moshi district, Moshi urban, and outside Kilimanjaro region such as in Dar es Salaam, Arusha, etc. (see figure 4.12).

The village has basic physical infrastructures such as roads, water, sanitation, electricity, etc.; and social infrastructures such as schools, churches and a dispensary. For more information, see the findings chapters.

Figure 4.12: The livelihood activities (shops and motorcycle transport) in Sango village.

Source: Fieldwork, 2016

4.8 Concluding remarks

This chapter has provided some secondary and primary empirical findings which are significant in understanding the case study area in detail. Though, it has appeared that, vital information is missing at the lower local government authorities. It is very difficult to find the important and current information in the reports at the lower local government level. For instance, the number of people or households who have access to better housing, water and sanitation at ward and village levels are not available in the local government reports. And, when available, for instance, at district level, it is too general. This calls for the inclusion of these levels in order to capture information that will enable development from below especially in the villages in Tanzania. The next chapter conceptualizes multi-locational households and housing investments in their village of origin.

CHAPTER FIVE

CONCEPTUALIZING MULTI-LOCATIONAL HOUSEHOLDS AND HOUSING INVESTMENTS IN THEIR VILLAGES OF ORIGIN IN TANZANIA

5.1 Introduction

This chapter highlights the key concepts which are used in this research. It also conceptualizes multi-locational households and housing investments in their villages of origin in Tanzania.

5.2 Conceptualizing multi-locational households and housing investments in their villages of origin

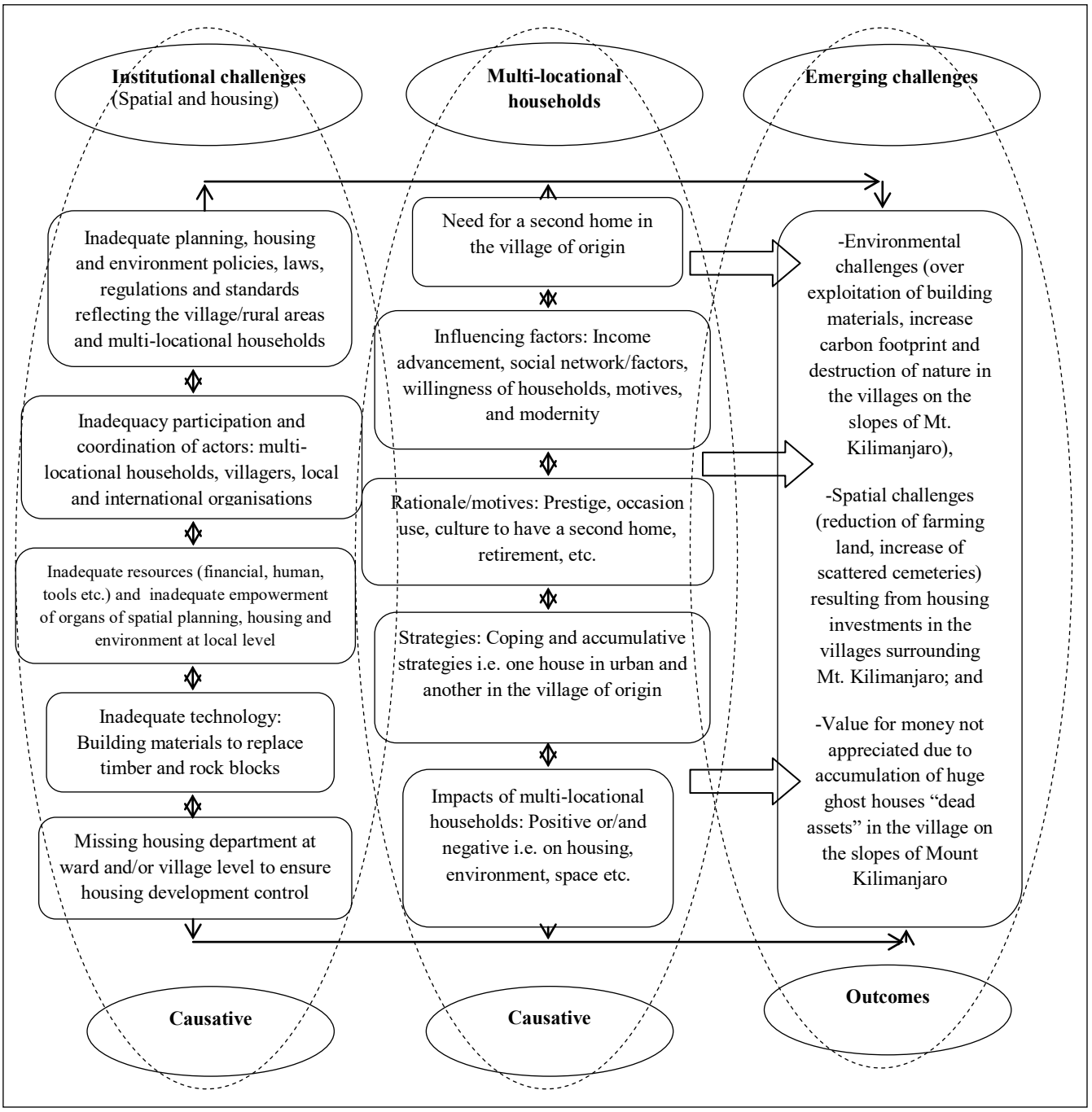
Frankfort-Nachmias and Nachmias argued that, concepts are abstractions of a phenomenon from which meaning or a way of seeing the world can be apprehended (Frankfort-Nachmias and Nachmias, 1996). Adding that, scientists begin the process of researching by forming concepts as shorthand for describing the empirical world (Frankfort-Nachmias, et al., 2015:24-25). Further, claimed that, the concepts are the building blocks of any theory because they ultimately define its content and attributes (ibid: 25).

On the other hand, Maxwell (2005:33) claimed that a conceptual framework essentially wants to respond to the question what do a researcher think is going on and why. Adding that, a conceptual framework is a tool for developing and clarifying a theory. This framework was named as "concept mapping (Novak and Gowin, 1984)"; "Conceptual framework (Miles and Huberman, 1994:18-22)"; "An integrative diagram (Strauss, 1987:170)"; "Concept map (Maxwell, 2005:47)" cited in Maxwell, (2005:47). The conceptual framework of this study sees figure 5.1.

The conceptual framework is mainly derived from researchers own experience, existing theory, literature review or from the people we are studying-their own concepts of what is going on (Maxwell, 2005:52). Therefore, a concept map of a theory is a visual display of that theory-a picture of what the theory says is going on with the phenomenon we are studying (Maxwell, 2005:47). The phenomenon under this study is on why do we see a booming housing investment in the villages, particularly in the villages on the slopes of Mount Kilimanjaro in Tanzania. This is something which has never been there before. The literature shows that, it is the outcome of the multi-locational household concept.

Katani (1999) in Mayeta (2004) added that a conceptual framework binds facts together and provides guidance towards the collection of appropriate data. Kajembe (1994) further, claimed that a research performed without a conceptual framework is usually sterile for reasons that the researcher does not know quite well what data to collect and when he/she has collected them cannot put them to meaningful use. Therefore, the conceptual framework of multi-locational households and housing investments in the villages of origin in the context of Tanzania is visualized and explained below.

Figure 5.1: A conceptual framework of multi-locational households and housing investments in their villages of origin in Tanzania.



Source: Author's own construct, 2015

Spatial planning and housing, institutional challenges

Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction (North, 1990:3). In consequence, they structure incentives in human exchange, whether political, social or economic. As a result, institutional change shapes the way societies evolve through time and hence is the key to understanding historical change (ibid: 3). Additionally, institutions reduce uncertainty by providing a structure of everyday life. They are a guide to human interaction, so that when we wish to greet friends on the street, drive an automobile,

buy oranges, borrow money, form a business, bury our dead, or whatever, we know (or can learn easily) how to perform these tasks (ibid: 4).

Therefore, based on the definition of institutions (as the rules of the game) we will agree that they are quite important in shaping our societies including their development activities. However, the national and local planning and housing institutions in the context of Tanzania do not provide a clear framework that controls housing development/investments in the villages and in the informal areas. Whenever provided they are too general, and sometimes not realistic, which makes it difficult to implement. For example, the Village Land Act, 1999, section 29 (b) claimed that any permissions that are required to be obtained before any buildings are erected will be obtained and no building will be erected until those permits have been so obtained. This is the building condition for those who have certificates of Customary Rights of Occupancy. The law does not say anything regarding those who don't have certificates of Customary Rights of Occupancy. This is a challenge that needs to be addressed. We have witnessed a lot of housing investments/development projects which are happening in the villages/rural, and in the informal areas in Tanzania without any guidelines (rules of the game). In the case study area, this gap not only impacts the nature in the villages on the slopes of Mount Kilimanjaro, but also challenges the essence of the spatial planning profession, including its experts.

North (1990:4) further, added that, institutional constraints include both what individuals are prohibited from doing and, sometimes, under what conditions, some individuals are permitted to undertake certain activities. As defined here, they are therefore the framework within which human interaction takes place. They are perfectly analogous to the rules of the game in a competitive team sport. That is, they consist of formal written rules as well as typically unwritten codes of conduct that underlie and supplement formal rules, such as not deliberately injuring a key player on the opposing team. And as this analogy would imply, the rules and informal codes are sometimes violated and punishment is enacted. Therefore, an essential part of the functioning of institutions is the costliness of ascertaining violations and the severity of punishment (ibid: 4).

In line with the North's argument, the empirical evidences, for example, from Sango village have shown that all the houses were constructed without any guidelines (institutions as the rules of the game). This is because the rules of the game are not there; this implies that there are a lot of fouls, because the match (between housing developers and the village space/environment) is not fair at all. It is, therefore, a challenge that requires attention to create these institutions (rules/guidelines/standards) of housing development/investments in order to protect the nature, ensure sustainable use of natural resources and restore the essence of the spatial planning profession in the villages and particularly on the slopes of Mount Kilimanjaro, Tanzania.

Organizational challenges

Like institutions, organizations provide a structure for human interaction (North, 1990:4). Indeed, when we examine the costs that arise as a consequence of the institutional framework we see they are a result not only of that framework, but also of the organizations that have developed in consequence of that framework. Conceptually, what must be clearly differentiated are the rules for the players. The purpose of the rules is to define the way the game is played. But the objective of the team within that set of rules is to win the game-by a combination of skills, strategy, and coordination; by fair means and sometimes by foul means (ibid: 4-5). Modeling the strategies and the skills of the team as it develops is a separate process from modelling the creation, evolution, and consequences of the rules (ibid: 5).

In the same line of thinking, in this study, the rules are meant to define the way human development activities (i.e. Rural/village housing development/investments) should be practiced with

the attention in mind that it will not impede the nature and other land uses. This will depend on the structural arrangement and commitment of the organizations (central and local governments) responsible for spatial planning and housing in Tanzania. The Ministry of Lands, Housing and Human Settlements Development in collaboration with Presidents Office Regional Administration and Local Government (PO-RALG) in Kiswahili Ofisi ya Raisi Tawala za Mikoa na Serikali za Mitaa (TAMISEMI) should guide the process of structural change. The case study area has revealed that, the absence of clear housing institutions and organizations narrowed down to the village level makes the housing investments in the villages, especially on the slopes of Mount Kilimanjaro not so promising.

Organizations include political bodies (political parties, a city council, a regulatory agency), economic bodies (firms, family farms, cooperatives), social bodies (churches, clubs), and educational bodies (schools, universities, vocational training centres). They are groups of individuals bound by some common purpose to achieve objectives (North, 1990: 5). Additional explanations on institutions and organizations relevant to this study have also been explained in chapter seven and twelve.

The major role of institutions in a society is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to human interaction (ibid: 6). But the stability of institutions in no way gainsays the fact that they are changing. From conventions, codes of conduct, and norms of behavior to statute law, and common law, and contracts between individuals, institutions are evolving and, therefore, are continually altering the choices available to us. The changes at the margin may be so slow and glacial in character that we have to stand back as historians to perceive them, although we live in a world where the rapidity of institutional change is very apparent (ibid. 6).

Institutional change is a complicated process because the changes at the margin can be a consequence of changes in rules, informal constraints, and the in kinds and the effectiveness of enforcement. Moreover, institutions typically change incrementally rather than in discontinuous fashion. How and why they change incrementally and why even discontinuous changes (such as revolution and conquest) are never completely discontinuous is a result of the embeddedness of informal constraints in societies. Although formal rules may change overnight as the result of political or judicial decisions, informal constraints embodied in customs, traditions, and codes of conduct are much more impervious to deliberate policies (ibid: 6). These cultural constraints not only the past with the present and future, but provide us with a key to explaining the path of historical change (ibid: 6).

This meaning is quite relevant in this study in the sense that both informal and formal institutions/constraints/guidelines are needed to shape housing investments and development activities in the villages in Tanzania. It is, so to say that, leaving the current practice unguided is the challenge now and worsens more in the future. It will be the source of disasters in the villages, towns and cities of today and tomorrow. At present, we are witnessing many of them in many of the developing countries.

In addition to that, organizations facilitate the efficiency and effectiveness of societies, including their development activities. This is more strengthened through decentralization. Decentralization can be defined as the transfer of planning, decision making or administrative authority from the central government to field organizations, local administrative units, semi-autonomous and parastatal organizations, local governments or non-governmental organizations (Cheema, Nellis and Rondinelli, 1983). Through decentralization, grassroots groups have been reached. NGOs, CBOs and private sectors have also been given power to supply services in areas where the government has failed to play its role.

Findings show that effective decentralization must be supported by qualified manpower, availability of funds, availability of technical equipment and materials as well as a partnership among all actors from central and local government, parastatal organizations and individuals (Liviga, 1996).

It is evident that in service provision decentralization has played a great role by involving grassroots groups (actors) in the planning, implementation and management of different projects. Participation in decision-making (in prioritization of needs); lower investment costs through self-help practices (activities), which are common at local level and empowerment of grassroots groups (control in the provision of technical services that can be used for income generating).

It is true that the local government authorities such as the Village Council have been given power to manage the village land. However, the monitoring of housing development/investments is not clear. It has also become clear that, the inadequate budget, manpower, working tools and unclear roles and autonomy to a large extent have also constraints the implementations of the roles of the local government authorities and particularly at the village level.

Village/rural spatial planning and housing policies and legislations

The planning and housing policies are formulated with a purpose of addressing the spatial planning and housing issues and the legislations are there in order to ensure space and housing investments/development are practiced in accordance with the stipulated regulations in order to ensure sustainable development. Therefore the achievement of sustainability (spatial, environmental and economical sustainability) will depend on how efficient and effective the policies and legislations are set and implemented. Findings reveal that appropriate housing investments require appropriate policies and legislations at international, national and local levels. Though, housing policies cannot be efficient and effective if they are not supported by appropriate legislations and organizations. The mechanism to implement the legislations is vital as well, more clarifications are provided under chapters seven and twelve.

Resource challenges

The resources for formulating and implementing development plans/activities at local level have been observed to be a great challenge in many of the developing countries. The main ones are financial and human resources. These have impeded many development plans, policies, projects, etc. Therefore, the resources required for formulating and implementing realistic policies, legislations, institutions and organizations includes finance, human labour, land, equipment, etc. The lack or inadequacy of these resources constrains the whole process and lead to the formulation of inadequate or unrealistic policies, legislations, institutions and organizations. The observed spatial and environmental challenges as a result of housing investments in the villages on the slopes of Mount Kilimanjaro and many other villages in Tanzania are a result of resource constraints. This constrain had led to a lack of institutions, tools, and manpower to guide housing development in the village.

Multi-locational households and where to invest matters a lot

The need for a second home (in the village of origin) visit at least once in a year has been a norm in the many of the African societies over a century or so (see also Schmidt-Kallert, 2009; Smit, 1998 and Krüger, 1998). This is what we call multi-locational households. The multi-locational households in relation to this study are the households who have domicile in two locations, a rural/village and an urban one, which are often far away from each other and take advantage of both urban and rural/village opportunities and social networks to enable the individual household to bridge the gap between the two locations (see more clarifications in chapter two and three).

There have been several strategies employed by multi-locational households to ensure that those networks persist over the years. The observed strategy which is one of the motivations of this study is the need for a second home in their village of origin. This study shows that there are quite a number of interesting reasons and motives behind housing investments in their village of origin (see chapter

three and chapter ten). The study also shows that, there are factors which facilitate the process to own a 'modern' house in the village of origin. These include income advancement, social network/factors, and willingness of households, motives, and modernity. Usually they start with coping or survival strategy (e.g. one house in urban or in the village) and then followed up by accumulative strategy (e.g. another house in the village or/and in urban). This has positive impacts in the sense that housing poverty in the rural/village is addressed, but also it has negative impacts if the institutions and organisations are not prepared to handle the existing practice. This has been witnessed in the case study area.

Environmental and spatial challenges

It has been argued that, if the rules of the game are not so clear in any circumstance, it is obvious that there will not be a fair play (see North 1990). As a result, there must be a lot of challenges. It has become clear that, the housing investments which are now on pace in the villages of origin of multi-locational households, particularly on the slopes of Mount Kilimanjaro are missing guidelines (rules of the game). Therefore, it is very obvious that there have been a lot of environmental and spatial challenges in the respective villages. The evidences for this argument have been provided in chapter eleven. To avoid such challenges chapter twelve provides some recommendations.

This study has five main research questions which have been formulated with the purpose of understanding the phenomenon under study. This study intends to know the magnitude of the village housing investments, including who is investing in these 'modern' residential housing in the villages, especially on the slopes of Mount Kilimanjaro. It has also captured the motives behind such investments, including the spatial and environmental challenges contributed by such investments in the villages. It is believed that, the formulation of these research questions guides us to understand the phenomenon under study quite well and in the end be able to recommend some housing and spatial planning solutions to address the underpinning challenges in the villages.

5.3 The research questions

Maxwell (2005:67) claims that in the research proposal, the function of research questions is to explain specifically what the study will attempt to learn or understand. In research design, the research questions serve two other vital functions: to help researchers to focus the study (the questions relating to our goals and conceptual framework) and to give us guidance for how to conduct it (their relationship to the methods and validity) (cf. Miles and Huberman, 1994: 22-25).

Added that a common problem in developing research questions is confusion between intellectual issues-what we want to understand by doing the study and practical issues-what we want to accomplish (ibid: 68).

Again, Creswell (2014:127) added that, research questions are questions in quantitative or qualitative research that narrow the purpose statement to specific questions that researchers seek to answer. Adding that, researchers typically develop them before identifying the methods of the study (i.e., the type of data to be collected, analysed, and interpreted in a study).

In quantitative research, the questions relate attributes or characteristics of individuals or organisations (these are called variable) while in qualitative research, the questions include the central concept being explored (this central concept is called central phenomenon) (ibid: 127).

In line with this scientific way of thinking, this study attempts to answer five main research questions.

These research questions are as follows:

1. What is the extent and characteristics of 'modern' residential housing investments in the villages on the slopes of Mount Kilimanjaro?
2. Who are the main actors of 'modern' residential housing investments in the villages on the slopes of Mount Kilimanjaro in Moshi district?
3. Why are the households contesting to invest on "modern" residential housing in their villages of origin in Moshi district, Kilimanjaro region, Tanzania?
4. How is the need to have a 'modern' residential house in the village of origin contributes to spatial and environmental challenges in the villages on the slopes of Mount Kilimanjaro?
5. Which institutional and policy measures, housing and space standards and regulations that are needed in a land which is under customary tenure arrangements (clan inheritance) in the villages in Tanzania?

The answers to these five research questions will shed light on protecting the nature and ensure sustainable development in the villages on the slopes of Mount Kilimanjaro, Tanzania.

5.4 Concluding remarks

The conceptual framework in research is very important because it explains why a particular phenomenon is the way it is. In other ways it displays why things/issues we wonder are the way they are. For example, why do we see the booming 'modern' residential houses accompanied by spatial and environmental challenges in the villages on the slopes of Mount Kilimanjaro? Is it because of multi-locational households or the issue of institutional weaknesses? These research questions help the researcher to be more focus on understanding the issue under study. The next chapter explains the research design and the methods that were used to capture and analyse the information collected in order to respond to these research questions.

CHAPTER SIX

RESEARCH DESIGN AND METHODOLOGY

6.1 Introduction

This chapter explains different methods employed by the researcher to accomplish this research. The focus is mainly on research design and strategy as well as the whole process by which the research is executed. It also includes tools used in selecting a case study area together with collecting and analysing data. In short, it explains how the whole research was done.

6.2 Research design

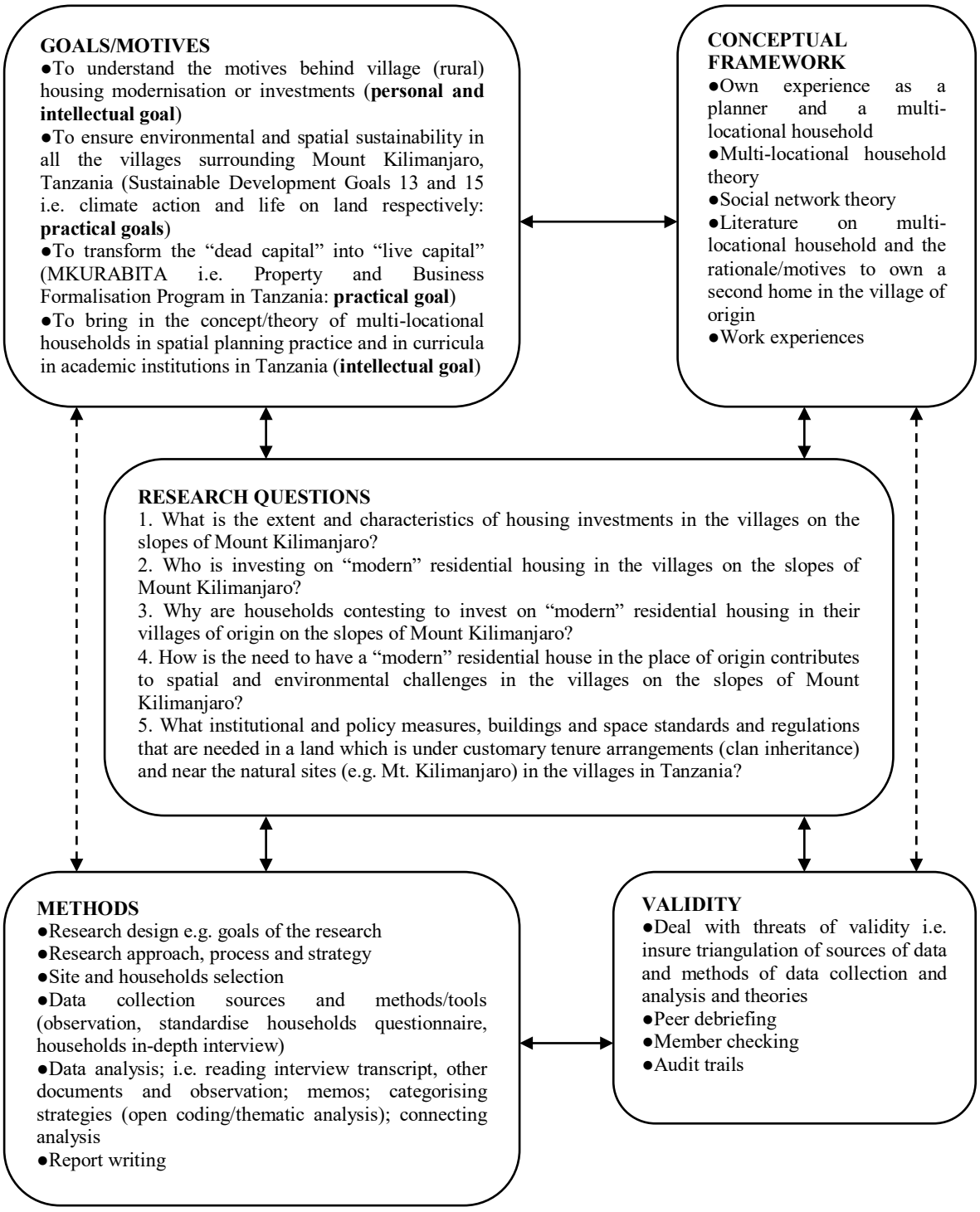
The research design indicates how the research is carried out based on methods and tools chosen and used. Research design is a platform that guides the researcher how to collect, analyse and interpret data. Nachmias and Nachmias (1996) argued that a research design helps the researcher to come up with solutions in various stages of the research. Further, Kothari (1990) added that research design is well understood as a logical plan of how to conduct a research. It stands for the advance planning of the methods to be adopted for collecting the relevant data and techniques to be used in their analysis. It also shows how the objectives of the research will be attained. Research design also shows the availability of staff, time and money. Research design is critical because it facilitates the sailing of various research operations, thereby making the research as efficient as possible; yielding relevant information and taking into account the available time and money. The design helps the researcher to organize his or her ideas in a form in which it becomes possible to look for flaws and inadequacies. In the absence of such a course of action, it will be difficult for the critic to provide a comprehensive review of the proposed study (ibid).

The purpose of a research design is to prevent a situation by which the data collected do not address the research questions. It is, therefore, that research design must be clear and at the same time allow flexibility during the implementation process (Yin, 1994:20 cited in Sheuya, 2004:49). In this way, research design is a series of guidelines to keep one in the right direction (Sanchez, 1980:21 cited in Sheuya, 2004:49).

Maxwell added that, the relationships that we also create with participants in our study (and also with others, sometimes called 'gatekeepers', who can facilitate or interfere with our study) are an essential part of our methods, and how we initiate and negotiate these relationships is a key research design decision (Maxwell, 2005:82). These pieces of advice were taken on board before, during and after data collection. For example, in the early stage of this research, I had several discussions with my supervisors and we had agreed on the topic and the way forward. This was very important because if not done well it could either hinder or facilitate the researcher's progress to the next step. In short, the research design is the logic of doing research.

Thus, the research design for this research followed Maxwell (2005) qualitative research design model which is presented in figure 6.1. This research started by identifying the goals/motives of this research followed up with development of a conceptual framework. The research questions were then formulated to narrow down the focus of the study. Also, the research methods were selected to respond to these research questions. While on the process of data collection, analysis and report writing, the validity of the data was also ensured.

Figure 6.1: The research design of this research.



Source: Author's own construct, 2015 based on Maxwell, (2005:05)

6.3 The research approach

This study has applied both quantitative and qualitative research approaches. The literature provides several reasons for using a mixed methods design to conduct a study. In general, we conduct a mixed methods study when we have both quantitative and qualitative data and both types of data, together, provide a better understanding of our research problem than either type by itself (Creswell, 2014:565).

Mixed methods research is a good design to use if we seek to build on the strengths of both quantitative and qualitative data. Quantitative data, such as scores on instruments, yield specific numbers that can be statistically analysed, can produce results to assess the frequency and magnitude of trends, and can provide useful information if we need to describe trends about a large number of people. However, qualitative data, such as open-ended interviews that provide actual words of people in the study, offer many different perspectives on the study topic and provide a complex picture of the situation (ibid).

It is also argued that, when we combine quantitative and qualitative data, "we have a very powerful mix" (Miles and Huberman, 1994:42 cited in Creswell, 2014:565). For example, by assessing both outcomes of a study (i.e., quantitative) as well as the process (i.e., qualitative), we can develop "a complex" picture of social phenomenon (Greene and Caracelli, 1997:7 cited in Creswell, 2014:565). We also conduct a mixed methods study when one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions. More data are needed to extend, elaborate on, or explain the first database. For example, we may want to first explore the data qualitatively to develop an instrument or to identify variables to test in a later quantitative study. We engage in a mixed methods study when we want to follow up with a quantitative study with a qualitative one to obtain more detailed, specific information that can be gained from the results of statistical tests (Creswell, 2014:565). The aim of this study was not to employ statistical test, however, it starts by capturing the socioeconomic data (quantitative approach) of house owners followed by in-depth interview (qualitative approach) of 8 house owners (multi-locational households) to capture the motives behind 'modern' residential housing investments in their village of origin.

We also use a mixed method when policymakers want both the "numbers" and the "stories" about the issue. These different sources of information provide both a condensed understanding of a problem as well as the detail (ibid). It was also argued by Yin (2003) that qualitative approach caters for subjectivity-rich and deep data as it is discovery oriented, exploratory and descriptive. It is also, process oriented while quantitative approach analyses and presents data in quantities. However, both approaches share the same epistemological basis and are considered to be complementary to each other. Thus, both quantitative and qualitative approaches were used by the researcher to respond to the research questions of the phenomenon under study. The nature of the study, the research questions and the data collected was the determinant factors in employing both quantitative and qualitative approaches. However, the quantitative approach provided only the quantitative evidences while the qualitative approach was mostly used through quoting the respondents, summarized explanations below.

6.3.1 Quantitative research approach

This study starts by employing a quantitative approach followed by a qualitative approach. As Creswell (2014:564) provided an example that; *Maria chooses to collect both quantitative and qualitative data. She decides to conduct a survey and then use follow-up interviews with a few students to explain the results of the survey. She views this research in two phases. For the first, quantitative phase, her research question is "What factors influence student attitudes toward weapon possession?" Later, in the follow-up, qualitative phase, her question is "When students mention 'peers' as a factor influencing student attitudes, what do they mean? In this study, Maria collects quantitative survey data and then follows up with qualitative interview data to help explain the initial quantitative results. Maria conducts a study using mixed methods research (Creswell, 2014:564).* In relation to this study, the quantitative approach employed intended to provide some statistical evidences (socioeconomic data) on households who have invested in 'modern' residential houses in

their village of origin (Kilimanjaro region-Sango village). It therefore provided a socioeconomic reflection of 64 households who have invested in 'modern' residential housing in Sango village. Also, the nature of the phenomenon under study required the employment of deductive and inductive approaches. It had demanded to view the phenomenon from the literature and on the ground. For instance, in responding to the question, why are households contesting to invest in 'modern' residential housing in their village of origin this had demanded theoretical and ground findings. This is both quantitative and qualitative in nature.

6.3.2 Qualitative research approach

The main strength of qualitative research, which is its ability to elucidate/clarify/explain local processes, meanings, and contextual influences, in particular settings or cases (Maxwell, 2005:90). This study therefore is also a qualitative (inductive) research because it has process questions. These are follow-up qualitative questions (for example, why are households contesting to invest in 'modern' residential housing in their village of origin and how has that contributed to spatial and environmental challenges in the village of origin). It is also an exploratory and descriptive study in nature (see Creswell, 2009; Creswell, 2014; Maxwell, 2005; and Oktay, 2012). Therefore, it qualifies to be a qualitative study. Though, the study employs both quantitative (to establish the socioeconomic data of households who have invested in housing in the village of origin) and qualitative (to respond to the why and how questions) approaches. It, therefore, becomes a mixed methods kind of study.

6.3.3 Mixed methods approach

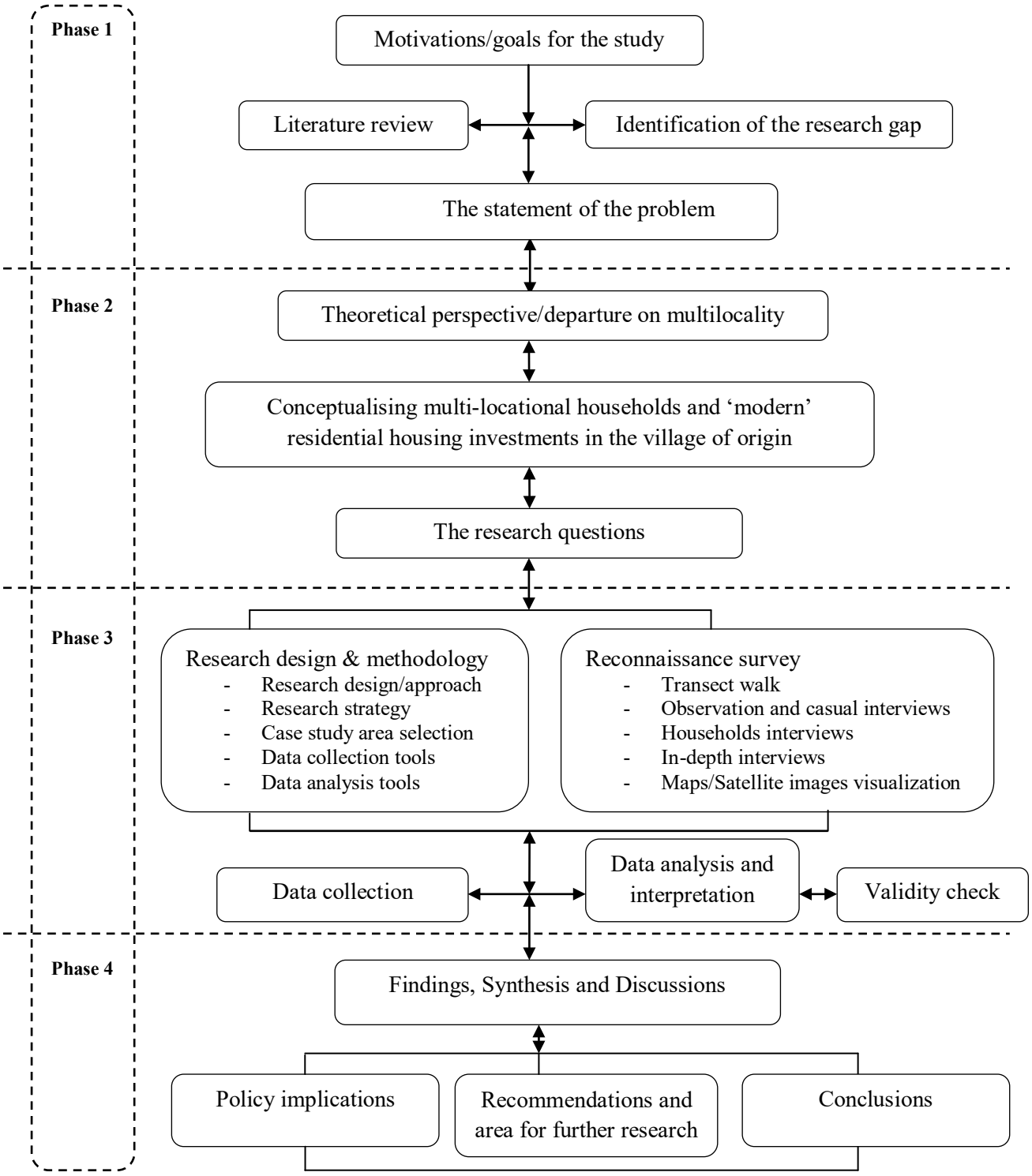
Creswell (2014: 564) claimed that if we have access to both quantitative and qualitative data, we can use both forms of data to understand our research problem and answer our research questions. With qualitative research now accepted by researchers, and with quantitative research long established as an approach, mixed methods research has become popular as the newest development in research methods and in approaches to 'mixing' quantitative and qualitative research (ibid). A mixed methods research design is a procedure for collecting, analysing, and "mixing" both quantitative and qualitative methods in a single study or a series of studies to understand a research problem (Creswell and Plano Clark, 2011 cited in Creswell, 2014:565). The basic assumption is that the uses of both quantitative and qualitative methods, in combination, provide a better understanding of the research problem and question than either method by itself (Creswell, 2014:565). The study employs both quantitative (to establish the socioeconomic data of households who have invested in housing in their village of origin) and qualitative (to respond to the why and how questions) approaches in understanding the phenomenon under study. Therefore, the data are "mixed" in a mixed method study (Creswell, 2014:565).

6.4 Research process

This research employs a qualitative research design model as proposed by Maxwell (2005). In this regard, it is divided into four (4) phases and each phase has a series of activities starting from the first to the last. The process started with the motivations/goals for the study, followed by research gap identification, which was largely dependent on the literature review, and then it was followed by the statement of the problem. The theoretical perspective/departure on multi-locality, multi-locational households and housing investments in their village of origin followed after the research problem was made clear. It was then followed by a conceptual framework on which the study is based. Immediately after conceptualizing multi-locational households and housing investments in the village of origin in Tanzania, it was then followed by the research questions. The methodology section was followed. It had started with research design, followed by research strategy and selection of a case

study area using the researcher's selection criteria. It was then followed by a reconnaissance survey in the villages in Moshi district. Sango village was then selected (more explanation on how it was selected are provided see below and chapter four). The data collection and analysis methods were then followed. The analysed data were then interpreted and validated to reflect the research questions. It was then followed by revealing the research findings, synthesis and discussions. Finally, policy implications, recommendations, areas for further research and conclusions were drawn (see figure 6.2 which summarises the whole process of this research).

Figure 6.2: The research process of this research.



Source: Author's own construct, 2014/2015

6.5 Research strategy

Scientists have argued that research in social sciences uses various strategies such as case study, surveys, experiments and observation. Yin (1994), for example, asserts that there are about five strategies in scientific research. These are survey, experiment, case study, archive and history. However, in this study, the research strategy which is used in exploring multi-locational households and housing investments in their village of origin in Kilimanjaro region, Tanzania, is a case study strategy. Yin (1994:23) looks at a case study as an inquiry of a contemporary phenomenon within a real life context, especially when the boundaries between the phenomenon and the context are not clearly evident. In general, case studies are the preferred method when (1) "how" or "why" questions are being posed (2) the investigator has little or no control over behavioural events; and (3) the focus of the study is on a contemporary phenomenon within a real-life context (Yin, 2009:2; 2014:2). Adding that, a case study can include single or multiple cases, can also be limited to quantitative evidence, and can be a useful method in doing an evaluation (Yin, 2014:2).

6.5.1 The rationale for selecting a case study strategy

According to Patton (1987:91) cited in Sheuya (2004:50) case studies become particularly useful where one needs to understand some particular problems or situation in great depth and where one can identify cases rich in information in the sense that a great deal can be learned from a few examples of the phenomenon in question. Therefore, the case study strategy is the best option for this study compared to others. This is because it provides answers to the two research questions: 1. Why multi-locational households invest in 'modern' housing in their village of origin, and 2. How is that need to own a second house/home in the village of origin has contributed to spatial and environmental challenges and particularly in the villages on the slopes of Mount Kilimanjaro in Kilimanjaro region, Tanzania.

Kothari (1990:113) adds that, a case study strategy is a form of qualitative analysis wherein careful and complete observation of the individual or a situation or an institution is done; efforts are made to study each and every aspect of the concerning unit in minute details and then from case data generalizations and inferences are drawn. This study is therefore, essentially a contemporary one that involves an empirical investigation within its real life context using multiple sources of evidence. In this regard, in order to understand the motives behind housing investments in the village of origin, it was important to analyse and understand more than one sub-case (households who own 'modern' houses in the village). Therefore, a single case study area (Sango village) with 64 households (sub-cases) was deployed in this study. The researcher also selected 8 out of 64 households for in-depth understanding of the phenomenon under study. These are households who are multi-locational households and own a 'modern' house in the village in the village of origin (Sango village).

6.5.2 Selection of a case study area

The standard used in choosing participants and sites is whether they are "information rich" (Patton, 1990:169 cited in Creswell, 2014:228). Adding that, the process or the logic of selecting case study areas by quantitative and qualitative methods is totally different. On the one hand, quantitative research aims at selecting a truly random and representative sample that will permit generalization from the sample to a large population. On the other hand, the main objective of qualitative method is to obtain the greatest amount of information on a given problem or phenomenon (Patton, 1987:51 cited in Sheuya, 2004:53).

This means that the researcher has to look for information rich cases, which Patton defines as those from which one can learn a great deal about issues of central importance (ibid). Stake (1995:243) cited in Sheuya (2004) claimed further that… "My choice would be to take that case from

which we feel we can learn the most…potentials for learning is a different and sometimes superior criterion to representativeness. Often it is better to learn a lot from a typical case than from a magnificently typical case".

Gerring (2007:1) added that, there are two ways to learn how to build a house. One might study the construction of many houses-perhaps a large subdivision or even hundreds of thousands of houses. Or one might study the construction of a particular house. The first approach is a cross-case method. The second is a within-case study method. While both are concerned with the same general subject-the building of houses-they follow different paths to this goal. The same could be said about social research. Researchers may choose to observe lots of cases superficially, or a few cases more intensively. They may of course do both, but there are usually trade-offs involved in this methodological choice (ibid).

In order to be a case of something broader than itself, the chosen case must be representative (in some respects) of a larger population (Gering, 2007:145). Otherwise, if it is purely idiosyncratic ("unique") - it is uninformative about anything other than itself. A study based on a non-representative sample has no (or very little) external validity. To be sure, no phenomenon is purely idiosyncratic; the notion of a unique case is a matter that would be difficult to define. One is concerned, as always, with matters of degree. Cases are more or less representative of some broader phenomenon and, on that score, may be considered better or worse subjects for intensive analysis (ibid).

Light et al. (1990:53), in discussing site selection, stated that "with only a limited number of sites, consider the purposeful selection, rather than relying on the idiosyncrasies of chance"; the same logic applies to selecting interview participants and observation settings (cited in Maxwell, 2005: 89).

Therefore, basing on the researcher's selection criteria explained below; Tanzania, Kilimanjaro region, Moshi district, Kimochi ward and Sango village were selected. They are information rich cases which provided answers for the research questions. The possible goal of purposeful selection is to deliberately examine cases that are critical for the theories that we began the study with, or that we have subsequently developed. Extreme cases often provide a crucial test of these theories, and can illuminate what is going on in a way that representative cases cannot (Maxwell, 2005: 90).

It is in this logical way of thinking that, the researcher realised that, despite being the rich case, Tanzania has been inadequately documented, especially in the area of multi-locational households and housing investments in their villages of origin. Therefore, this case provides some insights on realizing multi-locational households' contributions on housing development/investments in the villages in Tanzania. Tanzania is also a home of unique natural national parks such as Serengeti National Park and Mount Kilimanjaro which are facing quite a number of challenges (such as environmental issues). These parks are also surrounded by several villages inhabited by diverse households, including multi-locational households. The link between these households and their development activities (such as housing investments in the village of origin) in relation to these parks, natural resource use and the environment protection is paramount. Therefore, the selection criteria included: country in the global south with national parks or natural resources surrounded by villages, villages with 'modern residential houses', the presence of environmental and spatial challenges, and population pressure.

In that line of thinking, Kilimanjaro region was the right case because of the following reasons:

- Kilimanjaro region is one of the densely populated and smallest regions in Tanzania (URT, 2012). According to the census report, 2012 it is the third region in Tanzania with the highest population density (124 inhabitants per square kilometers) after Mwanza (293 inhabitants per square kilometers) and Dar es Salaam (3,133 inhabitants per square kilometers);

- It has also more "modern" housing compared to other regions in Tanzania (see chapter four; URT, 2012; and URT analysis report, 2014);
- It is again associated with environmental and spatial challenges such as the transformation of the agriculture land into housing, especially in the villages on the slopes of Mount Kilimanjaro (see satellite images provided under chapter eleven);
- In additional to that, Mount Kilimanjaro has an international value (the world heritage site-UNESCO) which demands its protection; and
- Moreover, the researcher was born and grew up in Kilimanjaro region; therefore, he is familiar with different parts in the region. On top of that, the researcher understands the Chagga language which is the most spoken local language in the region. Therefore, it was easier to communicate with the local households who would prefer to speak the local language more than "Kiswahili". In addition to that, the researcher is much familiar with different areas of the chosen case study area. It is therefore trusted that in the end the researcher produces a good report.

It is again with this logical way of thinking that, the researcher observes that, Moshi district is the rich case as it is one of the six districts in Kilimanjaro region with significant housing investments in the village in Tanzania (see more evidence under chapter four).

- Its population size and density is also growing very fast than all the districts in Kilimanjaro region (URT, 2012).
- Again, it is a district with the highest modern housing characterized by a rampant spatial horizontal expansion and environmental challenges in the villages on the slopes of Mount Kilimanjaro (Moshi municipality, district officials and satellite images).
- Moreover, Moshi district was selected because it is the district which will be affected by the expansion of Moshi town/Municipality boundaries (Moshi Municipality officials and report, 2012).

Moshi district has 31 wards. However, only one Ward was selected. Similar criteria used to select Moshi district were applied to select a Ward and Kimochi Ward was selected (see chapter four).

Kimochi Ward has two (2) villages which were proposed to be part of Moshi town. Therefore, the same criteria were used and Sango village was selected (see chapter four). The intention here was to select a worthy case study area which responds to the research questions of the phenomenon under study. More explanation about selection criteria, see chapter four.

Criteria for selecting households

The households with "modern" houses were selected based on the stated criteria of a modern house (see chapter seven and chapter eight). The purpose was to respond to the research questions and to provide a justification, whether the 'modern' residential houses that we see in the villages on the slopes of Mount Kilimanjaro in Kilimanjaro region, Tanzania are because of multi-locational households or not. Therefore, this study employed a purposeful sampling. The purposeful sampling is a strategy in which particular settings, persons, or activities are selected deliberately in order to provide information that can't be gotten as well from other choices. For example, Weiss (1994:17) cited in Maxwell (2005:88) argued that, many qualitative interview studies do not use "sample" at all, but panels-"people who are uniquely able to be informative because they are expert in an area or were privileged witnesses to an event"; this is one form of purposeful selection. Selecting those times, settings, and individuals that can provide us with the information that we need in order to answer our research questions is the most important consideration in qualitative selection decisions (Maxwell, 2005:88). Further, Light et al. (1990:53) cited in Maxwell (2005:89) in discussing site selection, they asserted that "with only a limited number of sites, consider the purposeful selection, rather than

relying on the idiosyncrasies of chance"; the same logic applies to selecting interview participants and observation settings.

Therefore, basing on those criteria explained above: Tanzania, Kilimanjaro region, Moshi district, Kimochi ward and Sango village were selected to provide answers to the research questions because they are information rich cases (more explanations see chapter four). This led to access of information related to multi-locational households and housing investments in their villages of origin, including the spatial and environmental impacts of the invested housing. Through this case study area, it was easier to reveal that most of the 'modern' residential houses in the village were owned by multi-locational households (more explanations and evidences, see chapter nine).

6.6 Choice of unit of analysis

According to Patton (1987:50), the unit of analysis of a particular study can be an individual, a group of people, programme participants or students. The key factor in selecting and making decisions about appropriate unit of analysis is to decide what unit it is that one wants to be able to say something about at the end of the evaluation (ibid: 51). Creswell (2014:159) added that, the first step in the process of collecting quantitative data is to identify the people and places we plan to study. This involves determining whether we will study, individuals or entire organisations or some combination. If we select either individuals or organisations, we need to decide what type of people or organisations we will actually study and how many we will need for our research. These decisions require that we decide on a unit of analysis, the group and individuals we will study, the procedure for selecting these individuals, and assessing the numbers of people needed for our data analysis (ibid).

The key question to answer according to Creswell (2014:159) is: who can supply the information that we will use to answer our quantitative research questions or hypotheses? Some possibilities might be individual households, family, etc. or some combination. At this early stage in data collection, we must decide at what level (e.g., individual, family, etc.) the data needs to be gathered. This level is referred to as the unit of analysis. In some research studies, researchers gather data from multiple levels (e.g.., individuals and organizations), whereas other studies involve collecting data from only one level. This decision depends on the questions or hypotheses that we seek to answer (ibid).

Therefore, the smallest unit of analysis for this study is multi-locational household. The aim of determining the smallest unit of analysis is to enable the researcher to respond to the quantitative research questions. For example, the research questions on who is investing in the village housing and the extent of housing investments in the villages of origin of multi-locational households on the slopes of Mount Kilimanjaro, Tanzania.

6.7 Households sampling and sample size

Creswell (2014:160) claimed that, a population is a group of individuals who have the same characteristic. Population is used in research to denote the universe of units or elements from which a sample is selected for an inquiry (Bryman, 2012 cited in Tamanja, 2014:62). A target population (or the sampling frame) is a group of individuals (or a group of organisations) with some common defining characteristic that the researcher can identify and study (Creswell, 2014:160). Within this target population, researchers then select a sample for study (ibid).

A sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population (Creswell, 2014:160). In an ideal situation, we can select a sample of individuals (households) who are representative of the entire population (households). For example, we might select a sample of 'modern' house owners (the sample) from the population of all 'modern' house owners in one village (the population). A sample refers to part of a research population who is actually chosen to participate in a study. In other words, it is a segment or a sub-set of the research

population that is selected to participate in a research (Bryman, 2012 cited in Tamanja, 2014:62). Creswell (2014:160) further, added that, a sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population.

Basically, there are two types of sample designs, namely; purposive/non-probability and random/probability sampling (Kothari, 1993:73). Purposive sampling is that sampling procedure which does not establish any basis for estimating the probability that all items in the population have an equal chance of being included in the sample. Under purposive sampling, the organizers for inquiry purposefully choose particular units of the universe to constitute a sample on the basis that the small mass that they so select out of a huge one will be representative of the whole. Probability sampling is based on the concept of random selection. Under this sampling design, every item of the universe has an equal chance of inclusion in the sample. Therefore, this study employed purposive sampling (households with modern houses in the village on the slopes of Mount Kilimanjaro, particularly Sango village).

6.7.1 Quantitative sample size

In practice, quantitative researchers sample from lists and people available (Creswell, 2014:160). In order to provide some statistical evidence on the phenomenon under study, the researcher started the data collection by conducting a survey with 64 households who owns 'modern' residential housing in Sango village. From the census report 2012 and the Village Executive Officer of Sango village, it was revealed that, the village had 704 households. Therefore, ten (10) percent of 704 households (70.4 households) were required to be surveyed or interviewed. However, only 64 households were selected to provide general information such as the socioeconomic data of house owners, validation of the availability of multi-locational households and understanding the magnitude of the problem (spatial and environmental challenges contributed by housing investments in the village of origin of multi-locational households). The increase of the size of the sample did not provide new findings on the phenomenon under study. It should also be noted that, the focus of this study is not for external generalisation from the larger population (sample). It is more of a qualitative kind-of study. Therefore, the sample size selected does not match with the formula suggested by Krejcie and Morgan (1970). The researcher used a standardized household questionnaire to capture the statistical data.

6.7.2 Qualitative sampling and sample size

In quantitative research, we systematically identify our participants and sites through random sampling; in qualitative research, we identify our participants and sites on purposeful sampling, based on places and people that can best help us understand our central phenomenon (Creswell, 2014:227). Decisions about where to conduct our research and whom to include (what is traditionally called "sampling") are an essential part of our research methods (Maxwell, 2005:87).

In qualitative research, the typical way of selecting settings and households is neither probability sampling nor convenience sampling. It falls into a third category which we will call "purposeful selection (Light et al., 1990:53)"; "purposeful sampling (Patton, 1990:169)" and; "criterion-based sampling (LeCompte and Preissle, 1993:69)". Selecting those times, settings, and individuals or households that can provide us with the information that we need in order to answer our research questions is the most important consideration in qualitative selection decisions (Maxwell, 2005:88).

Purposive sampling is a non-probability sampling technique in which the researcher aims to strategically select participants in a research, such that, those selected are relevant to the research questions that the research seeks to answer (Bryman, 2012 cited in Tamanja, 2014:63). The possible goal of purposeful selection is to deliberately examine cases that are critical for the theories that we began the study with, or that we have subsequently developed. Extreme cases often provide a crucial

test of these theories, and can illuminate what is going on in a way that representative cases cannot (Maxwell, 2005: 90).

Therefore, Sango village was selected in order to shed light on the practice of multi-location households and provide evidence (answers for the research questions) on why multi-locational households need a second home in their village of origin and how has that contributed to the spatial and environmental challenges especially in the villages on the slopes of Mount Kilimanjaro, in Kilimanjaro Region, Tanzania.

Denscombe (2010) added that, purposive sampling operates on the principal that, the best information can be obtained through focusing on a relatively small number of instances, deliberately selected on the basis of relevance and knowledge on an issue under investigation (ibid: 34-35 cited in Tamanja, 2014:63). Adding that, it works well when the researcher has some appreciable knowledge of members of the population and deliberately selects particular members who can produce the most valuable data, based on the experience or expertise they have on the issue being studied (ibid.).

In this study, respondents were purposefully selected based on the criterion that they own a 'modern' residential house in the village of origin (Sango village). The main aim was to understand who the owners of these houses their motives behind 'modern' residential housing investments in their village of origin, including the spatial and environmental implications of the invested houses in their village of origin (Sango village).

In qualitative inquiry, the intent is not to generalize to a population, but to develop an in-depth exploration of a central phenomenon (Creswell, 2014:228). Thus, to best understand this phenomenon, the qualitative researcher purposefully or intentionally selects individuals and sites (ibid: 228). In quantitative research, the focus is on random sampling, selecting representative individuals, and then generalizing from these individuals to a population. Often this process results in testing "theories" that explain the population. However, in qualitative we select people or sites that can best help us understand the central phenomenon. This understanding emerges through a detailed understanding of the people or sites (ibid: 228). The number of people and sites sampled vary from one qualitative study to the next. It is typical in qualitative research to study a few individuals or a few cases (Creswell, 2014:231). This is because the overall ability of a researcher to provide an in-depth picture diminishes with the additional of each new individual or site.

One objective of qualitative research is to present the complexity of a site or of the information provided by individuals. In some cases, we might study a single individual or a single site. In other cases, the number may be several, ranging from 1 or 2 to 30 or 40. Because of the need to report details about each individual or site, the larger number of cases can become unwieldy and result in superficial perspectives. Moreover, collecting qualitative data and analyzing it takes considerable time, and the additional of each individual or site only lengthens that time (ibid).

Therefore, initially the researcher planned to carry out 10-20 in-depth interviews with multi-locational households who own 'modern' residential houses in Sango village (the village of origin) that can best help us understand the study phenomenon. However, he managed to conduct 8 interviews with multi-locational households because no new findings were emerging. This sample was selected out of 64 households. The very main reason was to capture in detail the evidences behind the motives for such investments, including its spatial and environmental implications. The selection criteria include; multi-locational households, varieties of motives for housing investments in the village, types and sizes of houses invested, gender, age of house owners, employment status of the house owners, and house transformation forms/types. The idea was also to share mixed feelings on the phenomenon under study.

6.8 Data collection process

The data collection process was done in two phases. The first phase started with secondary data collection while the second phase was on primary data collection (see figure 6.3). The first phase intended to capture relevant secondary data of the phenomenon under study before going for the primary data collection.

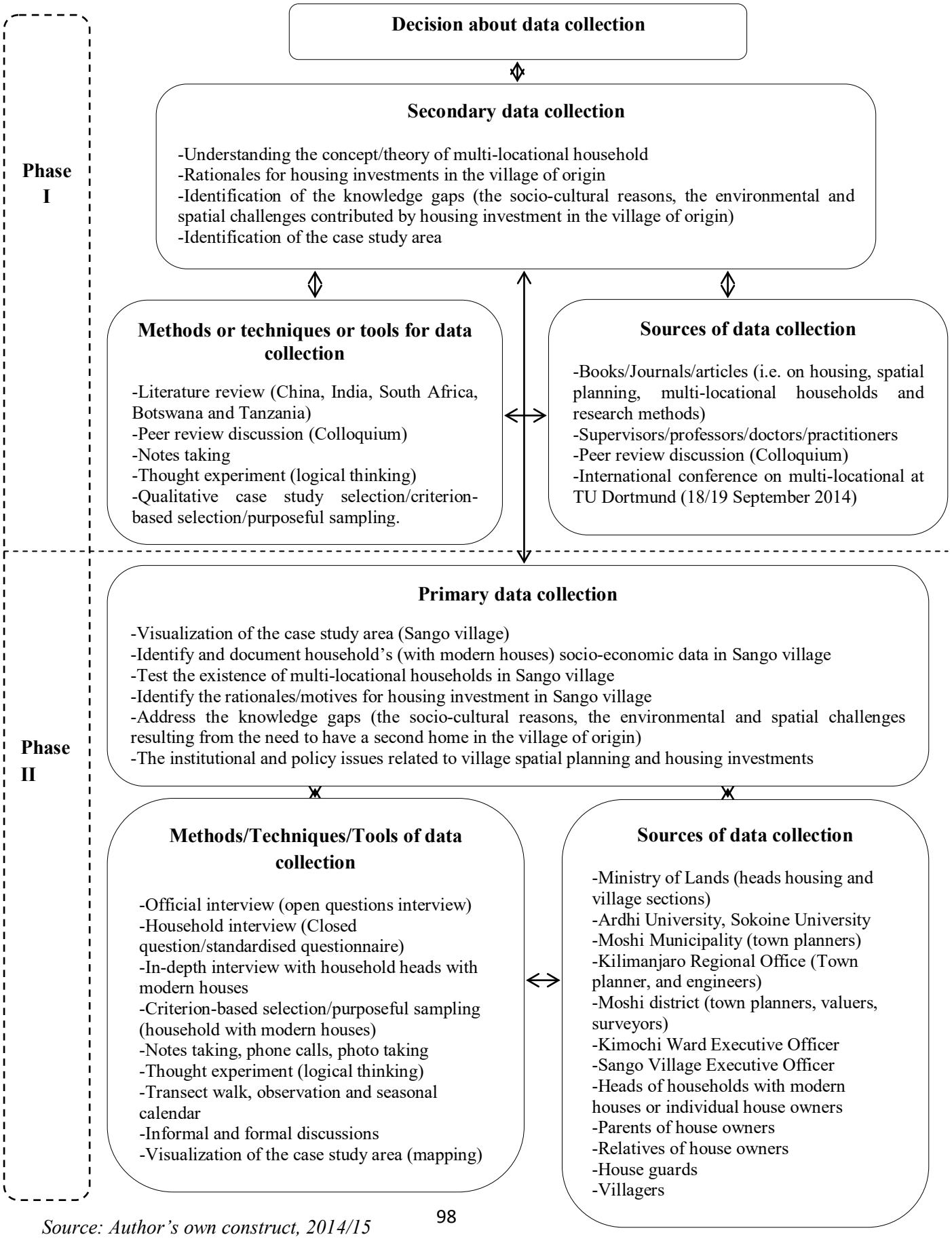
6.8.1 Secondary data collection

The very main aim of this phase was to get an overview from the literature in understanding the theory/concept of multi-locational households, the motives/rationales for housing investments in the village of origin and identify the research knowledge gap, including identification of the case study area. To do that, this phase had demanded a collection of secondary data using different methods, techniques and tools. These include reviewing literatures which are relevant to this study in order to get a broad perspective of the phenomenon under study in the context of China, India, South Africa, Botswana etc. narrowing down to Tanzania (see chapter three). These countries have been selected because they have findings relevant to this study. This study has also used different sources of information (such as books, journals, articles, international conferences, peer review, discussions with academics and practitioners) to capture relevant information for the study see figure 6.3. Usually, secondary data collection is an endless process. It ends once the whole report is finished. Therefore, at some point, the researcher decided to switch to the primary data collection.

6.8.2 Primary data collection

This phase intended to collect empirical data to respond to the research questions. The phase has two parts: the first part explains the process before data collection (before data collection) and the second part conveys how the data were collected (during data collection). This phase has also employed different methods or techniques or tools of primary data collection, such as official interviews (open questions interview); household interviews (closed questions or standardised questionnaire); in-depth interviews (criterion-based selection or purposeful sampling household with modern houses); notes taking; phone calls; photo taking; thought experiment (logical thinking); transect walk; observations; seasonal calendar; and informal and formal discussions. More explanations on how were the methods used are provided below and in the chapters on findings. The empirical data collection process has also captured information from different sources such as the Ministry of Lands, Housing and Human Settlements Development (heads housing and village sections), Ardhi University (Institute of Human Settlements Studies, School of Urban and Regional Planning and School of Architecture and Design), Moshi Municipality (town planners, surveyors), Kilimanjaro Regional Office (Town planner, and engineers), Moshi district (town planners, valuers, surveyors, MKURABITA coordinator, engineer), Kimochi Ward Executive Officer, Sango Village Executive Officer, heads of households with modern houses or individual house owners (MLHs), parents of house owners, relatives of house owners, house guards, villager's see the data collection matrix table 6.1 and the data collection table 6.2.

Figure 6.3: The data collection process.



Source: Author's own construct, 2014/15

Before primary data collection

Maxwell (2005:82) suggested that, the relationships that we create with participants in our study (and also with others, sometimes called 'gatekeepers', who can facilitate or interfere with our study) are an essential part of our methods, and how we initiate and negotiate these relationships is a key design decision. Maxwell's piece of advice was taken on board before, during and after data collection. For example, during the early stage of the PhD process there was a fruitful discussion with supervisors and agreed on the topic and the PhD progress. This was very important because if not done well it could either hinder or facilitate the researcher's progress to the next step. The same spirit of negotiation was applied to households, officials, practitioners and academics before, during and after data collection.

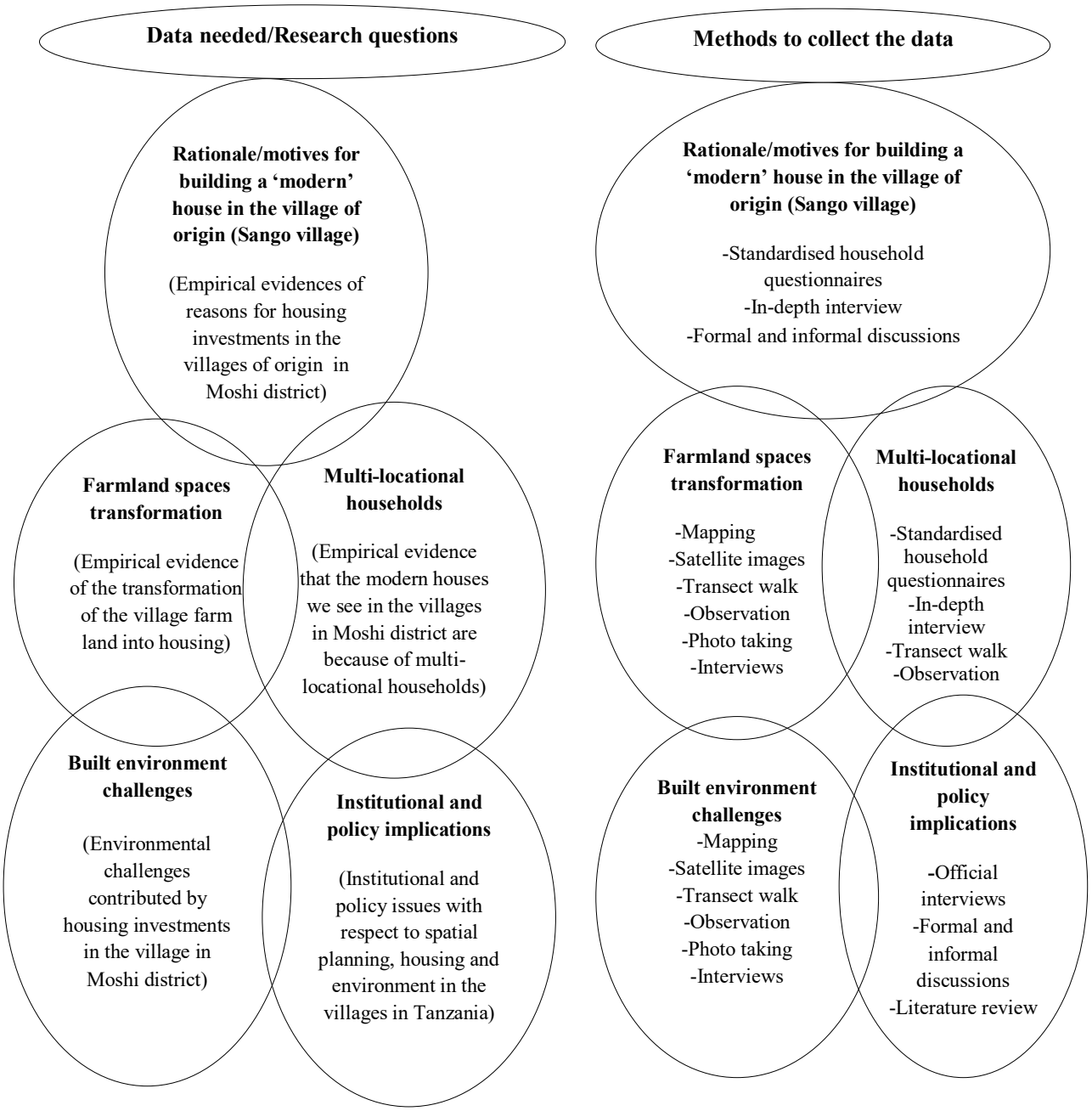
Maxwell (2005: 92) further added that, our methods are the means for answering our research questions (see figure 6.4). Their selection depends not only on our research questions, but also on the actual research situation and on what will work most effectively in that situation to give us the data we need. Also, differentiating the research questions and interview questions are fundamental, our research questions formulate what we want to understand; our interview questions on the other hand, are what we ask people in order to gain that understanding.

In addition to that, the development of good interview questions (and observational strategies) requires creativity and insight, rather than a mechanical conversion of the research questions into an interview guide or observation schedule, and depends fundamentally on how the interview questions and observational strategies will actually work in practice (ibid: 92). These reflections were taken on board before and during the data collection process as explained later.

Carol Gilligan emphasized the value of asking our interviewees "real questions", ones to which we are genuinely interested in the answer, rather than contrived questions designed to elicit particular sorts of data (cited in Maxwell, 2005:92). Doing this creates a more symmetrical and collaborative relationships in which participants are able to bring their own knowledge to bear on the questions in ways that we might never have anticipated (ibid: 92). Therefore, a Maxwell piece of advice was fundamental and was taken seriously and used to formulate the realistic interview questions before data collection.

The tools for collecting secondary (literature review) and primary data such as a standardised household questionnaire, official checklists and open ended questionnaire for in-depth interview were developed and reviewed several times by the researcher with assistance from supervisors before primary data collection. The other tools which were thought before primary data collection were: formal and informal interviews with local and national officials, practitioners, academicians and households; observations, transect walk (move around to see what is happening), seasonal calendar (event months in a year e.g., good target for multi-locational households are Christmas and Easter). The detail of applications of the methods or techniques or tools sees the data collection process and the findings chapters.

Figure 6.4: The specific data needed and methods to collect the data.



Source: Author's own construct, 2014/2015

During primary data collection

Maxwell (2005: 93-94) citing Fielding and Fielding (1986) argues that collecting information using a variety of sources and methods is one aspect of what is called triangulation (see table 6.1 and 6.2). This strategy reduces the risk that our conclusions will reflect only the systematic biases or limitations of a specific source or method, and allows us to gain a broader and more secure understanding of the issues we are investigating. These multiple sources and methods give conclusions far more credibility than if had been limited to one source or method (ibid: 94).

Conversely, although observation often provides a direct and powerful way of learning about people's behaviour and the context in which this occurs, interviewing can also be a valuable way of gaining a description of actions and events-often the only way, for events that took place in the past or ones to which we cannot gain observational access. Interviews can provide additional information that was missing in observation, and can be used to check the accuracy of the observations.

However, in order for interviewing to be useful for this purpose, we need to ask about specific events and actions, rather than posing questions that elicit only generalizations or abstract opinions (Weiss, 1994: 72-76 cited in Maxwell, 2005). In both of these situations, triangulation of observations and interviews can provide a more complete and accurate account than either could alone (Maxwell, 2005: 94).

Maxwell added that if our methods won't provide us with the data that we need to answer our research questions; we need to change either our questions or our methods. A useful tool in assessing this compatibility is a matrix in which we list our questions and identify how each of the components of our methods will help us to get the data to answer these questions (ibid: 102). Further, argues that such a matrix displays the logic of our methods decisions. With the same logic, this study employed different data collection methods and capture these data from different sources sees table 6.1.

Table 6.1: A data planning matrix for a study of multi-locational households and housing investments in the village of origin (Sango village) in Kilimanjaro region, Tanzania.

What do I need to know?	Why do I need to know this?	What kind of methods will answer the questions?	Where can I find the data?	Whom do I contact for access?	Time lines for acquisition
1. What is the extent of housing investment in the villages on the slopes of Mount Kilimanjaro?	To know the magnitude of the housing investments and thus the magnitude of the problem in the villages on the slopes of Mount Kilimanjaro.	-Satellite image analysis; -Official interviews; -Formal household interview (using a standardised questionnaire to household with modern houses); -Informal household interviews; and -Observation method.	-Google earth -Sango village executive office -Heads of households with modern houses in Sango village	-Moshi District Executive Director (permission letter to conduct research) -Sango Village Executive Officer -Head of households with modern houses/individual modern house owners -Relatives and Villagers.	December 2014- April 2015
2. Who is investing in 'modern' residential housing in the villages in Moshi district?	To know the type of households who own these houses and whether they are multi-locational households and if they are on the increase or decrease in order to intervene through	-Literature review; -Official interview; -Formal household interviews (using a standardised questionnaire to	-Kimochi ward executive office -Sango village executive office -Heads of households	-Moshi District Executive Director (permission letter to conduct interviews) -Kimochi Ward Executive Officer -Sango Village Executive Officer	December 2014- April 2015

	recommending some spatial planning and environmental solutions.	household with modern houses); -Informal household interviews; -Observation method; and -Seasonal Calendar	with modern houses in Sango village	-Head of households with modern houses/Individual modern house owners -House guards, -Parents of house owners, -Relatives and villagers.	
3. Why are households contesting to invest in 'modern' residential housing in the villages of origin in Moshi district?	To know the rationales/motives for a need to have a second home (housing) in the village of origin because they have implications on space and environment in the village of origin. Therefore, recommending some spatial planning and environmental solutions.	-Literature review -Formal household interviews (using a standardised questionnaire for household with modern houses). -Detailed field notes taking and recording	-Heads of household with modern houses in Sango village	-Heads of households with modern houses/individual multi-locational households house owners -House guards, -Parents of house owners, -Relatives, -Local officials	December 2014-August 2015
4a. Which spatial challenges resulting from 'modern' residential housing construction in the village of origin in Moshi district?	To assess the trend of land (space) transformation due to housing construction, transformation, improvement or modernisation and the process of housing construction or modernisation in order to recommend some housing, space and environmental standards to ensure sustainable housing development in the villages on the slopes of Mt. Kilimanjaro, Tanzania	-Literature review -Visualization by using GIS software Aerial/Satellite images to compare the trend of the case study area (Sango village) over time (i.e. From 2001 to 2015). -Formal and informal discussions	-Google earth	-Google earth	December 2014-September 2015
4b. Which environmental challenges resulting from multi-locational	To assess the environmental challenges emerged due to the need to have a second home in the village of	-Formal household interview (using a standardised questionnaire for household	-Kimochi ward executive office -Sango village	-Moshi District Executive Director -Kimochi Ward Executive Officer -Sango Village	December 2014-October 2015

households, especially due to 'modern' residential housing investments in the village of origin in Moshi district?	origin (Sango village) in order to ensure spatial, socioeconomic, cultural and environmentally viable village housing modernisation or development	with modern houses) -Official interview; and -Observation method -Transect walk and taking photos. -Formal and informal discussions	executive office -Heads of household with modern houses in Sango village	Executive Officer -Head of households with modern houses/individual modern house owners -House guards, -Parents of house owners, -Relatives.	
5. What policy measures, buildings and space standards that are needed in a land which is under customary tenure arrangements (clan inheritance) in the village in Tanzania?	To assess housing, land, forest and environmental policies, legislations and standards so that we add the concept of multi-locational household and/or recommend the need for space standards and housing development conditions for all the villages, particularly those surrounding sensitive areas such as Mt. Kilimanjaro.	-Literature review -Formal household interview (using a standardised questionnaire for household with modern houses) -Official interview; and -Discussions (formal and informal)	-Ministry of lands (MLHHSD) -Moshi municipality -Moshi district -Kimochi ward executive office -Sango village executive office -Heads of household with modern houses in Sango village.	-Village development section (MLHHSD) -Planners, Land valuers, Environmentalist, Surveyors (Moshi and MLHHSD). -Moshi District Executive Director -Kimochi Ward Executive Officer -Sango Village Executive Officer -Head of households with modern houses -Individual modern house owners.	December 2014-December 2016

Source: Author's own construct, 2014/2015

The methods applied and sources of primary data collection

This study begins by carrying out official interviews (using an open ended questionnaire) see table 6.2. It then followed by carrying out 64 household interviews with house owners who owns modern houses in Sango village (using a standardised household questionnaire) and then followed by 8 in-depth household interviews (multi-locational households) who owns modern houses in the village of origin (Sango village). Other formal and informal discussions were conducted with villagers, officials, etc. The other methods or techniques or tools that were also employed were: observations (understanding people's behaviour or things through observing), transect walk (move around the village to see what is happening), seasonal calendar (event periods in a year).

The sources of information were heads of households with 'modern' houses or individual multi-locational households who owns 'modern' house in Sango village, housekeepers, and parents of house owners, relatives, local officials, practitioners, academicians and international experts. It has also captured information from local officials (Village Executive Officer - Mr. Minde; Ward Executive Officer (WEO) and Chairman of the village Mr. Telesphory Tenga); practitioners (Mr. Christopher

Sanga Christopher a Land Officer of Moshi district, Mzee Poteka and Mama Kombe of Moshi Municipality); academicians (Dr. Nguluma, Dr. Swai at Ardhi University and Prof. John Kessy of Sokoine University); Ministry of Lands, Housing and Human Settlements Development and Kilimanjaro National Park (KINAPA). The methods used and sources of data are shown in table 6.2.

Table 6.2: The methods applied and sources of data collection.

S/n	Type of interviewed participants/ actors	Methods applied	Sources of data	Location of interviewed participants	Number of interviewed participants	Information required
1	Ministry of Lands, Housing and Human Settlement Development and KINAPA	Formal and informal discussions (requested appointment)	Mr. Lugala and Mrs. Misigaro Head Survey Department, Village Section and Master Plan section Mr. Lufungulo-KINAPA	Dar es Salaam	3	Accessing Moshi Master Plan (1974-1994 and 1995-2015), Village maps, and know whether there are plans to ensure development control on the slopes of Mt. Kilimanjaro (Sensitive Area)
2	Ardhi University and Sokoine University	Formal and informal discussions (requested appointments)	Prof. John Kessy, Dr. Nguluma, Dr. Swai, etc.	Dar es Salaam	7	Intellectual input on the topic of housing investment in the village of origin of MLHs, i.e. rationale/motives for housing investment, implication to village space and the environment.
3	Moshi Municipality (Department of Spatial Planning and Environment)	Official interview (requested appointments)	Head Town Planner (Mzee Poteka) and Environment Section (Mama Kombe)	Moshi Town	2	Moshi is expected to be a secondary city in 2016 therefore, wanted to understand the proposed extension of Moshi Town boundaries (i.e. Villages to be included in the new boundary) also, understand the challenges of housing investments in the villages on the slopes of Mt. Kilimanjaro. Accessing to Moshi Master Plan (1974-1994 and 1995-2015), Village maps and know whether there are plans to ensure development control in the villages on the slopes of Mt. Kilimanjaro (Sensitive Area)
4	Moshi district (Department of Spatial Planning and Environment)	Official interview, formal and informal discussions	Moshi District Executive Director (permission letter to conduct interviews), Moshi rural head of the land section (Mr. Sanga), Surveyor (Mr. Maliki), Planner (Mr. Richard), and MKURABITA representative (Mr. Shayo).	Moshi Town and Rural	4	To familiarize Moshi and get access to formal permission and access to secondary and primary data, including their perception on the expansion of boundaries of Moshi Town and housing investments in the village on the slopes of Mount Kilimanjaro.
5	Kimochi Ward Executive Office	Official interview	Kimochi Ward Executive Officer	Moshi Rural	1	Perception on the extension of Moshi town boundaries, engulfing village farmland space. The rate of multi-locational households in the village in relation to housing investments in the village, farmland space transformation and environment challenges contributed by housing investments in the villages on the slopes of Mt. Kilimanjaro.

6	Sango Village Executive Office	Official Interview, formal and informal discussions	Sango Village Executive Officer (Mr. Minde), Village Chairman (Mr. Tenga) and one village member (Mr. Mrema)	Sango Village	3	Perception on the extension of Moshi town boundaries, engulfing village farmland space. The rate of multi-locational households in the village in relation to housing investments in the village, farmland space transformation and environment challenges contributed by housing investments in the villages on the slopes of Mt. Kilimanjaro.
7	Households with 'modern' houses	Households standardised questionnaire, observations, transect walk, seasonal calendar.	Heads of households with 'modern' houses (or representatives such as house guards, parents of house owners or relatives).	Sango Village	64	Rationale/motives for housing investments in their village of origin. Also to capture their socioeconomic data and their perception in relation to housing investments in the village, farmland space transformation and environment challenges contributed by housing investments in Sango villages.

Source: Author's own construct, 2014/2015

The following are the methods or tools or techniques which were used to capture empirical data in detail.

Official interviews

The official interviews were very important in order to understand the level of awareness of, the research issue and how is it being addressed at central and local government levels, including academic institutions. It begins from the Ministry of Lands, Housing and Human Settlements Development (MLHHSD); academic institutions; to Moshi municipality narrowing down to Moshi district, then to Kimochi ward and finally to Sango village officials and experts.

Through these authorities it was easier to identify areas of weaknesses that the study needs to address. Also, these institutions stand as 'gatekeepers' it was through them that I got the permission to conduct this research in the case study area and access data to respond to the research questions. Through the Ministry of Lands (Mr. Lugala), I was able to access Moshi district village maps, including Sango village map, and know whether there are plans to ensure development control in the villages on the slopes of Mt. Kilimanjaro (sensitive area). Again, through Mzee Poteka (Town planner-Moshi municipality) I was able to access Moshi Master Plan (1995-2015) I was also able to get an overview of the expansion of Moshi town. He argued that, part of Sango village will be part of the Moshi Municipality (see proposed new boundary of Moshi town). This was important because one of the case study area selection criteria was a village which is proposed to be part of Moshi municipality so that the recommendations made can somehow easily be implemented. Also, through Mr. Sanga (head land officer-Moshi district) who on behalf of the Moshi District Executive Director (DED) was able to process the research permission letter on time. The discussion I had also with Prof. John F. Kessy (Sokoine University-Tanzania) was also rewarding. In the sense that, he provided me with the best input on why multi-locational households invest nice houses in their village of origin in Moshi which concurs with the findings I got from Sango village. The information about the phenomenon under study was also captured from Dr. Nguluma and Dr. Swai both from Ardhi University-Tanzania. Through these interviews I had also plenty of empirical information about the case study area (see more officials and explanations in the findings chapters).

Household data collection

The households data collection process had started by introducing in the village authority see figure 6.5. This was fundamental in order to get permission and some introductory insights about this village

before conducting the household surveys and interviews. The methods or instruments and sources of data which were used during the data collection process in Sango village are explained below.

Figure 6.5: The researcher being introduced to Sango Village Committee Member (Mr. Mrema).

Source: Author, January, 2015

The main methods and instruments which were used to capture households' information were observational, transect walk and seasonal calendar. Then it was followed by closed interviews (household survey) and in-depth interviews.

Observational

The information which was collected through observational method (understanding people's behaviour or things through observing) was: identification of the modern houses, identification of sources of building materials, magnitude of housing investments, environmental and spatial challenges resulting due to housing investment etc. The techniques/tools used to capture the information includes: researcher thought experiment, notes taking, photo taking etc. Also, through this method the researcher was able to see and document some environmental and spatial challenges contributed by housing investments in Sango village. The sources of information were: the whole village, house owners, and villagers.

Transect walk

The transect walk helps the researcher to move around and see what is happening in the village. This was possible under the help of indigenous villagers. The researcher used the three roads (Kilimani, Lowasi and Sango) in Sango village to access households with modern house and was able to identify the modern houses and conduct interview.

A seasonal calendar

Through the seasonal calendar (events period in a year) the researcher was able to know and plan in advance when to conduct the household and official interviews. The researcher prepared an event list from December, 2014 to April, 2015; it was also updated through talking with the indigenous people, individual multi-locational households, house owners, housekeepers, parents of house owners, relatives, local officials, etc. For example, the large numbers of multi-locational households who own

these modern houses are available during Christmas and Easter. Thus, it was good to conduct household interviews from mid-December to mid-January or/and from mid-March to mid-April.

It was also noted that, from January through April is usually a period of cultivation (maize and beans) in the lowland areas of the village. Therefore, in the morning it was very rare to meet people at home. Most of the households were available at home around 13-17 hours except during the holidays (Sunday, Christmas and Easter) or when there was an appointment. It was also realized that, around 17 hours onwards is local brew "mbege" drinking hours.

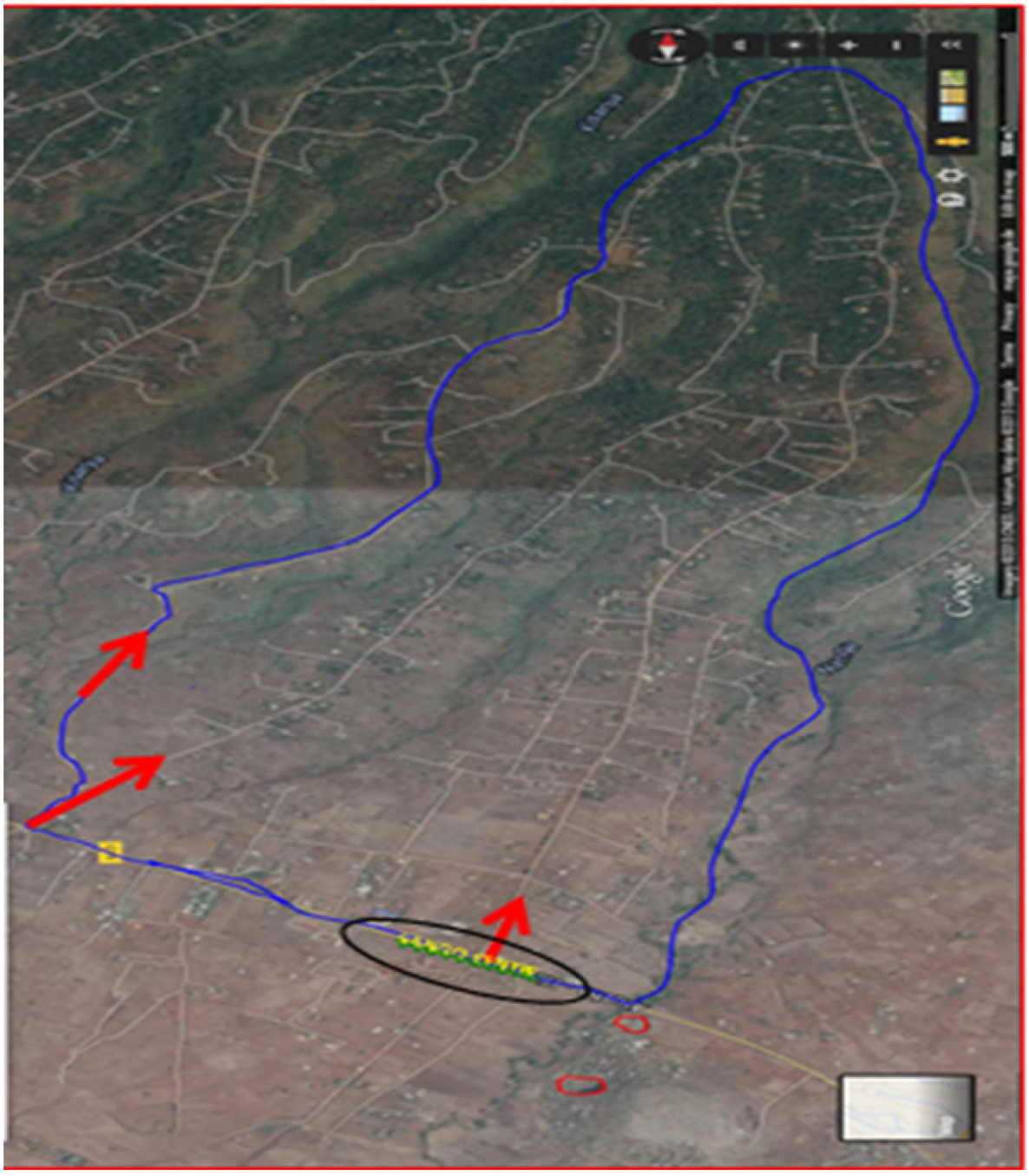
This study employed a purposeful sampling strategy; therefore, the target was to interview the multi-locational households who visit their village of origin during occasions, holidays or weekends (Christmas, Easter, Saturday or Sunday). The target was to survey 64 households who own modern houses in Sango village. Therefore, the researcher used to go there around 10 hours in the morning in order to familiarize with the village and the villagers, and conduct household surveys with those who were available. In the morning and afternoon it was also possible to meet households (the older and children) but many were available at home from 13-17 hours.

Closed interviews (household survey)

Interview guides refer to a list of questions or fairly specific topics to be covered in a research project (Bryman, 2012: 471 cited in Tamanja, 2014: 68). Interview guides are usually employed in qualitative research and can be structured or semi-structured. They are flexible in use, but serve to keep the researcher focused, to cover all relevant issues during interviews (ibid.). The main purpose of conducting the closed interviews (household survey) was to capture the socioeconomic data of the households who owns modern houses in Sango village. It was also intended to get the general overview of some key issues for this study such as: rationale/motives for investing a modern house in the village of origin, sources of building materials for housing construction, sources of funds for housing investments together with environmental and spatial challenges resulting due to housing investments in the village.

The main method, technique or tool used to capture the information was a standardised household questionnaire. This tool is often associated with quantitative research and is widely used for collecting quantitative data in survey research. The questionnaire also enables one to collect standardised information in respect of the same variables for everyone in the sample selected, making it an indispensable tool in gathering primary data about people, their behaviour, attitudes, opinions and awareness on specific issues (Bryman, 2012:715 cited in Tamanja, 2014:68). It was supported with other techniques or tools such as taking notes, photo taking, transect walk (move around to see what is happening). The researcher used the three access roads (Kilimani, Lowasi and Sango) in accessing Sango village and was able to identify the modern houses and conduct interview with house owners (see figure 6.6 below).

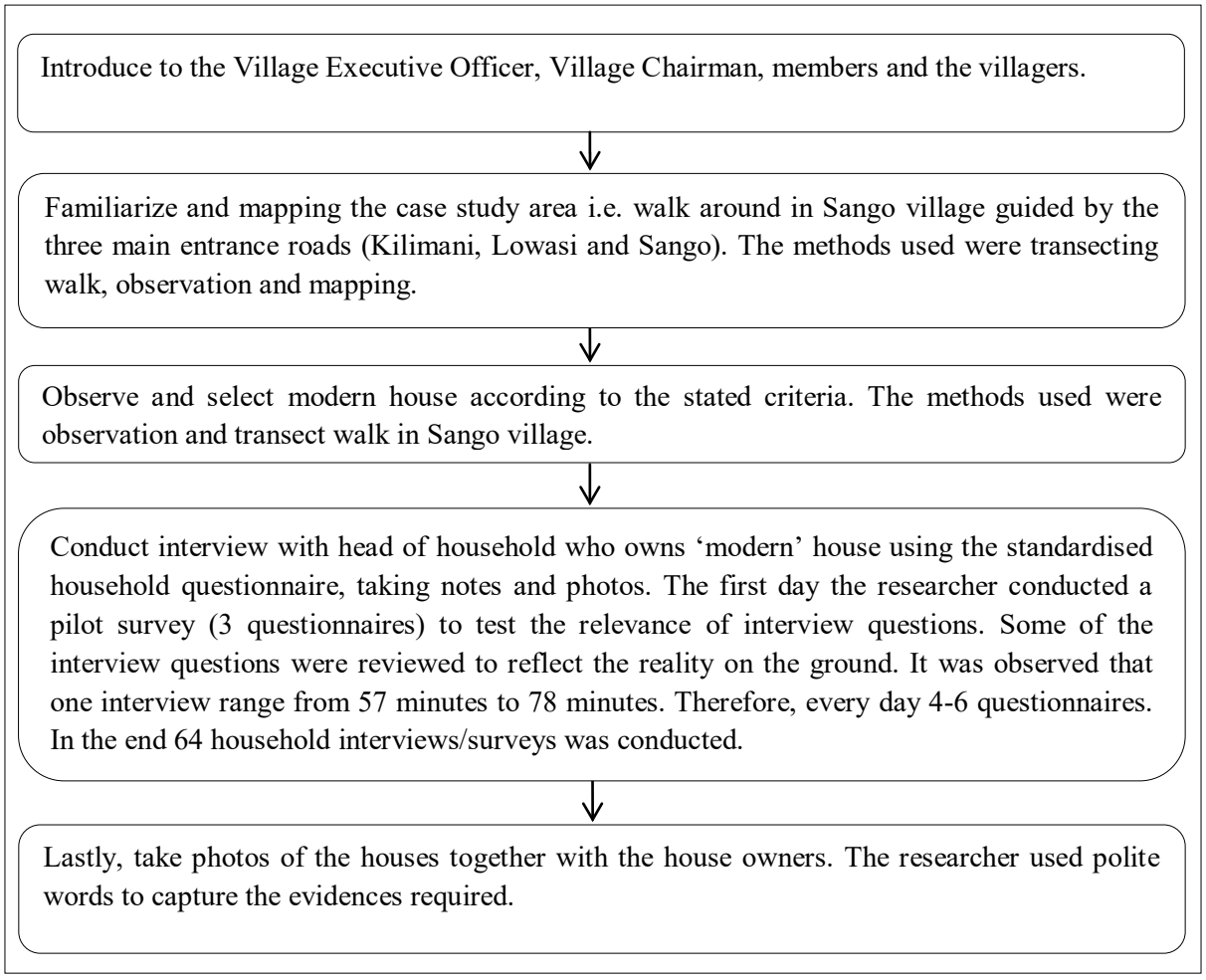
Figure 6.6: The three access roads (Kilimani, Lowasi and Sango roads) in Sango village used to access and interview/survey the 64 households.



Source: Fieldwork, January and April, 2015

Before conducting the 64 household interviews/surveys, the researcher had piloted 3 standardised household questionnaires to test the relevance of the interview questions see figure 6.7 below. The pilot study was rewarding because it had helped the researcher to change some of the interview questions in order to reflect the reality on the ground in responding to the research questions. Maxwell (2005:93) advises that, if at all possible, we should pilot-test our interview guide with people as much like our planned interviewees as possible, to determine if the questions work as intended and what revisions we may need to make.

Figure 6.7: The detailed household socioeconomic data collection in Sango village.



Source: Author's own construct, 2015.

Before, during and after the household survey analysis, the researcher had some criteria to select the households for an in-depth interview in order to provide much evidence and in detail of households who owns modern houses in the village of origin (Sango village) but also who are multi-locational. The selection criteria include; multi-locational households, varieties of motives for housing investments in the village, types and sizes of houses invested, gender and age of house owners, employment status of the house owners, and house transformation forms/types.

In-depth interviews

The information which was collected through the 8 household in-depth interviews include: individual multi-locational households life trajectories, the detailed motives and evidence for investing a modern house in the village of origin, sources of materials for housing construction, sources of fund for housing financing, opinions on environmental and spatial challenges resulting due to housing investments in the villages on the slopes of Mount Kilimanjaro (for more explanations and evidences see the findings chapters). The techniques/tools used to capture the required information were; open ended questionnaires, taking notes, recording, photo taking, and transect walk (move around to see what is happening). The researcher used the three roads in accessing Sango village and was able to identify the modern houses and conduct interviews. The sources of information were individual multi-locational household (house owners), parents of house owners, relatives and housekeepers.

Maxwell (2005:83) claimed that, what we need as researchers are relationships that allow us to ethically gain the information that can answer our research questions. In qualitative studies, the researcher is the instrument of the research, and the research relationships are the means by which the research gets done (ibid: 83). Adding that, thinking about what we can give to participants in return for the time and inconveniences of being involved in our research is paramount. What can we do to make people feel that this has been a worthwhile experience and that they aren't just being "used"? What it's appropriate to offer depends on the setting individual and on what we ask that person to do, but some acknowledgement of our appreciation is almost always required.

Quoting one of his students, Caroline Linse, who reminded him, that, "the interview isn't over until the thank you note is delivered" (ibid: 85). Apart from saying 'thank you' to the respondents, the researcher promised the respondents (house owners) that, the outcomes of the study is to ensure that these modern houses are transferred from "dead assets" to "live assets" so that the owners could use them as collateral to access loans from financial institutions. Also, promised that the research findings will recommend renting out the houses to tourists who visit Mount Kilimanjaro. They were very happy and prepared to offer adequate cooperation and information.

Spatial data collection

The spatial data such as topographical maps of the case study area was collected from Moshi Municipality and the Ministry of Lands, Housing and Human Settlements Development (MLHHSD) through the survey department/section. The satellite images to show the trend of land transformation and housing densities in the case study area (Sango village) was captured from Google earth (2001-2015). The end of the data collection phase had initiated the data analysis phase and interpretation of the research findings. The end product was the report/dissertation.

6.9 Data analysis, interpretation and reporting

Maxwell (2005: 95) states that one of the most common problems in qualitative studies is letting our analysed field notes and transcripts pile up, making the task of final analysis much more difficult and discouraging. Adding that, the experienced qualitative researcher begins data analysis immediately after finishing the first interview or observation, and continues to analyse the data as long as he or she is working on the research, stopping briefly to write reports and papers. The same was observed in Coffey and Atkinson (1996:2) cited in Maxwell (2005: 95) that, "we should never collect data without substantial analysis going on simultaneously". This is a design decision, and how it will be done should be systematically planned (ibid: 95).

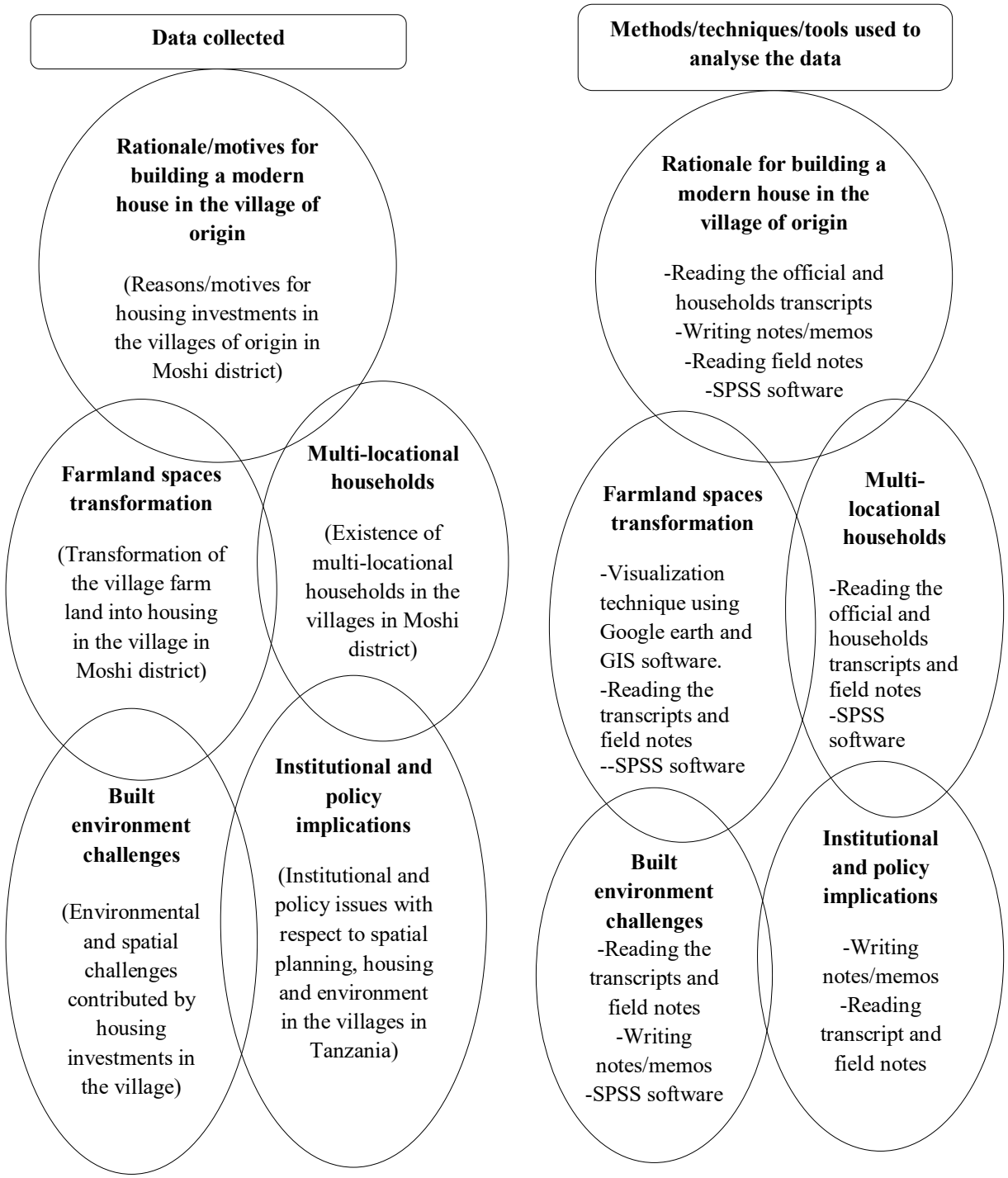
This strategy was adopted by the researcher. I was collecting the data (field notes and transcripts) at the same time analysing it to get a brief overview of the empirical findings responding to the research questions. This activity was done immediately after the first interview/survey.

The initial step in qualitative analysis is reading the interview transcripts, observational notes, or documents that are to be analysed (Emerson et al., 1995:142-143) cited in Maxwell (2005:96). Listening to interview tapes prior to transcription is also an opportunity for analysis, as is the actual process of transcribing interviews or of rewriting and reorganising our rough observation notes. During this reading or listening, we should write notes and memos on what we see or hear in our data, and develop tentative ideas about categories and relationships (ibid: 96).

Therefore, in qualitative research there are three main analytical groups. These are (1) memos, (2) categorizing strategies (such as coding and thematic analysis), and (3) connecting strategies (such as narrative analysis) (Maxwell and Miller, n.d.) cited in Maxwell (2005:96). Unfortunately, many texts and published articles deal explicitly only with coding, giving the impression that coding is qualitative data analysis.

In fact, most researchers informally use other strategies as well; they just don't describe these as part of their analysis. Maxwell wanted to emphasize that reading and thinking about our interview transcripts, and observation notes, writing memos, developing coding categories and applying these to our data, and analysing narrative structure and contextual relationships are all important types of data analyses. Their use needs to be planned (and carried out) in order to answer our research questions and address validity threats (ibid: 96). These analysis techniques assisted by different software were used by the researcher with the very main aim of responding to the research questions see figure 6.8 below and the findings chapters.

Figure 6.8: The specific data collected and methods used to analyse the data.



Source: Author's own construct, 2015

The process of analysis involved reading and describing transcripts, observation/field notes, photos and satellite images. The data collected were analysed, interpreted and presented using text, quotations, percentages, charts, graphs, tables, maps, images and photos. To do all this various software were used. These include Statistical Package for Social Sciences (SPSS) to analyse the quantitative data (the 64 household questionnaires) to provide statistical evidence of the research questions. For example, the socioeconomic data on house owners, including, provision of statistical evidences on whether the house owners are multi-locational households or not.

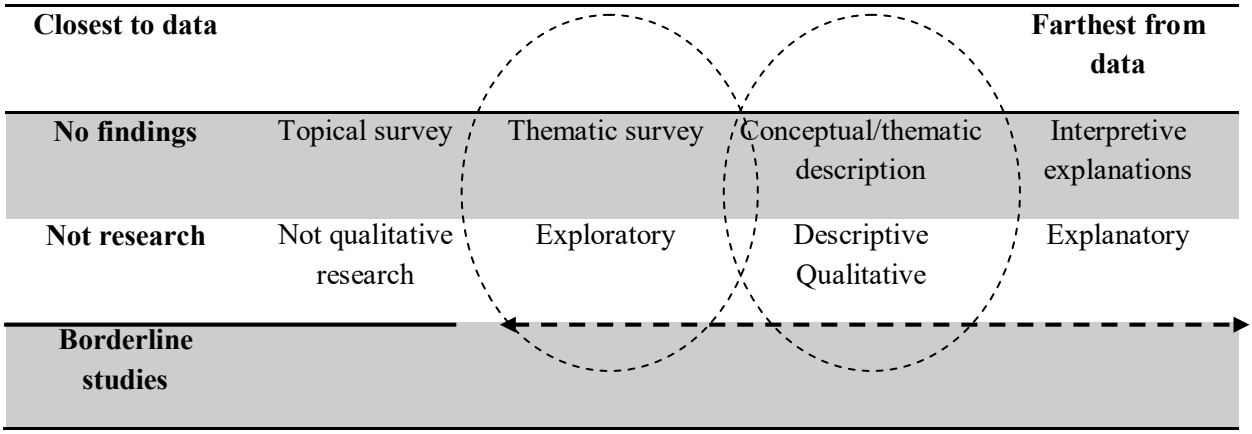
On the other hand, the qualitative data, such as those which were obtained from 8 in-depth household interviews were analysed manually. For example, through writing memos and taking quotes from respondents (for example, why they had decided to invest in residential 'modern' house in their village of origin). Also, the qualitative data were analysed through the use of software such as: Microsoft excel in preparing figures, charts and graphs. Again, the spatial data (satellite images) were analysed through tracing the satellite images to see the trend in the case study area from 2001 to 2015. This was possible through satellite image analysis by using Google earth and also photo analysis. The researcher was able to respond to the research question on spatial and environmental challenges contributed by housing investments in the village of origin (Sango village).

Data interpretation and report writing

The findings were interpreted and it had appeared that they are more exploratory and descriptive qualitative see figure 6.9 below which shows the scale for rating qualitative studies developed by Sandelowski and Barroso (2003) cited in Oktay (2012:115). The scale ranges from studies with "no findings" to those that provide "interpretive explanations". In a "thematic survey," the researcher identifies common themes, but the themes are not fully described or explained. Instead, like a quantitative study, they are counted and presented as a frequency list. In a "conceptual/thematic description" study, themes are identified and described. Data may be presented to support the theme and to show its dimensions. However, the themes identified are not related to each other, nor are their categories, consequences, dimensions, or conditions developed. Because the themes are simply listed and not related to each other, they do not constitute a fully developed theory (Oktay, 2012:114).

Grounded theory falls into the most abstract level, "interpretive explanation" studies, which transform data to produce grounded theories, ethnographies or otherwise fully integrated explanations of some phenomenon, event or case….In contrast to findings that survey topics and themes without linking them, or that conceptually or thematically described elements of experience without explaining them, interpretive explanations offer a coherent model of some phenomenon, or a single thesis or line of argument that addresses causality or essence. Moreover, these explanations fully attended to relevant variations in both sample and data (Sandelowski and Barroso, 2003:914 cited in Oktay, 2012:115). Studies that are "thematic surveys" and "conceptual/thematic descriptions" are not appropriately labelled "grounded theory" studies (Oktay, 2012:115). This research ranges between thematic survey and conceptual/thematic description. Therefore, it is an exploratory and descriptive qualitative study/report (see the findings chapter).

Figure 6.9: The typology of qualitative findings.



Source: Sandelowski and Barroso, (2003) cited in Oktay, (2012:115) modified by the author, 2015.

6.10 Validity

Validity refers to the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account (Maxwell, 2005:106). Though, the validity of our results is not guaranteed by following some prescribed procedure (ibid: 105). As Brinberg and McGrath (1985:13) put it, "validity is not a commodity that can be purchased with techniques" (cited in Maxwell, 2005:105); instead, it depends on the relationship of our conclusions to reality, and there are no methods that can completely assure that we have captured this. However, validity threats are made implausible by evidence, not methods; methods are only a way of getting evidence that can help us rule out these threats (ibid: 105).

There are important differences between quantitative and qualitative designs in the ways they typically deal with validity threats. Quantitative and experimental researchers generally attempt to design, in advance, controls that will deal with both anticipated and unanticipated threats to validity (Maxwell, 2005:107). These include control groups, statistical control of extraneous variables, randomized sampling and assignment, the framing of explicit hypotheses in advance of collecting the data, and the use of tests of statistical significance. These prior controls deal with most validity threats in an anonymous, generic fashion; as Campbell put it, "randomization purports to control an infinite number of 'rival hypotheses' without specifying what any of them are" (1984:8 cited in Maxwell, 2005:107).

Qualitative researchers, on the other hand, rarely have the benefit of previously planned comparisons, sampling strategies, or statistical manipulations that "control for" plausible threats, and must try to rule out most validity threats after the research has begun, using evidence collected during the research itself to make these "alternative hypotheses" implausible (Maxwell, 2005:107). This strategy of addressing particular validity threats after a tentative account has been developed, rather than by attempting to eliminate such threats through prior features of the research design, is, in fact, more fundamental to the scientific method than is the latter approach (Campbell, 1988; Platt, 1964).

However, this approach requires us to identify the specific threat in question and to develop ways to attempt to rule out that particular threat. This conception of validity threats and how they can be dealt with is a key issue in a qualitative research (Maxwell, 2005:107). The qualitative researchers generally deal with validity threats as particular events or processes that could lead to invalid conclusions, rather than as generic "variables" that need to be controlled.

The broader types of threats to validity that are often raised in relation to qualitative studies are researcher bias and the effect of the researcher on the individuals studied, often called reactivity (ibid:

108). The understanding of the possible validity threats for this study and how they were addressed see the explanation below.

Researcher bias: two important threats to the validity of qualitative conclusions are the selection of data that fit the researcher's existing theory or preconceptions and the selection of data that "stand out" to the researcher (Miles and Huberman, 1994:263; Shweder, 1980 cited in Maxwell, 2005:108). Researcher bias occurs when "observations and interpretations are clouded by perceptions and personal opinions of the researcher. Emotional pitfalls can also contribute to researcher bias" (Padgett, 2008:184 cited in Oktay, 2012:116). Both of these involve the subjectivity of the researcher, a term that most qualitative researchers refer to "bias". Though, it is impossible to deal with these issues by eliminating the researcher's theories, beliefs, and perceptual "lens".

Qualitative research is not primarily concerned with eliminating variance between researchers in the values and expectations they bring to the study, but with understanding how a particular researcher's values and expectations influence the conduct and conclusions of the study (which may be either positive or negative) and avoiding the negative consequences. Explaining our possible biases and how we will deal with these is a key task of our research (Maxwell, 2005:108).

The researcher is from the case study area (Kilimanjaro region); however, the methodology (e.g. Cases selection criteria, data collection methods, techniques, tools and sources, etc.) were set to ensure that bias is limited (more explanations on how this research was done see this chapter).

Reactivity: it means a bias that results because the presence of the researcher causes a change in the setting or the respondents (Padgett, 2008:184 cited in Oktay, 2012:116). The influence of the researcher on the setting or individuals studied, generally known as "reactivity", is a second problem that is often raised about qualitative studies (Maxwell, 2005: 108). Trying to 'control for' the effect of the researcher is appropriate to a quantitative, "variance theory" approach, in which the goal is to prevent researcher variability from being an unwanted cause of variability in the outcome variables.

For example, the standardised household questionnaires and household interviews were employed to control at the same time to ensure flexibility of the respondents (the house owners in Sango village) towards responding to the interview questions.

However, eliminating the actual influence of the researcher is impossible (Hammersley and Atkinson, 1995 cited in Maxwell, 2005:108), and the goal in qualitative study is not to eliminate this influence, but to understand it and to use it productively (Maxwell, 2005: 109).

For interviews, reactivity-more correctly, what Hammersley and Atkinson (1995) called "reflexivity", the fact that the researcher is part of the world he or she studies-is a powerful and inescapable influence; what the informant says is always influenced by the interviewer and the interview situation. While there are some things we can do to prevent the more undesirable consequences of this (such as avoiding leading questions), trying to "minimize" our effect is not a meaningful goal for qualitative research. What is important is to understand how we are influencing what the informant says, and how this affects the validity of the inferences we can draw from the interview (Maxwell, 2005:109).

Respondent bias: it occurs when respondents themselves misrepresent themselves or their cultures in an attempt to please the researcher (called "social desirability" in quantitative research) or to make themselves look good (Padgett, 2008:184 cited in Oktay, 2012:116). The respondents were given freedom of expression, guided by the interview questions. Generally speaking, these pieces of advice were seriously considered especially during the household surveys and the in-depth interviews with 'modern' house owners in Sango village. Although methods and procedures do not guarantee validity, they are nonetheless essential to the process of ruling out validity threats and increasing the credibility of our conclusions (Maxwell, 2005:109).

Addressing the validity threats in this research

The pinpointed methods that were used by the researcher to rule out the threats of validity, are also reflected in the literature (see Oktay, 2012; Padgett's, 2008; Maxwell, 2005:110; Miles and Huberman, 1994; Becker, 1990; and Patton, 1990 cited in Oktay, 2012). For Padgett cited in Oktay (2012: 116), for example, claimed that, each of the "threats to trustworthiness" can be minimized by applying a set of techniques consisting of "prolonged engagement," "triangulation," "peer debriefing/support," "member checking," "negative case analysis," and "audit trail". The fundamental process in all of these tests is looking for evidence that could challenge our conclusions or make the potential threats implausible (Maxwell, 2005:109). Therefore, this study has employed the following methods and procedures to reduce such threats of validity.

Respondent validation or member checks: respondent validation (Bryman, 1988:78-80; Lincoln and Guba, 1985 cited in Maxwell, 2005:111, referred to this as "member checks") is systematically soliciting feedback about our data and conclusions from the people we are studying. This is the single most way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying our own biases and misunderstandings of what we observed. However, participants' feedback is no more inherently valid than their interview responses; both should be taken simply as evidence regarding the validity of our account (cf. Hammersley and Atkinson, 1995 cited in Maxwell, 2005:111).

The researcher ensured that the primary data are captured from the right source (i.e. house owners in Sango village). However, additional data were captured from other household members (e.g. Parents of house owners), including housekeepers (who sometimes lives in these houses in the absence of the house owners) in order to reduce "respondents bias"(without this technique the researcher might interview only the housekeepers with a thought that they are the house owners, see the findings chapters).

"Rich" data: both long term participant observation and intensive interviews enable us to collect "rich" data, data that are detailed and varied enough that they provide a full and revealing picture of what is going on (Becker, 1970: 51-62 cited in Maxwell, 2005:110). In interview studies, such data generally require verbatim transcripts of the interviews, not just notes on what we felt were significant. For observation, rich data are the product of detailed, descriptive note taking (or videotaping and transcribing) of the specific, concrete events that we observe (Emerson, Fretz, and Shaw, 1995 cited in Maxwell, 2005:110).

Becker (1970) further argued that, such data counter the twin dangers of respondent duplicity and observer bias by making it difficult for respondents to produce data that uniformly support a mistaken conclusion, just as they make it difficult for the observer to restrict his observations so that he sees only what supports his prejudices and expectations (p. 53 cited in Maxwell, 2005:110).

This study has a plenty and rich data (see the findings chapters) which were captured (using a household questionnaire, in-depth interviews, observation methods, etc.) from the house owners and multi-locational households in Sango village. The idea was to reduce "researcher's bias," "reactivity," and "respondent's bias".

Peer debriefing: the researcher had made several presentations in the PhD colloquium at TU-Dortmund in order to test the relevance of the topic, methods and sources of data employed, including the findings of the study. Also, through formal and informal discussions with colleagues (practitioners and academics) there were quite a number of appreciation and constructive comments made. Lastly, several discussions with supervisors were a milestone towards shaping the study and reduce chances of validity threats especially before the data collection process.

Intervention: In field research, the researcher's presence is always an intervention in some ways, and the effects of this presence can be used to develop or test ideas about the group or topic studied (Maxwell, 2005:111). The researcher did the whole field data collection process alone, including the data analysis. This was very important in order to intervene whenever problems arise. This had therefore in some way handed scientifically the threats of validity.

Quasi-statistics: many of the conclusions of qualitative studies have an implicit quantitative component. Any claim that a particular phenomenon is typical, rare, or prevalent in the setting or population studied is an inherently quantitative claim, and requires some quantitative support (Maxwell, 2005:113).

Becker (1970) coined the term "quasi-statistics" to refer to the use of simple numerical results that can be readily derived from the data. As he argued that, one of the greatest faults in most observational case studies has been their failure to make explicit the quasi-statistical basis of their conclusions (pp. 81-82 cited in Maxwell, 2005:113). Quasi-statistics not only allow us to test and support claims that are inherently quantitative, but also enable us to assess the amount of evidence in our data that bears on a particular conclusion or threat, such as how many discrepant instances exist and from how many different sources they were obtained (Maxwell, 2005:113).

Therefore, through the use of the household questionnaire (which was analysed by using SPSS software) the study was able to provide statistical evidences to support the findings of the phenomenon under study.

6.11 Triangulation

Triangulation means collecting information from a diverse range of individuals and settings, using a variety of methods (Maxwell, 2005:112). This is a mixed method study, which has employed different data collection methods (household survey, in-depth interview, official interviews, observation, transect walk, seasonal calendars, formal and informal discussions) and different sources of data (house owners, practitioners, academics, villagers etc.) in order to reduce "researcher's bias," "reactivity," and "respondent's bias". More explanation and evidences on how it was done are provided under the data collection section and also reflected in the findings chapters.

6.12 Generalisation in qualitative research

Qualitative researchers usually study a single setting or a small number of individuals or sites, using theoretical or purposeful rather than probability sampling, and they rarely make explicit claims about the generalizability of their accounts (Maxwell, 2005:115). However, it is important to distinguish between what is called "internal" and "external" generalizability (Maxwell, 1992 cited in Maxwell, 2005:115). Internal generalizability refers to the generalizability of a conclusion within the setting or group studied, while external generalizability refers to its generalizability beyond that setting or group. Internal generalizability is clearly a key issue for qualitative case studies; it corresponds to what Cook and Campbell (1979) called "statistical conclusion validity" in quantitative research (Maxwell, 2005:115). The descriptive, interpretive, and theoretical validity of the conclusions of a case study all depends on their internal generalizability to the case as a whole. In contrast, external generalizability is often not a crucial issue for qualitative studies. Indeed, the value of a qualitative study may depend on its lack of external generalizability in the sense of being representative of a larger population (ibid: 115).

Therefore, what has been observed from the house owners in Sango village can be generalized to the whole village, including all the villages on the slopes of Mount Kilimanjaro, because they have similar characteristics (inhabited by "Wachaga", similar cultures etc.). For instance, this study has

generalized that the modern residential houses that we see in Sango village and of course all the villages surrounding Mount Kilimanjaro are because of multi-locational households.

Though, it is also possible to use this finding for external generalization to all the villages in Tanzania and in the countries in the global south. For example, by arguing that, most of the 'modern' residential houses that we see in the villages in Tanzania are because of multi-locational households. This is because there are evidences (though inadequately documented) of the existence of multi-locational households who still maintains linkage with their villages of origin and one of the strategies of maintaining this linkage is through housing investments in their village of origin.

However, these villages are inhabited by different tribes with different economic, social and cultural settings. This could bring mixed results. Therefore, the large sample size (quantitative approach) could provide some broader statistical evidences from different villages in Tanzania and in other countries in the global south, though we can apply theoretical generalizations. However, it was not the focus of this study. The focus of this study was to explore the motives for housing investments in the village of origin, including their implications on the village land space and the environment, especially in the context of Kilimanjaro region, Tanzania.

6.13 Concluding remarks

As it has been explained above, this study has employed Maxwell (2005) qualitative research design model, though mixed with quantitative components. It has, therefore, begun with the goal of the study, followed by the conceptual framework, then the research questions, followed by the methodology to answer the research questions and lastly, treating the validity threats. The next chapter gives an overview of the village (rural) housing situation and the institutional framework for rural housing in the context of Tanzania.

CHAPTER SEVEN

RURAL HOUSING CONDITION AND THE INSTITUTIONAL FRAMEWORK FOR RURAL HOUSING IN TANZANIA

7.1 Introduction

Before we get into detail into the phenomenon under study, especially in responding to the question on why multi-locational households invest in 'modern' residential housing in their village of origin, including the spatial and environmental challenges contributed by these investments, first, we need to understand the rural housing condition and the institutional framework for rural housing in Tanzania.

7.2 Housing condition in general

Tanzania rural housing development is in line with the government as defined in the Human Settlement Development Policy of 2000 whom its goals are to promote development of human settlements that are sustainable and to facilitate the provisions of adequate and affordable housing to all income groups in Tanzania (URT, 2009). The need to develop a National Human Settlements Development Policy arises from the government's resolve to address and reverse the deterioration of human settlements conditions in the country and its recognition and commitment to the decision by the United Nations Habitat Agenda II and the Istanbul Declaration (ibid).

This is also reflected in the cluster I and II of the National Strategy for Growth and Reduction of Poverty in Kiswahili "MKUKUTA", which is about the improvement of quality of life and social well-being. Among other goals is to ensure access to clean, affordable and safe water, sanitation, decent shelter and safe and sustainable environment and thereby, reduced vulnerability from environmental risks. There are also national development strategies which affect land administration and housing development/investment. These include the Tanzania Development Vision 2025 and the Property and Business Formalization Programme (MKURABITA) and Green Revolution (Kilimo Kwanza) Initiatives, 2009.

It has also been observed that, these strategies are also linked to International organisations (such as UN-Habitat) strategies, for example, the recently Sustainable Development Goals, 2015 (particularly goal 10, 13 and 15). These all intend to ensure sustainable development in both urban and rural areas.

Unfortunately, the development of human settlements in the country has neither been adequate nor sustainable for both rural and urban areas to date. The two main objectives of the 2000 National Human Settlements Development Policy are adequate and affordable shelter for all and sustainable human settlements. Shelter is seen in its entirety to include dwellings and necessities linked to them such as sanitation, drainage facilities and other utility services (water and electricity). The main task of the Government over the last one and a half decades has been to provide an enabling environment to promote the development and provision of housing to its people in both rural and urban areas.

This is in line with the 1996 Istanbul Declaration and the Global Plan of Action on Shelter and Human Settlements, otherwise referred as the Habitat Agenda. The Government, through the responsible Ministries demonstrated its commitment to implement the Habitat Agenda, inter alia, by putting in place the 2000 National Human Settlements Development Policy for the Tanzania Mainland as well as the establishment of the policy for Tanzania Zanzibar. As a step forward, the Government also formulated the National Housing Programme in 2002 to implement the policy. Whereas the Policy provides a framework for action, the programme presents a road map for all actors and stakeholders towards the attainment of the goal. The strategies are underway to review the available housing policy which leads as guidelines to proper development plan for the dwelling

facilities. This will be a step forward for the implementation of the 1996 Istanbul Declaration and the Global Plan of Action on Shelter and Human Settlements (URT, 2006:166).

The villagisation and "nyumba bora" housing campaign 1971/76 were also a milestone towards addressing the housing challenges in the rural/village areas in Tanzania. Also, the preparation of the recent Tanzania Housing Development Policy draft (2009) shows the good will of the government of the United Republic of Tanzania towards addressing the housing challenge both in urban and in the rural areas.

However, many households in rural areas still use grasses, leaves or bamboo for roofing at 55.7 percent in 2000/01 and 48.2 percent in 2007 (URT, 2009:34). Though, the Household Budget Survey (2007) shows that housing conditions improved across all wealth quintiles and all residence strata, particularly in rural areas. This is reflected in the increased percentages of households with non-earth flooring and durable walls and roofs (see table 7.1).

Table 7.1: The percentage of households with improved housing construction, by wealth quintile and residence, 2000/01 and 2007.

Wealth Quintile	Non-earth floor		Durable walls*		Durable roof**	
	2000/01	2007	2000/01	2007	2000/01	2007
Poorest	10.4	11.3	13.0	19.0	24.7	35.2
2nd	12.6	16.4	15.4	23.2	29.0	45.7
3rd	20.9	29.6	23.3	31.9	41.7	54.8
4th	31.5	40.9	29.1	41.3	52.8	65.8
Least Poor	50.0	60.8	42.6	54.9	69.8	76.6
Area of Residence						
Dar es Salaam	92.4	90.3	88.5	89.9	98.2	97.1
Other urban	61.0	61.9	38.3	50.6	83.7	84.6
Rural areas	12.5	15.6	16.7	21.9	31.2	42.0
Tanzania Mainland	**25.2**	**31.8**	**24.7**	**34.1**	**43.6**	**55.6**

Notes: * Concrete, cement, stone; ** Concrete, cement, metal sheets, asbestos sheets, tiles

Sources: HBS 2007, Hoogeveen et al., 2009

Source: Households Budget Survey, 2007.

On the other hand, the 2011/12 Household Budget Survey had revealed some good progress. The report shows that, in 2011/12 the largest proportion of Tanzania Mainland houses' walls was constructed using baked/burnt bricks (27.3 percent), followed by mud bricks (24.7 percent) and mud and poles or stones (23.6 percent). Large differences existed between Dar es Salaam and other urban areas where most of the houses in Dar es Salaam (96.9 percent) are constructed of concrete, cement and stones compared to 25.8 percent in other urban areas. In rural areas the houses with walls of concrete, cement and stones were only 5 percent. It is also apparent from table 7.2 that there has been a significant increase in the proportion of houses constructed using mud bricks, baked or burnt bricks and concrete or cement or stone between 2007 and 2011/12 Household Budget Surveys'. The overall analysis showed that, most of the households were living in dwellings with floors made of earth (58.5percent) followed by cement (39.4 percent). However, in rural areas 77.3 percent of households were in units with floors made of earth.

These secondary data reveal that, the non-income (housing) poverty is being reduced in rural areas in Tanzania, though at slower pace. The contributions of the multi-locational households towards addressing the rural/village housing poverty are yet to be appreciated.

Table 7.2: The percentage distribution of households' by construction materials and area, Tanzania Mainland, 2000/1, 2007 and 2011/12.

Construction Material	Dar es Salaam			Other Urban Areas			Rural Areas			Tanzania Mainland		
	2000/01	2007	2011/12	2000/01	2007	2011/12	2000/01	2007	2011/12	2000/01	2007	2011/12
House floor												
Earth	6.7	8.7	3.2	38.3	37.1	30.8	86.6	83.1	77.3	74.0	67.0	58.5
Cement, tiles	92.4	90.4	96.5	61.1	61.9	68.4	12.5	15.6	20.0	25.2	31.8	39.4
Other	0.9	1.0	0.3	0.5	0.9	0.8	0.9	1.3	2.8	0.8	1.2	2.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
House walls												
Poles, branches, grass	0.9	1.5	0.0	5.3	4.6	0.2	19.3	16.9	1.0	16.0	13.0	0.7
Mud & poles or stones	5.2	4.7	2.5	13.1	10.9	11.9	21.8	22	31.1	19.4	18.2	23.6
Mud only[3]	2.2	1.9	-	12.1	10.3	-	18.1	12.0	-	16.1	10.7	-
Mud bricks	3.2	1.3	0.3	30.8	22.6	19.0	23.5	26.4	31.0	23.3	23.2	24.7
Baked or burnt bricks	1.3	1.6	0.2	15.9	29.9	42.0	13.7	18.8	28.1	13.2	19.3	27.3
Concrete, cement, stone	87.2	88.3	96.9	22.4	20.7	25.8	3.0	3.1	5.0	11.5	14.8	20.9
Other	0.0	0.5	0.1	0.4	1.0	1.0	0.6	0.9	3.8	0.5	0.9	2.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
House Roof												
Grass, leaves, bamboo	1.1	2.1	0.8	14.3	12.3	7.4	55.7	48.2	38.6	45.8	36.8	27.5
Mud & leaves	0.7	0.4	0.0	1.5	2.6	1.8	12.5	9.2	5.7	10.1	7.1	4.2
Concrete, cement	3.6	1.2	0.6	0.5	0.0	0.3	0.0	0.0	0.1	0.3	0.1	0.2
Galvanized metal sheets/iron sheets	91.7	94.4	95	81.9	84.1	88.5	31.1	41.8	54.2	42.8	55.1	66.3
Asbestos sheets	0.5	0.3	0.4	0.3	0.3	0.3	0.0	0.2	0.3	0.1	0.2	0.3
Tiles	2.4	1.2	3.2	1.0	0.2	1.4	0.1	0.0	0 .2	0.4	0.2	0.8
Other	0.0	0.3	0.0	0.5	0.5	0.3	0.5	0.6	0.9	0.5	0.5	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: National Bureau of Statistics, Household Budget Survey, 2011/12

On top of that, the Tanzania population and housing census reports (2002 and 2012 and the 2011/2012 Household Budget Survey) revealed some similar promising housing improvement results as explained below:

Households number of rooms for sleeping

A room in the census was defined as a part of a dwelling unit enclosed by four walls, floor and roof. A dwelling unit with no portion was considered as having one room. In the 2002 census, information on the number of rooms used for sleeping was collected. Table 7.3 below give the percentage distribution of private households by number of rooms for sleeping; it is revealed that most of the households in Tanzania had two rooms (36.8 percent) followed by one room (33.2 percent) and then three rooms (17.5 percent). Moreover, only about 1 percent of the households had seven or more rooms. This pattern was somehow different from the one observed in 1988 census whereby the highest proportion of households' were using four rooms followed by two rooms and then three rooms (URT, 2006:172).

Table 7.3: The percentage distribution of households by number of rooms for sleeping, 2002.

Number of Rooms	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	100.0	100.0	100.0	100.0	100.0	100.0
1	33.2	29.6	43.4	33.6	29.8	44.4
2	36.8	40.5	26.6	36.9	40.5	26.6
3	17.5	18.2	15.9	17.2	17.8	15.3
4	7.8	7.6	8.3	7.7	7.6	8.0
5	2.4	2.2	3.0	2.3	2.2	2.8
6	1.2	1.1	1.6	1.2	1.1	1.6
7 and more	1.0	0.9	1.2	1.0	0.9	1.3

Source, URT, 2002 and URT, 2006:172

Also, table 7.4 based on the 2012 census report had shown that 62 percent of the households in Tanzania had one or two rooms for sleeping and 22 percent had three rooms for sleeping. Only 16 percent of households had more than three rooms for sleeping. The proportion of households with only one room for sleeping is higher in urban (39 percent) than rural areas (22 percent). Fifty percent of households in Dar es Salaam had one room used for sleeping. There is no marked difference between male and female headed households in the average number of rooms for sleeping (ibid: 140). Kilimanjaro region has shown to have more households (8.5 percent) with more rooms (5 rooms) for sleeping than all the regions in Tanzania mainland. The reasons for this depend on the motives behind such investments, such as prestige motives (see chapter ten).

Table 7.4: The percentage of households by number of rooms for sleeping in Tanzania, 2012 Census.

Region	Average household size	Total	Number of rooms for sleeping					Average number of rooms for sleeping
			1	2	3	4	5	
Tanzania	**4.7**	**9,276,997**	**28.4**	**33.2**	**22.0**	**9.7**	**6.6**	**2.4**
Male headed household	3.5	6,178,205	27.4	32.7	22.7	10.1	7.0	2.4
Female headed household	7.3	3,098,792	30.4	34.2	20.7	8.9	5.9	2.3
Rural	5.0	6,192,303	21.9	37.8	24.3	9.9	6.1	2.5
Urban	4.2	3,084,694	38.7	25.8	18.7	9.4	7.4	2.3
Tanzania mainland	**4.7**	**9,026,785**	**28.8**	**33.4**	**21.7**	**9.6**	**6.5**	**2.4**
Male headed household	3.5	6,005,826	27.8	32.9	22.4	10.0	6.9	2.4
Female headed household	7.3	3,020,959	30.7	34.3	20.4	8.7	5.8	2.3
Kilimanjaro	4.2	381,526	19.5	32.3	26.1	13.5	8.5	2.6
Dar es Salaam	3.9	1,083,381	50.0	20.5	15.3	7.4	6.8	2.1
Mbeya	4.2	630,593	34.7	34.1	17.8	8.2	5.3	2.2
Mwanza	5.7	481,107	27.7	35.2	20.5	9.6	7.0	2.4

Source: URT, 2014:142

Again, the 2011/2012 Household Budget Survey also shows that, between 2007 and 2011/12 HBS's, the mean number of persons per room increased marginally (see table 7.5). The mean number of persons per room was highest in rural areas (2.8), followed by other urban areas (2.3) and Dar es Salaam (2.2). The average number of persons per room used for sleeping is an indicator of the extent

of overcrowding. Having several persons per sleeping room may be associated with the increased risk of transmission of respiratory diseases. The mean number of persons per room is obtained by dividing the number of household members by the number of rooms used for sleeping.

Table 7.5: The average number of persons per sleeping room, by area, Tanzania Mainland, 1991/92, 2000/01,2007 and 2011/12 HBSs'.

Year	Dar es Salaam	Other urban	Rural Areas	Tanzania Mainland
1991/92	2.45	2.31	2.61	2.56
2000/01	2.50	2.21	2.44	2.41
2007	2.10	2.22	2.29	2.26
2011/12	2.20	2.30	2.80	2.70

Source: HBS, 2011/12

Building materials for housing

In the 2002 Population and Housing Census, the information on building materials used to construct the main elements of the building, namely, the roofs, walls, and the floors were collected. As revealed in the table 7.6, traditional building materials were predominantly used in most of the regions: "grass" and "grass and mud" for roof, "sun-dried bricks", "baked bricks" and "poles and mud" for wall and "mud" for the floor.

Only in Dar es Salaam and Urban West, modern building materials such as "iron sheets" for roof, "cement bricks" for wall and "cement" for the floor were widely used for housing. Dar es Salaam recorded the highest percentage of private households using iron sheets for roof (90.4 percent), followed by Kilimanjaro (88.5 percent) and Urban West (78.6 percent). Arusha and South Pemba showed relative high percentages of iron sheets (63.6 percent and 60.4 percent respectively).

Cement bricks were predominantly used as materials for wall in Dar es Salaam (87.7 percent) and Urban West (69.6 percent). In Kilimanjaro region, while a very high percentage of households using iron sheets for the roof of their houses were recorded, use of poles and mud as building materials for the wall was more prevalent than cement bricks and percentage of mud floor was higher than the cement floor (URT, 2006: 176-177).

Table 7.6: The percentage distribution of households by building materials of housing in Tanzania, 2002.

Region	Roof			Wall				Floor	
	Iron sheets	Grass	Grass and mud	Cement bricks	Sun-dried bricks	Baked bricks	Poles and mud	Cement	Mud
Tanzania Total	46.3	41.1	11.2	15.5	33.0	14.0	34.4	26.4	73.0
Tanzania Mainland	45.9	41.2	11.5	14.9	33.8	14.3	34.2	25.6	73.7
Kilimanjaro	88.5	8.9	0.9	29.5	15.7	10.9	33.4	45.2	53.8

Source: The United Republic of Tanzania 2002 Population and Housing Census and URT, 2006.

Roofing materials of the main building

Table 7.7 presents the percentage distribution of private households by materials used for roofing of the main building. Materials for roofing identified in the 2002 census were: iron sheets, tiles, concrete, asbestos, grass, grass and mud, and others. The census results revealed that iron sheets were the most

commonly used as a roofing material accounting for 46.3 percent, followed by grass (41.1 percent) and grass and mud (11.2 percent). This was an improvement when compared with the 1978 results which were only 24.0 percent of the households lived in the houses roofed with iron sheets; this reflects a great improvement in the use of iron sheets at all levels.

The analysis with rural and urban areas revealed that urban areas recorded higher percentage (85.8 percent) compared to 32.1 percent in rural areas, whereas grass were still the predominant roofing materials for houses in rural areas. A little over a half of the private households (52.5 percent) live in houses using grass for roofing and 14.7 percent in houses roofed with grass/mud in rural areas. This was an improvement when compared with the 1978 results, whereby houses roofed with grass and grass/mud accounted for 60.0 percent and 12.1 percent respectively.

Table 7.7 also shows that in Tanzania Mainland iron sheets are the leading roofing material (45.9 percent), which is slightly lower than the national proportion. This was followed by grass (41.2 percent) and grass/mud (11.5 percent) (URT, 2006: 174).

Table 7.7: The percentage distribution of households by the building materials used for roofing in 2002.

Roofing Materials	Tanzania			Tanzania Mainland		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Total	100.0	100.0	100.0	100.0	100.0	100.0
Iron sheet	46.3	32.1	85.8	45.9	31.8	86.0
Tiles	0.5	0.2	1.1	0.4	0.2	1.1
Concrete	0.4	0.0	1.4	0.4	0.0	1.4
Asbestos	0.3	0.1	0.7	0.2	0.1	0.7
Grass	41.1	52.5	9.3	41.2	52.5	9.2
Grass and mud	11.1	14.7	1.5	11.5	15.0	1.6
Others	0.3	0.4	0.1	0.3	0.4	0.1

Source: The United Republic of Tanzania 2002 Population and Housing Census. URT, 2006:175

The 2012 census results had also depicted some good progress. Table 7.8 shows that, 65 percent of private households in Tanzania used iron sheets as the main roofing materials, followed by grass or leaves (25 percent) and mud and leaves (8 percent). Ninety three (93) percent of the households in urban areas used modern roofing materials (iron sheets, tiles, concrete and asbestos) compared with 53 percent in rural areas.

Significant variations were observed across regions. Percentage of households with modern roofing materials ranged from 34 percent in Lindi to 99 percent in Dar es Salaam (URT, 2014: 134). Kilimanjaro region still showed better progress from 88.5 percent of households who had used iron sheets as a roofing material in 2002 to 91.8 percent in 2012.

Table 7.8: The percentage of households by region and type of materials used for roofing; Tanzania, 2012 Census.

Region	Total	Roofing materials of the main dwelling unit							
		Iron sheet	Tiles	Concrete	Asbestos	Grass/ Leaves	Mud and Leaves	Plastic/ Box Paper	Canvass
Tanzania	**9,276,997**	**65.4**	**0.4**	**0.3**	**0.3**	**25.4**	**7.9**	**0.2**	**0.1**
Rural	6,192,303	52.6	0.2	0.0	0.2	35.2	11.3	0.3	0.1
Urban	3,084,694	91.1	0.8	0.8	0.3	5.9	0.9	0.1	0.1
Tanzania mainland	**9,026,785**	**65.1**	**0.4**	**0.2**	**0.3**	**25.6**	**8.1**	**0.2**	**0.1**
Kilimanjaro	381,526	91.8	0.3	0.1	0.2	5.6	1.4	0.5	0.1
Dar es Salaam	1,083,381	96.1	1.2	1.5	0.3	0.5	0.1	0.0	0.3
Mbeya	630,593	72.3	0.1	0.0	0.2	24.9	2.3	0.1	0.1
Mwanza	481,107	70.4	0.2	0.1	0.3	25.3	3.3	0.2	0.2

Source: URT, 2014:135

Wall materials of the main building

Table 7.9 below presents the percentage distribution of households by the building materials used for the walls of their main building. Materials for walls identified in the 2002 census were: stone, cement bricks, sun-dried bricks, baked bricks, poles and mud, timbers, grass, and others. The results from the 2002 census show that a significant proportion of households in Tanzania (34.4 percent) lived in the houses with mud and poles walls, followed by sun-dried bricks (33.0 percent).

It was also observed that only 15.5 percent of the households lived in the houses with cement bricks walls. Comparing rural and urban areas with respect to walling materials used, in urban areas, a higher proportion of households live in houses used cement bricks (49.7 percent) while in rural areas, 41.8 percent of households lived in houses using a pole and mud for walls. It is interesting to note that only 3.2 percent of the private households lived in the houses with cement bricks walls in rural areas of total Tanzania.

Tanzania Mainland portrays more or less the same pattern as that of the total Tanzania with respect to walling materials used as indicated in table 7.9 below for both rural and urban areas (URT, 2006: 175). Compared to the 1978 census results, in general, there has been a very little improvement in terms of walling materials used in the country; for a span of twenty four years, the percentage of households living in houses with walls built of poles and mud have decreased from 50 percent to 34.4 percent only.

Table 7.9: The percentage distribution of households by the building materials used for walls, 2002.

Walling Materials	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	100.0	100.0	100.0	100.0	100.0	100.0
Stone	0.9	0.6	1.8	0.5	0.2	1.3
Cement bricks	15.5	3.2	49.7	14.9	2.9	48.9
Sun-dried bricks	33.0	37.2	21.4	33.8	38.0	22.1
Baked bricks	14.0	14.5	12.6	14.3	14.8	13.0
Poles and mud	34.4	41.8	13.9	34.2	41.4	13.9
Timbers	0.5	0.6	0.3	0.5	0.6	0.4
Grass	1.1	1.4	0.1	1.1	1.4	0.1
Others	0.6	0.7	0.2	0.6	0.7	0.2

Source: The United Republic of Tanzania 2002 Population and Housing Census. URT, 2006

The 2012 report had also shown some improvement. Table 7.10 shows that 53 percent of all private households in Tanzania had their house walls built of sun-dried bricks or baked bricks (26.3 percent each). Other materials commonly used for building walls were poles and mud (24 percent), and cement bricks (20 percent). The table also shows that most of the households in the urban areas used cement bricks (52 percent) as wall materials, followed by baked bricks (24 percent), while in rural areas the main wall materials used were sun-dried bricks and poles and mud (32 percent each) as well as baked bricks (27 percent). Kilimanjaro region also shows some good progress compared to all the regions in Tanzania. There has been a slight change from 29.5 percent (use of cement bricks) in 2002 to 33.5 percent in 2012.

Table 7.10: The percentage of households by region and type of wall materials used in Tanzania, 2012 Census.

Region	Total	Walling materials of the main dwelling unit								
		Stones	Cement bricks	Sun-dried bricks	Baked bricks	Timber	Timber and iron sheets	Poles and mud	Grass	Canvass
Tanzania	**9,276,997**	**1.0**	**20.3**	**26.3**	**26.3**	**0.6**	**0.3**	**23.5**	**1.6**	**0.1**
Rural	6,192,303	0.8	4.5	32.3	27.4	0.7	0.3	31.6	2.2	0.1
Urban	3,084,694	1.5	52.0	14.3	24.1	0.3	0.2	7.2	0.3	0.1
Tanzania mainland	**9,026,785**	**0.6**	**19.3**	**27.0**	**27.0**	**0.6**	**0.3**	**23.5**	**1.6**	**0.1**
Kilimanjaro	381,526	2.1	33.5	11.8	22.3	8.7	0.9	20.1	0.6	0.1
Dar es Salaam	1,083,381	1.1	95.0	1.0	0.3	0.1	0.2	1.9	0.1	0.3
Mbeya	630,593	0.1	2.4	36.0	53.2	0.1	0.1	7.1	1.0	0.1
Mwanza	481,107	0.9	17.5	54.2	19.3	0.6	0.4	5.6	1.4	0.1

Source: URT, 2014:139

Floor material of the main building

Table 7.11 below presents the percentage distribution of households by the building materials used for the floor of their main building. Materials for floor identified in the 2002 census were: cement, mud, timber, tiles, and others. The census results revealed that mud was by far the most predominant flooring material (73.0 percent) in the country, followed by cement floor (26.4 percent). Timber floor and tiles were less than one percent. The pattern of flooring materials in Tanzania Mainland does not differ much from that of the country as a whole. The most predominant flooring material used in rural areas was still muddy, which recorded 88.8 percent. In urban areas, however, cement was the most

predominant flooring material (70.5 percent). This prototype is also observed in Tanzania Mainland which recorded 70.0 percent (ibid: 176).

Table 7.11: The percentage distribution of households by the building materials used for floor, 2002.

Floor Materials	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cement	26.4	10.5	70.0	25.6	10.0	70.0
Mud	73.0	88.8	28.9	73.7	89.3	29.4
Timber	0.4	0.5	0.2	0.4	0.5	0.2
Tiles	0.1	0.0	0.2	0.1	0.0	0.2
Others	0.2	0.2	0.1	0.2	0.2	0.1

Source: The United Republic of Tanzania 2002 Population and Housing Census. URT, 2006

The 2012 census report had also shown some improvement in flooring. Table 7.12 presents the percentage distribution of households by region and type of flooring materials used in the main dwelling. The table indicates that 60 percent of the total private households used earth or sand as the main flooring materials, followed by cement (37 percent).

In urban areas, cement was the most common flooring material used (74 percent), followed by earth or sand (22 percent). On the other hand 79 percent of the rural households had used earth or sand as the main flooring material, followed by cement (19 percent).

On the Tanzania mainland, only Dar es Salaam and Kilimanjaro regions had more than 50 percent of the households using modern flooring materials (95 and 58 percent, respectively) see table 7.12 below (URT, 2014: 136). Kilimanjaro region has shown a good progress from 45.2 percent in 2002 to 58 percent in 2012.

Table 7.12: The percentage of households by region and main material used for flooring in Tanzania, 2012 Census.

Region	Total	Flooring materials of the main dwelling unit								
		Cement	Ceramic tiles	Parquet or Polished wood	Terrazzo	Vinyl or asphalt strips	Wood planks	Palm/ bamboo planks	Earth / Sand	Animal dung
Tanzania	**9,276,997**	**37.2**	**1.3**	**0.0**	**0.2**	**0.0**	**0.2**	**0.3**	**60.0**	**0.6**
Rural	6,192,303	18.8	0.2	0.0	0.1	0.1	0.3	0.4	79.2	0.9
Urban	3,084,694	74.2	3.6	0.0	0.3	0.0	0.1	0.1	21.6	0.1
Tanzania mainland	**9,026,785**	**36.3**	**1.3**	**0.0**	**0.2**	**0.0**	**0.2**	**0.3**	**60.9**	**0.6**
Kilimanjaro	381,526	56.0	1.2	0.3	0.2	0.0	0.8	0.3	40.6	0.5
Dar es Salaam	1,083,381	88.2	6.4	0.1	0.5	0.0	0.1	0.0	4.7	0.0
Mbeya	630,593	40.2	0.4	0.0	0.1	0.0	0.1	0.3	57.7	1.2
Mwanza	481,107	37.8	1.6	0.0	0.1	0.1	0.3	0.2	59.8	0.1

Source: URT, 2014:137

Housing is also composed of physical infrastructures such as energy for lighting and cooking, water, and sanitation. This information has also been extracted from the 2002 and 2012 census reports. The information is provided below:

The main source of energy used for lighting

The 2002 census and its analysis report 2006 had revealed eight main sources of energy used for lighting; namely; electricity, pressure lamp, hurricane lamp, firewood, candle, wick lamp, solar and others. Of the eight energy sources, wick lamp is by far the most commonly used one in the whole country, about two thirds (64.3 percent) of the households in Tanzania use this source. The next in the important main source of energy used for lighting in the country is a hurricane lamp (19.0 percent), followed by electricity (10.1 percent) and firewood (4.9 percent) (URT, 2006:177).

The pattern is somewhat different between rural and urban areas. In the rural areas 77.1 percent of the private households use wick lamp, 14.1 percent use hurricane lamp, 6.3 percent use firewood and only 1.3 percent use electricity for lighting as compared to urban areas where 34.7 percent use electricity, 32.7 hurricane lamp, 28.7 wick lamps, and less than one percent use firewood for lighting.

These results revealed that kerosene is a main source of energy for lighting in both rural and urban areas, and the use of electricity is mainly confined to urban areas. The pattern of distribution of households with respect to the use of three main sources of the energy for lighting, namely, wick lamp, hurricane lamp and electricity, is more or less the same in Tanzania Mainland and Tanzania as a whole (see table 7.13).

Table 7.13: The percentage distribution of private households by main source of energy for lighting, 2002.

Energy for lighting	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Electricity	10.1	1.3	34.7	9.7	1.2	34.0
Hurricane lamp	19.0	14.1	32.7	19.2	14.2	33.5
Pressure lamp	1.0	0.6	2.2	1.0	0.6	2.3
Firewood	4.9	6.3	0.8	4.9	6.4	0.8
Candle	0.3	0.2	0.7	0.3	0.2	0.7
Wick lamp	64.3	77.1	28.7	64.4	77.1	28.6
Solar	0.1	0.1	0.0	0.1	0.1	0.0
Others	0.2	0.3	0.1	0.2	0.3	0.1

Source: The United Republic of Tanzania 2002 Population and Housing Census and URT, 2006.

In 2002 the supply of electricity was quite limited in Tanzania except Dar es Salaam. About a half of private households used electricity as the main source of energy for lighting in Dar es Salaam (45.1 percent of households). Even in Dar es Salaam 30.2 percent of private households were using hurricane lamps for lighting and 19.9 percent using wick lamps. In other regions, wick lamps were most predominantly used as a source of energy for lighting see table 7.14 (URT, 2006: 180).

Table 7.14: The percentage distribution of private households by main sources of energy for lighting in Tanzania, 2002.

Region	Energy for lighting		
	Electricity	Hurricane lamp	Wick lamp
Tanzania Total	10.1	19.0	64.3
Tanzania Mainland	9.7	19.2	64.4
Kilimanjaro	17.4	33.4	45.0

Source:URT, 2006:180

Again, the 2012 population and housing census collected information on the households' main source of energy for lighting. The information collected indicates the access and availability of modern source of energy (electricity, solar energy and gas) has improved when compared to 2002 (URT, 2014: 147). Table 7.15 presents the percentage distribution of households by region and main source of energy for lighting. It shows that 58 percent of all households used kerosene (wick lamp and lantern or chimney) as their main sources of energy for lighting. Only 21 percent of households in Tanzania reported using electricity as the main source of energy for lighting, followed by torch or rechargeable lamps (15 percent).

There are noticeable variations between rural and urban areas. In urban areas, the main source was electricity (49 percent), followed by kerosene (lantern or chimney and wick lamps) (42 percent). In rural areas, the main source was kerosene (66 percent), followed by torch or rechargeable lamps (20 percent) (ibid: 150).

Table 7.15: The percentage of households by region and main source of energy for lighting; Tanzania, 2012 Census.

Region	Total	Main source of energy for lighting											
		Electricity (TANESCO/ ZECO)	Solar energy	Generator/ private sources	Gas (industrial)	Gas (biogas)	Electricity (Wind)	Acetylene	Kerosene (lantern/ chimney)	Kerosene (wick lamps)	Candles	Firewood	Torch/ rechargeable lamps
Tanzania	**9,276,997**	**19.5**	**1.4**	**0.3**	**0.0**	**0.0**	**0.0**	**2.7**	**17.5**	**40.7**	**1.3**	**2.0**	**14.5**
Male headed household	6,178,205	19.4	1.6	0.4	0.0	0.0	0.0	2.6	17.6	39.8	1.3	1.8	15.5
Female headed household	3,098,792	19.8	1.0	0.2	0.0	0.0	0.0	2.7	17.4	42.5	1.3	2.3	12.6
Rural	6,192,303	5.7	1.7	0.3	0.0	0.0	0.0	2.8	15.2	51.1	1.0	2.8	19.5
Urban	3,084,694	47.3	0.9	0.4	0.0	0.0	0.0	2.3	22.2	19.9	2.1	0.3	4.6
Tanzania mainland	**9,026,785**	**18.9**	**1.4**	**0.3**	**0.0**	**0.0**	**0.0**	**2.7**	**17.8**	**40.6**	**1.3**	**2.0**	**14.9**
Kilimanjaro	381,526	26.7	3.5	0.2	0.0	0.0	0.1	3.2	30.9	31.8	0.7	0.6	2.4
Dar es Salaam	1,083,381	63.4	0.7	0.2	0.0	0.0	0.0	2.2	17.0	9.5	2.9	0.1	3.9
Mbeya	630,593	13.3	1.0	0.3	0.0	0.0	0.0	2.6	17.8	45.4	1.4	1.6	16.5
Mwanza	481,107	22.7	1.0	0.3	0.0	0.0	0.0	2.0	22.6	34.6	1.8	0.7	14.3

Source: URT, 2014:151-152

The main source of energy for cooking

The information about the main sources of energy for cooking was collected during the 2002 census. The sources collected include electricity, kerosene/paraffin, gas, firewood, charcoal and others.

Table 7.16 below present the distribution of private households by main sources of energy for cooking. The results revealed that firewood is the main source of energy used for cooking in Tanzania, which was recorded 77.4 percent of the private households, followed by charcoal (16.7 percent). However, only less than one percent of the private households used electricity for cooking.

In the rural areas, 95.6 percent of the households use firewood as the main source of energy for cooking, while in the urban areas, charcoal comes first which indicated that more than a half of the households used charcoal (52.9 percent) (URT, 2006).

Table 7.16: The percentage distribution of private households by main sources of energy for cooking, 2002.

Energy for cooking	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Electricity	0.9	0.1	3.3	0.9	0.1	3.3
Kerosene/Paraffin	4.3	0.5	15.2	4.4	0.4	15.5
Gas	0.1	0.1	0.3	0.1	0.1	0.3
Firewood	77.4	95.6	26.7	77.4	95.6	25.9
Charcoal	16.7	3.6	52.9	16.6	3.6	53.3
Other	0.5	0.1	1.4	0.5	0.1	1.4
Not Applicable	0.1	0.0	0.2	0.1	0.0	0.2

Source: The United Republic of Tanzania 2002, Population and Housing Census and URT, 2006.

In 2002, firewood was mostly used as the main source of energy for cooking in all regions than Dar es Salaam see table 7.17. In Dar es Salaam the percentage of private households using firewood, as a main source of energy for cooking was only 12.3 percent and charcoal was most widely used (54.0 percent). The percentage of households using kerosene/paraffin as main source of energy for cooking was 26.3 percent in Dar es Salaam. The percentage of kerosene/paraffin was 19.7 percent in Arusha following Dar es Salaam, but the percentage using kerosene/paraffin for cooking was very low in all other regions (URT, 2006: 180).

Table 7.17: The percentage distribution of private households by main sources of energy for cooking in Tanzania, 2002.

Region	Energy for cooking		
	Kerosene/Paraffin	Firewood	Charcoal
Tanzania Total	**4.3**	**77.4**	**16.7**
Tanzania Mainland	4.4	77.4	16.6
Kilimanjaro	6.9	83.4	7.4

Source: URT, 2006:180

In 2012 there has been a slight improvement in the use of modern sources of energy for cooking. Though, firewood is still the main source of energy for cooking.

Table 7.18 shows the percentage distribution of households by residence and main source of energy for cooking. The results underscore the use of modern source of energy for cooking in the country was very low even in urban areas. The percentages of households using modern sources for cooking were only seven percent in urban areas. The majority of households (95 percent) reported using wood-fuel (69 percent firewood and 26 percent charcoal) as the main source of energy for cooking (URT, 2014: 147).

Table 7.18: The percentage of households by region and main source of energy for cooking; Tanzania, 2012 Census.

Region	Total	Main source of energy for cooking												
		Electricity (TANESCO)	Solar energy	Generator/ private sources	Gas (industrial)	Gas (biogas)	Electricity (wind)	Paraffin	Coal	Charcoal	Firewood	Wood/farm residuals	Animal residuals	Not applicable
Tanzania	**9,276,997**	**1.6**	**0.1**	**0.1**	**0.9**	**0.04**	**0.03**	**2.4**	**0.1**	**25.7**	**68.5**	**0.2**	**0.1**	**0.4**
Male headed household	6,178,205	1.6	0.1	0.1	0.9	0.0	0.0	2.6	0.1	25.1	68.7	0.2	0.1	0.5
Female headed household	3,098,792	1.5	0.1	0.0	0.8	0.0	0.0	2.1	0.1	26.7	68.1	0.2	0.1	0.1
Rural	6,192,303	0.2	0.1	0.0	0.1	0.0	0.0	1.0	0.1	7.7	90.2	0.3	0.1	0.1
Urban	3,084,694	4.3	0.1	0.1	2.3	0.1	0.0	5.2	0.3	61.8	24.9	0.1	0.0	0.9
Tanzania mainland	**9,026,785**	**1.5**	**0.1**	**0.1**	**0.9**	**0.0**	**0.0**	**2.4**	**0.1**	**25.6**	**68.6**	**0.2**	**0.1**	**0.4**
Kilimanjaro	381,526	1.7	0.1	0.0	1.5	0.1	0.0	4.9	0.2	10.9	79.8	0.3	0.1	0.3
Dar es Salaam	1,083,381	7.2	0.1	0.0	3.9	0.0	0.0	6.7	0.3	73.5	6.6	0.0	0.0	1.6
Mbeya	630,593	1.1	0.0	0.0	0.2	0.0	0.0	1.3	0.1	22.7	74.2	0.1	0.0	0.2
Mwanza	481,107	0.7	0.1	0.0	0.5	0.0	0.0	1.1	0.2	32.5	64.4	0.1	0.1	0.2

Source: URT, 2014:148-149

Main source of drinking water

The importance of water as a basic need for human life and also as an important element for promoting social and economic development needs no explanation. Adequate access to clean and safe water and better sanitation contributes to improved health status of the society, among other things reducing exposure to water and airborne diseases.

The main source of water identified in the census included piped water, protected well, unprotected well, protected spring, unprotected spring, river/stream, pond/dam, lake, rain water, water vendors and other sources (URT, 2006:181). The overall goal of the Government as stipulated in the current water policies is to ensure that all Tanzanians have access to clean and safe water within a reasonable distance.

However, according to the 2002 census results presented in table 7.19 and figure 7.1 below, the proportion of the private households that indicated piped water as the main source of drinking water was 34.4 percent. This is a slight increase from 31.6 percent in 1988. The proportion of protected well and protected spring was 13.4 percent and 6.1 percent respectively. If these three sources are combined, the proportion of households that used these as main sources of drinking water accounts for 53.8 percent.

On the other hand, the proportion of households using unprotected wells and unprotected springs as main sources of drinking water was 26.0 percent and 5.0 percent respectively. Moreover, there were a significant percentage of the households that depends their drinking water on sources such as river/stream, pond/dam and lake.

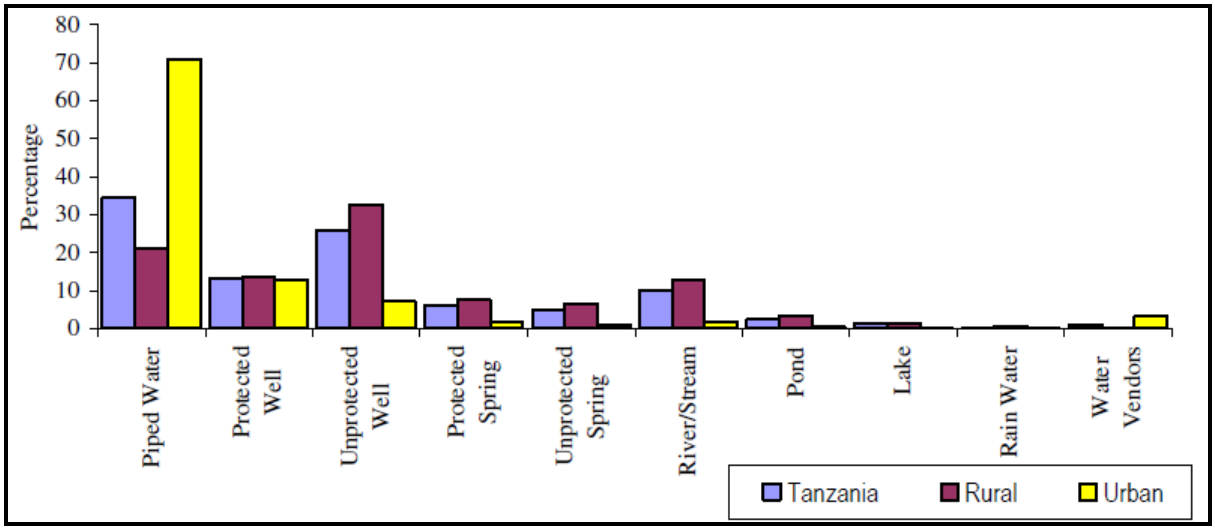
Rural households were worse off in access to clean and safe water as compared to urban households; only 42.4 percent of the households had access to water from piped system, protected well and protected spring compared to over 85.8 percent of urban households. A significant proportion of households in the rural areas indicated that more than 50 percent depended on unprotected wells, river/stream, and lake. Generally, these sources of drinking water are considered as unclean water sources, mainly because they are not subjected to any form of treatment and are more exposed to pollutant material (URT, 2006:182).

Table 7.19: The percentage distribution of private households by main source of drinking water, 2002.

Sources of drinking water	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Piped water	34.4	21.3	71.0	33.5	20.5	70.0
Protected well	13.4	13.5	12.9	13.7	13.8	13.3
Unprotected well	26.0	32.7	7.2	25.9	32.5	7.4
Protected spring	6.1	7.6	1.9	6.2	7.7	2.0
Unprotected spring	5.0	6.4	1.0	5.1	6.5	1.1
River/Stream	9.9	12.9	1.6	10.2	13.2	1.7
Pond/Dam	2.5	3.3	0.5	2.6	3.3	0.5
Lake	1.2	1.5	0.4	1.3	1.6	0.4
Rain water	0.4	0.5	0.1	0.4	0.5	0.1
Water vendors	1.1	0.2	3.3	1.1	0.2	3.4

Source: URT, 2006:182.

Figure 7.1: The percentage distribution of private households by main source of drinking water, 2002.



Source: URT, 2006:182.

One of the most notable features revealed in table 7.20 below is that Urban West recorded the highest percentage of private households using water from the piped system for drinking (91.4 percent), North Unguja (79.3 percent), Dar es Salaam (72.6 percent), Arusha (68.5 percent) and Kilimanjaro (65.4 percent). If piped water and water from protected well and spring are considered to be safe water for drinking, the percentage of private households having access to safe water for drinking was highest in

Urban West (95.2 percent), followed by Dar es Salaam (88.2 percent), North Unguja (80.6 percent), Kilimanjaro (77.2 percent) and Arusha (76.1 percent). Tabora, Pwani and Lindi recorded very low percentages of households having access to safe water for drinking (22.1 percent, 27.5 percent and 29.5 percent respectively). More than two thirds of the private households in Tabora and more than a half of the households in Pwani and Lindi used unprotected well and spring as main source of water for drinking.

Table 7.20: The percentage distribution of private households by main source of drinking water by region, 2002.

Region	Piped water	Protected well and spring	Unprotected well and spring	River/Stream	Pond/dam and lake
Tanzania total	**34.4**	**19.4**	**31.0**	**9.9**	**3.8**
Tanzania Mainland	33.5	19.9	31.1	10.2	3.9
Kilimanjaro	65.4	11.8	8.8	11.6	0.8

Source: URT, 2006

Again, the 2012 census reports better progress. Table 7.21 shows that overall 37 percent of private households in Tanzania used piped water as the main source of drinking water (12 percent had water piped into their houses, 8 percent piped into yard and 17 percent used public tap). In urban areas, 59 percent of private households used piped water as their main source of drinking water compared with 26 percent of households in rural areas. Percentage of households using piped water range from 78 percent in Kilimanjaro, Kaskazini Unguja and Kusini Pemba to 8 percent in Geita and Tabora region (URT, 2014: 143).

Table 7.21: The percentage of households by region and main source of drinking water; Tanzania, 2012 Census.

Region	Total	Main source of water												
		Piped water into dwelling	Piped water to yard/ plot	Public tap/ standpipe	Well/ Tube Borehole	Protected dug well	Unprotected dug well	Protected spring	Unprotected spring	Rain water collection	Bottled water	Cart with small tank/drum	Tanker truck	Surface water (River dam lake etc.)
Tanzania	**9,276,997**	**11.6**	**7.9**	**17.4**	**7.8**	**7.6**	**19.1**	**2.2**	**10.1**	**1.2**	**0.3**	**2.5**	**1.4**	**10.9**
Rural	6,192,303	6.0	3.4	16.6	6.9	7.0	25.2	2.7	14.0	1.5	0.1	1.4	0.4	14.9
Urban	3,084,694	22.7	16.9	19.0	9.8	9.0	7.0	1.2	2.3	0.7	0.6	4.7	3.3	2.8
Tanzania mainland	**9,026,785**	**11.1**	**7.7**	**17.0**	**8.0**	**7.6**	**19.3**	**2.2**	**10.4**	**1.2**	**0.3**	**2.6**	**1.4**	**11.2**
Kilimanjaro	381,526	31.7	21.6	24.8	1.6	1.4	1.4	1.5	8.7	0.4	0.1	1.4	0.2	5.1
Dar es Salaam	1,083,381	20.1	12.9	18.8	18.9	7.6	4.2	0.3	0.2	0.1	1.2	7.0	8.4	0.1
Mbeya	630,593	15.5	10.4	16.6	3.2	7.4	14.7	2.0	14.9	0.1	0.1	0.8	0.1	14.2
Mwanza	481,107	10.6	9.7	12.2	11.6	10.6	22.8	1.8	9.8	0.3	0.2	1.0	0.1	9.5

Source: URT, 2014:144-145

Overall, 37 percent of private households in Tanzania had access to piped water as the main source of drinking water in 2012 census. Access to piped water was more common in urban areas (59 percent) than in rural areas (26 percent). The percentage of Tanzania urban households decreased from 71 percent in 2002 to 59 percent in 2012 (URT, 2014: 147).

Type of toilet facility

Sanitation conditions of any human settlement have direct impact on the environment and on the health standards of the people who lives in the neighbourhood. Information on human waste disposal confined itself to the following types of toilets, namely; traditional pit latrine, ventilated improved pit latrine, flush toilet, and other types. The 2002 census findings on toilet facilities are presented in table 7.22.

Table 7.22: The percentage distribution of private households by type of toilet facilities, 2002.

Toilet facilities	**Tanzania**			**Tanzania Mainland**		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Flush toilet	3.6	0.4	12.5	3.4	0.4	11.9
Pit latrine (traditional)	85.7	86.9	82.3	86.6	87.9	83.0
Ventilated Improved Pit Latrines	1.4	0.6	3.6	1.4	0.6	3.6
Other type	0.1	0.1	0.1	0.1	0.1	0.1
No facility	9.2	12.0	1.6	8.6	11.1	1.5

Source: The URT 2002 Population and Housing Census and URT, 2006:184.

Table 7.22 shows that the most commonly used toilet facilities in the country in 2002 as a whole was still the traditional pit latrine that accounted for 85.7 percent of the total private households. This result is concurrent with Tanzania Mainland where 86.6 percent of households used the traditional pit latrine.

By rural and urban areas, the proportion of the private households using traditional pit latrine in the rural areas was higher than the urban areas (86.9 percent in rural and 82.3 percent in urban areas). The situation of Tanzania Mainland is similar to the whole country (87.9 percent in rural and 83.0 percent in urban areas). The use of flush toilets and that of ventilated improved pit latrines (V.I.P) is still very low; only 3.6 percent and 1.4 percent of the households used these types of facilities respectively (URT, 2006:185).

Compared to the 1988 census, we can safely say that there has been very little change in the type of toilet facilities used in the country over the last decades or so. The use of traditional pit latrines still dominates, while that of flush toilets has remained low see table 7.23.

Table 7.23: The percentage distribution of private households by type of toilet facilities by region, 2002.

Region	Flush toilet	Pit latrine (traditional)	Ventilated improved pit latrine	No facility
Tanzania Total	**3.6**	**85.7**	**1.4**	**9.2**
Tanzania Mainland	3.4	86.6	1.4	8.6
Kilimanjaro	6.3	90.6	0.6	2.5

Source: URT, 2006:185

It can be observed from the table 7.23 that the percentage of private households using traditional pit latrines was significantly high in all regions of Tanzania Mainland. Urban West recorded the highest percentage of households using flush toilets (25.5 percent), followed by Dar es Salaam (14.3 percent). In Arusha and Kilimanjaro the percentage of households using flush toilets was 7.1 percent and 6.3 percent respectively. For all other regions, the percentage of flush toilets was below 5 percent. The percentage of flush toilets was lower than one percent in 5 regions: Mtwara, Manyara, Singida, Kagera and Kigoma. Use of ventilated improved pit latrine was very low (ibid). However, in 2012 (table 7.24 and figure 7.2) shows that the most common toilet facilities in Tanzania were pit latrines without washable floor or soil slab (30 percent of households). There is a slight improvement from the 2002 census results whereby 9 percent of the households had no toilet facilities compared with 8 percent of the 2012 (URT, 2014: 155). The distribution of households by type of toilet facility in Tanzania revealed a decrease in the use of traditional pit latrines from 86 percent in 2002 to 76 percent in 2012 while households with flush toilets increased from 4 percent to 14 percent in the same period. On the other hand, there was a slight decrease in households with no toilet facility (ibid: 158).

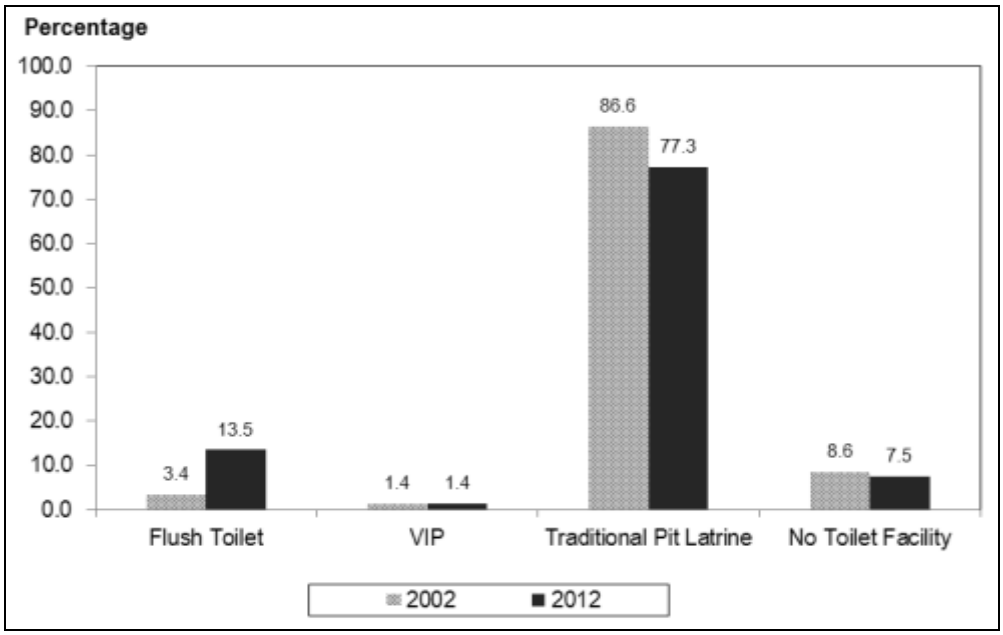
Table 7.24: The percentage of households by region and type of toilet facility; Tanzania, 2012 Census.

Region	Total	Main type of toilet facility											
		Flush/pour water to piped sewer system	Flush/pour water to septic tank	Flush/pour water to covered pit	Flush/pour water to somewhere else	Ventilated improved pit latrine	Pit latrine with washable slab with lid	Pit latrine with washable slab without lid	Pit latrine without washable/ soil slab	Pit latrine without slab/open pit	Composting/ ecosan latrine	Bucket	No facility/bush/ field/beach
Tanzania	**9,276,997**	**1.7**	**4.0**	**7.2**	**1.3**	**1.5**	**8.6**	**10.9**	**30.1**	**26.8**	**0.2**	**0.0**	**7.8**
Rural	6,192,303	0.3	0.6	2.2	0.5	0.8	4.5	6.4	38.1	35.1	0.2	0.0	11.3
Urban	3,084,694	4.5	10.8	17.0	2.9	2.9	16.8	19.8	14.0	10.2	0.1	0.0	0.9
Tanzania mainland	**9,026,785**	**1.6**	**3.9**	**6.8**	**1.2**	**1.4**	**7.9**	**11.0**	**30.9**	**27.5**	**0.2**	**0.0**	**7.5**
Kilimanjaro	381,526	1.9	3.1	9.4	1.6	2.9	18.2	14.8	26.7	18.7	0.2	0.0	2.6
Dar es Salaam	1,083,381	5.7	15.2	14.0	3.1	2.1	22.9	29.3	4.5	3.0	0.0	0.0	0.2
Mbeya	630,593	1.1	1.9	7.3	1.1	1.3	6.8	10.0	37.2	30.1	0.2	0.0	3.1
Mwanza	481,107	1.9	4.9	10.8	1.5	2.1	4.2	7.2	24.1	34.0	0.3	0.0	8.8

Source: URT, 2014:156-157

Figure 7.2 presents the percentage distribution of household by type of toilet facility. It shows that households in Tanzania Mainland that used traditional pit latrines decreased from 87 percent in 2002 to 77 percent in 2012 while households that used a flush toilet increased from 3 percent to 14 percent in the same period.

Figure 7.2: The percentage of households by type of toilet facility, Tanzania Mainland, 2002 and 2012 censuses.



Source: URT (Tanzania Mainland), 2014:156

Refuse disposal

The table 7.25 shows that 36 percent of private households in Tanzania reported burying or pit as the main method of refuse disposal followed by other dumping methods (32 percent). Regular collection of refuse is not common even in urban areas where only 16 percent of households reported it as their main means of refuse disposal. Tanzania Mainland main method of waste disposal was burying or pits (37 percent) (ibid: 158).

Table 7.25: The percentage of households by type of refuse disposal in Tanzania, 2012 census.

Region	Total	Main source of waste disposal					
		Regularly collected	Irregularly collected	Burnt	Roadside dumping	Burying/ pit	Other dumping
Tanzania	**9,276,997**	**5.4**	**3.1**	**22.6**	**1.2**	**36.2**	**31.6**
Rural	6,192,303	0.1	0.2	22.8	1.1	37.3	38.6
Urban	3,084,694	15.9	9.0	22.0	1.6	34.0	17.6
Tanzania mainland	**9,026,785**	**5.2**	**3.1**	**22.7**	**1.2**	**37.0**	**30.7**
Kilimanjaro	381,526	3.6	1.2	47.4	0.5	20.6	26.6
Dar es Salaam	1,083,381	25.9	17.2	16.8	1.7	16.7	21.7
Mbeya	630,593	2.7	1.1	14.7	0.7	63.7	17.1
Mwanza	481,107	3.4	2.1	28.2	1.4	38.4	26.5

Source: URT, 2014:159

7.3 Households ownership of selected assets

The ownership of household items may be taken as an approximate measure of a household's wealth or in other words an indicator for poverty monitoring. The question concerning ownership of assets by households in the 2002 census report restricted itself to seven main items, namely, radio, telephone, bicycle, hand hoe, wheelbarrow charcoal/electric iron, and electricity. The results of the private households owned these items are shown in table 7.26.

Table 7.26: The proportion of private households owning selected assets, 2002.

Assets	Tanzania			Tanzania Mainland		
	Total	Rural	Urban	Total	Rural	Urban
Radio	51.2	44.5	69.8	50.6	44	69.3
Telephone	3.8	0.6	12.6	3.6	0.6	12.3
Bicycle	33.8	36.1	27.3	33.5	36	26.4
Hand hoe	77.2	84.3	57.4	77.2	84.1	57.5
Wheelbarrow	15.6	4.6	46.1	15	4.3	45.5
Charcoal/Electric iron	4.3	3.1	7.5	4.3	3.2	7.7
Electricity	9.5	1.3	32.3	9.1	1.2	31.5

Source: URT, 2006:187

Asset ownership is very important for the survival and status of a particular household. The 2002 population and housing census had also documented the key assets owned by households by region see table 7.27.

Table 7.27: The proportion of private households owning selected assets in Tanzania, 2002.

Region	Radio	Telephone	Bicycle	Hand hoe	Wheelbarrow	Charcoal or electric iron	Electricity
Tanzania Total	51.2	3.8	33.8	77.2	15.6	4.3	9.5
Tanzania Mainland	50.6	3.6	33.5	77.2	15.0	4.3	9.1
Kilimanjaro	72.4	4.7	23.4	54.6	10.4	14.9	16.1

Source: URT, 2006:188.

However, other important assets such as land, housing, livestock and poultry were not documented in the 2002 census report. This had called for the 2012 population and housing census, which has indicated that house was the most commonly owned assets. It was owned by 75 percent of all private households, followed by hand hoe (74 percent), land or farm (70 percent), mobile phone (64 percent), radio (62 percent) and bicycle (40 percent). Ownership of houses, land or farms, and hoes and bicycles was higher in rural than in urban areas (see table 7.28).

On the other hand, ownership of mobile phones, radios, televisions, charcoal and electric irons was higher in urban than in rural areas. Ownership of essential assets was higher among male-headed households than female headed households (URT, 2014: 160). Kilimanjaro region has shown to have a promising proportion of households who owns assets compared to all the regions in Tanzania see table 7.28. Therefore, this study has selected housing because it has appeared that, it is the asset that the majority of households want to own.

Table 7.28: The percentage of households by ownership of assets in Kilimanjaro region, 2012.

Region	Total	Households main asset ownership											
		Radio	Mobile phone	Motor vehicle	Motorcycle/ Vespa	Television	Electric iron	Charcoal iron	Refrigerator/ freezer	Cooker (electric or	Computer/ laptop	House	Land/ farm
Tanzania	**9,276,997**	**61.6**	**63.9**	**2.6**	**5.0**	**15.6**	**10.0**	**20.2**	**3.3**	**6.8**	**2.7**	**74.8**	**70.4**
Male headed household	6,178,205	67.9	67.6	2.9	6.1	16.3	10.1	21.4	3.4	6.9	3.0	75.6	71.6
Female headed household	3,098,792	49.1	56.4	1.9	2.8	14.3	9.9	17.6	3.1	6.7	2.2	73.3	68.0
Rural	6,192,303	58.1	54.2	0.9	4.2	4.0	1.8	17.4	0.7	1.0	0.5	88.8	85.9
Urban	3,084,694	68.6	83.4	6.0	6.5	39.0	26.4	25.8	8.6	18.4	7.2	46.7	39.2
Tanzania mainland	**9,026,785**	**61.4**	**63.4**	**2.5**	**4.9**	**15.1**	**9.5**	**20.4**	**3.1**	**6.4**	**2.7**	**74.8**	**71.2**
Male headed household	6,005,826	67.7	67.2	2.8	5.9	15.7	9.6	21.7	3.2	6.4	2.9	75.5	72.4
Female headed household	3,020,959	48.7	56.0	1.9	2.8	13.9	9.5	17.8	3.0	6.3	2.2	73.3	68.7
Kilimanjaro	381,526	75.3	79.0	3.9	7.4	19.5	15.1	39.6	5.7	7.7	2.8	79.5	76.8
Dar es Salaam	1,083,381	67.9	89.5	8.1	4.5	53.0	37.4	20.4	11.7	28.4	10.4	33.2	23.8
Mbeya	630,593	62.1	58.1	1.8	4.3	10.9	6.1	25.7	1.7	2.8	1.7	79.0	75.5
Mwanza	481,107	61.4	69.7	2.2	3.7	14.9	8.9	23.1	2.9	5.7	2.5	71.8	62.7

Source: URT, 2014:160

Ownership status of the main dwelling

The 2012 Population and Housing Census had also collected information on household characteristics and conditions as an indicator on household prosperity. Information collected include: the ownership status of the main dwelling used by the household; and legal right over the ownership of land where the main dwelling is built.

Table 7.29 presents information on ownership of the main dwelling used by the household. The results indicated that 74 percent of private households lived in privately owned dwellings. The percentage of households living in privately owned dwellings was higher in rural areas (88 percent) than in urban areas (48 percent) (United Republic of Tanzania, 2014: 132). Therefore, the focus of this study is in the rural/village because it is where housing is mostly owned by households.

Table 7.29: The percentage of households by ownership status of the main dwelling by rural and urban Tanzania, 2012 Census.

	Total	Owned by household	Living without paying any rent	Rented privately	Rented by the employer	Rented by government at subsidized rent	Owned by employer (free)	Owned by an employer (rent)
Total	**9, 276,997**	**74.4**	**4.4**	**18.3**	**0.8**	**0.8**	**1.0**	**0.3**
Rural	6,192,303	87.8	4.1	6.2	0.4	0.4	0.9	0.2
Urban	3,084,694	47.6	5.0	42.6	1.5	1.7	1.1	0.4

Source: URT, 2014:132

Tenure status by age of households

Table 7.30 below presents information on tenure status by age of head of household. The results show that most of the private house owners (57 percent) were aged 25-49 years. It was found that only 15 percent of senior citizens (65 years and above) were living in their own houses (ibid: 132). These findings have also been reflected in the case study area (see chapter nine).

Table 7.30: The percentage of households by tenure status and age group in Tanzania, 2012 census.

Age of head of household	Total	Owned by household	Living without paying any rent	Rented privately	Rented by the employer	Rented by government at subsidized rent	Owned by an employer (free)	Owned by an employer (rent)
Total	**9, 276,997**	**74.4**	**4.4**	**18.3**	**0.8**	**0.8**	**1.0**	**0.3**
Below 15	24,985	0.3	0.4	0.3	0.3	0.3	0.3	0.3
15-19	139,075	1.1	2.7	2.5	2.5	2.5	2.1	2.2
20-24	623,914	4.8	10.5	13.2	11.6	13.1	8.9	10.0
25-29	1,135,279	9.2	15.7	22.8	19.7	21.9	16.8	18.5
30-34	1,295,251	12.0	15.5	21.0	17.8	19.6	15.9	16.1
35-39	1,238,747	12.9	13.3	15.1	13.6	14.4	14.0	14.1
40-44	1,055,367	11.9	10.5	9.4	10.4	9.7	11.4	11.1
45-49	957,881	11.4	8.8	6.5	8.9	7.3	10.3	8.9
50-54	730,467	9.0	6.6	3.7	6.4	4.6	8.7	7.5
55-59	484,349	6.1	4.1	2.0	4.3	2.8	5.1	4.9
60-64	496,929	6.5	3.9	1.6	2.1	1.7	2.7	2.6
65+	1,094,753	14.8	8.2	1.9	2.3	2.2	3.8	3.8

Source: URT, 2014:133

Legal right of ownership of land where main dwelling is located

Members of the households living in privately owned houses were asked to state the legal right of the land where their main dwelling is built. About one third of the households had no legal right over the land and only 9 percent of households had a title deed. Most of the ownership was customary (50 percent) see table 7.31 below. However, 30 percent of households in urban areas had a title deed over the ownership of land where their houses are built compared with four (4) percent in rural areas (ibid: 133).

Table 7.31: The percentage of households by type of legal rights over the ownership of the land where the main dwelling is located; Tanzania, 2012 census.

	Total	Type of legal right						
		Title deed	Residential licence	Offer	Customary ownership	Contract	Registration (Zanzibar)	No legal right
Total	6,905,332	9.4	2.4	2.5	50.0	4.1	0.1	31.4
Rural	5,436,735	3.9	0.6	1.3	57.5	3.3	0.1	33.3
Urban	1,468,597	29.9	9.0	7.0	22.4	7.1	0.2	24.4

Source: URT, 2014:133

The overall analysis shows that there has been a rise in the proportion of households living in houses built with modern building materials implying an improvement in the housing conditions in both urban and rural areas in Tanzania. The use of building materials such as cement, tiles, burnt bricks/cement blocks and iron sheets has increased in all areas, although the impact has been most profound in urban areas. This study argues that, the inclusion of the village (rural) areas in the government and international housing agenda is also paramount.

From the census reports it has appeared that, the most owned assets by households in the village (rural) areas is housing. However, the questions that need attention here would be to what extent does the village (rural) housing improved? Other questions could be: Who is improving and financing village (rural) housing and why? Where does the technical support for rural housing investments come from? What housing investments processes obtained in areas where customary tenure exists? Which spatial and environmental challenges contributed by village (rural) housing investments? Yet another question is about opportunities in the village (rural) housing investments. Generally, little is known about these questions. Therefore, to start to respond to these questions the next section traces the village (rural) housing development in Tanzania.

7.4 Tracing the village (rural) housing development in Tanzania: a background

This part traces the history of housing development before, during and after the colonial period in the villages in Tanzania. The idea is to get a good history of housing situation before we embark on the current situation (housing modernisation). The development of housing in Tanzania went through a number of eras as explained below:

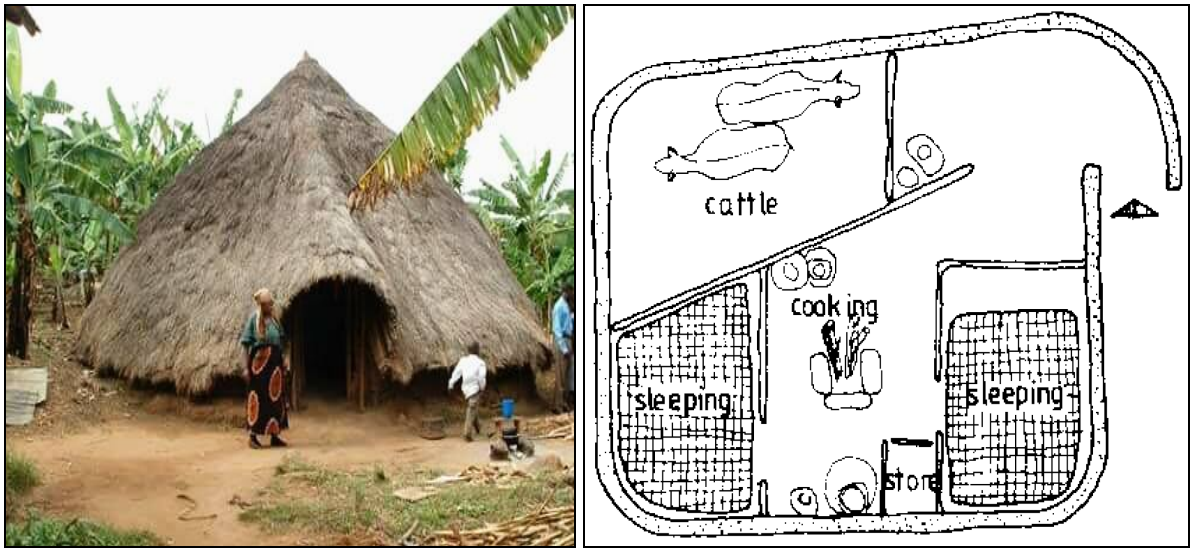
Colonial era

The housing development can be traced back from the colonial period. The colonial policies aim to facilitate political control and exploitations of natural resources for exports to Europe and to provide housing to colonial administrators (URT, 2000:9). For example, towns established by both the Germans and British served as administrative centres and as military bases or garrison towns. At that time, the planning policy was based on racial segregation of the towns into separate areas for Europeans, Asians and the native Africans (ibid).

To support these policies, the British Colonial Government passed a series of planning legislation beginning with the 1919 Sanitation and Control of Development Rules for Dar es Salaam Township. The scope of the 1919 rules was expanded in 1920 into the Township Ordinance that empowered the Governor to proclaim Townships and to appoint Township Authorities who could make township plans and exercise limited powers of controlling development.

Throughout the colonial period, economic activities were focused in urban areas. Little effort was put into improving the social and economic conditions in rural areas (ibid: 9). Therefore, the houses that were seen in the village at that time were made up of traditional building materials and conical in shapes. Also, the houses had one entrance with all functions (sleeping for human beings, livestock and poultries, cooking and eating places) in the same house see figure 7.3.

Figure 7.3: The traditional house and its plan in Moshi villages before and during the colonial era.



Source: The first figure by author and the second figure by unknown author, 2015.

Post-independence, rural housing development policies

Just after the attainment of independence in 1961, and following recommendations for a transformation approach to agricultural development of then Tanganyika, the government embarked on capital intensive village settlement schemes under Village Settlement Commission. The transformation approach to agriculture development was further embodied in the document Tanganyika five-year plan, social and economic development 1st July 1964-30th June 1969 (URT, 2000:10).

At this time the finished housing was provided to the settlers, including food rations in the first two years. These settlements schemes were started in anticipation that through the demonstration effect, their success and practices would be emulated on a national scale. It was thought that the transformation approach in these selected areas such as Kerenge settlement in Bagamoyo district and Kabuku settlement in Handeni district would be replicated in other villages. But the project failed because it was too capital-intensive to be afforded by the government (ibid: 11). This had initiated a new declaration.

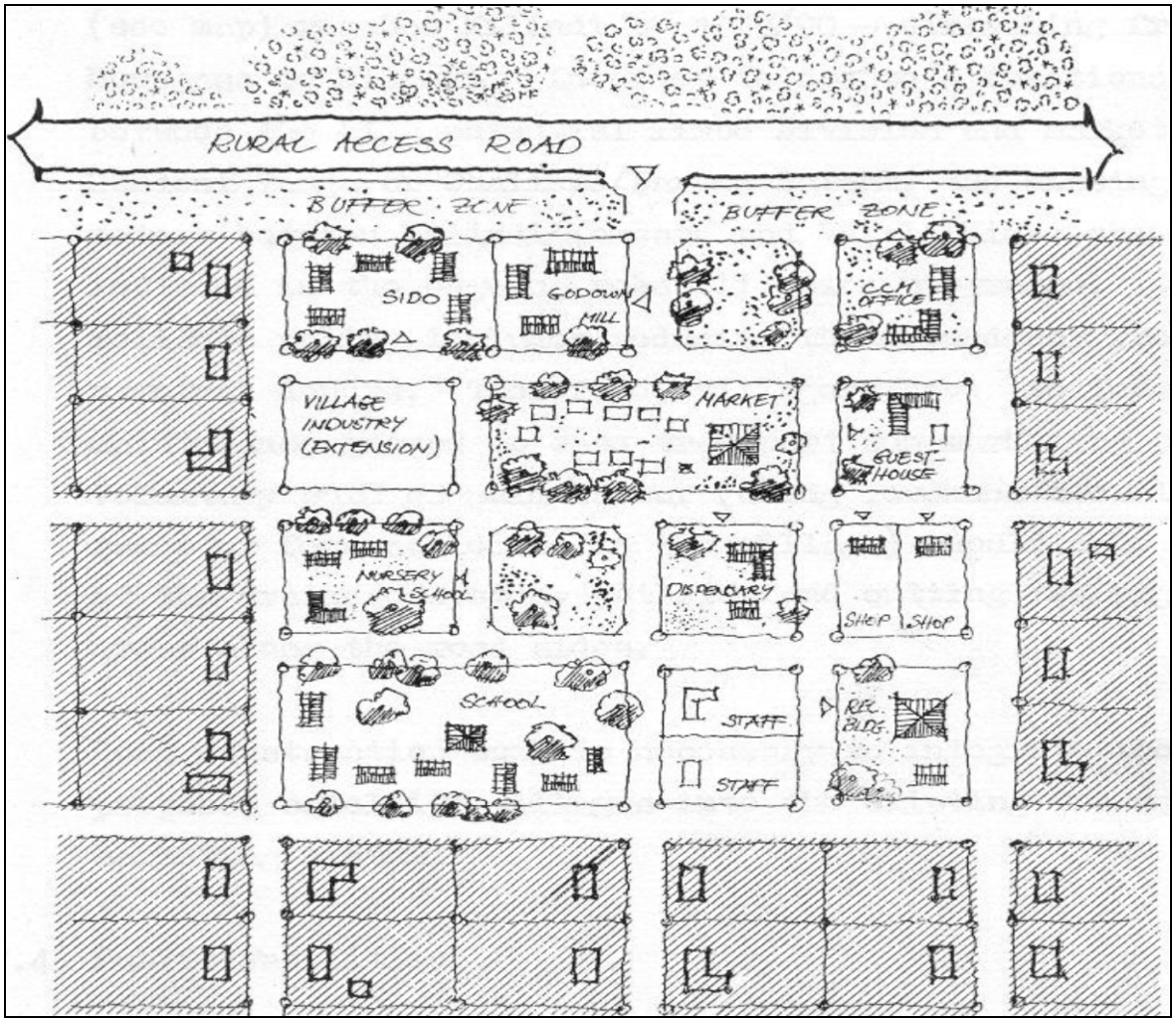
The Arusha Declaration, 1967

The failure of the capital-intensive schemes led to the application of an improvement and frontal approach to rural transformation from scattered rural homesteads to nucleated Ujamaa Villages (URT, 2000:11). The rural development strategy was further enhanced by the Arusha Declaration of 1967, which introduced the "Ujamaa" and "Kujitegemea" i.e. Socialism and Self-Reliance philosophy.

Under the Ujamaa philosophy, villages were to be provided with basic services such as clean water, schools and dispensaries. The mode of production was supposed to be communal and returns would be distributed amongst the villagers. To hasten the villagisation programme, a nationwide "Operation Vijiji" (i.e. villagisation programme) over the 1971-1972 and 1974-1975 periods which involved moving rural inhabitants into nucleated and compact villages which would be economical to provide with services, was carried out.

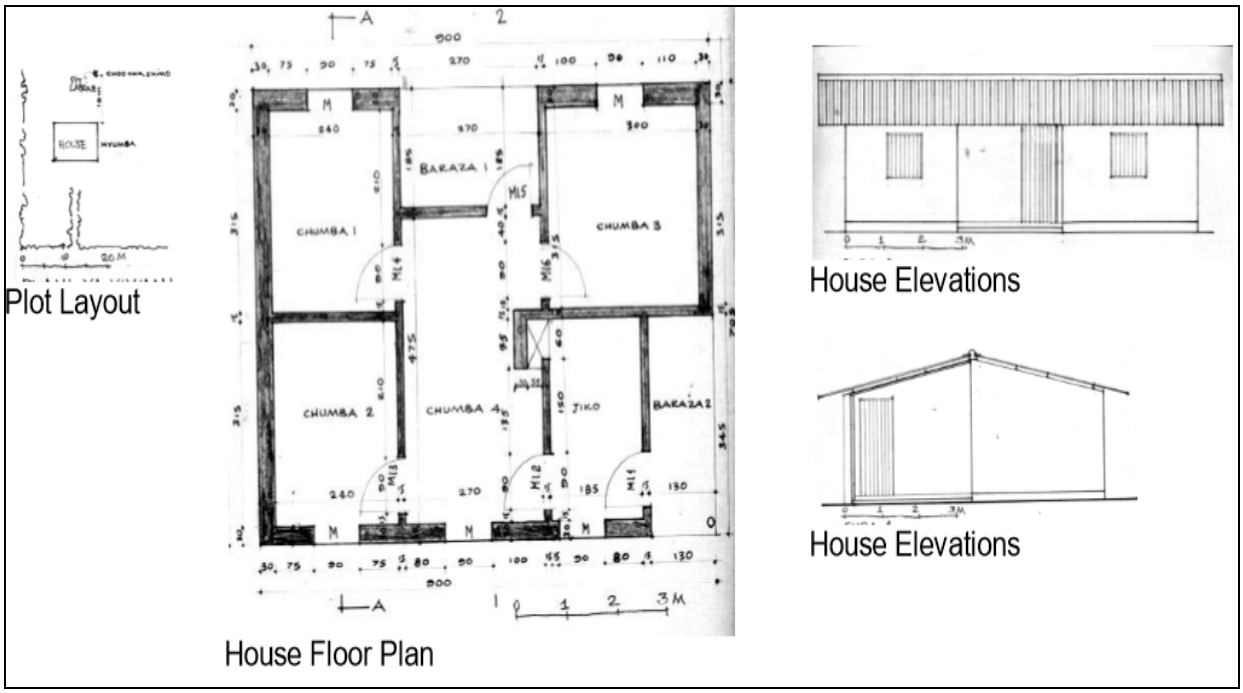
In 1975, Parliament passed an Act for the registration of Ujamaa Villages and other villages as legal entities. In 1970's and 1980's the imposition of state policy of Ujamaa (socialism) in Tanzania forced rural people to shift from their local dwelling compounds to centralized "urban-like Ujamaa" neighbourhoods with 70m x 80m grid plots as shown in figure 7.4 and the house plan in figure 7.5. But local people rejected the urbanistic concepts in favour of cultural dwelling concepts and patterns and examples of these villages are in Misungwi district (Mosha, 2012:596).

Figure 7.4: The Ujamaa villagisation plots organisation (not in scale) and the village centre in Tanzania.



Source: URT, 1975 cited/inserted in Mosha, 2012:597; and Schuler & Lerise (Ed), 1989:114

Figure 7.5: Typical modern houses during Ujamaa (Socialism) Villagisation program in Tanzania.



Source: URT, 1975; Mosha, 2005 cited/inserted in Mosha, 2012:598

However, individualism has since surfaced amongst villagers and most of the Ujamaa villages had to turn to private production (URT, 2000: 11). This challenge had created a new program.

The Nyumba Bora Housing Campaign, 1976

The other policy which was initiated in Tanzania in 1976, was a "Nyumba Bora" housing campaign, i.e. 'better/decent housing', an attempt to persuade people to try and build more durable houses with corrugated iron roofs, and cement floors, rather than the houses and huts made of local materials such as palm leaves, mud and mangrove poles (Caplan in Nelson, 1981: 98).

Though, Mosha (2005) found out that cement, sand block walled and corrugated iron sheet roofed houses were designed by government architects during Ujamaa Villagisation era under Nyumba Bora housing campaign policy were not accepted by rural people because they were not affordable by the majority and failed to satisfy local people's cultural needs (cited in Mosha, 2012:597). This means that the houses were afforded by the well-off minority, who at that time were very few. The examples in the case study area see figure 7.6 below.

Figure 7.6: The houses built by households in Sango Village during "Nyumba Bora" housing campaign in Tanzania.

Source: Field surveys in Sango village January-April, 2015

This section provides the history of rural housing development/investments from the colonial era, to capital intensive village development schemes, then to nucleated Ujamaa villages, and lastly to the Nyumba Bora housing campaign. Unfortunately, some of the programs failed because of individualism and financial dependency from the government. Though, the practice today is still individualism (housing themselves) because of the reasons provided under chapter ten. The houses were also classified to reflect the current situation (modern housing) in the village, especially in the context of Tanzania and particularly in the villages on the slopes of Mount Kilimanjaro which are represented by Sango village.

7.5 Classification of housing

For the help in understanding this study it is also important to sort out on how to classify housing in rural areas in Tanzania. According to Lawrence, (1994) cited in Nguluma, (2003:46) asserts that there are different ways of classifying housing. He states that by an analysis of architectural plans, followed by site visits it is possible to classify housing. Lawrence further provides several criteria that could be used for housing classification. These criteria include:

- Stylistic conventions related to the composition of building facades (e.g., classical, neo-gothic, modern). These criteria account for the explicit professional knowledge of an architect and a builder, which is frequently recorded in pattern books or other professional publications. There is rarely any consideration of the point of view of lay people;
- Socioeconomic variables related to the income and professional status of the inhabitants (e.g., working class or middle class, blue-or white-collar workers). People in all walks of life are generally aware of their position in society when it is defined according to these criteria;
- The number, size, layout of dwelling units on each floor level of residential buildings (e.g., two or three rooms, although floor plan or only one façade with fenestration). These criteria are frequently used by architects, property owners, and estate agents to classify and assess house

types. This criterion was used in this study. It is clear that Tanzania has a variety of house types in terms of shape, design style and forms such as detached house types, maisonettes, bungalows etc.;

- The layout and construction of the buildings (e.g., timber framed, brick or stone walled) which is not only used by professionals to interpret the nature of physical boundaries (e.g., walls, fenestrations, door openings), but also by lay people to attribute social values to residential buildings. This criterion was also relevant and used in this study; and
- The spatial organisation of the floor plan in relation to the means of access from the public realm of the street to the private realm of each dwelling unit (e.g., passing through a private outdoor space, a shared external space, and/or an internal space (Lawrence, 1994:276 cited in Nguluma, 2003:47).

Lawrence's criteria are relevant, but they based on his experience from apartment blocks in urban Europe (ibid). However, his criteria were useful in this study with some modifications. As explained above the main purpose of understanding housing classification is to be able to analyse and classify the existing housing in the rural Tanzania and particularly in the villages on the slopes of Mt. Kilimanjaro (see chapter eight).

7.6 House types, traditional and modern housing

Type refers to a kind, class or category of people or things that have characteristics in common. It is therefore possible to identify particular types of objects, events, setting and people with respect to specific characteristics (Lawrence, 1994:271 cited in Nguluma, 2003:45). He further defines type as that object by which something is symbolised or figured i.e. anything having a symbolic signification.

While type refers to objects with characteristics in common, typology refers to "the study of symbolic representation of the origin and meaning of scripture types as well as the study of classes with common characteristics" (ibid). Different types can be used together to produce a new type.

Moneo defines typology as a "concept which describes a group of objects characterised by the same formal structure" (Moneo, 1978:79 cited in Nguluma, 2003:46). He further argued that, one may speak of skyscrapers in general, but the act of grouping pushes towards speaking of skyscrapers as huge, distorted renaissance places, as gothic towers, etc. The idea of type, which ostensibly rules out individuality, in the end has to return to its origin in the single work (ibid).

Rossi defines the type as "a concept which describes a group of objects characterised by the same formal structures" (Rossi, 1975:153 cited in Nguluma, 2003:46). He also contends that the type could further be abstracted into some kind of scheme of spatial relationship. According to Rossi (1975:12) type is located in time as well as in place, but there is an argument that the place location is relative, as objects found in different spots can be gathered in one typological class.

Therefore, from the housing classification point of view (see Lawrence, 1994 cited in Nguluma, 2003) we see a classified variety of housing types in terms of shape, design style and form such as detached house types, semidetached, row, maisonettes, bungalows, etc. Again, from the same explanation we get house types in terms of building materials used (see evidence of house types under chapter eight).

Traditional and modern houses

Traditional houses are usually built with local building materials, which are easily collected around the village. Houses are usually built by members of the household and craftsmen often with assistance from friends and neighbours. Both technology and tools used are simple. It was claimed by Oliver, (1990:148) cited in Nguluma, (2003:41) that "specialisation in the traditional houses enriches the

technological resources as each craftsmen passes on what he learns, and adds to the store of know-how".

In Tanzania, traditional houses are directly related to traditional society, depending on self-subsistence. Traditional houses are associated with simple, undeveloped building methods that result in relatively poor houses which are not durable (Larsson and Larsson, 1984 cited in Nguluma, 2003:42). Though, in the modern world traditional housing is fast disappearing subject to accelerating social change (ibid). This reality has been observed in the case study area (Kilimanjaro region in Tanzania).

It has also become clear that, the change from traditional to modern building materials symbolises modernity and cash economy because houses are built by industrially produced building materials like concrete blocks, corrugated iron sheets and concrete tiles that require financial resources to purchase. Most of the people living in urban areas in Tanzania originate from rural areas where many of them live in traditional houses. However, when they shift their residences to large urban centres like Dar es Salaam, Mwanza, and Arusha they adapt themselves to urban ways of life. Thus, whereas some may initially build houses using traditional building materials, they later change to "modern" building materials (Nguluma, 2003:42). This practice of transforming the traditional houses into modern houses has also been observed in the rural areas such as in most of the villages in Kilimanjaro, Kagera and Mbeya regions in Tanzania (see chapter eight).

7.7 Modernity and modern housing

Heynen (1999:8 cited in Nguluma, 2003:47) discusses modernity by identifying it with three basic levels of meaning. First and what she calls the oldest sense modernity, referring to "present or current or applying as it's opposite the notion of earlier, of what is the past". The second meaning is referred to "new as opposed to the old". Here the term is used to describe a present time that is experienced as a period, possessing certain specific features that distinguish it from previous periods. Thirdly, modernity is also described as being a break with tradition, and as typifying everything that rejects the inheritance of the past. She further contends that modernity refers to the typical features of modern times and to the way that these features are experienced by the individual.

Modernity stands for the attitude toward life that is associated with a continuous process of evolution and transformation, with an orientation towards a future that may be different from the past and from the present (Heynen, 1999:10 cited in Nguluma, 2003:48). Modern societies are directly related to modernity. It is seen as a condition in its plurality both culturally and institutionally. It is a complex condition but having a lot of opportunities. Giddens (1990) states that, "an important characteristic of the modern world is the intensification of the relationship between the local and the global". Tran Hoai Anh (1999) finds that "a crucial element of modernity is a new perception of the individual role in the society". Individuals are seen as active agents who can change their own destinies, nature and society (Nguluma, 2003:48).

Modernity in developing countries is a powerful vision full of images, which is promising and at the same time threatening (Larsson, 1990 cited in Nguluma, 2003:48). Poverty is affecting many people and economic benefits of modernisation are limited. Larsson further claimed that, housing transformation/improvement may be interpreted as an evolution from traditional to modern dwelling if looked upon superficially or as a linear transformation where traditional housing elements are gradually being replaced by modern ones. Such transformation is put in line with a modernisation paradigm, which is one of the main currents in development theory within the social sciences.

According to Larsson transition from traditional to modern housing involves a number of aspects, which include building materials and techniques and the use of space and the layout of the dwelling. Therefore, modernisation generally closely relates to economic growth induced by recent

technology. Technological impact on the economy on one hand and processes dependent upon technology on the other hand has to be distinguished (Larsson, 1990:31 cited in Nguluma, 2003:49).

In her study of "Modern Houses for Modern Life", Larsson asserts that housing modernisation implies housing improvements. Larsson concludes that modernisation of housing consists mainly of change from traditional to modern building materials and change in use of space (ibid). Another factor leading to the modernisation of houses, for instance, in Botswana was a result of changes in the economy from subsistence to a cash economy and the ambition to live a modern life. She points out that in a modern society houses are considered a means for income generating where houses or rooms are rented out, while in traditional society a dwelling has only use value. This is also observed in Tanzania, where houses are modernised and rooms are now rented out both in urban and in the village/rural (housing modernisation in the global south).

Tran Hoai Anh (1999 cited in Nguluma, 2003:50) argued that, although modernisation in the third world is seen as "westernisation" house design has much to do with "people's own aspirations, will and life strategies". An assumption is made that the transformations taking place could be explained as a reflection of aspirations of the people involved, towards living in better houses in terms of durable materials, good finishing and well-functioning. Criticism that housing modernisation in non-industrialized countries is westernisation or copying ideas from the west is debatable. One would not call it copying, but rather learning and adapting to what people think suits them in their life ideals and styles (Nguluma, 2003:50).

In the context of Tanzania, the migration of people from rural areas to urban centres makes urban dwellers to be regarded by their rural peers as modern persons because of the difference in the living conditions between rural and urban areas. It is assumed that, people who aspire to be modern change their houses in different ways (ibid).

For Tran Hoai Anh the crucial issue of modernisation in the third world is related to the impact of modernisation on local cultures. Tran Hoai Anh discusses the modernisation of underdevelopment, terms she borrowed from Berman (1982). In her work it is observed that there is a distinction between the modernisation process of the industrialised and non-industrialised countries. The difference given is "lack of individual freedom caused by the suppression of controlling government forces".

Tran Hoai Anh referring to Berman contends that "modernisation of underdevelopment means the struggle between the repression conducted by the governmental mega-policies and the growth of modern consciousness from within the individual". Another difference given is the 'incompatibility' of "material conditions and the development of modern consciousness". The modernism of developed societies is built directly on a modernised material reality, while the modernism of underdevelopment arises from "backwardness" and underdevelopment built on fantasies and dreams of modernity (Tran Hoai Anh, 1999:44).

According to Berman (1982:125) modernity is unavoidable and, therefore, people in non-industrialized countries are as much condemned to modernity as their fellows in the industrialised countries. He further argues that modernisation can precede along a number of different roads and that there are different modes of modernisation in the global south (cited in Nguluma, 2003:50).

From the literature we see that, it is obvious that the 'modern' residential houses that we see in the villages in the global south, for example, in the villages on the slopes of Mount Kilimanjaro are the results and an attempt to cope with the modern life. This practice has to be supported by the spatial and housing institutions. The next section gives an overview of the existing institutional framework for rural housing in Tanzania. The areas which require improvements are also pinpointed.

7.8 The institutional framework for rural housing in Tanzania

This section intends to explore the existing potentials and constraints in the institutional framework for rural housing in Tanzania. It also provides the existing rules of the game (policies and legislations) for housing development/investments in Tanzania.

7.8.1 An overview of the institutional framework for rural housing in Tanzania

One of the most serious problems which have impeded the implementation of lasting solutions to shelter problems in developing countries has been an institutional weakness (UNCHS, 1995:11). In many of these countries have both central and local governments lacking the capacity to plan, finance and administer shelter on a sustained basis (ibid). In Tanzania, for example, the housing sector in the village and in the informal areas is left unguarded. This is entirely because of the existing institutional weaknesses. This is a challenge that needs to be addressed (see suggested solutions in the village within chapter twelve).

The institutional framework for the development of the housing sector in Tanzania can be traced back immediately after the independence. In 1964-1965 there was a Ministry of Local Government and Housing and in 1965-1969 the Ministry of Health and Housing. The position of the housing sector in this set up enabled housing to be accorded fair government attention and allocation of resources. From 1970-1984, housing matters were placed within the portfolio of the Ministry of Lands, Housing and Urban Development, under its Housing Department. From 1984-1992 the portfolio of housing was moved from one ministry to another, including the Ministries of Local Government, Cooperatives and Marketing; the Prime Minister's Office and Lands, Water, Housing and Urban Development. In 1992 it was brought back to the Ministry of Lands, Housing and Urban Development (URT, 2009).

However, during this time housing was represented at the regional level by housing officers who then reported to the Regional Development Directorate. In 1997, the Directorate of Housing was merged with the Directorate of Urban Development to form the Directorate of Human Settlements Development within which there was a housing section with only four staff members. The merger of the two directorates was aimed at making housing to be correctly seen in relation to its essential components to include land, related infrastructure and services, standards as well as in relation to the social-cultural, economic and environmental context (ibid.).

Looking back 10 years, it appears that the merger of the two directorates did not really lead to the intended outcomes; instead it contributed to diffusion of housing matters in the national development agenda, despite its presence in the National Human Settlements Development Policy adopted by the Government in 2000. By the end of 2007 the Directorate of Housing was re-introduced by the Ministry of Lands, Housing and Human Settlement Development. Following the restructuring of the civil service in the late 1990s, which did away with the Regional Development Directorates and established the Regional Secretariats to coordinate regional development, the position of housing officer was, abandoned (URT, 2009).

To-date, nobody is directly in-charge of housing at the regional secretariat and local authority levels. It appears that, the government has been unequivocal in addressing the housing issue. The shift in the government's policy from being provider to that of an enabler of housing delivery was necessitated by socioeconomic realities. It was expected that the enabling environment would allow market forces to regulate the housing production system. However, the housing market is more favourable to wealthier than the poor people. Therefore, government initiatives have so far not significantly improved the housing conditions for the majority as was the case just after independence in 1961 (URT, 2009). This is a challenge which needs attention from the Ministry of Lands, Housing and Human Settlements Development.

Tracing the nature of public administration in relation to housing in Tanzania

Tanzania is in a stage of transformation from a highly centralized form of government administration to a decentralized one. In 1999 a Local Government Reform Program was enacted by the National Assembly, which led to political, financial and administrative decentralization and changed central-local government relations.

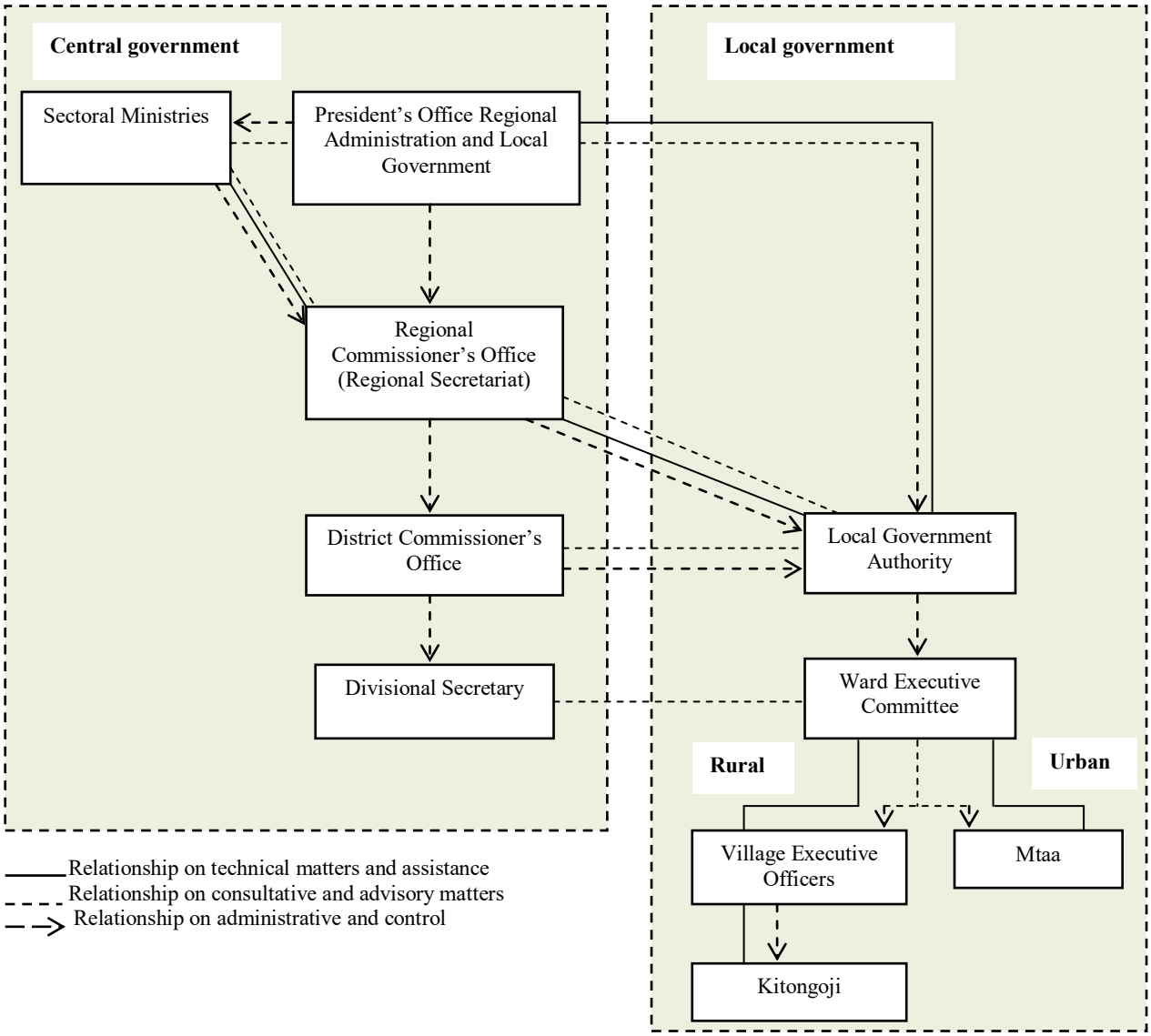
The coordination of local government in general is currently fulfilled by the Ministry of State, Regional Administration, Local Government, Civil Service and Good Governance, which falls under the President's Office (it was previously called Regional Administration and Local Government-TAMISEMI under the Prime Minister's Office (see figure 7.7).

Apart from overseeing and coordinating regional and district administration, this ministry is directly responsible for key operations of local authorities. There is a strong central control and inadequate financing at all levels of local government, because of a lack of communication between the different levels of administration. There is also political interference in the distribution of financial resources. Also, the private and public sectors are to some extent uncoordinated.

The other underpinning challenge is that, in some of the administrative levels, there are no specific housing and spatial planning sections including the clearly stated role and adequate manpower (such as planners, architects, housing experts, Valuers and surveyors). For example, the housing department/section is only available at the Ministry of Lands, Housing and Human Settlements Development. Though, its role is also limited and focuses more on the urban areas.

The Ministry of Lands, Housing and Human Settlements Development who is the foreseer, approves spatial planning schemes, and makes policies, legislations, regulations and standards. These tasks are fulfilled by the administrative organs on each level and are controlled by the Ministry of Lands Housing and Human Settlements Development. It approves general planning schemes which are prepared by Local Authorities to guide the orderly use of land. Therefore, at the central government level, we see chains of command to the lower levels (see figure no.7.7). The understanding of the links that exist between these levels of administration easier to understand the institutional and organisational gaps in relation to village (rural) space use, housing investments and environmental related issues that still needs to be addressed.

Figure 7.7: Interlinks between central and local government structures in Tanzania.



Source: http://www.rug.nl/research/portal/files/14672724/03c3.pdf accessed *on 01 January 2016 at TU-Dortmund library and modified by the author, 2016.*

In Tanzania, the institutional setting is structured by different levels of administration which are under central and local governments see figure 7.7. These include sectoral ministries, regions, districts, wards, streets and villages. The lowest administrative unit in urban is a street "mtaa" while in the rural is a village. The village is again made up of the hamlets "vitongoji" (see examples within this chapter and chapter four).

Tanzania is, currently, divided into 31 regions and subdivided further into 185 authorities. Of the 185 authorities 48 are urban units. In July 2016, the Permanent Secretary in the President's Office (Regional Administration and Local Government-TAMISEMI), Engineer Mussa Iyombe, announced 185 new District Executive Directors (DEDs). He said of the 185 DEDs, five would serve in big cities, 21 in municipalities, 22 in town councils while 137 others have been posted to 137 district councils (Source: http://www.dailynews.co.tz/index.php/home-news/51454-120-new-faces-as-magufuli-picks-185-in-ded-line-up published and accessed online on 08 July 2016).

The region

The region is the largest political unit below the national government. The executive branch, the Regional Commissioner in this study Kilimanjaro Regional Commissioner, is appointed directly by the president. In the region, therefore, all executive functions of the government are performed through the office of the Regional Commissioner. Under the regional commissioner there are several administrative units, including a spatial planning section, but no housing section which assists the commissioner as justified below:

Regional Secretariat

The Regional Secretariat performs development and administrative functions and represents the central government at the regional level. The development role centers on building capacity within and supporting Local Government Authorities (LGAs) on the district level. The administrative role is meant to ensure peace and tranquility for all inhabitants of the region and the distribution of possibilities to every one of them to pursue their goals. Besides, they facilitate and assist Local Government Authorities (LGAs) to undertake and deliver their responsibilities.

By reinstating the Local Government Authorities to the district level the role of the Regional Secretariat was changed from a service provider to an advisory role. The management and development of services, which focus on local authorities, are an objective of the Regional Secretariat. It unites expertise in the areas of finance, planning and economic analysis, community development, legal and labour affairs and auditing for Local Government Authorities. It also focuses on supporting production related activities in the region, through experts in agriculture, trade and natural resources. It procures physical planning and engineering services which focus on support to infrastructure and land management activity. This includes support for and regulation of technical designs, contracting and tendering in the sections of physical planning engineering and land development (TU Dortmund University Spring report, 2015).

Another field of supervision is social development services which focus on support services and regulation of services, development activities related to health, education, water services and local welfare activities in the region. For example, at regional level, i.e. Kilimanjaro Regional Administrative Secretariat office, we have a town planner, surveyor and valuer. However, the housing section and assigned experts at this level are missing. The available section (construction section) which is under the department of infrastructure, including its experts (civil engineers) advisory role, especially for individual residential housing constructions is also not clearly stated and coordinated with the local government authorities, Tanzania Building Agency (TBA), National Housing Cooperation (NHC) and the Ministry of lands. This has implications on the quality and standards of housing investments and development in the region.

After understanding the central government (region), in this study Kilimanjaro region, we then narrowed down to local government (municipality, district, ward and village) of the region. The very main reason is to understand the chains and links of command in exercising duties at both central and local government authorities in Tanzania. It will easier to identify and plug the challenges of space use and environment in the villages on the slopes of Mount Kilimanjaro.

Local Government Authorities (LGAs)

Local Government Authorities (LGAs) exist for the purpose of consolidating and giving more opportunities for the people to participate in the planning and implementation of development programs within their respective areas and generally throughout the country. The LGAs have autonomy in their geographic area. They coordinate the activities of the urban and rural authorities, which are accountable to the district for all revenues received for day-to-day administration. The main

functions of the Local Government Authorities are the maintenance of law, order and good governance, the promotion of economic and social welfare of the inhabitants and ensuring effective and equitable delivery of services (TU Dortmund University Spring report, 2015). These main functions include the following functions:

a. Formulation, coordination and supervision of the implementation of all plans for economic, industrial and social development in their areas of jurisdiction.
b. Monitoring and controlling the performance of the duties and functions of the district and its staff.
c. Ensuring the collection and proper utilization of the revenues of the district.
d. Making bylaws applicable throughout their areas of jurisdiction, and considering and improving bylaws made by village councils within their areas of jurisdiction.
e. Ensuring, regulating and coordinating development plans, projects and programs of urban and rural authorities within their areas of jurisdiction.
f. Regulating and monitoring the collection and utilization of revenue of urban and rural authorities.

There are special committees in the field of finance, administration and planning, education, health and water, economic affairs and the environment, their tasks are:

a) Facilitate the maintenance of peace, order and good governance
b) Promote social welfare and economic well-being of the local community, further the social and economic development of their areas
c) Take the necessary measures for the suppression of crimes and protection of public and private property
d) Regulate and improve agriculture, trade, commerce and industry
e) Enhance health, education, and the social, cultural and recreational
f) End poverty and distress.

The LGAs are service providers in the district to village level. There are two major categories of Local Government Authorities, which are urban and rural authorities. According to the Local Government (Urban Authorities) Act 1982, the urban authorities are responsible for the administration and development of urban areas ranging from townships, municipalities to cities. While, according to the Local Government (District Authorities) Act 1982, the rural authorities are commonly known as district councils.

In respect to Local Authorities, the Regional Commissioner is mandated to support these authorities in the region to undertake and discharge their responsibilities. The Regional Secretariat is meant to facilitate the functions of the local government authorities within the region. However, the experience is that the regional administration can put heavy pressure on the local authorities and disturb their development plans and programs (TU Dortmund University Spring report, 2015).

In relation to this study, at local government level, for example, in Kilimanjaro region, we have seven administrative units. These are Moshi municipality, Moshi district, Siha district, Same district, Mwanga district, Rombo district and Hai district. Though, this study focuses more on the Moshi district (see this chapter and chapter four). In these authorities, we see a spatial planning section. However, the housing section with clearly stated roles and adequate experts is missing (see recommendations in chapter twelve).

The district

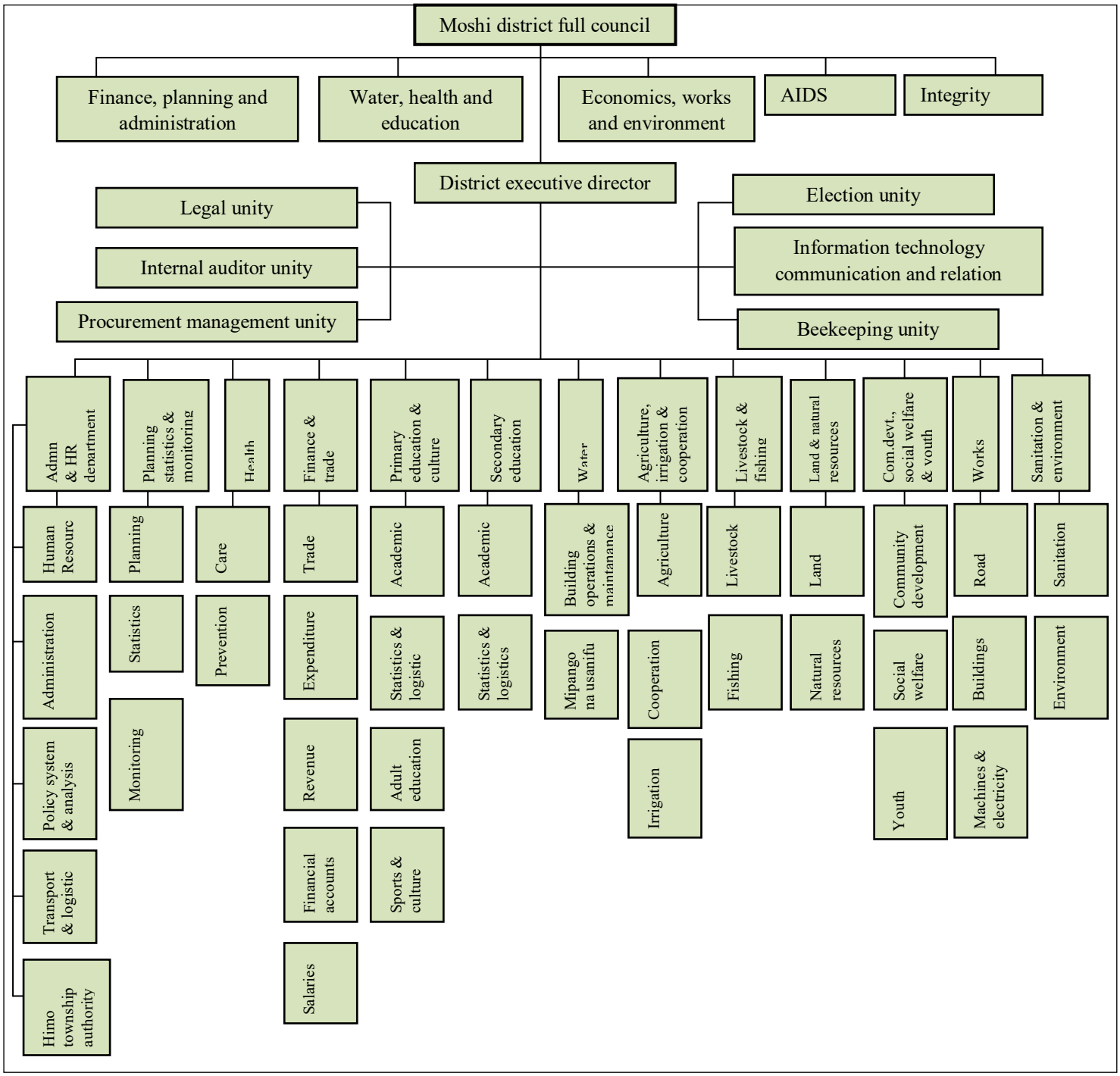
The next lower political unit below the region is the district. It is administrated by the Ministry of State in the President's Office: Regional Administration, Local Government, Civil Service and Good Governance. The district in this study means Moshi district. On the district level, there is a district

council composed of members elected from each ward, members of the parliament representing constituencies within the area of the district council, three members appointed by the Ministry of State in the President's Office: Regional Administration, Local Government, Civil Service and Good Governance and one member representing the constituent village councils on a rotational basis.

The District Commissioner (DC) is the principal representative of the Central Government in the district and is responsible for facilitating and assisting Local Government Authorities in the actions. The head of a district is called District Executive Director (DED). At the district level, the spatial planning falls under the department of land and natural resources while housing falls under the department of works. See the structure of Moshi district authority in figure 7.8.

At this authority, we have a spatial planning section. However, the housing section with clearly stated roles and adequate experts are missing. The building section which is under the department of works cannot really be named as a 'housing section' because to perform such intensive roles (both in the formal and informal urban areas, including in the village) in an effective manner it needs its autonomy and adequate resources (to be institutionalized). It has also been observed that, narrowing down the spatial planning and housing section into the ward and village levels could raise the value of housing sector in the grassroots levels in Tanzania (see the proposed solutions in chapter twelve).

Figure 7.8: The structure of the Moshi district authority.



Source: Author's own construct based on the fieldwork data, 2015.

The ward

The districts are further subdivided into wards for management purposes. In facilitating the undertaking of its functions and roles, section 30 (1) of the Local Government Acts 1982 divides the district into wards. The ward in this study is Kimochi ward. The ward reviews the proposed village council's projects in its jurisdiction and approves them for passage up to the District Development Committee. At the ward level, daily administration is under the Ward Executive Officer (WEO) who

reports to the Ward Development Committee under the chairmanship of the elected Ward Councilor. The Ward Development Councilor represents the ward in the District Development Council. Chairpersons are members of the Ward Development Committees and are expected to assist the Ward Executive Officers in daily administration since they are closest to the municipal residents. On the ward level, there are also committees covering issues of economic planning, finance, social services, security, forest protection and water resources. Proposed bylaws must be adopted by the Village Assembly before been submitted to the District Council for approval.

Also, at the ward level, there is a lack of a spatial and housing section with clear roles, autonomy and resources. The presence of these vital sections at grassroots levels could shape the practice of, spatial planning and housing development in a better and in a sustainable way in Tanzania. The ward is further subdivided into streets (for urban wards) and into villages (for rural wards). In urban authorities the lowest level of the ward is referred to as "mtaa" a street. "Mtaa" has a similar status to that of the villages in the rural areas.

The village

In the rural areas the grass roots level consists of the village and the village is further subdivided into hamlets "vitongoji". The village is a smallest unit of the local government authorities. In this study the village means Sango village. The village structure is comprised of a Village Assembly and a Village Council. The Village Council is a corporate body with perpetual succession and an official seal. The council is capable of suing and being sued and entitled of holding and purchasing, or acquiring in any other way. Also, the council can dispose of any movable or unmovable property (section 26 of the Local Government-District Authorities Act, 1982).

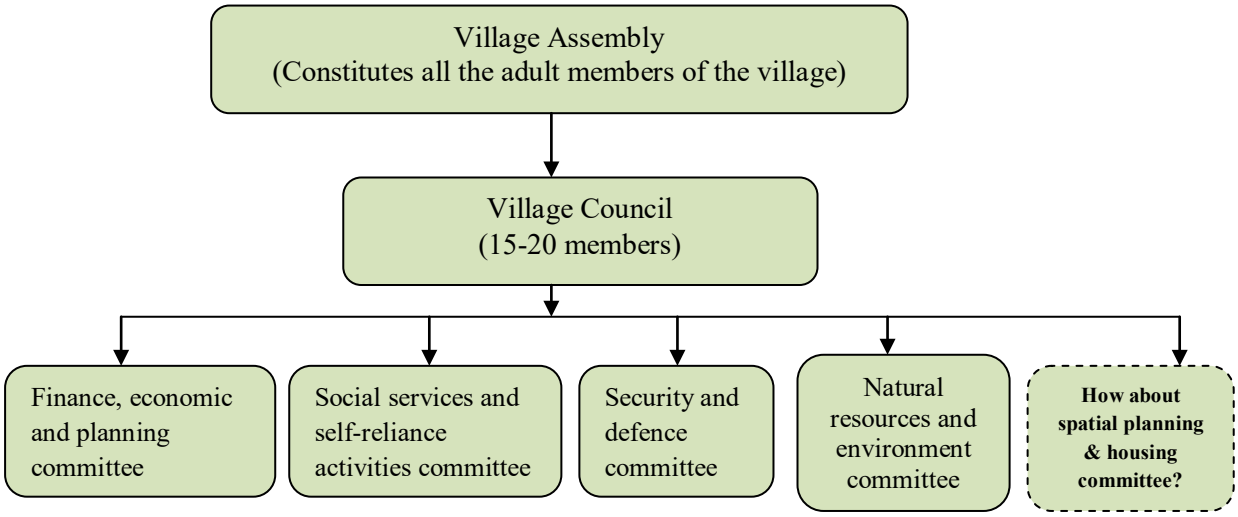
The Village Council is made up of a chairperson elected by the Village Assembly, the chairperson of all "vitongoji" within the village and other members elected by the Village Assembly. No less than one quarter of the total number of all members of the Village Council is women. While the Village Council consists between fifteen and twenty members, the Village Assembly is comprised of every person who is ordinarily resident in the village and who has attained the apparent age of eighteen years see figure 7.9.

In addition, the Village Assembly is the supreme authority on all matters of general policy making in relation to the affairs of the village and is responsible for the election of the Village Council and the removal from the council of any or all the members of the council, for the performance of any other functions conferred upon it by or under the Local Government Act or any other written law.

The village council's functions and roles include planning and coordinating activities, rendering assistance and advice to the villagers engaged in agriculture, forestry, horticultural, industrial or any other activity, and to encourage village residents to undertake and participate in communal enterprises. Proposed bylaws must be adopted by the village assembly before been submitted to the District Council for approval (section 163 of the Local Government -District Authorities Acts 1982).

In facilitating the undertaking of its functions and roles, the village is divided into "kitongoji". "Kitongoji" is a local unit within the village. Every village consists of not more than five "vitongoji" with a chairman elected by the "kitongoji" electoral meeting. This meeting consists of all adult members of the "kitongoji".

Figure 7.9: The structure of the village governance in Tanzania.



Source: Author's own construct based on the fieldwork data, 2016

In administrative practice, and official and unofficial perception, however, most of the time villages are not perceived as governance units and local government seems to stop at the district level (Shivji and Peter 2000 cited in Shivji 2002:30). It has also been revealed that, there is a lack of a spatial and housing committee at the village level. The presence of these vital committees at grassroots levels could address the emerging spatial and environmentally related housing issues at the very infancy stage. Thus, ensure guided villages which are our future townships, towns and cities.

Other ministries

It has also been revealed that, there are several other important ministries involved in spatial planning and housing in Tanzania. These are explained below:

a) Ministry of Finance and Planning

This ministry is responsible for financing housing, planning, foreign exchange regulations, revenue collection and expenditure. In respect of Local Authorities, the ministry is mandated to oversee and moderate budgets of local governments, particularly in areas where the LGAs require Government subventions;

b) Ministry of Natural Resources and Tourism

This ministry deals with the development and maintenance of natural resources and tourist attractions such as Mount Kilimanjaro;

c) Ministry of Water and Irrigation

This ministry is responsible for the formulation of water delivery policies one of which is to ensure that every person has access to clean water at a distance of less than 400 meters;

d) Ministry of Energy and Minerals

This ministry is responsible for the proper utilization of non-renewable and renewable energy by coordinating and organizing investments in projects for producing, generating and distributing electricity in both urban and rural areas in Tanzania;

e) Ministry of Works, Transport and Communication

This ministry is responsible for planning, development and maintenance of major infrastructure investments, particularly related to transport;

f) Ministry of Health, Community Development, Gender, Seniors and Children

This ministry oversees policy matters relating to health and social welfare, including the provision of curative and preventive services;

g) Ministry of Education, Science and Technology. It involves in policies on education, skills, knowledge and professions. It ensures that the human resource of the country is good and competent in different sectors such as spatial planning and housing; and
h) Ministry of State in the Vice President's Office: Union Affairs and Environment. It involves and plays a greater role in addressing the environmental issues caused by human development activities in the country.

Other stakeholders

In addition to the already mentioned institutions, there are several other stakeholders in the public, private and other sectors, which include Non-governmental Organizations (NGOs) and Community Based Organizations (CBOs), who take part in the housing and planning practice in Tanzania. Their roles in the development process are to bring diverse information, technical skills and support, coordination abilities and implementation effectiveness in the sectors of housing spatial planning. These include the following:

a) The National Land Use Planning Commission - the formal institutions such as the National Land Use Planning Commission are also responsible for the land use plan preparation in the country, following up of different land use plans, policy formulation and implementation. Other responsibilities include conflict management related to land development in the country. It has been observed that, the focus of the Land Use Planning Commission is to prepare general and detailed planning schemes in urban areas, whereas in the village the focus is preparation of general physical planning schemes. The findings in the case study area have suggested that, detailed planning schemes are also needed in the village (see chapter twelve);
b) Local Water Supply and Sewerage Authority establishes and controls the public water supply, imposes water rates and prevents pollution of water sources within the country. For example, in Kilimanjaro region, we have a Moshi Urban Water Supply and Sewerage Authority (MUWSA). In the village it has been observed that, most of the villagers use natural sources and some through NGOs projects;
c) Tanzania National Electricity Supply Company (TANESCO) has a regional office in Moshi Municipality. Its responsibilities include the generation and distribution of electricity energy, construction of energy generating facilities, and ensuring payments of electricity bills. It has been able to penetrate even in the village, though, not reliable. Thus, other renewable sources of energy e.g. solar are currently used (see chapter eight);
d) Kilimanjaro National Park (KINAPA) oversees the development of tourist attractions around Mount Kilimanjaro and the surrounding national park. It coordinates the use of the mountain by different activity sectors. It also ensures the protection of Mount Kilimanjaro boundaries and protection of its forest and the nature;
e) National Housing Corporation (NHC) is a government agency responsible for the development of social and rental housing. It operates under the mandate of the Ministry of Lands, Housing and Human Settlements Development. Currently, it is also involved in constructing and selling of houses at market price in several regions in Tanzania. It has an office in Moshi town. Though, it is limited only in urban areas;
f) Others actors are National Housing Building Research Agency (NHBRA) which specializes in researching various building materials; Tanzania Building Agency (TBA) which is responsible for constructing government housing; and
g) The expert registration boards, such as the Architects and Quantity Surveyors Registration Board (AQRB) and the Planners Registration Board, which all initiated to support the practice

of housing and spatial planning in Tanzania. Though, the challenges are still persisting because of the institutional weaknesses.

Financial resources and revenue raising powers of the local authorities

The financial resources of the local government units generally come from three main sources as explained below:

Taxation: Most of the taxes are collected by the central government; however the local government authorities do have some taxes on their own. There is an inadequate collaboration between the central and local governments, which leads to unclear autonomy on local taxes collection and use. It has also been observed that, the local governments have very weak local tax administration capacity. This needs to be adjusted through recasting the regulatory framework for local government revenue administration. The tax system shows a lack of transparency and justification, which leads to tax evasion (TU Dortmund University Spring report, 2015).

In additional to that, local taxes are mostly nuisance taxes that are less efficient than central government taxes. An alternative could be the improvement of the relations between the central government taxation administration and the local government authorities. Local authorities can raise revenue locally. The main sources of local income come from: development levies, property tax, agricultural/livestock levies, industrial/service levies, land rent, licenses and fees, charges, and other taxes and levies (ibid).

The shares from the national government revenue: The other source is the shares they receive from the central government revenues. These shares play a major role, especially in the development of the local governments. Almost 95 percent of the local government revenues are transferred from the central government (TU Dortmund University Spring report, 2015). This is because it collects the most of the taxes. The importance of transfers has steadily increased over the years. Both sources of local revenue collections and local government borrowing play a major role in the total financial inflows for Local Government Authorities (LGAs).

The public borrowing: The public borrowing plays a minor role in the local financial system. These are some of the major challenges that the local government authorities face in Tanzania. The existing financial challenges, which most of the local governments face, have implications, for example, in housing and spatial planning development particularly in the rural/villages in Tanzania.

Generally, in this section I presented the existing institutional framework for spatial planning and housing in Tanzania in general and in relation to the case study area. I have also provided the existing link from the central to the local government. I went further to highlight how its setting impedes the development of spatial planning and housing sector, especially in the village/rural areas. It has become clear that the lack of spatial planning and housing sections at the grassroots levels, inadequate human resource and actors to pursue the roles of spatial planning and housing, lack of detailed planning and housing standards and regulations, and inadequate and dependency budget poses a great challenge in ensuring sustainable development in the villages in Tanzania. The next section gives some reflections on the existing housing and land policies, their legislations, including their underpinning challenges particularly in the village in Tanzania. In short, it highlights the existing rules of the game for village spatial planning and housing development in Tanzania. These aspects are important in understanding the phenomenon under the study.

7.8.2 Housing policies

In case of rural shelter, many developing countries do not even have coherent policies (UNCHS, 1995:11). To some extent this statement holds water in Tanzania. The existing Tanzania housing and land policies, including their challenges and how they have been addressed are explained below:

- *The National Housing Policy, 1981*

The first National Housing Policy was formulated in 1981 with the objective of providing a framework for the housing sector development in the country. This policy outlined the need for addressing broad housing problems. These problems among others were, the housing shortage in urban areas, poor housing quality in both urban and rural areas, rapid growth of unplanned settlements, and inadequate infrastructure and services in urban areas. The policy called for concerted efforts from all stakeholders and greater government involvement in housing sector development. This policy was not implemented due to government budgetary constraints and a change in economic policy direction from central planning to a market economy (URT, 2009).

- *The National Land Policy, 1997*

The overall aim of a National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad-based social and economic development (such as housing development/investments) without upsetting or endangering the ecological balance of the environment. This land policy addresses some of the land pressing issues which are related to human development activities. For example, section 6.10 states that progress in village land use planning has been very slow and without adequate participation of the users. Adding that, the land use plans consist of rigid land use zoning which is sometimes not suitable for proper management of rural land resources. Its policy statement states that the village land use planning process will be simplified for speedy execution. Also, the village land use plans will provide a basis for guiding extended service packages including techniques in agriculture, livestock, forestry, wildlife, fisheries and environmental conservation (ibid: 33). However, the land policy regarded the village land as a land for agriculture and pastoralism. Also, this policy had given less attention on the human settlements development, both in the rural and urban. This gap calls for the preparation of the Human Settlements Development Policy, 2000.

- *The National Human Settlements Development Policy, 2000*

The overall goals of the National Human Settlements Development Policy, 2000 are to promote development of human settlements that are sustainable and to facilitate the provisions of adequate and affordable shelter for all income groups in Tanzania. However, the challenges is that while housing development in Tanzania is guided by this policy, the policy objectives largely caters towards the provision of adequate shelter, an efficient land delivery system, service provision and better rural housing without specifically addressing the problem within the housing sector. Therefore, calls for the housing development policy.

- *The Housing Development Policy draft, 2009*

The goal of this policy is to have a framework within which majority of citizens will be able to access adequate and affordable housing by the year 2025. However, it also gives priority in urban areas; in the rural (village) is still a challenge. The urban context is different from the rural; therefore, perhaps we need to have a rural/village housing policy or rural/village housing development/investment framework. It is obvious that the rural/village areas will also require their legislations; regulations and standards (see the proposed thoughts in chapter twelve).

7.8.3 The existing spatial planning and housing legislations for the village

To give the land and housing policies the power, there have been several legislations and regulations which have been provided. These are intended to ensure the orderly use and govern of land and housing investments in Tanzania. To ensure systematic use of land and proper housing development, there has been also standards which have been provided. Though, one of the great challenges that Tanzania government is still facing today is on the implementation of the existing rules of the game. Also, the monitoring of housing in the village, including those in the informal (unplanned) areas is another great challenge.

– *The Village Land Act No. 5 of 1999*

The Village Land Act, No. 5 of 1999 ensures that the village land is used productively and that any such use complies with the principles of sustainable development (URT, 1999:23). It provides a legal framework for the management and administration of land in the village and other related matters. Though, it has also some weaknesses that need to be addressed. For example, according to section 18 of the Village Land Act, of 1999, it states that a customary right of occupancy is in every respect of equal status and effect to a granted right of occupancy. However, in reality it has never been the same.

The "dualistic" statutory customary character of land rights that has prevailed since the colonial era, however, remains. Government officials and financial institutions do not recognize customary land rights as equal to statutory rights, and they do not respect the legal authorities of village government over land. As a result large swaths of village land have been alienated. The law has not been effectively implemented and enforced, leaving some community advocates to call for reform (World Resources Institute and Landesa-Rural Development Institute, 2010:1).

As, the UNCHS, (1995:33) had added that, the customary land-tenure patterns in many rural areas of the developing world often mean that the land on which houses are built cannot be pledged as security for loans because the exchange value of rural houses is usually low. Perhaps, this calls for 'an institutional framework for rural/village housing development' to guide the rural housing development and give value to the rural housing through customary right of occupancy to enable household to use as a collateral. These will improve the village housing, the nature, the use of land and other natural resources, the household's income and the local government revenue through property tax (see recommendations in chapter twelve).

- *The Land Use Planning Act No. 6 of 2007*

The Land Use Planning Act No. 6 of 2007 provides for the procedure for the preparation, administration and enforcement of land use plans in urban and rural areas in Tanzania.

The objectives of the Land Use Planning Act to which all persons and authorities exercising powers under, applying or interpreting this act shall be to: facilitate efficient and orderly management of land use; empower landholders and users to make better and more productive use of their land; promote sustainable land use practices; ensure security and equity in access to land resources; facilitate the establishment of framework for the prevention of land use conflicts; facilitate overall macro-level planning while taking into account regional and sectoral considerations; provide for inter-sectoral co-ordination at all levels; ensure the use of political and administrative structures and resources available at national, regional, district and village levels; and provide a framework for the incorporation of such relevant principles contained in national and structural development policies as may be defined by the government (URT, 2007:140).

The fundamental principles and objectives of the National Land Policy and the Human Settlements Development Policy are incorporated in the Land Use Planning Act of 2007. Though, like the other rules of the game still there has been a little attention in the village. More attention has been vested in the urban housing (see, for example, the Land Act, No. 4 of 1999; the Unit Tile Act no. 16 of 2008; and the Mortgage Finance Act no.17 of 2008).

- *The Land Act, No. 4 of 1999*

The Land Act, No. 4 of 1999 provides for the basic law in relation to land other than the village land and sets the legal framework for implementing the objectives of the National Land Policy of 1997 for the Granted Right of Occupancy. The Land Act as amended in 2004 created the platform for review of the legal framework for mortgage finance in Tanzania for the purpose of redressing the balance between the interests of the mortgagor (borrower) and those of the mortgagee (lender).

- *The Unit Titles Act no. 16 of 2008*

The Unit Titles Act no. 16 of 2008 sets out the rules and procedures for the management and regulation of divisions of buildings into units, clusters, blocks and sections, owned individually or in common use for the purpose of promoting the efficient and effective use of landed property in Tanzania. In other territories, it would be referred to as the Condominium Law. To support it the mortgage finance act was enacted.

- *Mortgage Finance Act No. 17 of 2008*

Mortgage Finance Act No. 17 of 2008 provides for amendments to the Land Act, the Land Registration Act and Civil Procedure Act to make needed provisions to allow for development, promotion and more efficient management of the mortgage financial market. However, more efforts and priorities are vested in urban, rural areas are still isolated. The other main observed challenge is that, to date we still don't have a national housing policy and an act to give it power. In addition to that, the spatial planning and housing standards in the rural/village are almost missing and when available are over generalised.

7.9 Concluding remarks

This chapter has provided the facts for the existing rural/village housing condition in Tanzania. It has also shown that there are a number of institutions as actors, policy frameworks, and legislations governing land and housing development in Tanzania. Though, it has appeared that, more effort is vested on urban areas than in rural/village areas. It is an argument that, this thinking has to change, for example, through conceptualizing the village spatial planning and housing development/investments in Tanzania. This is important because the better rural/village areas we create today, implies the better towns and cities of tomorrow. This is not an easier task, but the inclusion of multi-locational households in the village development might fast-track this dream into reality. The following chapter explains the extent and characteristics of housing investments in the case study area (Sango village).

CHAPTER EIGHT

EXTENT AND CHARACTERISTICS OF 'MODERN' RESIDENTIAL HOUSING INVESTMENTS IN SANGO VILLAGE

8.1 Introduction

The purpose of this chapter is to explain the extent and characteristics of housing investments and urbanisation in Sango village. The chapter is divided into several parts to display some insights. The criteria for classifying an area as urban may be based on one or a combination of characteristics, such as: a minimum population threshold; population density; the proportion of the population employed in non-agricultural sectors; the presence of infrastructure such as paved roads, electricity, piped water or sewers; and the presence of education or health services (United Nations, 2014:4). However, there is no common global definition of what constitutes an urban settlement (ibid). Therefore, we can say that, an urban area is characterised by urban characteristics than rural characteristics (agriculture activities).

8.2 Classification of housing in Sango village

In this study and particularly in the context of Sango and other villages on the slopes of Mount Kilimanjaro, houses were classified based on the building materials and functional use. The literature shows that there are two types of building materials. These are traditional (locally available) and modern (industrial) materials. For example, Nguluma (2003:42) claims that, the change from traditional to modern building materials symbolises modernity and cash economy because houses are built with industrially produced building materials like concrete tiles that require financial resources to purchase. Adding that, people living in urban areas in Tanzania originate mostly from rural areas where many people live in traditional houses. However, when they shift their residences to large urban centres like Dar es Salaam, they adapt themselves to urban ways of life. Thus, whereas some may initially build houses using traditional building materials, they later change to "modern" building materials (ibid). Therefore, basing on this argument, the researcher was able to establish three categories of housing in Sango village. These are as follows:

i. Traditional housing, i.e. houses constructed using traditional materials only. In Tanzania, traditional houses are directly related to traditional society, depending on self-subsistence. Traditional houses are associated with simple, undeveloped building materials that result in relatively poor houses which are not durable (Larsson and Larsson, 1984 cited in Nguluma, 2003:42);

ii. Mixed material housing i.e. houses constructed using traditional and industrial (modern) materials. This was named as 'transition to low modern housing' i.e. houses constructed by half traditional and industrial materials (see table 8.1, 8.2 and 8.3); and

iii. Modern housing i.e. houses constructed using industrial (modern) materials only;

Again, the modern houses were further classified into three sub-categories. These were as follows:

a) Low modern housing i.e. houses constructed using industrial (modern) materials, but low cost materials/low quality;

b) Medium modern housing i.e. houses constructed of industrial (modern) materials, but medium cost materials/medium quality;

c) Advanced modern housing i.e. houses constructed using industrial (modern) materials and expensive materials/high quality (see table 8.1, 8.2 and 8.3). The symbol (√) means modern while (×) means traditional housing.

The criteria of classifying village housing are also based on the Tanzania census report of 2002 and 2012 and the Households Budget Survey 2011/12.

The functional use definition implies that, the modern use of the house is mainly for residential purpose (living and renting), while the traditional use is mainly for both residential and livestock keeping. The modern use of the house is the focus of this study.

Table 8.1: The summary of criteria of selecting a modern vs. a traditional housing in Tanzania.

1.Wall Materials	Cement and sand blocks	Blocks extracted from rocks	Baked bricks	Timber and iron sheets	Sun-dried bricks	Stones and mud	Poles and mud	Grass and Canvass
House no. 1 up to 64	√	√	√	√	×	×	×	×
2.Roofing cover Materials	Iron Sheets	Tiles	Concrete	Asbestos	Grass/ Leaves	Mud and Leaves	Plastic/ Box Paper	Canvass
House no. 1 up to 64	√	√	√	√	×	×	×	×
3.Flooring Materials	Cement	Ceramic Tiles	Parquet or Polished Wood	Terrazzo	Vinyl or Asphalt Strips	Wood Planks	Palm/ Bamboo Planks	Earth/ Sand
House no. 1 up to 64	√	√	√	√	√	√	×	×
4.Window Materials	Aluminium and glass	Aluminium, glass and Steel	Glass and Steel	Glass and Timber	Timber and Steel	Steel	Processed Timber	Poles
House no. 1 up to 64	√	√	√	√	√	√	√	×
5.Door Materials	Aluminium and glass	Aluminium, glass and Steel	Glass and Steel	Glass and Timber	Timber and Steel	Steel	Processed Timber	Poles/ Timber
House no. 1 up to 64	√	√	√	√	√	√	√	×
6.Roofing (Rafter)	Steel	Aluminium	Treated Timber	Untreated Timber				
House no. 1 up to 64	√	√	√	×				

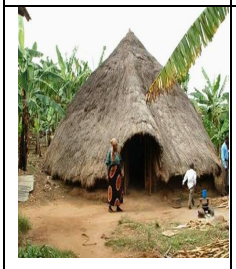
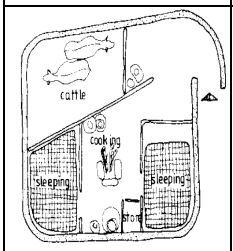
Source: Author's own construct, 2015 based on Tanzania census reports, 2002 and 2012

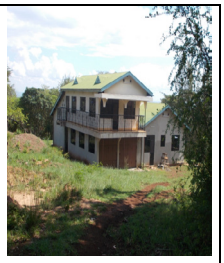
Table 8.2: The classification of housing by building materials in Sango village.

Levels/ Types of materials	Traditional housing	Transition to low modern housing	Low modern housing	Medium modern housing	Advanced modern housing
Walls Materials	Mud and poles, sundried bricks with soil mortar, grass, cow dungs	Mud and poles, Sun dried bricks with cement or soil mortar	Bricks or rock blocks and cement mortar, but not plastered	Cement block/ concrete/ bricks, plastered and well finished	Cement block/concrete, decorated, with unique shapes plastered and well finished
Roofing Materials	Grass/Leaves and mud	Iron sheets	Iron sheets	Iron sheets	Tiles/Iron sheets decorated
Flooring Materials	Earth	Earth/sand /stones	Rough sand, stones and cement	Well finished sand and cement/coloured	Tiles
Windows Materials	Poles	Unprocessed timber/Poles	Processed Timber window or glass	Glass and steel window	Aluminium and glass window
Doors Materials	Poles	Unprocessed timber	Processed/ Unprocessed timber	Iron grill/ polished timber	Iron grill, aluminium/ polished timber.

Source: Author's own construct, 2015

Table 8.3: The classifications of housing before, during, and after colonial era and now in Sango village.

Type 1. Traditional housing (Conical shaped)	Type 2. Transition to low modern housing (conical and rectangular shaped)	Type 3. Low modern housing (Rectangular shaped)	Type 4. Medium modern housing (Rectangular shaped)	Type 5. Advanced modern housing (Rectangular or L-shaped)
				
				

Source: Google search (traditional house in Kilimanjaro region) and field surveys in Sango village January-April, 2015

8.3 Extent and characteristics of housing investments in Sango village

This research has realised that, before and during the colonial era, the traditional houses (type 1) were abundant in the villages in Kilimanjaro region. However, to date these houses are very rare to find not only in Sango village, but almost in all the villages on the slope of Mount Kilimanjaro. This argument concurs with Nguluma (2003:42) that in the modern world traditional housing are fast disappearing subject to accelerating social change. Again, the transition to low modern housing (type 2) are also diminishing over the years. Type 3, 4 and 5 are now on the increase see table 8.3. It has been noted that, over the years, there has been an observed great change on house types, styles, materials, sizes, designs of the general house structures, windows sizes and designs, doors and roofing design or materials, etc. Unlike the past, this study has realized that, there are varieties of housing emerging in the villages on the slopes of Mount Kilimanjaro. This research used the Statistical Package for Social Sciences (SPSS) to provide statistical evidences related to multi-locational households and housing investments in the village of origin as described below.

8.3.1 House types in terms of forms/style/shape

The standardised household questionnaire analysis outcomes (SPSS) have revealed that, 59 out of 64 households surveyed built detached rectangular shaped houses, while 3 built Bungalows and 2 built Maisonettes house types see table 8.4 and lively examples of these houses in chapter ten. Therefore, Sango village is more characterised by detached houses. Through observational method, it has also shown that Sango village qualifies to be a medium modern housing village because of the type and number of modern houses available in the village.

Table 8.4: House types in terms of design/forms/style/shapes.

S/n	House forms/style/shape	Frequency	Percent
1	Detached house type (two-five bedroom house)	59	92.2
2	Bungalow house type (one storey house type)	3	4.7
3	Maisonettes house type (two storey house type)	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.3.2 Number of rooms

The empirical findings have shown that, 35 out of 64 households surveyed own four bedroom houses see table 8.5. This means that, many (35) households pose four (4) bedroom houses. This is because they have been built with a purpose, including accommodating the large extended Chagga family members who usually visit their village of origin, mostly twice a year (during Christmas and Easter or during burial ceremonies). It has also become clear that, it reflects the social status (prestige) of the households. The built self-contained houses have bedrooms, lounge, kitchen, toilets and bathrooms.

The indoor toilets are used during occasions. For example, one household argued that: "*...my children grew up in town; they grew up in a modern house with a flush toilet inside. That is why even our village house has a toilet inside…"*-Standardised household questionnaire no.5 conducted on 12/01/2015.

Table 8.5: The number of rooms per house.

S/n	Number of rooms per house	Frequency	Percent
1	Two bedroom house + Lounge + Toilet/bath	5	7.8
2	Three bedroom house + Lounge + Toilet/bath	14	21.9
3	Four bedroom house + Lounge + Toilet/bath	35	54.7
4	Five bedroom house + Lounge + Toilet/bath	10	15.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.3.3 House sizes

Findings have also shown that, 37 out of 64 households surveyed own houses ranging from 101-110 square meters see table 8.6. It has again been realised that, the bigger the house the higher the status. Therefore, those who built huge houses have been considered well-off and highly appreciated by the household members and the Sango community at large. It was easier to differentiate the house built by a normal government salaried employee and the self-employed business person/tycoon (see chapter ten). The large houses are also used to accommodate the large number of household members who visits the village of origin during occasions. This sends signals to rural spatial planners, architects; rural sociologist and environmentalists (see recommendations in chapter twelve).

Table 8.6: The house size/area.

S/n	House size/area in square meters	Frequency	Percent
1	51-100 square meter	11	17.2
2	101-110 square meter	37	57.8
3	111 square meters and above	16	25.0
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.3.4 Housing transformation types

The statistical evidences have shown that 49 out of 64 households surveyed have built new modern houses on an agricultural land see table 8.7. This implies that there are more new modern houses added on the agricultural land. The findings further show that the trend of housing transformation (especially new houses built on the agricultural land) in the villages on the slopes of Mount Kilimanjaro is on the rise. This has implications on the village agricultural land and other land uses, including the use of natural resources such as forest (see also chapter eleven). The recommendations to address these underpinning spatial and environmental issues are provided under chapter twelve.

Table 8.7:The types of housing transformations in Sango village.

S/n	Types of house transformations	Frequency	Percent
1	Old modern house partially modified	2	3.1
2	Old modern house totally modified and horizontally extended	6	9.4
3	Old traditional house totally demolished and replaced with modern housing	1	1.6
4	New modern house built on an agricultural land	49	76.6
5	Old modern house horizontally extended	4	6.2
6	Old modern house totally modified and horizontally extended and a new house built on agricultural land	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

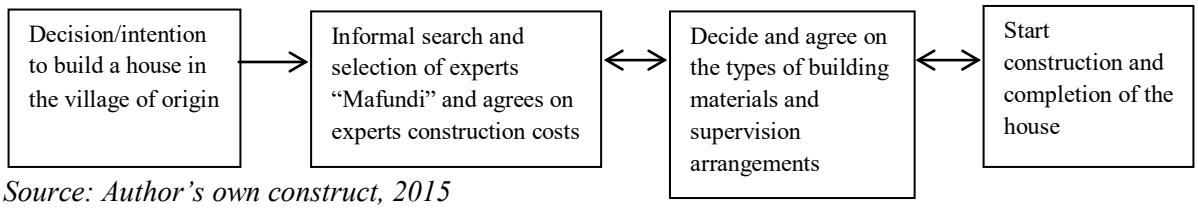
8.3.5 Housing investments processes

This study has revealed that, usually, the decision/intention to build a house in the village of origin (e.g. Sango village) is an individual (head of household) decision which is also influenced by the family members and the Chagga community.

It has been further revealed that, once the head of the household has decided to build a house in his/her village of origin. He/she finds an expert "fundi" to build his/her house by asking the family members or people with good reputation in the village. It is then followed by personal contact and agreement (mostly informal and orally agreed) on the type and size of the house to be built including the cost of the experts. The payment is usually in instalments (for example; foundation stage, walling, roofing etc.). The house plan might be available or not, it depends on whether the house is built by "Mafundi"[1] or contractors. Again, the supervision is done by the house owners or the appointed member of the household or the trusted villager (with a good reputation) see summary in figure 8.1.

Unfortunately, the village, ward or district authorities are not involved in the process. This has implication on the quality of housing and space standards in the village. This is a housing and spatial planning problem which requires urgent measures (housing and spatial planning solutions) now and in the future in order to ensure sustainable development in the villages on the slopes of Mount Kilimanjaro (see some recommendations in chapter twelve).

Figure 8.1: The housing construction processes in Sango village.



Source: Author's own construct, 2015

[1] "Mafundi" is a plural of the word "fundi". It is a Swahili word used to mean the local artisans who involves in construction works e.g. in house constructions.

8.3.6 Housing construction experts "Mafundi"

Findings have shown that, 39 out of 64 households' surveyed used local artisans popularly known as "Mafundi" to build their houses while 25 used trained professionals see table 8.8. The results have revealed that, the local artisans are cheap and affordable, hence accepted by most households. However, their outputs are to some extent missing the professional standards. This concurs with Nguluma (2006) who argued that: "*…the workmanships of "Mafundi" especially in the finishing part are poor…"* This is a risk if not controlled; bearing in mind that Kilimanjaro region is also affected by several earthquakes. Therefore, it requires special attention and control from the construction or the housing sector, which needs to be narrowed down to the village level (see more recommendations in chapter twelve).

Table 8.8: The house construction experts.

S/n	House construction experts	Frequency	Percent
1	Local experts "Mafundi"	39	60.94
2	Contractors/trained professionals	25	39.06
	Total	**64**	**100**

Source: Fieldwork data, 2014/2015; SPSS analysis, 2015

8.3.7 Progressive house construction

The progressive construction model was suggested to be the best model to apply in the implementation of the development projects (such as housing and infrastructure constructions) in developing countries, see for example, Choguill (1999). This is because of its flexibility. In the housing investments, for example, households have been able to build their houses step by step depending on the availability of funds, materials and time. The findings have revealed that, on average, it takes about 2 to 8 years or more to complete a house construction in the village.

The statistical evidences have shown that, 37 out of 64 households surveyed built their houses between the years 2001 to 2010 while from 2011 to 2015 there was 23 new modern houses built in Sango village see table 8.9. This implies that the trend of housing investment in Sango village has been on the increase over the years. The findings tell us that this is the cultural phenomenon which will continue to exist over the years. In short, it is a phenomenon which is there to stay. The remained challenge is on how planners, architects, environmentalist, including the local authorities (village authorities) and central government (Ministry of Lands, Housing and Human Settlements Development) going to intervene (see chapter twelve).

Table 8.9: The time when the house was constructed/improved.

S/n	Time when the house was constructed/improved	Frequency	Percent
1	1991-2000	4	6.2
2	2001-2010	37	57.8
3	2011 and above	23	35.9
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.3.8 Housing financing

The findings have shown that, households have used more than one source of income for housing finance. The findings have further revealed that, 27 out of 64 households surveyed used their own source (business), salary and loan to build their houses. Again, 16 out of 64 households used only their own source (business) while 13 households used both their own source and loan to finance their

housing see table 8.10. This implies that, the houses that we see in Sango village are mostly self-financed with little support from the financial lending institutions. The transformations of the 'dead assets' (housing investments in the villages) into 'live assets' could influence the financial institutions to boost the rural housing sector in Tanzania.

Table 8.10: The sources of funding for housing investments.

S/n	Sources of funding for housing	Frequency	Percent
1	Own source (business)	16	25.0
2	Salary	1	1.6
3	Own source, salary and loan	27	42.2
4	Own source and pension	5	7.8
5	Own source, pension and children	2	3.1
6	Own source and loan	13	20.3
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.4 House building materials used

This research has shown that, all the households surveyed in Sango village built their houses by using industrial/modern building materials. It also analysed the whole house structure, i.e. walling, rafter, roofing, floor, windows and doors. This research displays some promising housing improvement results, which are also reflected in the Tanzania population and housing censuses reports of 2002 and 2012 and the Households Budget Survey 2011/12.

8.4.1 Walling building materials

The statistical findings have shown that 28 out of 64 households surveyed own houses which have been constructed with rock block walls (blocks extracted from rocks/hills/mountains) while 23 households used both normal (sand and cement) blocks and rock blocks see table 8.11. This implies that rock blocks are mostly used for housing walling in Sango village. Though, it's associated spatial (site for extraction of building materials) and environmental challenges needs to be established (see chapter eleven).

Table 8.11: Housing walling building materials.

S/n	House walling building materials	Frequency	Percent
1	Normal blocks (cement and sand)	5	7.8
2	Rock blocks (extracted from rocks/hills/mountains)	28	43.8
3	Blocks and rock blocks	23	35.9
4	Blocks, rock blocks and bricks	2	3.1
5	Rock blocks and bricks	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.4.2 Roofing (rafter) materials

As it has been a call for a recommendation of an area for extracting walling materials, it is also a call for alternative rafter materials to replace timber, reduce deforestation and protect the nature in the villages on the slopes of Mount Kilimanjaro. Findings have revealed that all the households' surveyed used timber to prepare rafter see table 8.12 and figure 8.2. This means that there is high demand for timber for making rafter in Sango village and all the villages surrounding Mount Kilimanjaro. It is,

therefore, a call for alternative rafter materials to replace timber and protect the nature in the villages on the slopes of Mount Kilimanjaro.

Table 8.12: The roof beam (rafter) materials.

S/n	House roof beam (rafter) materials	Frequency	Percent
1	Timber	64	100
2	Steel/Aluminium/Concrete	0	0
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.2: Timber used as the roofing (rafter) materials in Moshi district.

Source: Fieldwork data, 2015

8.4.3 Roof covers materials

The results obtained from the Statistical Package for Social Sciences (SPSS) have shown that 63 out of 64 households surveyed used iron sheets as a roof cover while one (1) household used tile see table 8.13. This means that the use of modern roofing materials is on the increase in Sango village. This can also be observed in most of the villages on the slopes of Mount Kilimanjaro.

Table 8.13: House roofing covers materials.

S/n	House roof covers materials	Frequency	Percent
1	Corrugated iron sheet	63	98.4
2	Tiles	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.4.4 Flooring materials

The analysis outcomes have shown that 33 out of 64 households own houses with concrete floor materials while 25 used tiles and 6 used both tiles and concrete see table 8.14. This has also shown

that the uses of modern materials for flooring are on the increase in Sango village and of course several other villages on the slopes of Mount Kilimanjaro and Tanzania in general.

Table 8.14: House flooring materials.

S/n	House floor materials	Frequency	Percent
1	Tiles	25	39.1
2	Concrete (sand and cement)	33	51.6
3	Tiles and Concrete	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.4.5 Window materials

It has also been revealed that 18 out of 64 households have houses built with windows constructed of metal/steel frame plus glass while 17 have windows constructed with metal/steel frame plus aluminium plus glass and 16 have windows constructed of timber frame plus metal/steel plus wire see table 8.15. This means that households have used modern materials to construct windows. However, the use of timber as a building material for window still exists today. Though, the use of alternative materials (such as aluminium, steel and glass) is slowly replacing the use of timber. This is a promising result in the forest sector.

Table 8.15: House window materials.

S/n	House windows materials	Frequency	Percent
1	Timber frame + metal/steel + glass	11	17.2
2	Timber frame + metal/steel + wire	16	25.0
3	Timber frame + metal/steel + aluminium + glass	2	3.1
4	Metal/steel frame + glass	18	28.1
5	Metal/steel frame + aluminium + glass	17	26.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.4.6 Door materials

The results have shown that, all houses were constructed with processed and treated timber doors see table 8.16. However, some households have both timber and steel gates. The steel gates are mainly used for security purposes. Like rafter it also calls for alternative materials.

Table 8.16: House door materials.

S/n	House door materials	Frequency	Percent
1	Timber	64	100
2	Timber and metal/steel	0	0
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Generally, the results have shown that households used modern building materials for housing construction. Yet, timber is mostly used in making rafters, doors and windows. This has negative impacts on forestry. The sources of building materials were also highlighted.

8.5 Sources of housing building materials

This study has revealed that, there are different sources of building materials in and outside Sango village. These sources are explained below:

8.5.1 Sources of timber

The analysis has shown that 38 out of 64 households surveyed get timber for housing from three sources. The sources are from their own farms, villager's farms and Moshi town/Kiboroloni see table 8.17. This implies that deforestation and environmental degradation in the villages on the slopes of Mount Kilimanjaro, including its forest (Mount Kilimanjaro forest) is at risk. More explanations and evidences from Sango village are provided in chapter eleven. It has also been observed that, despite of the existence of bylaws which monitor trees cut off, still it has never been implemented successfully. This challenge might be the result of institutional weaknesses.

Table 8.17: Sources of timber for housing.

S/n	Sources of timber for housing	Frequency	Percent
1	Own farm	7	10.9
2	Villagers farms	4	6.2
3	Own farm, Mt. Kilimanjaro forest (Rombo district), villagers farms and Moshi town/Kiboroloni	7	10.9
4	Own farm, villagers farms and Moshi town/Kiboroloni	38	59.4
5	Villagers farms and Moshi town/Kiboroloni	8	12.5
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.5.2 Source of sand, gravel and stone

It has been revealed that 37 out of 64 households surveyed got sand; gravel and stone along or in seasonal rivers and hills within Sango village and neighbouring villages see table 8.18 and figure 8.3. The findings have again shown that the price for normal sand range from 120,000-180,000 TZS[2] depended on the capacity of the truck and the carriage distance. While the price for small stone-gravel (fine, medium or coarse gravel i.e. ½ or ¼ inch gravel) per truck was 160,000 TZS. The large stone-gravel costed 150,000 TZS and normal rock-gravel costed 20,000 TZS. The transport cost depended on the carriage distance which had ranged from 40,000-80,000 TZS (households' interviews and women entrepreneurs selling gravel at Sango hill).

Findings have further shown that, the main source of gravel is Sango hill. It is the hill which is highly depleting over the years due to high demand for gravel for housing construction sees satellite images in chapter eleven, including figure 8.3 and 8.4. These results have negative implications on Sango village space and the environment as explained further in chapter eleven.

It also means that Sango and Kawawa hills which are the main sources of housing building materials are diminishing over the years. These findings suggest for alternative housing building materials or/and closer control/monitoring.

[2] 1 US Dollar approximately equal to 2,142 TZS (January, 2015)

Table 8.18: The various sources of sand, gravel and stone in Sango village.

S/n	Sources of sand, gravel and stone	Frequency	Percent
1	Hills/mountains (Sango, Kawawa etc.)	22	34.4
2	Along/in rivers and hills/mountains	37	57.8
3	Along/in the rivers, hills/mountains and Kifaru/Mwanga	5	7.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.3: The sources of housing building materials (gravels) in the Sango hill in 2015.

Source: Field surveys in Sango village January-April, 2015

Figure 8.4: Sources of various types of gravels in Sango hill.

Source: Field surveys in Sango village January-April, 2015

8.5.3 Sources of rock blocks, normal blocks and bricks

The statistical evidences have shown that, 45 out of 64 households surveyed access rock blocks (blocks extracted from the hills/rocks) see figure 8.5; normal blocks (made out of sand and cement)

and bricks (made out of burnt soil) from two sources (small scale industries making sand and cement blocks; and small scale industries extracting rock blocks from the hills/rocks in Sango and Kawawa hills) see table 8.19. The price for rock blocks range from 350-450 TZS per block while the price for normal block range from 1,000-1,200 TZS per block; and burnt bricks cost 250 TZS per piece.

Table 8.19: The sources of rock blocks, normal blocks and bricks.

S/n	Source of rock blocks, normal blocks and bricks	Frequency	Percent
1	Small scale industries making cements and sand blocks	3	4.7
2	Small scale industries making burnt bricks	0	0
3	Small scale industries extracting rock blocks from the hills/mountains (Sango, Kawawa etc.)	11	17.2
4	Small scale industries (1 and 3)	45	70.3
5	Small scale industries (2 and 3)	3	4.7
6	Small scale industries (1,2 and 3)	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.5: The sources of gravel and rock blocks in Kawawa and Sango hills in 2015.

Source; Fieldwork data, 2015

Generally, despite the fact that multi-locational households have transformed the poor housing conditions in their villages of origin into modern housing (positive impacts), still the analysis has revealed that, the sources of housing building materials, especially for rafter and walling seem to have negative impacts on the nature (the forestry and the built environment). These impacts are further explained in chapter eleven. However, households surveyed were very happy about the quality of housing in their village of origin (Sango village) see table 8.20.

Table 8.20: The assessment of the quality of housing in Sango village.

S/n	Quality of housing	Frequency	Percent
1	Very good	58	90.6
2	Good	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

8.6 Access to physical infrastructures

The availability of modern physical infrastructures such as water, access roads, electricity and sanitation etc. add value to housing. Also, the presence of social infrastructures such as education facilities, health services, church, etc. adds more value to a particular village or settlement. The available infrastructures in Sango village are explained below:

8.6.1 The main sources of energy for lighting and cooking

The International Energy Agency claimed that, access to modern and environmentally friendly energy services is significant. It is therefore important that individual households get access to electricity and clean cooking facilities. The reality in Sango village is explained below:

Main source of energy for lighting

The statistical evidences have revealed that, 35 out of 64 households surveyed are using electricity as the main source of energy for lighting. However, it was insufficient and unreliable. This made 21 households to use both electricity and solar as their main source of energy for lighting see table 8.21. The use of solar is observed to be more reliable and efficient than electricity. This means that modern house owners in Sango village use modern energy for lighting. Though, capacity building is highly needed to expand the use of solar as a renewable and sustainable energy in order to protect the climate by reducing carbon dioxide (CO_2). This solar project needs to be implemented in all the villages on the slopes of Mount Kilimanjaro (see further explanations in chapter twelve).

Table 8.21: The main source of energy for lighting.

S/n	Main source of energy for lighting	Frequency	Percent
1	Electricity	35	54.7
2	Solar	2	3.1
3	Electricity and solar	21	32.8
4	Electricity, solar and gas	5	7.8
5	Electricity and kerosene	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Main source of energy for cooking

The household survey revealed that 33 out of 64 households use firewood as the main source of energy for cooking see table 8.22. It has also shown that 21 households use firewood and gas see figure 8.6 and 8.7. This means that households in Sango and other villages on the slopes of Mt. Kilimanjaro still use firewood as the main source of energy for cooking. It further depicts some signs of deforestation in Sango village and other villages on the slopes of Mount Kilimanjaro. This is a wakeup call to researchers and policy makers to suggest for environmentally friendly cooking energies in the villages in order to save our planet (see more recommendations in chapter twelve).

Table 8.22: The main sources of energy for cooking.

S/n	Main sources of energy for cooking	Frequency	Percent
1	Firewood	33	51.6
2	Firewood and kerosene	7	10.9
3	Firewood, electricity, kerosene, charcoal and bio gas	3	4.7
4	Firewood and gas	21	32.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.6: Women carrying firewood for cooking from the Mount Kilimanjaro forest.

Source: Fieldwork data, 2015

Figure 8.7: Household bio gas production for lighting and cooking in Sango village.

Source: Field surveys in Sango village January-April, 2015

8.6.2 The main sources of water

It is very clear that Mount Kilimanjaro and its forest are the main source of water for all the villages in Moshi district. The statistical evidences have shown that 46 out of 64 households surveyed have piped tap water inside and outside their house. It has also shown that 11 households surveyed have piped water tap outside the house within the plot see table 8.23 and figure 8.8. This finding also corresponds to that of the Tanzania Population and Housing Census report of 2012 which claimed that many households in Kilimanjaro region have good access to water (see chapter four). The main source of piped water is Mount Kilimanjaro forest. Therefore, monitoring and protection of this mountain, including its forest and the villages on the slopes of Mount Kilimanjaro are essential for the present and the future generation.

Table 8.23: The main sources of water.

S/n	Main sources of water	Frequency	Percent
1	Piped tap water outside the house within the plot	11	17.2
2	Piped tap water inside and outside the house	46	71.9
3	Public standpipe/kiosk	3	4.7
4	Public standpipe/kiosk and piped tap water outside the house within the plot	4	6.2
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.8: Piped tap water outside the house within the plot.

Source: Fieldwork data, 2015

Water supplier

Findings have shown that 49 out of 64 households assert that the water suppliers in the village is the Sango community and the government through the late Lucy Lameck (former Tanzania Member of Parliament) while 10 out of 64 claimed that, it is supplied by the government see table 8.24. However, the village chairman stated that it is supplied by both the community and the government (through the late Lucy Lameck).

Though, the water storage tanks and water kiosks, which were constructed many years ago (during the regime of the late Lucy Lameck) are now dilapidated due to lack of maintenance which results into unreliable water supply, especially in the lowland area of Sango village see figure 8.9 and 8.10.

Table 8.24: Water supplier.

S/n	Water supplier	Frequency	Percent
1	Government	10	15.6
2	Community and Lucy Lameck (the late MP)	49	76.6
3	Lucy Lameck, son of Nyange, the community line	5	7.8
	Total	**64**	**100**

Source: Fieldwork data, 2014/2015; SPSS analysis, 2015

Figure 8.9: The dilapidated water tank in Sango village.

Source: Field surveys in Sango village January-April, 2015

Figure 8.10: Dilapidated water kiosks in Sango village.

Source: Field surveys in Sango village January-April, 2015

Households average water use per day

The survey has shown that 37 out of 64 households normally use 6-7 twenty litres jerry can per day. The water use is very high, especially during occasions such as Christmas, New Year, Easter and other ceremonies see table 8.25.

Table 8.25: Households average water use per day per 20 litres jerry can.

S/n	Average water use per day	Frequency	Percent
1	4-5	10	15.6
2	6-7	37	57.8
3	8+	17	26.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Price of water

The survey has shown that 39 out of 64 households surveyed don't pay for water while 25 pays for water see table 8.26. However, it was not clear why others are paying while others are not. Also, the payment arrangement was not so clear including the responsible person/authority which is collecting the money. Though, the respondents claimed that the water bill is collected by the village authority. This gap was not the focus of this study; therefore, it requires further investigation.

Table 8.26: The price per month for water.

S/n	Bill for water per month	Frequency	Percent
1	0 TZS	39	60.9
2	1-1000 TZS	16	25.0
3	1001-2000 TZS	9	14.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Water price affordability

The survey shows that 25 out of 64 households who pay for water can afford it. However, the majority is not paying see table 8.27. As one of the respondents who claimed that: "*... water belongs to God, why should we pay…*" - Standardised household questionnaire and interview no. 5 conducted on 12/01/2015.

Table 8.27: Affordability for water.

S/n	Affordability in price for water	Frequency	Percent
1	Yes	25	39.1
2	N/A (Not paying)	39	60.9
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Distance to access water

The findings have shown that, 55 out of 64 households surveyed access water within a distance of 50 meters see table 8.28. According to the Tanzania spatial planning standard, the reasonable distance to water points is 400 meters. Therefore, households who own modern houses in Sango village access water at a reasonable distance. However, in the lowland areas the water accessibility is more than 400 meters (see figure 8.11 below).

Table 8.28: The distance from the water source.

S/n	Distance from water sources	Frequency	Percent
1	0-50meters	55	85.9
2	51-100meters	3	4.7
3	101-400 meters	5	7.8
4	401 meters and above	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Water reliability

Findings have depicted that, 51 out of 64 households surveyed revealed that access to water in Sango village is reliable. However, in the lowland areas, water accessibility and reliability is a challenge because of the dilapidated water storage tanks and kiosks, including deforestation see table 8.29 and figure 8.11.

Table 8.29: Water reliability.

S/n	Water reliability	Frequency	Percent
1	Yes	51	79.7
2	No	13	20.3
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.11: The challenges of accessing water in the lowland areas of Sango village.

Source: Field surveys in Sango village January, 2015

Water quality

The results have shown that, all households surveyed (64) assert that the water quality in the village is good. This is because of the protective measures taken at the main water source in the slopes of Mount Kilimanjaro forest. However, more efforts are needed to protect the nature in the villages on the slopes of Mount Kilimanjaro because of population increase and expansion of human development activities.

8.6.3 Sanitation facilities

Findings have shown that 45 out of 64 surveyed households use both traditional and flush toilets see table 8.30. The findings further reveal that there is an improvement of sanitation facilities in the village. It has become clear that, the ownership of a traditional toilet today is perceived by the community as poverty and a shame. Though, the facts still concur with the Tanzania Population and Housing Census report, 2012 that the majority of households in the village still use traditional pit latrines.

The traditional latrines and Ventilated Improved Pit Latrines are mostly used by owners during the day and by visitors during occasions (Christmas and Easter) and other ceremonies. However, the flush toilets are used mostly by household members during the night. Usually, there are indoor and outdoor toilets and bathrooms see figure 8.12. It is a practice that, for the traditional and improved pit latrines, when it is full, usually a new place is secured to build a new one. However, for the flush toilets which is a new technology in the village, it is not clear how will the emptying process be carried out in the future. This will result into spatial and environmental challenges if not intervened.

Table 8.30: The type of sanitation facility used.

S/n	Sanitation facility used	Frequency	Percent
1	Traditional pit latrines	10	15.6
2	Ventilated Improved Pit Latrine (VIPL)	2	3.1
3	Traditional and flush toilets	45	70.3
4	Ventilated Improved Pit Latrines and flush toilets	7	10.9
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.12: Flash toilet, traditional toilet and Ventilated Improved Pit Latrine in Sango village.

Source: Field surveys in Sango village January-April, 2015

8.6.4 Liquid waste management

The results have shown that, 61 out of 64 households surveyed pour their liquid waste in their own farms. The bath water and the liquid waste from the dish washing space commonly known in Kiswahili as 'karo' are directed into the individual farms see table 8.31 and figure 8.13.

Table 8.31: Liquid waste management.

S/n	Liquid waste management	Frequency	Percent
1	In farms	61	95.3
2	In special pits	3	4.7
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.13: Liquid waste management in Sango village.

Source: Field surveys in Sango village January-April, 2015

8.6.5 Solid waste management

The findings have shown that, in Sango village there are varieties of solid waste (refuse or garbage) management systems. These include dumping, burying and burning solid waste in farms. However, the findings have revealed that 19 out of 64 households surveyed dump and bury solid waste in farms see table 8.32. Therefore, from the findings, we see two main types of solid waste management systems in Sango village. However, the management of solid waste such as plastic bags and bottles still poses a challenge to the environment see figure 8.14.

Table 8.32: The solid waste management systems.

S/n	Solid waste management	Frequency	Percent
1	Dumping in farms	13	20.3
2	Buried on farms	15	23.4
3	Dumping and buried on farms	19	29.7
4	Buried on farms and burning	12	18.8
5	Dumping, buried in farms and burning	5	7.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 8.14: Scattered plastic bottles in Sango village.

Source: Field surveys in Sango village January, 2015

8.6.6 Roads conditions and accessibility

The findings have shown that the road conditions in Sango village are poor. The whole village is accessed by three main roads (i.e. Sango, Kilimani and Lowasi roads) which are earth roads (not tarmac roads). It was also revealed that, during the rainy season for example, in March and April all the roads are hardly being accessed by cars. Through the household survey, transect walk and observation methods and photographs; it has become clear that all the roads are hardly accessed throughout the year see figure 8.15.

Figure 8.15: Sango and Lowasi roads in Sango village.

Source: Field surveys in Sango village April, 2015

8.7 Access to social infrastructures

In Sango village there is one public secondary school (Kimochi secondary school), one private secondary school (Komakya secondary school), one public primary school (Kimochi primary school), one private primary school (Ebenezer primary school) and one public primary school (Sango primary school) and one nursery school (Sango Baptist nursery school).

The presence of only one primary school in the village (in the lowland area) which is against the spatial planning standards (planning challenge) poses a great problem for children to walk a long distance to access primary education see figure 8.16.

Also, there is only one public dispensary and a village office. Again, there are five Christian's churches (two Lutheran churches, i.e. Lyamanyaki Lutheran church and Lowasi Lutheran church); one Sabbath church, i.e. Sango Baptist church; one Evangelist Assembles of God church i.e. Sango Evangelist Assembles of God; and one Pentecostal church.

In addition to that, the Sango population is dominated by the Lutherans, followed by the Roman Catholics and the minority Muslims.

Figure 8.16: The challenge of distance in accessing primary education.

Source: Fieldwork, January 2015

8.8 Concluding remarks

The aim of this chapter was to explore the extent and characteristics of housing investments in the villages on the slopes of Mount Kilimanjaro and Sango village in particular. It has therefore become clear that there has been a remarkable housing change in the village on the slopes of Mount Kilimanjaro over the years. This change has implications on the village land space and on the environment (see chapter eleven). The next chapter helps us to understand who is investing in this modern housing in the villages on the slopes of Mount Kilimanjaro, including the motives behind such investments. This is also vital because it has implications on the village land space and on the nature (environment).

CHAPTER NINE

HOUSE OWNERS AND HOUSEHOLDS ASSETS OWNERSHIP IN SANGO VILLAGE

9.1 Introduction

This chapter highlights the house owners and the assets they own in Sango village (village of origin) and in urban areas (place of destination). The second research question of this study is to understand the actors of housing investments in the villages. The empirical findings from Sango village in Moshi district, Kilimanjaro region are provided. The understanding of these actors leads us to the third research question on why they are investing in 'modern' residential housing in their village of origin. It is then followed by the fourth research question which wants to explore the spatial and environmental challenges contributed by the housing investment and the last question concludes and recommends the way forward.

9.2 House owners in Sango village

The researcher used several research methods, tools, techniques and software to capture and analyse the information collected from different sources in order to respond to this research question and ensures validity of the data. The methods, tools and techniques used to capture information were standardised household questionnaires, transect walk, observations, official interviews, in-depth interviews, and photographs. On the other hand, the methods, tools, techniques and software used for analysis were memos writing, codding, categorising and the use of analysis software such as Statistical Package for Social Sciences (SPSS) for analysis of quantitative data and manual technics for qualitative data. The analysis outcomes are explained below:

Place of residence

The standardised household questionnaire data analysis outcomes have shown that, the 'modern' residential houses that we see in Sango village and especially in the uplands areas is a result of multi-locational households who mostly lives in Dar es Salaam. Through the use of Statistical Package for Social Sciences (SPSS) software, it has been revealed that, 27 out of 64 surveyed households with modern houses in Sango village live in Dar es Salaam while 11 live in Arusha the rest see table 9.1. This means that 56 households out of 64 households live outside Moshi and therefore they are multi-locational households (see the definition of multi-locational household in chapter two).

Table 9.1: The permanent place of residence of respondents.

S/n	Regions where households live	Frequency	Percent
1	Dar es Salaam	27	42.2
2	Arusha and Moshi	2	3.1
3	Outside the country	1	1.6
4	Arusha	11	17.2
5	Moshi	8	12.5
6	Morogoro	3	4.7
7	Dar es Salaam, Arusha and Moshi	4	6.2
8	Dar es Salaam, Arusha and Sumbawanga	4	6.2
9	Dar es Salaam, Arusha, Moshi, Shinyanga and Kenya	2	3.1
10	Dar es Salaam and Arusha	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Households village house/home visit per year

Also, 30 out of 64 house owners visit their village house two times per year see table 9.2. This implies that the house owners visit their village (home) of origin, mostly during Christmas and Easter or during other occasions such as burial and wedding ceremonies.

Table 9.2: The household, village house visit per year.

S/n	Home village visit per year	Frequency	Percent
1	One	19	29.7
2	Two	30	46.9
3	Three	3	4.7
4	NA/Others	12	18.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Again, the transect walk analysis outcomes have revealed that the modern houses that we see in Sango village and of course most of the villages on the slopes of mount Kilimanjaro are because of multi-locational households. The researcher was able to move around Sango village with the help of the indigenous who could easily point out these modern houses and be able to tell with evidence who is the owner, where does he/she lives and how frequently do they visit their home village and for which reasons. For example, through field notes and memos writing and analysis, it has been revealed that these modern houses are owned by multi-locational households. For example, quoting aunt of Mr. LT, she said:

"*… That is the house of the son of Mzee T… he lives in Dar es Salaam, he is a car mechanic expert, and he also sells tires and cars parts, no one who lives in this house now.* Further, she claimed that… *Mr. LT… visits his home village every Christmas and Easter; his father also lives in Dar es Salaam…. He was here on Christmas, he will come again in Easter…"* – Refer also standardised household questionnaire no. 12 conducted 14 January, 2015.

Also, before these occasions the houses are inhabited by family members, relatives, housekeepers and some houses remained vacant. For example, 11 out of 64 households who were surveyed, their houses were inhabited by housekeepers see table 9.3 and 13 out of 64 houses remained vacant for a long period of time see table 9.4.

Table 9.3: Households who live and eat in the house.

S/n	Live and eat in the house	Frequency	Percent
1	Yes	14	21.9
2	No (live housekeepers until during occasions)	11	17.2
3	No (the house not finished, but live in when visit village)	4	6.2
4	No (stay vacant until during occasions)	9	14.1
5	No (parents/relatives live in until during occasions)	26	40.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Table 9.4: Houses in the village that stays vacant for a long time.

S/n	House in the village that stay vacant for a long time	Frequency	Percent
1	Yes	13	20.3
2	No	51	79.7
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Indeed, the house owners pay the housekeepers salaries every month in order to take care of the village house (see table 9.5). For example, the housekeeper of Mr. MN asserts that:

"... I live here with my husband, we all come from Singida region - Tanzania, my husband has lived here for more than 20 years now, for me, is about 10 years ....you know our boss visits his village home every Christmas or when there is relatives burial ceremony and rarely in Easter. He used to visit here mostly before his parents dies, however, now the trend went down, but he must come every Christmas even this ended Christmas (2014) he was here...The family of Mr. MN and the villagers respect us a lot because we used to take care of their parents until when they died, they also gave us a piece of land here and they also offer us 200,000/=TZS (approximately 92 US$) as a salary paid every month..."– refer standardised household questionnaire no.1 and interview conducted on 07 January, 2015 with a wife of housekeeper of Mr. MN.

Table 9.5: Households who pay a housekeeper to take care of the village house.

S/n	Pay housekeeper to take care the village house	Frequency	Percent
1	Yes	11	17.2
2	No	53	82.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

In addition to that, through the use of observation method as a tool for collecting primary data, it was evidently that these houses are owned by multi-locational households. From December 2014 through April 2015 during the fieldwork, the researcher was able to notice many multi-locational households celebrating Christmas, New Year and Easter together with their fellow families and relatives in Sango village and most of the villages on the slopes of Mount Kilimanjaro. The multi-locational households (house owners) were also there with their families. There were many cars in the village; villagers put up new urban/modern dresses, a lot of churches overcrowded with newcomers and parking areas full of cars and celebration everywhere.

Moreover, the household interviews have revealed some similar results, for example, Mama ER and Mama ED claimed that:

"... We have two sons, everyone owns one modern house here (Sango village of origin). They all live in Dar es Salaam. They come every Christmas with their families and we celebrate together..." - Standardised household questionnaire no. 13 conducted on 14 January, 2015. Also, another respondent claimed that:

" ... They were here during Christmas and I am sure one son will come again this Easter (this week 2-5 April, 2015) ... we do clean the houses few days before they come..." - Standardised household questionnaire no. 17 conducted on 02 April, 2015.

Furthermore, the official interview conducted at Moshi municipality and Moshi district at the Department of Physical Planning revealed that these modern houses in the villages on the slopes of Mount Kilimanjaro are owned by people who mostly live outside Moshi (multi-locational households). For example, Mr. M claimed that:

"*... The district with more modern houses which stay vacant until Christmas is Moshi District...* further argued that*:"...in village areas such as in Marangu, Kilema etc. if you go there you will find most of the houses are very nice, but vacant or housekeepers or relatives live in... the house owners live in Dar es Salaam, Arusha, Morogoro, etc.... and they come every Christmas..."*- Cartographer at Moshi district office.

Lastly, official and informal discussions with academics and officials, for example, Mr. Sanga (Moshi district land officer and head department of land) he insisted that most of the houses constructed in the villages in Moshi district are owned by multi-locational households.

Therefore, basing on these findings from different methods and sources we can conclude by saying that the 'modern' residential houses that we see in Sango and other villages of the same characteristics in Moshi district especially on the slopes of Mount Kilimanjaro are because of multi-locational households.

9.3 Characteristics of the house owners

The purpose of this part is mainly to understand in detail the characters of the households who have invested in modern houses in their village of origin (Sango village). It also sheds light on understanding the characteristics of the multi-locational households.

Household heads

The results have revealed that 62 out 64 households surveyed are headed by husband while 2 are headed by wife see table 9.6. This data concur with the Tanzania Population and Housing Census report 2012 that, there are more male headed households than female in Tanzania. For example, in Kilimanjaro region, there are 381,526 households, of which 242,064 households are headed by male while 139,462 are headed by females. This shows that males are still the breadwinner in the village and in most of the societies in Tanzania.

Table 9.6: Household heads.

S/n	Household head	Frequency	Percent
1	Husband	62	96.9
2	Wife	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Employment status

The findings have shown that, 29 out of 64 surveyed households are self-employed, 22 full time employed, 12 retired and 1 part time employed see table 9.7. This implies that the majority of the house owners in Sango village are self-employed.

Table 9.7: The employment of house owners.

S/n	Employment of house owners	Frequency	Percent
1	Self employed	29	45.3
2	Full time employed	22	34.4
3	Part time employed	1	1.6
4	Retired	12	18.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Work

The findings have shown that 18 out of 64 households who own modern houses in Sango village are business people/entrepreneurs (see table 9.8). This means that the modern houses that we see in Sango village and probably other villages on the slopes of Mount Kilimanjaro are mostly because of business people/entrepreneurs.

Table 9.8: House owners' types of work.

S/n	Work of house owners	Frequency	Percent
1	Mechanical engineer/business/entrepreneurship	6	9.4
2	Mchungaji/Pastor KKKT	2	3.1
3	Agriculture/livestock and work with NGOs	2	3.1
4	Defence/military/agriculture	2	3.1
5	Teaching/business/entrepreneurship	3	4.7
6	Business/entrepreneurship	18	26.6
7	Doctor/nurse/entrepreneurship	7	10.9
8	Agriculture/livestock	2	3.1
9	Accounts/banking	9	14.1
10	Construction/engineering	8	12.5
11	Business/entrepreneurship and agriculture/livestock	4	6.2
12	Councillor/business/entrepreneurship	1	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Education

The findings have revealed that, 40 out of 64 households surveyed have college/university education while 13 have ordinary/advanced education see table 9.9. The house owners' education levels in to some extent it has been reflected in the improvement of housing in the villages.

Table 9.9: The level of education of house owners.

S/n	Level of education of house owners	Frequency	Percent
1	Ordinary/advanced secondary education	13	20.3
2	College/university education	40	62.5
3	Vocational training (e.g. Vocational Education Training Authority-VETA)	8	12.5
4	Colonial education	3	4.7
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Age

The findings have shown that, 46 out of 64 surveyed households who own modern houses in Sango village are aged from 36 to 54 see table 9.10. This implies that most of the households own houses in their village of origin before retirement age. In Tanzania, the age of voluntary retirement from service is 55 years while 60 years is the age of compulsory retirement (see section 17 (1) (2) of the Public Service Retirement Benefit Act 1999). Again, some retirees prefer to retire permanently in the village; others prefer both in the village and in urban while others retire in the village and sometimes in a year visit their urban house to access good health services, visit relatives/friends and sometimes collect rent from their urban houses. For example, Mzee K is a retiree who owns a modern house in Sango village, but now he lives in Dar es Salaam. He was paralysed few years ago. His children and relatives take care of him. Therefore, his village house has been inhabited by a housekeeper's family (husband, wife and children) from Dodoma for more than five years now- refers standardised household questionnaire no. 2 conducted on 07/01/2015.

Table 9.10: The age of house owners.

S/n	Age of house owners	Frequency	Percent
1	36-54	46	71.9
2	55-60	4	6.2
3	61+	14	21.9
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Marital status

The results have shown that, 62 out of 64 households who own houses in Sango village are married while 2 are widowed/widower see table 9.11. This result concurs with the Chagga tradition which claims that before marriage, males should have a house ("Boma" or "Kibanda") in their inherited pieces of land ("Kihamba") in the village of origin.

Table 9.11: The marital status of house owners.

S/n	Marital status	Frequency	Percent
1	Married	62	96.9
2	Widow/widower	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Number of children

The findings have also shown that, 39 out of 64 households have 3 to 4 children while 12 have 1 to 2 children. The number is going down due to the improvement in education and family planning strategies at household and national levels see table 9.12. This is a promising result to balance the few resources that we have.

Table 9.12: The number of children of house owners.

S/n	Number of children	Frequency	Percent
1	1-2	12	18.8
2	3-4	39	60.9
3	5-6	5	7.8
4	7-8	3	4.7
5	9-10	2	3.1
6	11-12	2	3.1
7	13 and above	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Main source of income

The findings have shown that, all households surveyed don't depend on one source of income. However, it was revealed that 25 out of 64 households surveyed depend only on business/entrepreneurship as their main source of income sees table 9.13. Further, facts have shown that, 23 households surveyed depend on salary and business/entrepreneurship as their main source of income. This implies that, most of the owners of modern houses in Sango village are business/entrepreneur (livelihoods activities) people. The livelihoods activities (business activities)

include wholesale and retail shops of foods and non-foods stuffs (for example; selling of car spare parts, garage, painting, etc.) and involvement in agriculture and construction sectors.

Table 9.13: Households' main source of income.

S/n	Main source of income	Frequency	Percent
1	Salary and business/entrepreneurship	23	35.9
2	Business/entrepreneurship	25	39.1
3	Agriculture/livestock and business/entrepreneurship	10	15.6
4	Agriculture/livestock/assistance from children	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

House owners' monthly average income

The experience has shown that, understanding the income of people is not an easier task. However, the researcher posed a question that wanted to know the monthly average income of the house owners. Findings have shown that 40 out of 64 house owners' surveyed gets an average income of 500,000-999,999 TZS per month sees table 9.14. The low wage according to the Tanzania budget 2015/16 read by Ms. Saada Mkuya Salum (by the then Ministry of Finance now the Ministry of Finance and Planning) at the Parliament on 11 June 2015 in Dodoma was increased from 65,000/= TZS (2005) to 265,000/= TZS (2014/15). Therefore, most of the house owners in Sango village fall under the category of medium income earners.

Table 9.14: The house owners' monthly average income (1 US dollar approximate 2,142TZS).

S/n	Households monthly average income	Frequency	Percent
1	300,000-499,999	13	20.3
2	500,000-999,999	40	62.5
3	1,000,000 and above	11	17.2
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

9.4 Multi-locational households' and asset ownership

The literature claims that multi-locational households tend to own several assets because of different motives/reasons. These motives/reasons were explained in chapter two and three. Plenty of evidence is also provided in this chapter and chapter ten. Though, the focus of this study is on physical assets (i.e. residential houses) that multi-locational households own or invest in their villages of origin. The findings from the survey conducted in Sango village show that the households prefer to invest in physical assets in their village of origin and in urban areas (place of destination). It is a wonder that these households work and live most of their life time in urban areas; however, they still maintain the link with their village of origin through asset investments.

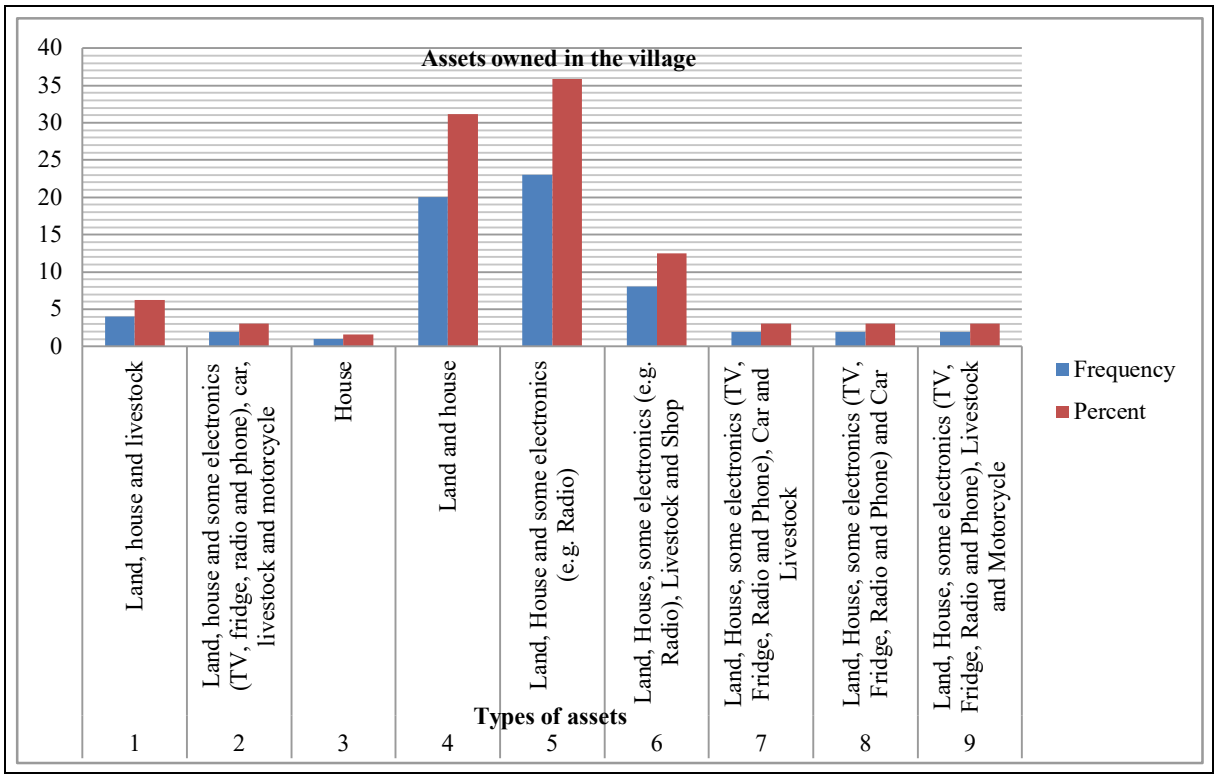
It has been revealed that the highly preferred and invested physical assets were: lands, houses, and some electronics. These assets were invested both in their village of origin and in urban areas (place of destination). The statistical results revealed that 23 out of 64 households surveyed in Sango village own land, modern house and some electronics (e.g. radio) in their village of origin, while 20 households owns land and house, other households see table 9.15 and figure 9.1. This implies that the ownership of physical assets (especially land and housing) in the village of origin is paramount. The reasons (especially for housing investments in the village of origin) are explained in chapter three (evidence from the literature review) and chapter ten (evidence from the case study area).

Table 9.15: The types of physical assets owned by households in Sango village.

S/N	Selected main types of assets owned in the village of origin	Frequency	Percent
1	Land, house and livestock	4	6.2
2	Land, house and some electronics (TV, fridge, radio and phone), car, livestock and motorcycle	2	3.1
3	House	1	1.6
4	Land and house	20	31.2
5	Land, house and some electronics (e.g. radio)	23	35.9
6	Land, house, some electronics (e.g. Radio), livestock and shops	8	12.5
7	Land, house, some electronics (TV, fridge, radio and phone), car and livestock	2	3.1
8	Land, house, some electronics (TV, fridge, radio and phone) and car	2	3.1
9	Land, house, some electronics (TV, fridge, radio and phone), livestock and motorcycle	2	3.1
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.1: The types of physical assets owned by households in Sango village.



Source: Field surveys in Sango village January-April, 2015

On the other hand, the findings have revealed that the households who own modern houses in their village of origin (Sango village) also own physical assets in urban areas (place of destination/work/live). The statistical data has shown that 34 out of 64 surveyed households own land,

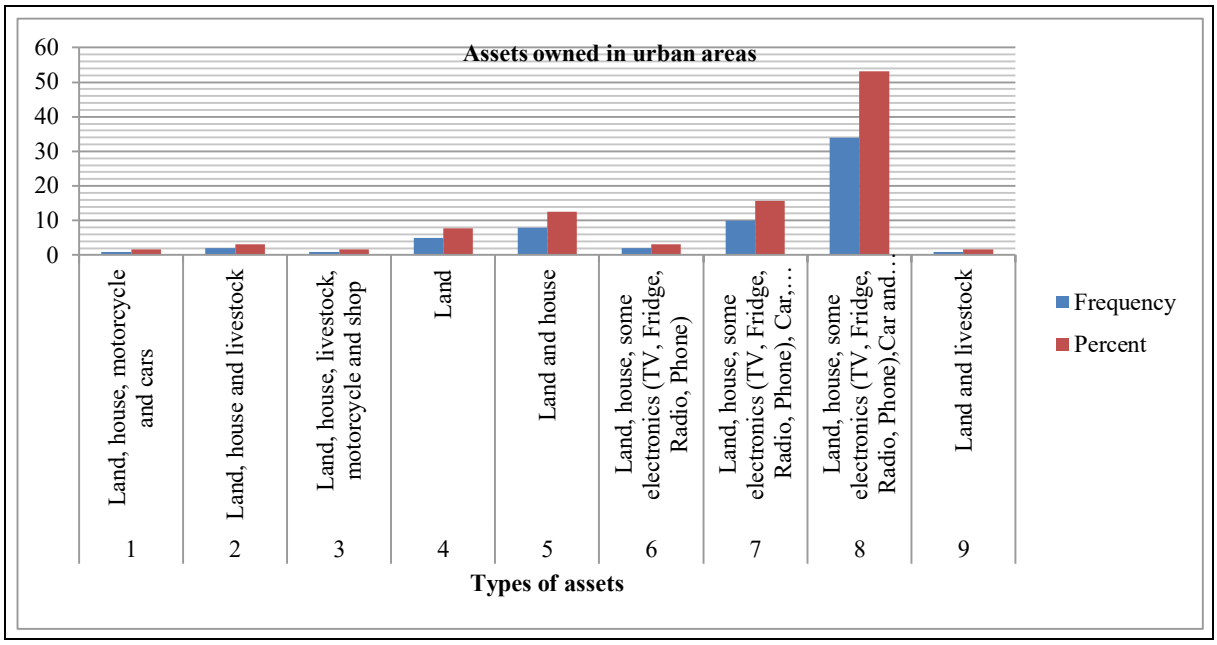
a house, some electronics (TV, fridge, radio, and phones etc.), car, livestock and shop in urban areas. This implies that all the households surveyed own physical assets in urban areas see table 9.16. The ownership of land and house in both urban (place of destination) and rural (village of origin) is a priority among all surveyed households. This is because the economic and cultural value of land and housing ownership has been appreciating over time as compared to other assets.

Table 9.16: The types of physical assets owned by households in urban areas.

S/N	Selected main types of assets owned in urban areas	Frequency	Percent
1	Land, house, motorcycle and cars	1	1.6
2	Land, house and livestock	2	3.1
3	Land, house, livestock, motorcycle and shop	1	1.6
4	Land	5	7.8
5	Land and house	8	12.5
6	Land, house, some electronics (TV, fridge, radio, phone)	2	3.1
7	Land, house, some electronics (TV, fridge, radio, phone), car, livestock and shop	10	15.6
8	Land, house, some electronics (TV, fridge, radio, phone), car and shop	34	53.1
9	Land and livestock	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.2: The types of physical assets owned by households in urban areas.



Source: Field surveys in Sango village January-April, 2015

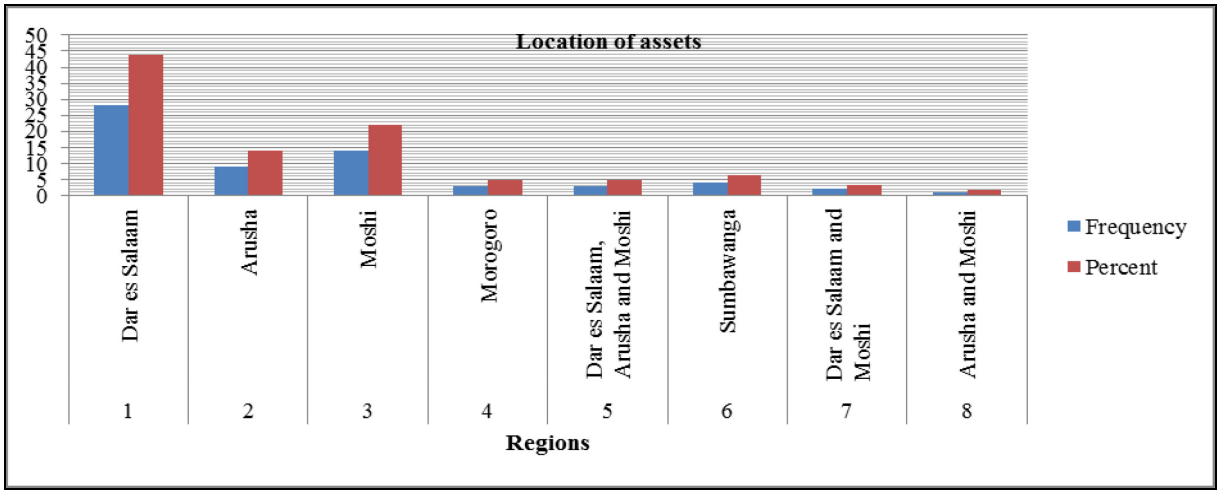
Again, the findings have shown that the surveyed households have more physical assets in Dar es Salaam than any other region in Tanzania see table 9.17 and figure 9.3. This implies that the assets that we see in Sango village and of course other villages on the slopes of Mount Kilimanjaro are because of multi-locational households who live in Dar es Salaam.

Table 9.17: Regions where the assets are located.

S/n	Regions where assets are located	Frequency	Percent
1	Dar es Salaam	28	43.8
2	Arusha	9	14.1
3	Kilimanjaro (Moshi)	14	21.9
4	Morogoro	3	4.7
5	Dar es Salaam, Arusha and Kilimanjaro (Moshi)	3	4.7
6	Rukwa (Sumbawanga)	4	6.2
7	Dar es Salaam and Kilimanjaro (Moshi)	2	3.1
8	Arusha and Kilimanjaro (Moshi)	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.3: Regions where the assets are located.



Source: Field surveys in Sango village January-April, 2015

Thus, because the focus of this study is on understanding household's housing ownership. The researcher narrows down to multi-locational household land and housing ownership both in the rural (village of origin) and in urban areas (place of destination).

Land ownership

The findings have shown that 63 out of 64 surveyed households with modern house in Sango village have inherited their portion of land from their fathers and ancestors see table 9.18. The inherited piece of land in the Chagga tribe is popularly known as *"Kihamba*[3]*"*. Traditionally, the inherited piece of land in the village is not for sale, it is the inherited land; therefore, it is usually transferred from one generation to another for free. When time is due parents will invite few relatives and neighbours to witness the subdivision process, including setting the boundaries using *"Masale*[4]*"* to avoid boundary conflicts. It is usually done when the sons have matured enough (especially at the marriage age) so that they can get a place to build their houses *("Boma"* or *"Kibanda")* before marriage.

[3] "Kihamba" is a Chagga word meaning a piece of land inherited from clan/family members.

[4] "Masale" is a Chagga/Swahili word meaning types of plants mostly used to demarcate plots boundaries in the villages in Kilimanjaro region.

The findings show that there are so much cultural values than economic values attached to the inherited/clan/family land. For example, quoting one of the respondents: He claims that:

"... You was given this piece of land for free, it is the land of your ancestors ... they lived on this land whole of their life, they are buried here, why would you sell them? ... You will get misfortune if you do that... " refer standardised household questionnaire no. 26 conducted on 16/01/2015 and interview on 01/04/2015.

Table 9.18: Access to land/land allocation in Sango village.

S/n	Access to land	Frequency	Percent
1	Inherited from family members	63	98.4
2	Granted	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

In addition to that, the findings have shown that 26 out of 64 households surveyed own land area ranging from 2,501 to 5,000 square meters while 22 households own land less than 2,500 square meters in the village. The ownership of land in the village was a priority among all surveyed households. This is because every family member wants to be attached to the clan/family land. This intention and the scarcity of land has resulted into an excessive subdivision of the inherited clan/family land to family members (see the sizes of land ownership in table 9.19 and figure 9.4).

The findings have further shown that, although the Village Land Act 1999 states that all people have equal access to land; women are still segregated but with a purpose: As one respondent argued that:

"*... Women were/are not given land in order to brand them for marriage....if they were/are given land they could/would not respect their husbands/partners and therefore, not married... but if they were/have not been married some of them were and are still given a piece of land as men..."* Standardised household questionnaire no. 24 conducted on 16/01/2015.

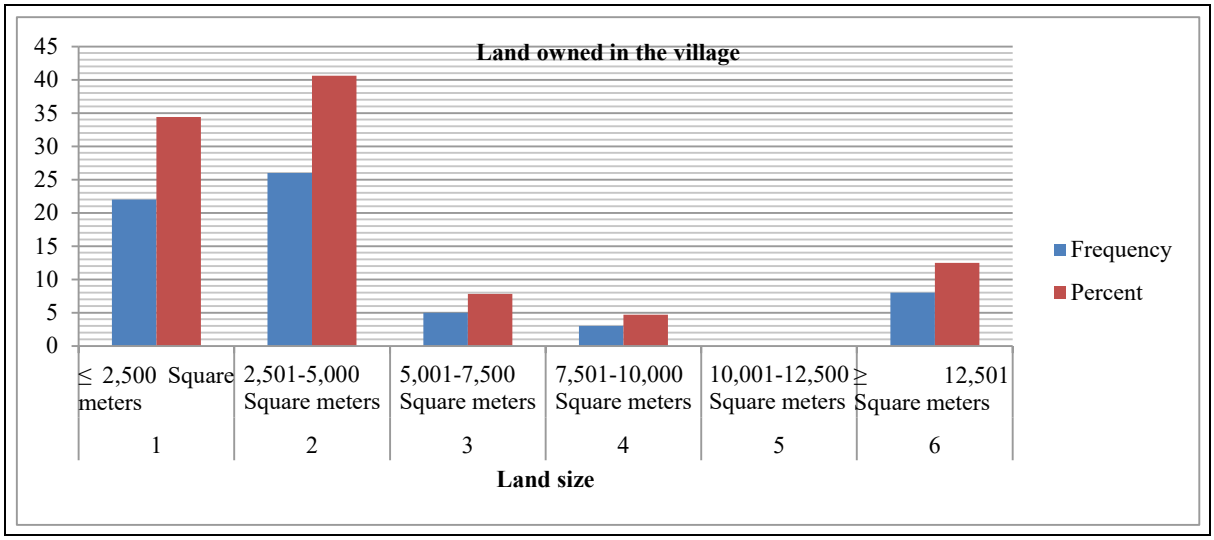
Despite of the existence of these kinds of arguments, still the forceful implementation and modifications of the land Acts is needed in order to give women equal access and ownership of land in the village. The ownership of assets (such as land and housing) is important because it gives them respect and power at household, family and village level.

Table 9.19: The land owned in the village.

S/n	Land owned in the village in square meters	Frequency	Percent
1	≤ 2,500 Square meters	22	34.4
2	2,501-5,000 Square meters	26	40.6
3	5,001-7,500 Square meters	5	7.8
4	7,501-10,000 Square meters	3	4.7
5	10,001-12,500 Square meters	0	0
6	≥ 12,501 Square meters	8	12.5
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.4: Households land size owned in the village.



Source: Field surveys in Sango village January-April, 2015

Again, the ownership of land alone does not give credit to plot owners; it requires individual household heads, especially sons to build at least a house *("Boma" or "Kibanda"*[5]*)* on their pieces of land/plot ("*Kihamba"*). It has also been revealed that, the type, size and quality of their houses depend on the financial well-off and motives for such investments of a particular person/household (see chapter ten).

On the other hand, findings have revealed that 53 out of 64 households surveyed owned less than 2,500 square meters of land in urban areas while 11 owned 2,501-5,000 square meters. This means that there is inadequate land in the (village) place of origin that's why more land is secured in other areas to compensate such deficit. Indeed, land has also been observed to be a scarce resource in urban areas due to population increase sees the plot size owned by households in table 9.20.

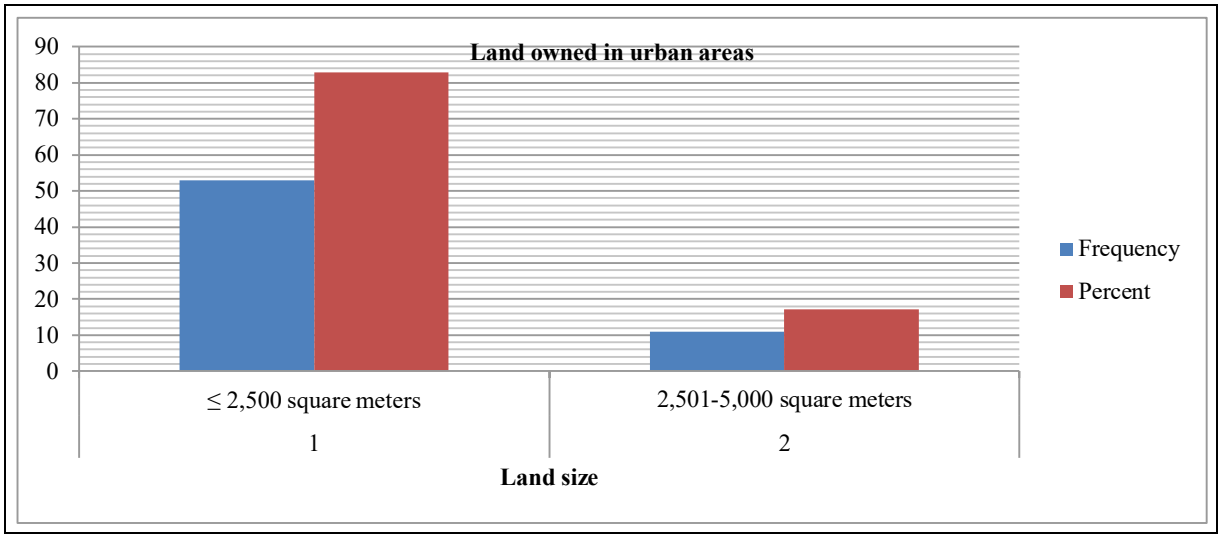
Table 9.20: Owned land in urban areas.

S/n	Owned land in urban areas	Frequency	Percent
1	≤ 2,500 square meters	53	82.8
2	2,501-5,000 square meters	11	17.2
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

[5] "Boma" or "Kibanda"are Chagga/Swahili words meaning a small house built for accommodation. It is recommended that one should build a "boma" or "Kibanda"in his "Kihamba" before marriage.

Figure 9.5: Land owned land in urban areas.



Source: Field surveys in Sango village January-April, 2015

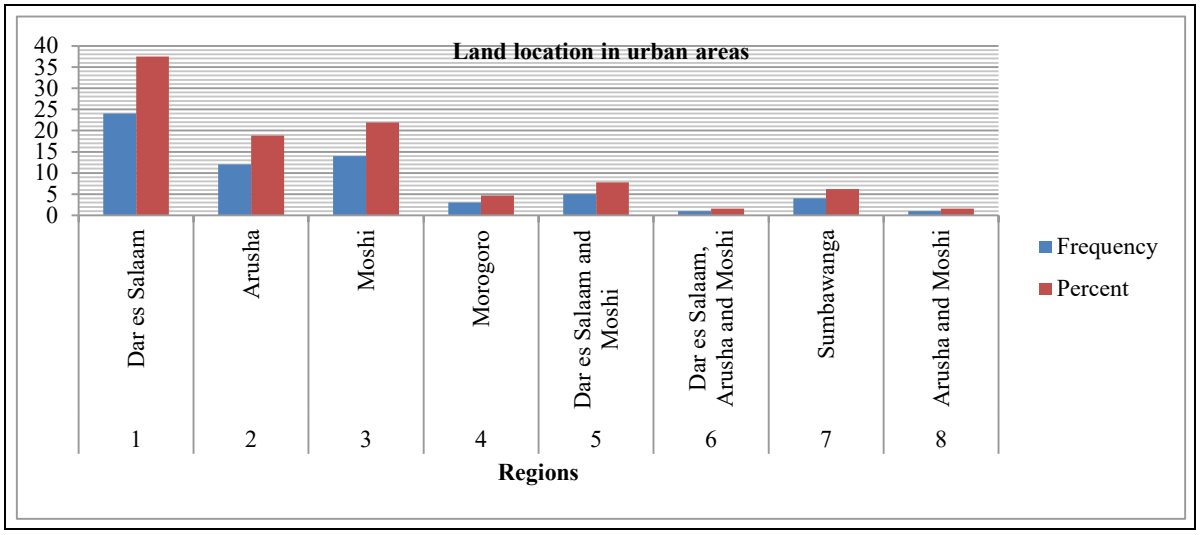
The statistical evidences have further shown that 24 out of 64 households own lands in Dar es Salaam, 14 in Moshi and 12 in Arusha see table 9.21.

Table 9.21: The regions where the households land is located.

S/N	Land location in urban/regions	Frequency	Percent
1	Dar es Salaam	24	37.5
2	Arusha	12	18.8
3	Moshi	14	21.9
4	Morogoro	3	4.7
5	Dar es Salaam and Moshi	5	7.8
6	Dar es Salaam, Arusha and Moshi	1	1.6
7	Sumbawanga	4	6.2
8	Arusha and Moshi	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.6: The regions where the households land is located.



Source: Field surveys in Sango village January-April, 2015

House ownership

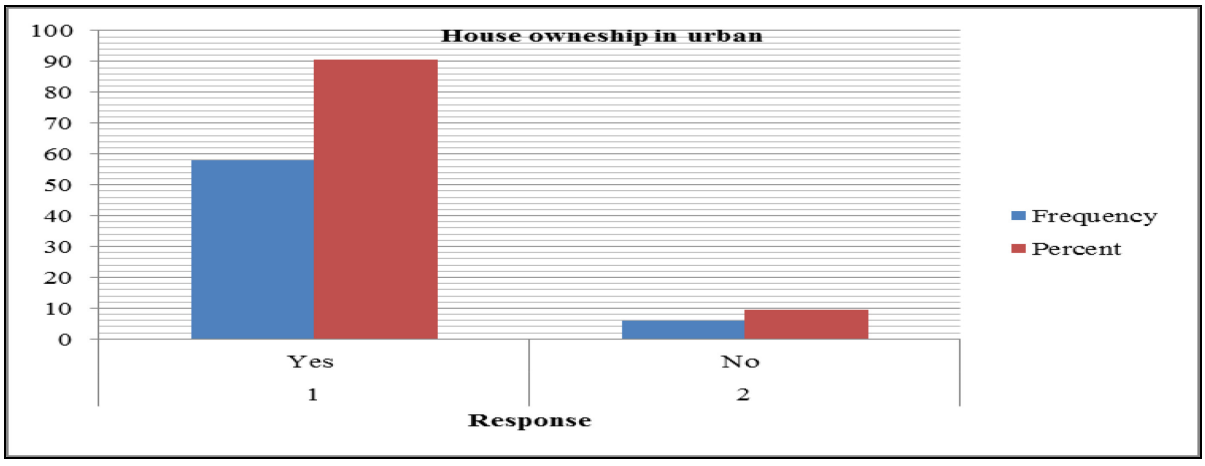
The researcher aims to know the motives behind modern residential housing investments in the villages of origin of multi-locational households on the slopes of Mount Kilimanjaro. However, he explores further to know the household house ownership in the place of destination (urban areas). The findings have shown that, 58 out of 64 households surveyed own houses in the place of destination in urban areas see table 9.22 and figure 9.7. The results show that the ownership of assets in both territories (place of origin and destination) is vital. While the reasons for investing housing in urban areas (place of destination) were to some extent clear, in the village (place of origin) were not. This gap becomes the essence of this study (see chapter ten).

Table 9.22: Households house ownership in urban areas (place of destination).

S/n	House ownership in urban areas	Frequency	Percent
1	Yes	58	90.6
2	No	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.7: Households house ownership in urban areas (place of destination).



Source: Field surveys in Sango village January-April, 2015

Number of house ownership in the village

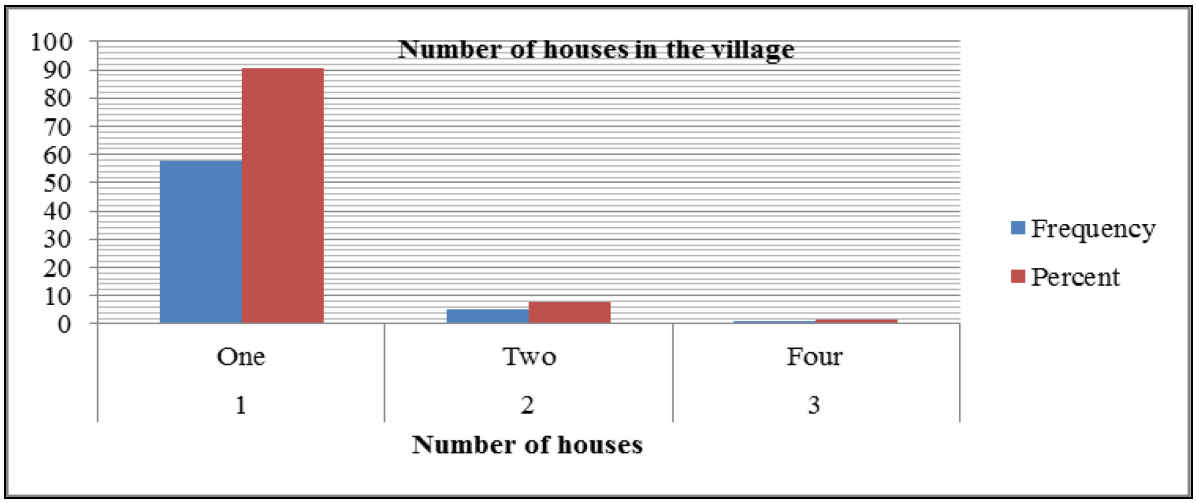
The ownership of a modern house in the village of origin has become so important today. The findings have shown that, 58 out of 64 households surveyed own one modern house in the village of origin see table 9.23 and figure 9.8. This implies that the traditional thinking that, the village land is mainly for agriculture does not exist today. Evidences from Sango village and most of the villages on the slopes of Mount Kilimanjaro are apparent. Today, it has become clear that a detailed land use plan (i.e. space for agriculture, housing, cemeteries, etc.) is highly needed in the villages, especially on the slopes of Mount Kilimanjaro (see recommendations in chapter twelve).

Table 9.23: The number of houses owned by households in the village of origin.

S/n	Number of houses in the village	Frequency	Percent
1	One	58	90.6
2	Two	5	7.8
3	Four	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.8: The number of houses owned by households in the village of origin.



Source: Field surveys in Sango village January-April, 2015

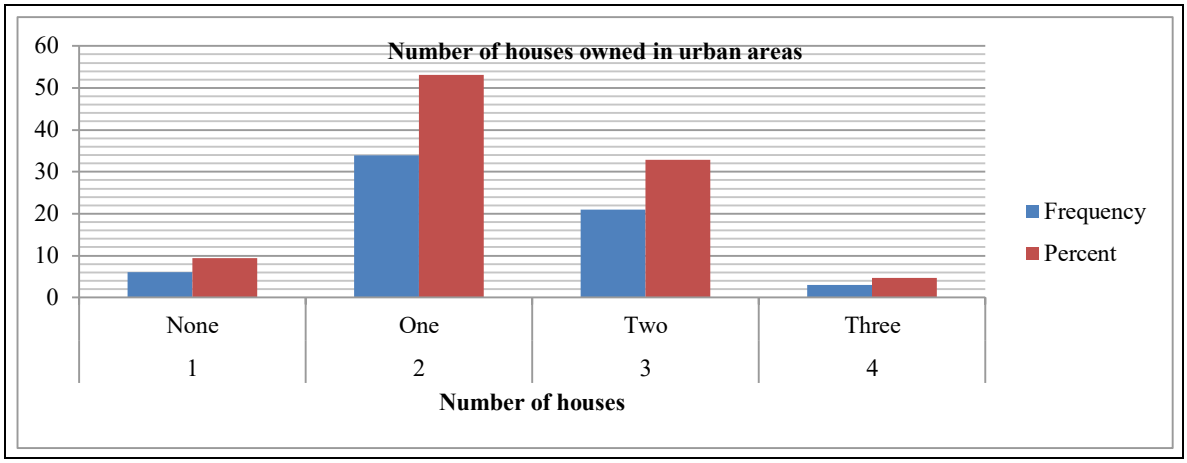
On the other hand, 34 out of 64 households surveyed own one modern house in urban areas (place of destination) while 21 owns two houses in urban areas (place of destination) see table 9.24 and figure 9.9. The data further show that, this is one of the characteristics of multi-locational households, see, for example, Smit, (1998); Deshingkar and Farrington, (2009); Franke and Schmidt-Kallert, (2013).

Table 9.24: The number of houses owned in the place of destination in Tanzania.

S/n	Number of houses owned in urban areas (place of destination)	Frequency	Percent
1	None	6	9.4
2	One	34	53.1
3	Two	21	32.8
4	Three	3	4.7
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.9: The number of houses owned in the place of destination.



Source: Field surveys in Sango village January-April, 2015

House location in urban areas (place of destination)

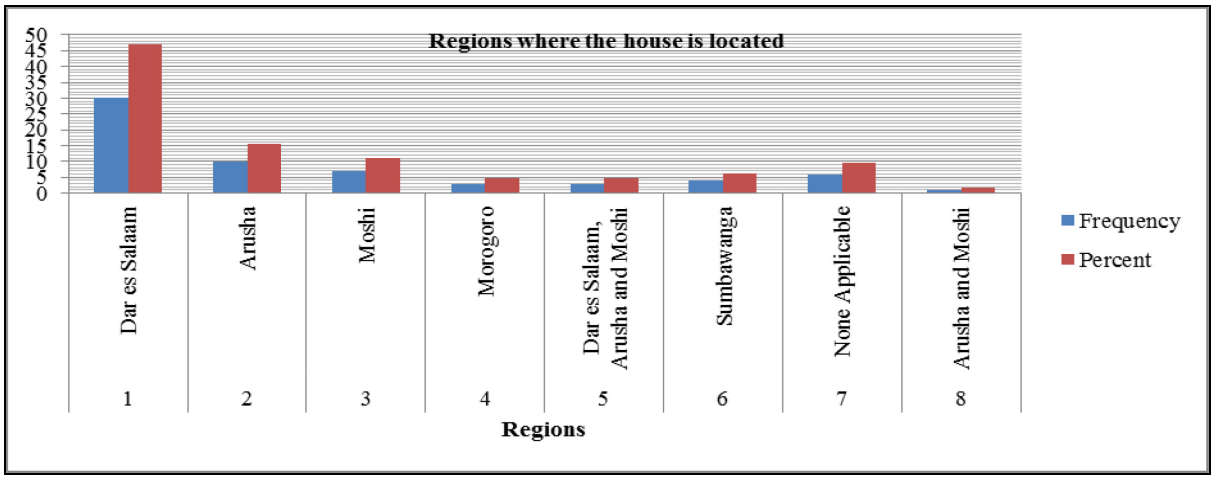
The statistical findings have shown that, 30 out of 64 households own houses in Dar es Salaam, 10 own in Arusha and 7 own in Moshi see table 9.25 and figure 9.10. This implies that more houses of multi-locational households of Sango village are located in Dar es Salaam.

Table 9.25: The location of the house in urban areas (place of destination).

S/n	A region where the house is located	Frequency	Percent
1	Dar es Salaam	30	46.9
2	Arusha	10	15.6
3	Moshi	7	10.9
4	Morogoro	3	4.7
5	Dar es Salaam, Arusha and Moshi	3	4.7
6	Sumbawanga	4	6.2
7	None Applicable	6	9.4
8	Arusha and Moshi	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.10: The location of the house in urban areas (place of destination).



Source: Field surveys in Sango village January-April, 2015

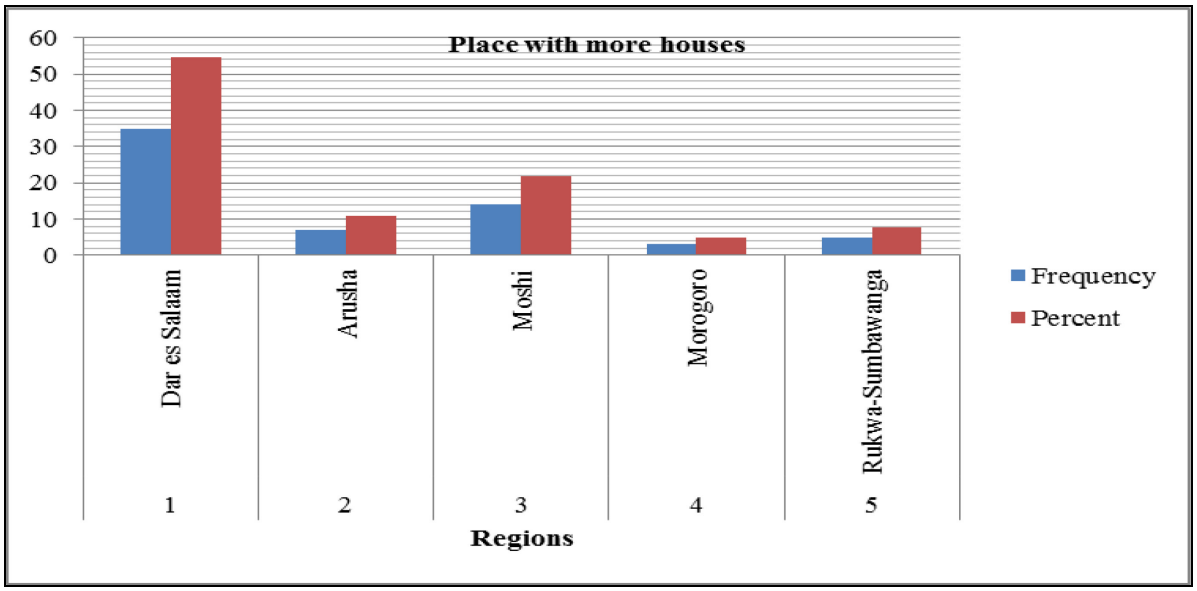
Also, findings have shown that multi-locational household family members have more houses in Dar es Salaam than in any other region in Tanzania see table 9.26 and figure 9.11. This is because Dar es Salaam is the first largest business capital city of Tanzania. Therefore, it attracts and accommodates more migrants from different regions in Tanzania and abroad.

Table 9.26: Regions where multi-locational household members have more houses.

S/n	Place with more houses	Frequency	Percent
1	Dar es Salaam	35	54.7
2	Arusha	7	10.9
3	Moshi	14	21.9
4	Morogoro	3	4.7
5	Rukwa-Sumbawanga	5	7.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Figure 9.11: Regions where multi-locational household family members have more houses.



Source: Field surveys in Sango village January-April, 2015

9.5 Concluding remarks

The evidences provided in this chapter using different methods and sources have shown that, most of the 'modern' residential houses that we see in Sango village and of course in most of the villages on the slopes of Mount Kilimanjaro are because of multi-locational households. The ownership of assets both in the village of origin and the place of destination has also been significant. While the motives/reasons for investing 'modern' residential houses in the place of destination have been to some extent clear, however, the motives/reasons for investing a 'modern' residential house in the village of origin is still vague. Therefore, the next chapter presents the motives/reasons for investing 'modern' residential houses in the village of origin.

CHAPTER TEN

MOTIVES FOR 'MODERN' RESIDENTIAL HOUSING INVESTMENTS IN THE VILLAGE OF ORIGIN (SANGO VILLAGE)

10.1 Introduction

In developing countries especially in Africa it is a wonder that why someone should build a 'modern' or expensive house in his/her village of origin while he/she can live there at least once a year. However, the literature and the findings from Sango village and most of the villages on the slopes of Mount Kilimanjaro have shown that this is because of the African culture and the characteristics of multi-locational households. The theory of multi-locational households has been clearly defined in chapter two.

In African culture, it is so argued that, our roots are in the village (see, for example, Schmidt-Kallert, 2009), therefore, everyone (household) has an attachment to his/her clan/family in the village of origin. To ensure this network/attachment continues to exist, one has to visit his or her village of origin at least once a year (see the frequency of households village visit in chapter nine). For the medium and high income households, they go further to build nice and expensive houses in their village of origin.

Therefore, this chapter provides the facts behind the motives for housing investments in the context of Chagga tribe households in Sango village, Moshi district, Kilimanjaro region, Tanzania. This will shed light, especially in addressing the poor housing conditions in the villages in Tanzania. Also, guide housing development/investments and proper land use planning and protection of natural resources and nature in the villages on the slopes of Mount Kilimanjaro in particular.

10.2 Motives for 'modern' residential housing investments in the village of origin

The researcher used different methods, tools and techniques to understand why medium and high income households invest a lot of money to build nice houses in their village of origin. The scholar surveyed 64 households who own modern houses in Sango village in order to capture their socioeconomic data, including the motives behind such investments. The author also conducted 8 in-depth interviews of the selected house owners based on the set criteria to get the information in detail (see the methodology chapter and explanation provided below). In addition, he used transect walk, formal and informal discussions, observational methods and photographs, including writing field notes and memos to respond to this research question.

Through the use of Statistical Package for Social Sciences (SPSS) it was revealed that the rationales/motives for building 'modern' residential houses in the village of origin (Sango village) were: social status (prestige), for use on occasions, culture to have a second home in the village of origin, taking care parents, for use after retirement and for taking care wives. However, most of the respondents gave more than one reason. Therefore, the group with the highest frequency (27 out of 64) is composed of social status (prestige), for use on occasions, the culture to have a second home in the village of origin, taking care parents and for use after retirement sees table 10.1 below.

Table 10.1: The motives for investing a modern house in the village of origin.

S/n	Motives for investing a modern house in the village	Frequency	Percent
1	Social status (prestige) and taking care wives	2	3.1
2	Social status (prestige), occasions and taking care of parents	4	6.2
3	Social status (prestige) and for use after retirement	3	4.7
4	Social status (prestige)	5	7.8
5	For use after retirement	2	3.1
6	For use on occasions	1	1.6
7	Social status (prestige), occasions, culture, taking care parents and retirement	27	42.2
8	Social status (prestige), occasions, culture and retirement	15	23.4
9	Social status (prestige) and occasions	5	7.8
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

This implies that, the multi-locational households have very interesting motives or reasons to invest in 'modern' residential housing in their village of origin. These motives or reasons are significant for professionals (spatial planners, architects, environmentalist and rural socialists). Taking them on board is significant as well. This will ensure sustainable housing investments and protect the nature in the villages on the slopes of Mount Kilimanjaro (see more recommendations in chapter twelve).

Also, through the formal and informal discussions with academics (Prof. J, Dr. N, Dr. S) and officials from the Moshi district (Mzee M) it has become clear that households are investing in their village of origin because of cultural value and prestige. Quoting, for example, Prof. J he said:

"…. *Individual households are investing 'modern' houses in their village of origin in Moshi because of the cultural value than economic value…"* His argument has also been reflected in the case study area (Sango village).

In addition to that, the motives for such investments have been further justified by conducting eight (8) in-depth interviews (sub-cases). The evidence for each motive is explained below:

10.2.1 Social status (prestige) motives

From the table 10.1 above and the sub-case number one below, we see that there are households who built houses in the village of origin because they want to achieve/realize social status (prestige/respect). The standardised households survey analysis outcomes have shown that, multi-locational households are investing in 'modern' residential housing in order to maintain social status and be respected by the community.

It has, further, been noted that, the status they own in urban areas should also be reflected in the village of origin. In that sense one needs to achieve social status both in urban and in the rural/village by building a modern house in the village of origin and in urban (place of destination). This means that, urbanisation has influenced multi-locational households to transfer their urban lifestyle to their village of origin. This has improved rural/village housing and escalates rural/village urbanisation which is lacking formal spatial and housing development guidance from the local government authorities.

Sub-case number one

The owner of the house is the last born of Mzee GT. He (SG) has a wife and four children. He lives in Dar es Salaam. He is self-employed (business of selling cars spare parts and also involves in cars repair). He visits his home village every Christmas and rarely on Easter or during other family or relatives events/ceremonies. He has opted progressive housing construction model, thus, he built the village house from 2011 to 2014. It is a new house built on an agricultural land. The construction of the house was supervised by his father and it was constructed by a local contractor.

It is a self-contained house with 3 bedrooms and its area is 110 square meters. He financed his house through his business he conducts in Dar es Salaam. The house costed him about 20 million TZS. The main reason for building such a house was for social status see figure 10.1 below. He builds a modern house in his village of origin because he wants to maintain his social status (prestige) at the household, village and community levels. He argued that:

"*...if you live in town in a nice house it does not make sense if you don't have a nice house in the village.....you know what...when you wake up in the morning the first thing you do is to wash your face, if you don't do that you will look unusual....This means that the village is your place of origin, it is where your roots are, it is your face, therefore, before you build a house in urban you must start first at your village of origin (Sango village)...*" - Standardised households questionnaire no.14 conducted on 14 January 2015 and interview on 01 April 2015.

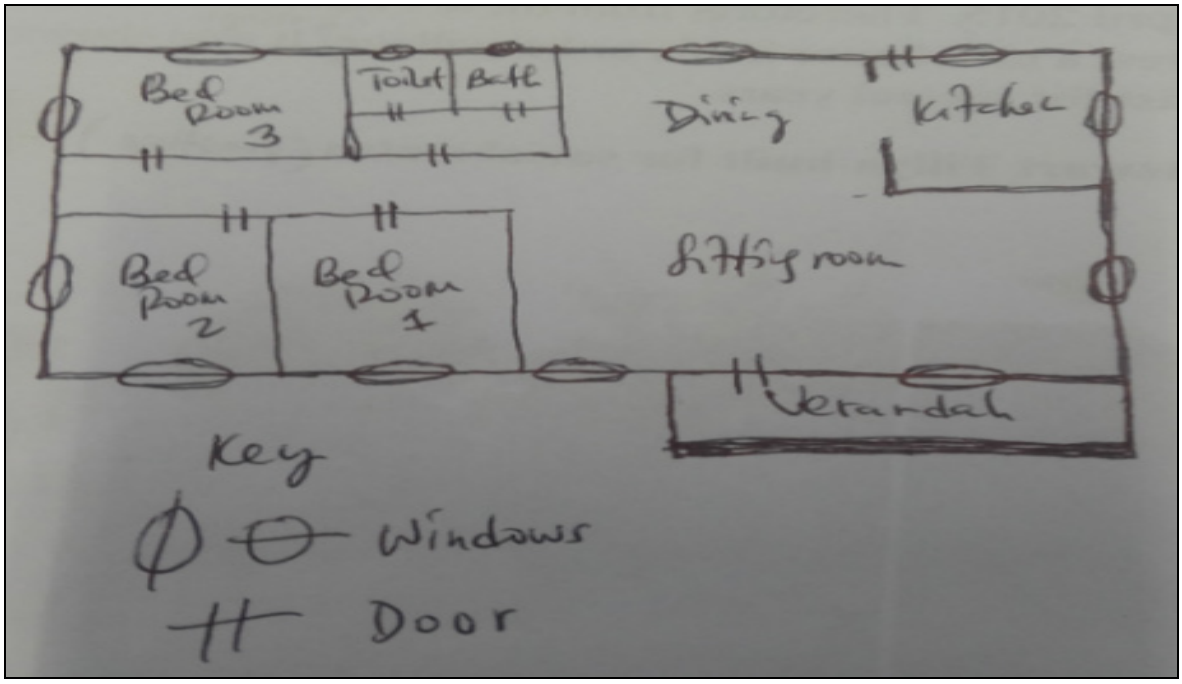
Therefore, from these evidences we see that, it is very important for someone to invest a nice house in his or her village of origin. It also shows that it is the culture that will continue to exist for several years.

Figure 10.1: A house of Mr. SG built for social status (prestige) in the village of origin (Sango village).

Source: Field surveys in Sango village January-April, 2015

The figure 10.1 above shows the modern house is made up of cement and sand blocks; wall painted nicely and roofed with blue painted iron sheets, aluminium windows, tiled floor and modern ceiling board. It has electricity and water connections. It was not possible to get the floor plans used to guide the construction of the houses. Therefore, the sketched floor plan of the house see figure 10.2.

Figure 10.2: The sketched floor plan of sub-case number one.



Source: Author's sketch plan, 2015

10.2.2 Events/occasions motives

Christmas and Easter celebrations are very popular events throughout the world. Indeed, Africa and Tanzania in particular have been operationalising these special events every year. The findings have revealed that households are investing modern houses in their villages of origin in order to use them in popular occasions such as Christmas, Easter, including wedding and burial ceremonies (see sub-case number two).

The argument is that we will go there (in the village of origin) when we are alive or when dead. For example, during Christmas and Easter most of the households travel to their home village to celebrate with their village families. It is a tradition that has been practiced for many years now. Also, when a Chagga tribe person dies, for example, in Dar es Salaam, Arusha, etc. or in any part of the world, he/she must be transported to his/her home village for burial ceremony.

This argument concurs with Schmidt-Kallert (2009:320) who claimed that, in many African cities, there are large numbers of people who have lived in the metropolis all their life, even in the second or third generation, but when asked to name their home village, they will invariably give the name of a remote village in the hinterland. And indeed, when such a person dies, the village folks will come to the mortuary in Kumasi or Dar es Salaam for the dead body which will then be taken to the home village for the funeral.

Therefore, in that regard it makes sense to own a nice house in the village of origin. Though, the challenge that still remains is on how the professionals (spatial planners, architects, environmentalist and rural sociologists) could incorporate these phenomena in rural/village development policies in order to ensure sustainable development in the villages in Tanzania (see some recommendations in chapter twelve).

Sub-case number two

Mr. LT is the son of Mzee T. He has a wife and two children. He lives in Dar es Salaam. He is self-employed (car mechanical expert and also sells car tires and other spare parts). He visits his home village every Christmas and Easter. He was in the village at Christmas in 2014 and this Easter 2015. He built the village house from 2011 to 2015 still not fully finished (see figure 10.3 below). He has also opted progressive housing construction model.

It is a new house built on a farming land. The construction of the house was supervised by a relative in the village and it was constructed by a local contractor. It is a self-contained house with 4 rooms and its area is 110 square meters. He financed his house through his business he conducts in Dar es Salaam. The house costed him about 15 million TZS. The main reason for building such a house was for uses in occasions/events – Standardised household questionnaire no. 12 conducted on 14 January, 2015 and in-depth interview in April 2015.

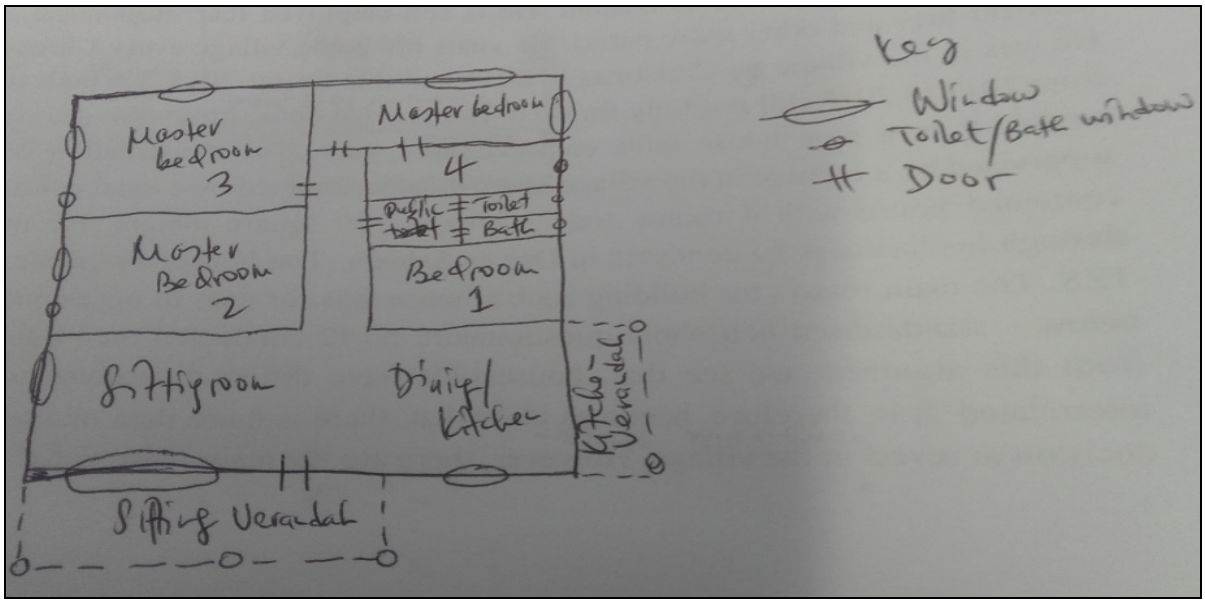
Thus, from this argument we see that, households have different motives which are somehow interrelated. It is, therefore, becomes clear that, there is more than one reason that influences the household's decision to invest in a modern house in the village of origin. Though, there are some main reasons for such investments.

Figure 10.3: A house of Mr. LT built for use in occasions/events.

Source: Field surveys in Sango village January-April, 2015

The figure 10.3 above shows that the modern house is made up of cement and sand blocks and rock block wall painted nicely and roofed with blue painted iron sheets and steel windows and tiled floor. It has also electricity and piped water. The sketch of the house see figure 10.4.

Figure 10.4: The sketched floor plan of sub-case number two.



Source: Source: Author's sketch plan, 2015

10.2.3 Cultural reasons

Again, the households build nice houses in their village of origin (e.g. Sango village) because of a culture to have a second home in the village of origin. It has been observed that the decision to invest in a modern house in the village is more influenced by cultural value than economic value. That is why households have invested a lot of savings just for constructing a modern house in the village of origin.

Further, it has been noticed that what is really needed as appreciation is the prestige and cultural values. The question on how much is spent on putting up such a modern house is not so important. As Mama EM (mother of JE) claimed that:

" *... Traditionally or customarily it is a shame if you don't have a house in the village… also Chagga tribe ladies don't want to be married to a man who does not have a house. It is a must for men to own a house before marriage…"* Further, added that: *"… if our sons visit us in the village with their wives and children… they get a place to live. … you know their wives sometimes have problems if they stay in one house they will quarrel every time that is why it is important for every son to have his own house… every son must have his own house in the village before marriage.." (ibid.)* – Standardised household questionnaire no. 24 conducted 16 January 2015 and interview on April 2015.

Also, Mama GK (mother of EG and EG) concurs with Mama EM who argued that:

"*...Women do fight each other; therefore, to avoid such problems everyone must have his own house in the village*- Standardised household questionnaire no. 13 conducted on14 January 2015 and interview April 2015.

In addition to that, one of the respondents claimed that:

"*…Our roots are in the village therefore we must maintain our roots through building houses in our village of origin…"* - Standardised household questionnaire no. 14 conducted on 14 January 2015 and interview on 01 April 2015.

Therefore, basing on these facts, we can agree that, it is culturally vital for every son to build a house on his inherited piece of land in the village in order to abide to the culture of the Chagga society. This motive has implication on the village land space and the environment.

10.2.4 Caring for the elderly and children

The findings have also revealed that, there are houses built for the purpose of taking cares parents and children. The main aim was to take cares the household's parents, but also for social status, for use on occasions, culture to have a second house in the village of origin, and for use in retirement. Honestly speaking, there are very rare single reasons for such investments (refer table 10.1 above). However, there are few specific or main reasons for such investments. The sub-case number three and four provide evidences for households who have built houses in the village of origin (Sango village) for taking cares their parents.

Sub-case number three

Mr. EG is a construction engineer (self-employed) who works and lives in Dar es Salaam. He is married and has 3 children. He visits his parents in the village every Christmas. He built the village house from 2001 to 2010. The house costed him about 7 million TZS.

The main reason of building the modern house in the village was for taking cares his parents. It is a self-contained detached L-shaped house with 4 rooms and its area is 102 square meters.

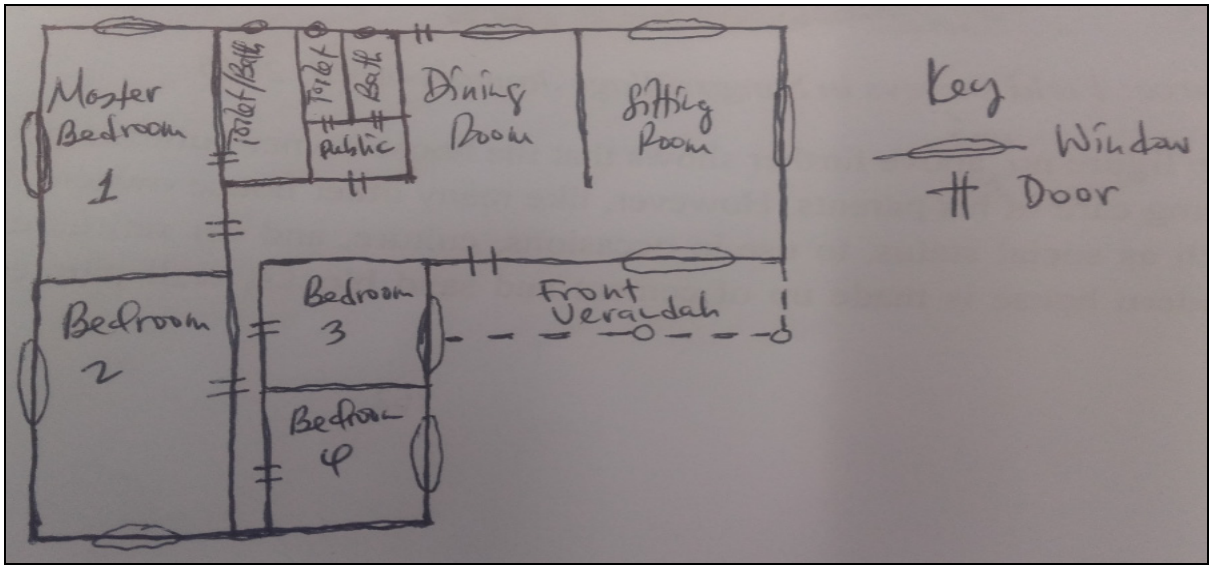
Also, his brother (EG) has one modern house in the village. His father died many years ago. His father (GK) had married two wives (Mama EG and Mama EG). They stay together and really love each other. They celebrate with their sons and wives, daughters and their husbands together with their grandchildren every Christmas see figure 10.5 below. –Standardised household questionnaire no. 13 conducted on 14 January 2015.

Figure 10.5: The house of Mr. EG built to take cares parents.

Source: Field surveys in Sango village January-April, 2015

The figure 10.5 above further shows that the house owner built the house with the main goal of taking care of his parents. However, like many other house owners, he had also other reasons such as social status, to use on occasions, culture, and for retirement. It also shows that the modern house is made up of cement and sand blocks; wall painted nicely and roofed with green painted iron sheets, aluminium windows, tiled floor and modern ceiling board. It has electricity and water connections. The sketched floor plan see figure 10.6.

Figure 10.6: The sketched floor plan of sub-case number three.



Source: Author's sketch plan, 2015

Sub-case number four

Mr. MN lives in Dar es Salaam. He is full time employed (accountant) with Tanzania Ports Authority (TPA). He has also been involved in business (livelihoods activities) based in Dar es Salaam. He has a wife and 4 children. He owns a modern house in Dar es Salaam and in his village of origin (Sango village). His parents are all dead. He built the village house in 2001 through 2010. It is a self-contained detached new house with 4 rooms and its area is 86 square meters (see figure 10.7). The house costed him about 7 million TZS.

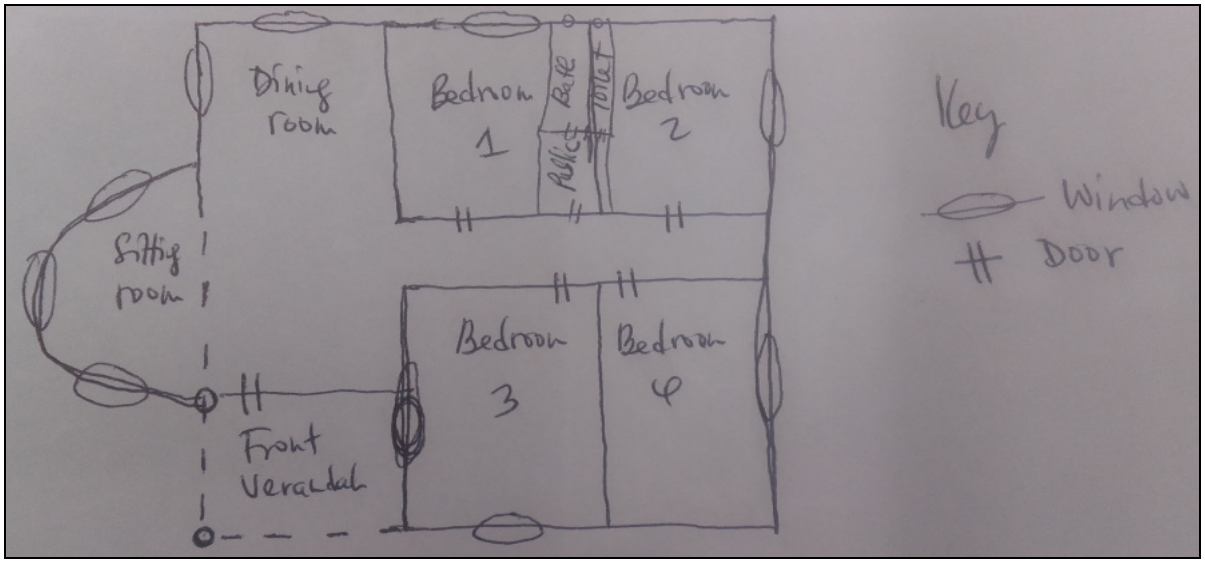
The main reason for building the modern house in the village was for taking cares his parents. He employs the housekeeper (who has a wife and children) to take care the village house. He pays him 200,000 TZS (Approximately 92 USD in January-April 2015) every month. His housekeeper (and his family) is highly respected because the family lived with and takes care of the house owner parents until when they died. Therefore, the Mr. MN clan/family considers them as part of their family.

Figure 10.7: The house of Mr.MN built to take cares parents & the two cemeteries of his parents

Source: Field surveys in Sango village January-April, 2015

The figure 10.7 above shows the modern house is made up of cement and sand blocks, rock block wall painted nicely and roofed with unpainted iron sheets; glass, iron and timber windows; normal floor not decorated and ceiling board. It has electricity and water connections. The sketched floor plan see figure 10.8.

Figure 10.8: The sketched floor plan of sub-case number four.



Source: Author's sketch plan, 2015

The figure 10.7 above further shows that the house owner built the house with the main goal of taking cares his parents. Though, like many other house owners, he had also other reasons such as social status, to use on occasions, culture, and for retirement.

It also shows the cemeteries on individual farms or subdivided plots (where his parents were buried). This is the culture of burying people on individual pieces of land. It is mostly practiced by the Chagga's who usually lives in different parts in Tanzania and abroad. But, when they die they prefer to be buried in their inherited village piece of land/plot "Kihamba". This implies that a detailed land use planning is needed in order to address the challenge of scattered cemeteries in the villages on the slopes of Mount Kilimanjaro (see detailed recommendations in chapter twelve).

10.2.5 Life after retirement and caring for spouses

The survey and the in-depth interviews have revealed that, there are households who built the houses in the village so they can use after retirement. However, some live in these houses while others still live in urban areas (place of destination).

Also, it has been revealed that, some houses in the village are inhabited by housekeepers under the absence of house owners (refer chapter nine). This implies that, it is a must to have a house in the village of origin because of several reasons pointed out in this chapter. It is obvious that the owners know that they will return at any time in their lifetime, whether alive or dead.

Sub-case number five

Mzee DI is a retired teacher who lives in Sango village. He married four wives and he has 20 children. He built the village house in 2011 through 2014. It is a new detached house built on a farming land. It is a self-contained 4 bedroom house. It has an area of 112 square meters. The housing financing comes from his pension, business and assistance from his children. It costed him about 23 million TZS.

The main reasons for building the village house were for taking care wives and for use after retirement. He builds four houses in different places in Sango village for taking cares his four wives (see figure 10.9 below) and for use after retirement.

Mzee DI has worked as a teacher in different secondary schools in Tanzania such as in Singida and in Kilimanjaro regions. The facts have shown that, during his lifetime, he used to be Sango village chairman and village advisory elder also as head teacher and a pastor in different regions in Tanzania.

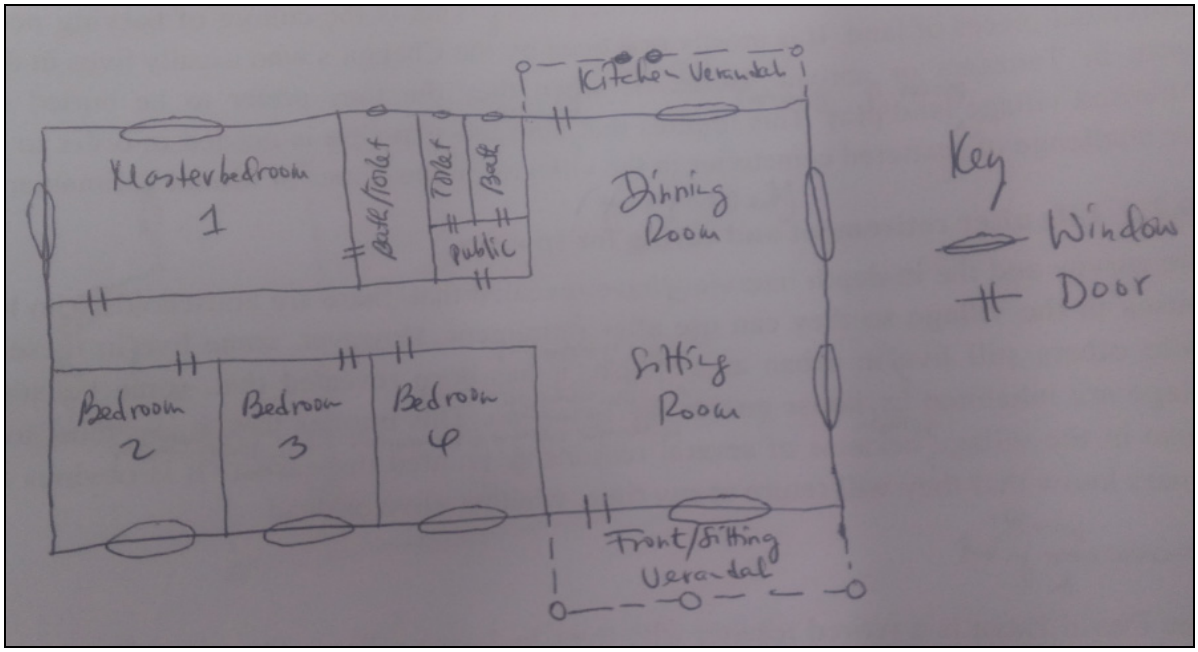
After retirement, he is now living in Sango village in Moshi. He is also involved in business (livelihoods activities) in Moshi and Arusha - Standardised household's questionnaire no. 9 conducted on 13 January 2015.

Figure 10.9: The old modern house of Mzee DI totally modified and the new house built on a farming land in Sango village.

Source: Field surveys in Sango village January-April, 2015

The figure 10.9 above shows the modern house is made up of cement and sand blocks; rock blocks, and burnt brick wall painted nicely and roofed with unpainted iron sheets, steel and glass windows; tiled floor and modern ceiling board. It has electricity and water connections. See the sketched floor plan in figure 10.10.

Figure 10.10: The sketched floor plan of sub-case number five.



Source: Author's sketch plan, 2015

Sub-case number six

Mzee AK is the retired government worker who used to work with National Housing Cooperation (NHC) as housing contractor/engineer. He is married and has 3 children. He built the village house from 2001 to 2010. It is a new detached house built on agriculture land. It is a self-contained 4 bedroom house (see figure 10.11). It has an area of 102 square meters. The housing financing comes from his salary and business. The house costed him about 9 million TZS.

He built the house in his home village in order to use it at the time of retirement. Unfortunately, his intention to retire in the village was obscured by health problems. He is paralytic, therefore, he lives in Dar es Salaam in his own house in order to access health service and get support from his children and relatives.

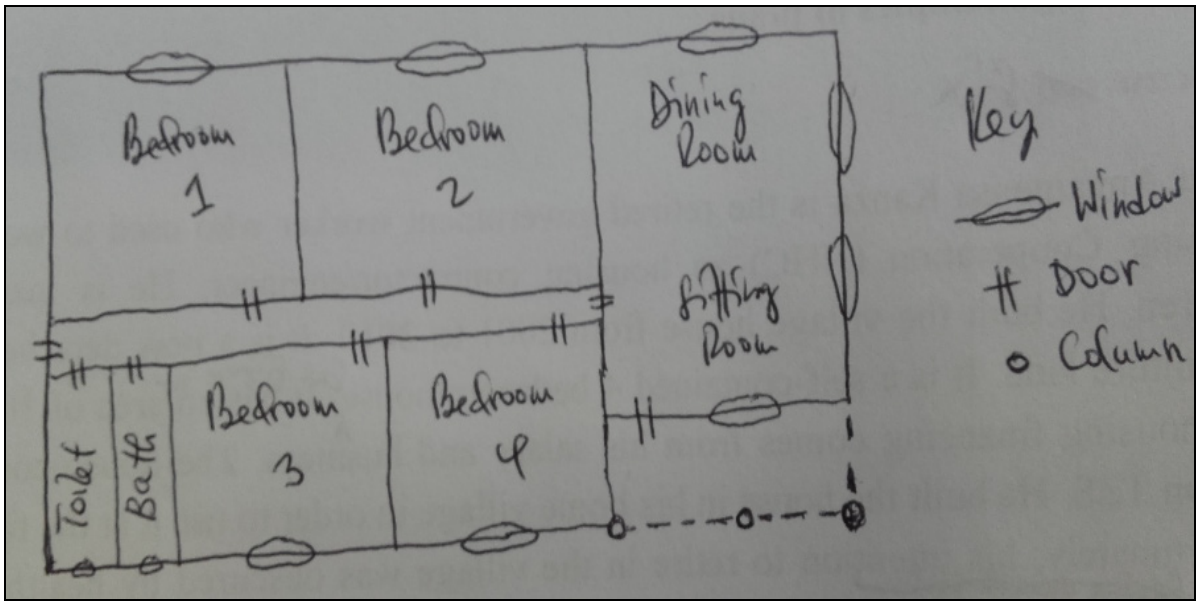
However, like many other house owners, there were other reasons such as social status, use on occasions and taking care of parents. Also, his parents are all dead; therefore, the house is inhabited by the housekeeper (a man who has wife and children). The housekeeper is from Dodoma. He has lived there for more than 20 years now. He and his wife are well informed about the Chagga's traditions. They consider Sango village and Moshi as their home- Standardised household questionnaire no. 2 conducted on 07 January 2015.

Figure 10.11: The house of Mzee AK in Sango village.

Source: Field surveys in Sango village January-April, 2015

The figure 10.11 above shows the modern house is made up of cement and sand blocks, rock block wall nicely finished and roofed with unpainted iron sheets; wire measure, steel and timber windows; normal but red coloured floor; modern ceiling board. It has electricity and water connections. It has also an entrance gate decorated and painted. The sketched floor plan see figure 10.12.

Figure 10.12: The sketched floor plan of sub-case number six.



Source: Author's sketch plan, 2015

10.2.6 Social status (prestige), occasions or event use, culture and caring for the elderly

In additional to that, through household surveys and in-depth interviews conducted in Sango village it has been revealed that households invest modern houses in the village of origin because of several reasons or motives such as social status (prestige), occasions, culture, and caring for the elderly see for example sub-case number seven.

Sub-case number seven

The owner of the house is the son of Mzee and Mama EM. He (Mr. JE) conducts business (wholesale and retail food shops) in Arusha and Moshi. He lives with his family in Arusha. He has started building the village house since 2001 to date not fully finished. However, he managed to finish the self-contained room on the first floor in order to get a nice place to sleep when he visits his parents in the village and also finished 2 rooms on the ground floor for his parents see figure 10.13 below.

He has opted progressive housing construction model. It is a bungalow house type with 5 bedrooms built on a farming land. It has an area of 112 square meters. The construction of the house was supervised by his father and it was constructed by a contractor. He financed his house through his business he conducts in Arusha and Moshi. The house costed him about 23 million TZS.

The main reason for putting up such a huge investment was for social status and to take cares his parents. He and other children of Mzee and Mama EM visit their parents every Christmas and sometimes in Easter and also when their father was ill. They really help each other, including their parents; for example, Mzee EM was extremely ill (he was paralyzed), but, the children really help him until he recovered. Mama EM said:

"...The children really help their parents, they cope with the modern system - Mama EM – Interview and the standardised household questionnaire no. 24 conducted on 16 January 2015 and April, 2015. Further, argued that:

"... If my son will build a traditional house while he is well-off is a shame to him..." (ibid.). She was also proud that all her five sons built nice houses in the village. Argued that:

"*... God enables them to build modern houses in the village and in urban God bless them, God is the answer..."* - (ibid). Her husband can speak, but not energetic like her, she is old but very charming woman.

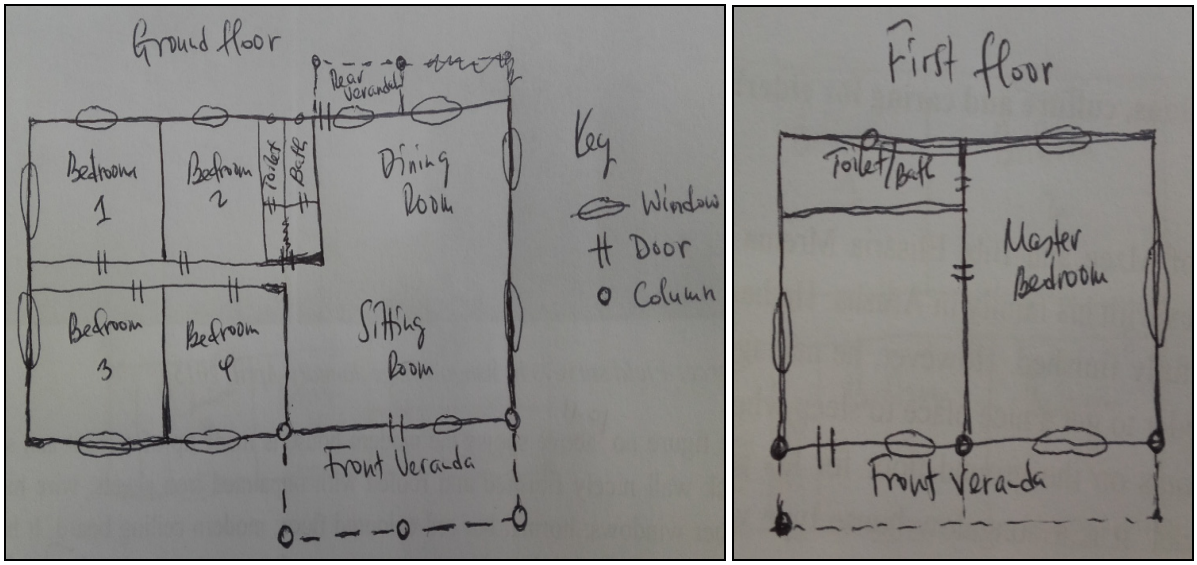
Further, talking to his son, he clearly agreed with the argument made by his mother adding that, *"... It is very important to have a house in the village and protect our parents because they protected us when we were young..."* (ibid.).

Figure 10.13: The house built by son for social status and to takes cares parents in Sango village

Source: Field surveys in Sango village January-April, 2015

The figure 10.13 above shows the modern house is made up of cement and sand blocks, rock blocks, burnt brick walls and roofed with red tiles; aluminium windows; tiled floor in the first floor, modern ceiling board. It has solar and water connections. The sketched floor plan see figure 10.14.

Figure 10.14: The sketched floor plan of sub-case number seven.



Source: Author's sketch plan, 2015

10.2.7 Social status (prestige), occasions or event use, culture, caring for elderly and life after retirement

Moreover, through household surveys and in-depth interviews conducted in Sango village it has also been revealed that households invest modern houses in the village of origin because of several reasons or motives such as social status (prestige), occasions or event use, caring for the elderly and for use after retirement see for example sub-case number eight.

Sub-case number eight

Dr. KI is a retired medical doctor. He and his family live in Morogoro region in Tanzania. Immediately, after retirement, he employs himself in his private dispensary in Morogoro. His wife is also a retired teacher. In January, 2015; the researcher visited and interviewed Mama KI (wife of Dr. KI) who at this time was supervising the transformation of their old modern house into a new modern house (totally modified by changing the roofs, iron sheets, windows, doors and adding flash toilets and tiles see figure 10.15 and 10.16 below) in the Sango village (a place where Dr. KI was born while his wife was also born in the neighbouring village called Shia).

They totally renovated/modified the village modern (old) house from the end of 2013 until early April 2015. They have opted capital intensive housing renovation/modification model. It is a detached house type with 3 bedrooms. It has an area of 64 square meters. The construction of the house was supervised by wife (Mama KI) and it was renovated or modified by "Mafundi".

They financed their house through their pension and business they conduct in Morogoro. The renovation/modification cost was about 9 million TZS. The main reason to renovate/modify the old modern house was for social status, occasions, to take care parent (mother of Dr. KI) and for use after retirement.

During our interview, she argued that:

"… You know we have modern houses in Morogoro urban. But we must have another modern house in the village because when we visit our mother (the mother of Dr. KI) every Christmas we must get a nice place to sleep…"– Mama KI-interview and standardised household questionnaire no. 5 conducted on 12 January 2015.

Added that: "... *Our children also grew up in a modern house (a toilet inside the house) in Morogoro urban (place of destination). Therefore, if we do not build it here is a shame to us…"* (ibid.).

Again, on 1-6 April, 2015 the researcher visited Sango village and the house was finished see figure 10.16 below.

Figure 10.15: The house of Dr. KI's family renovated for social status (prestige), occasions or event use, and taking care parents and for use after retirement.

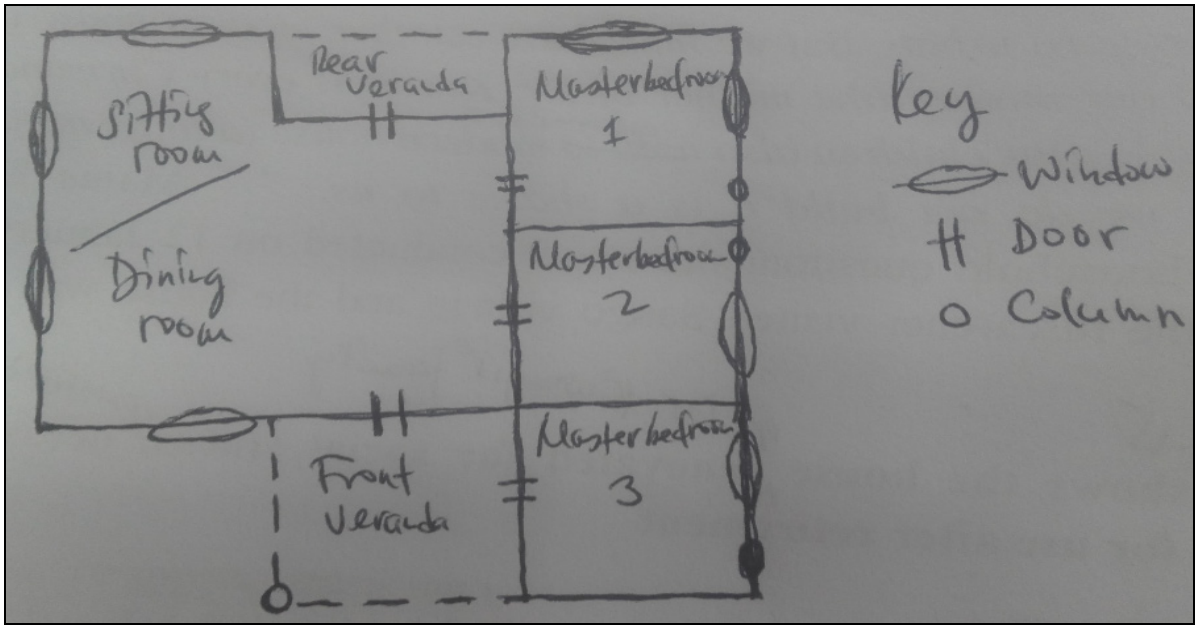
Source: Field surveys in Sango village January-April, 2015

Figure 10.16: The house of Dr. KI's family during and after transformation in Sango village.

Source: Field surveys in Sango village January-April, 2015

The figure 10.15 and 10.16 above shows that the renovated/modified house of Dr. KI's family is inserted new aluminium windows, iron sheets painted blue colour, tiled floor and it is a self-contained house with electricity and water connections. The sketched floor plan see figure 10.17.

Figure 10.17: The sketched floor plan of sub-case number eight.



Source: Author's sketch plan, 2015

10.3 Concluding remarks

Firstly, through the use of standardised household questionnaires, interviews, observational method and transect walk the results have shown that the modern residential houses that we see in Sango village and of course in most of the villages on the slopes of Mount Kilimanjaro are because of multi-locational households who mostly lives in Dar es Salaam.

Secondly, the analysis outcomes from the standardised household survey and in-depth interviews (through the use of eight sub-cases) as sources of evidences, it has further revealed that, there are interesting reasons or motives for housing investments in the village of origin. The findings have shown that, most of the multi-locational households gave more than one motive/reason behind such investments (see chapter ten). These findings are peculiar, however, to some extent they concur with scholars on multi-locality researches (see chapter two and three).

Also, it has been evidently revealed that, the type, design and size of the houses invested by multi-locational households (who are not involved in business activities) are simple (less complicated; i.e. most of them owns detached low and medium modern houses see the classification of houses in chapter eight) while the business people owns detached, Bungalow and Maisonette medium and advanced modern houses. This is the reflection of wealthier, which requires the professionals (spatial planners, architects, environmentalists and rural sociologist) and respective authorities (village councils and the Ministry of Lands, Housing and Human Settlements Development) to intervene in order to ensure development proceeds without negatively impacting the nature in the villages on the slopes of Mount Kilimanjaro (see detailed recommendations in chapter twelve).

Again, the employed methods have revealed that there is a strong connection between those multi-locational households whose parents are still alive in the village. However, after they have died the connection to their village of origin becomes weak. It has further been observed that, those houses of the multi-locational households whose parents are dead are inhabited by housekeepers or relatives who sometimes get paid just to take care of the village house.

In addition to that, the houses were/are built when the parents were/are still alive. This practice intends to ensure individuals' social status (prestige) and abide to the cultural values at the household

level. For example, the sizes of the houses are also bigger and have many rooms in order to attain respect, but also to be used by multi-locational household members who visits the village during occasions or events. It is also because of family pressure, e.g. parents want their children to invest housing in their inherited piece of land in the village (cultural value). Sometimes, children do that to get appreciation and satisfy their parents so they could also be appreciated by the family members, villagers and the community members at large.

Lastly, the intention to invest and the quality of the houses invested depends on several other factors. These include: individual households' wellbeing, willingness to invest and existing social/family connections and family pressure in the village of origin. Those who invest houses in the village of origin observed to have strong connections with their village counterparts. These reflections were mostly observed from households who own modern houses in Sango village. Their reasons or motives to invest modern houses in the village reflected their existing social/family connections. For example, during occasions (such as; Christmas, New Year, Easter, burial and wedding ceremonies) they are able to meet their fellow relatives and village members whom they had lost each other for one or more years. It is also the time to plan for development of their families (such as the construction of houses for the family, maintenance of the cemeteries of their loved ones, addressing family problems such as conflicts, introduce their partners, etc.) and the respective village at large (such as construction of schools, roads, water supply etc.). Thus, investing in housing in the village of origin is a social-cultural phenomenon which will continue to exist. The next chapter explains with facts the spatial and environmental challenges of the invested housing in Sango village.

CHAPTER ELEVEN

SPATIAL AND ENVIRONMENTAL CHALLENGES OF 'MODERN' RESIDENTIAL HOUSING INVESTMENTS IN THE VILLAGE COMMUNITIES ON THE SLOPES OF MOUNT KILIMANJARO

11.1 Introduction

This chapter provides the spatial and environmental challenges contributed by housing investments in the villages on the slopes of Mount Kilimanjaro and particularly in Sango village. The findings have revealed that, despite the fact that village housing investments have positive impacts to the village communities. These include improving the poor housing in the villages, reducing health related risks contributed by poor/traditional housing, provision of physical infrastructures (such as water, electricity, etc.) and to some extent ensures rural/village urbanisation.

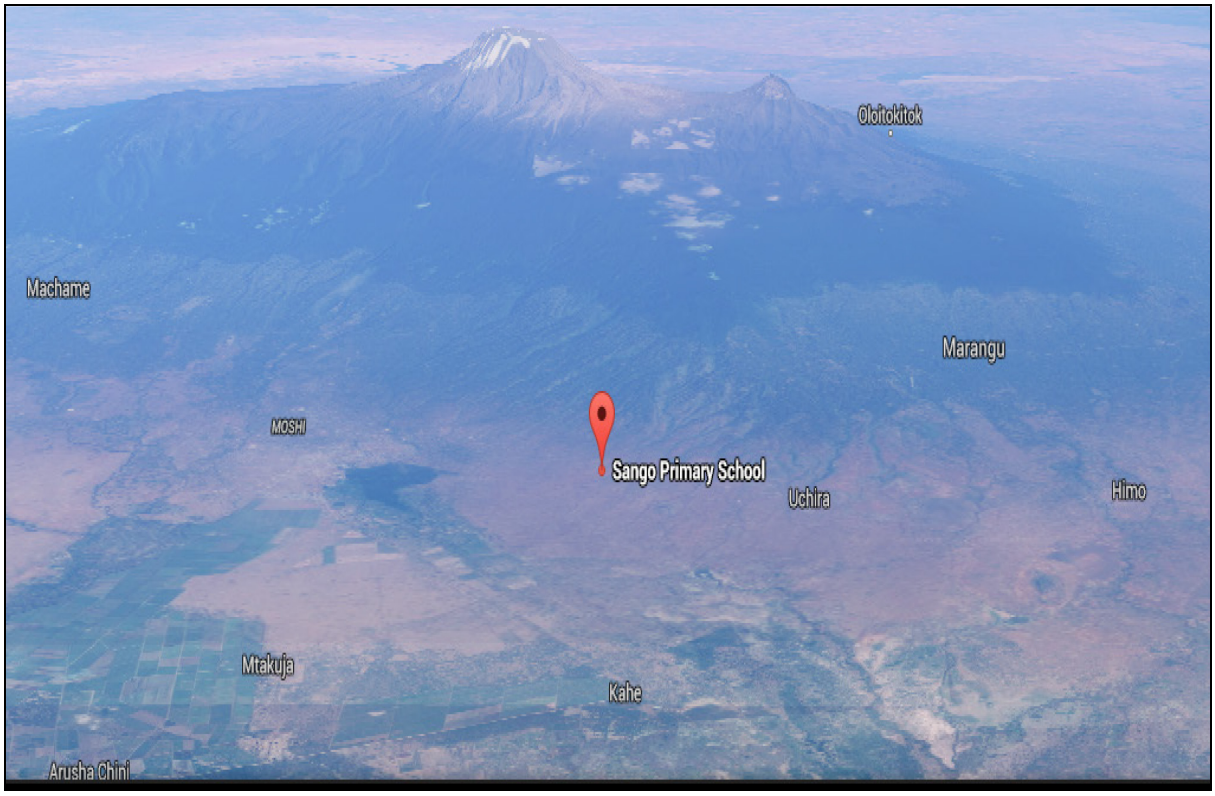
Though, there are still some negative impacts that emerge due to the existence of institutional weaknesses (related to spatial planning and housing monitoring) at the village level. One of the pinpointed constraints is the lack of enough resources (money and manpower). This has contributed to a lack and/or inadequate implementation of detailed Village Land Use Plans (VLUPs) and effective development control in most of the villages in Tanzania. This leads into an escalation of land use related challenges. The very main challenges include spatial (reduction of the farming land and pastoral farming; increasing housing densities characterised by informal housing; and scattered cemeteries) and environmental challenges (e.g. over-exploitation of building materials such as timber and sand causing deforestation and soil erosion).

11.2 Spatial challenges

This section provides in detail the main spatial challenges posed by housing investments in the villages on the slopes of Mount Kilimanjaro using Sango village as a source of evidence. The researcher uses satellite images to trace the housing densities in the villages on the slopes of Mount Kilimanjaro from 2001 to 2015.

Like many other cities, towns and villages in developing countries, Moshi town is also growing along the trunk roads (along Arusha-Moshi-Dar es Salaam road), on the south towards Manyara region and on the north towards the villages on the slopes of Mount Kilimanjaro. Also, due to rural/villages urbanisation which is somehow unique in Moshi district, Hai district, Siha district and Rombo district, there is also a growth of the villages towards Moshi urban see figure 11.1.

Figure 11.1: The direction of growth of Moshi town.



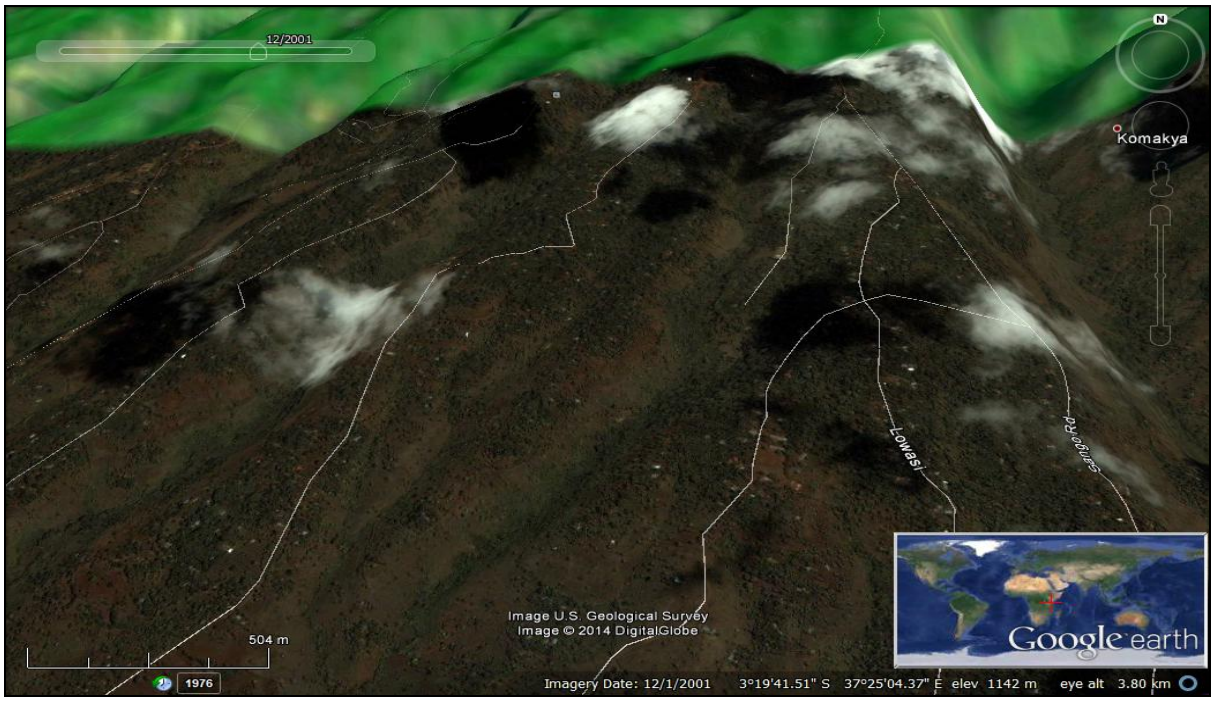
Source: Google Earth, 2015

The spatial challenges contributed by housing investments in the Sango village community are explained with evidence below:

11.2.1 Increased housing densities

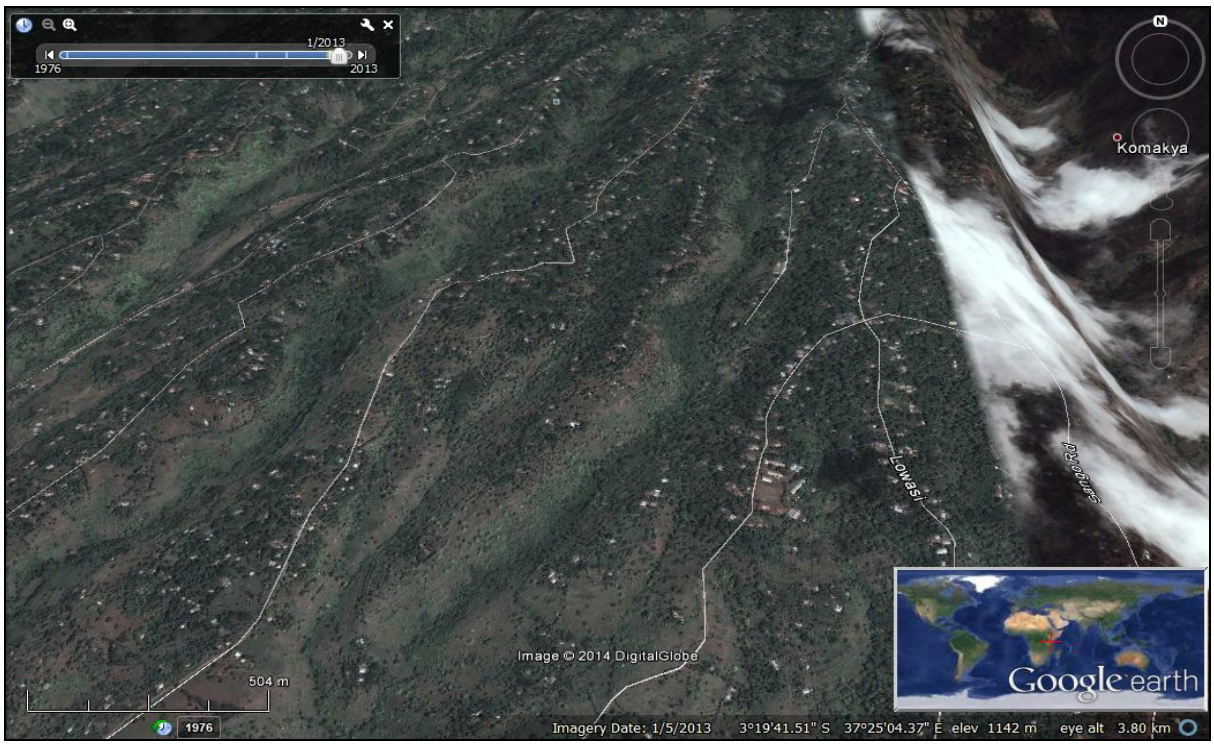
In recent years, the 'modern' residential housing investments in the villages on the slopes of Mount Kilimanjaro have been on the increase. This is mostly because of multi-locational households (see chapter nine and chapter ten) and village urbanisation. However, these developments lack professional guidance. The absence of organs and realistic instruments of spatial planning and housing (such as detailed Village Land Use Plans and effective implementation and development control) at village level impose more pressure/challenges on the land, including creating more housing densities in many of the villages on the slopes of Mount Kilimanjaro and Sango village in particular. The satellite image analysis (see figure 11.2, 11.3, and 11.4) shows the trend from 2001 to 2015 of housing densities in Sango village and other villages on the slopes of Mount Kilimanjaro.

Figure 11.2: The transformation of village farmland into land for housing in Sango village and other villages on the slopes of Mt. Kilimanjaro in 2001 (houses are scattered).



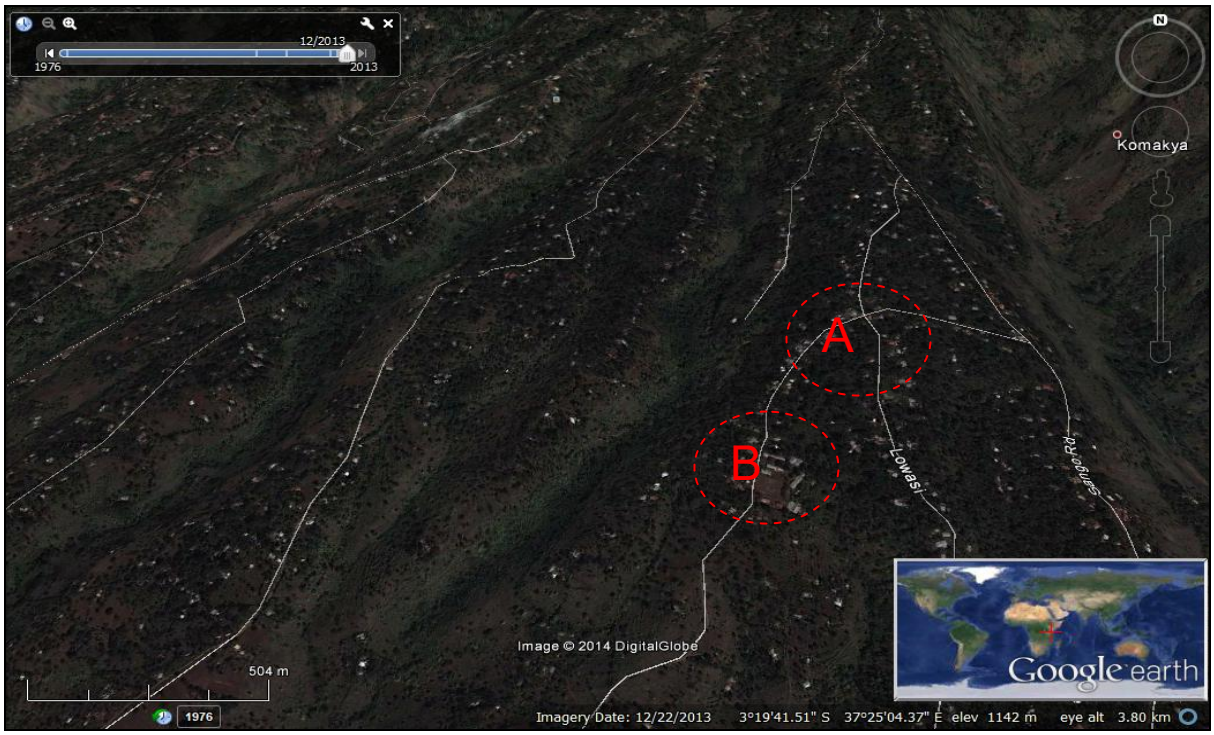
Source: Google Earth, 2015

Figure 11.3: The transformation of village farmland into land for housing in Sango village and other villages on the slopes of Mt. Kilimanjaro in January, 2013 (houses are densely)



Source: Google Earth, 2015

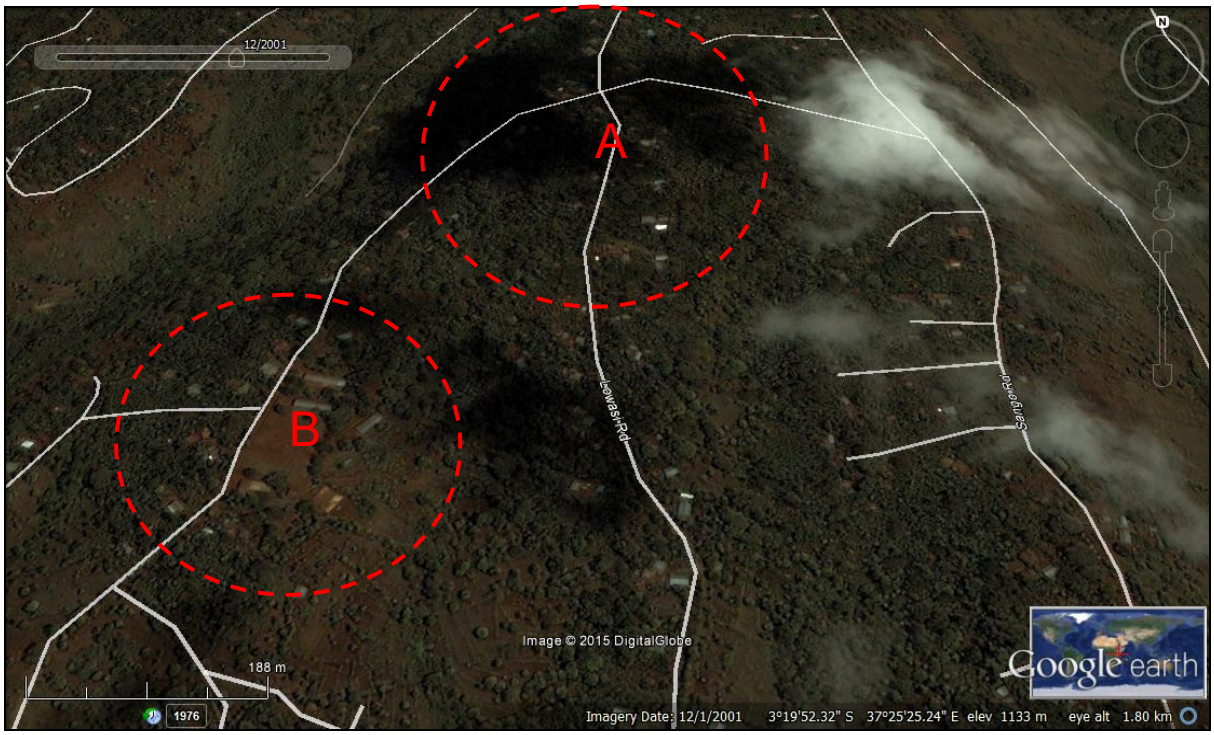
Figure 11.4: The transformation of village farmland into land for housing in Sango village and other villages on the slopes of Mt. Kilimanjaro in December 2013 (houses are more densely).



Source: Google Earth, 2015

From the satellite image analysis (spatial analysis) in the villages on the slopes of Mount Kilimanjaro, narrowing further down to Sango village we see that in December 2001 there were 13 houses at point A and 11 houses at point B see figure 11.5 and table 11.1.

Figure 11.5: The housing densities in Sango village in December 2001 (houses are scattered).



Source: Google Earth, 2015

Table 11.1: The number of houses per the identified location in Sango village in December 2001.

Points/Locations	A	B
Number of houses	13	11

Source: Field surveys in Sango village January-April, 2015

Again, in December 2013, which means 12 years from 2001, we see an additional of 13 houses which makes a total of 26 houses at point A and 8 houses which make a total of 19 houses at point B (see figure 11.6 and table 11.2 below).

Figure 11.6: Housing densities in Sango village in December 2013.

Source: Google Earth, 2015

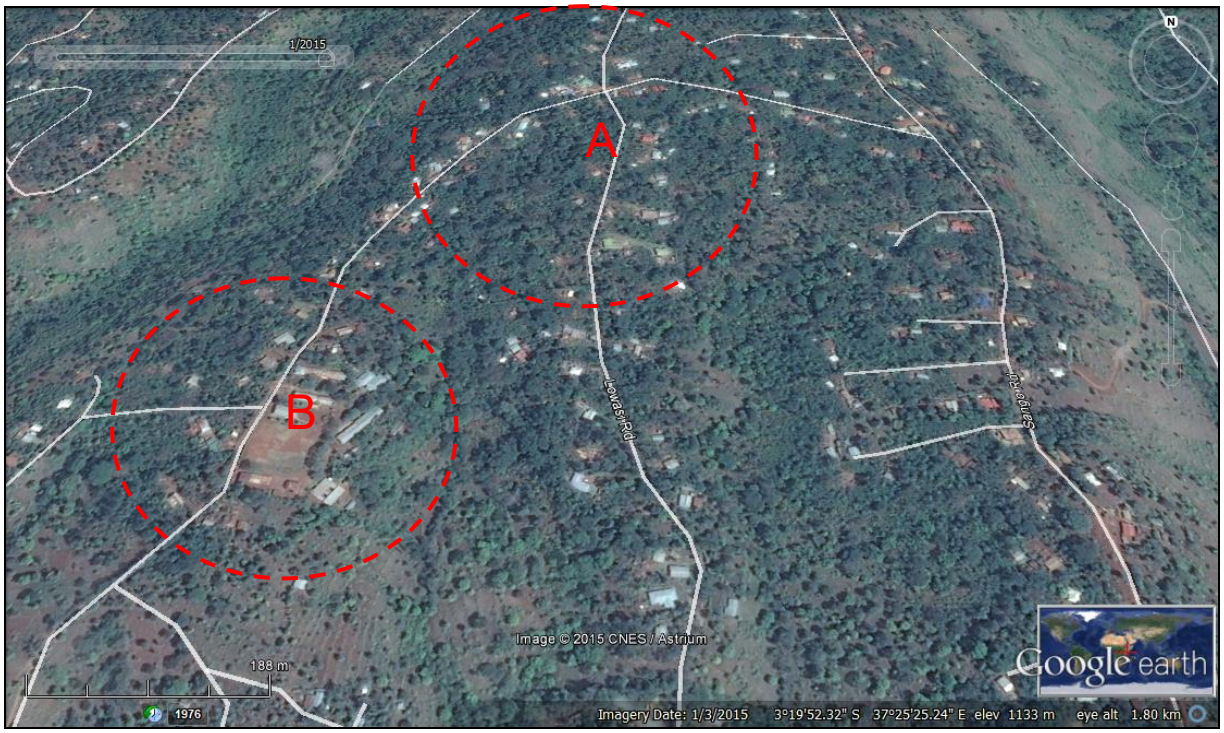
Table 11.2: The number of houses per the identified location in Sango village in December 2013.

Points/Locations	A	B
Number of houses	26	19

Source: Field surveys in Sango village January-April, 2015

In addition to that, in January 2015 we see an additional of 7 houses which makes 33 houses at point A and an additional of 3 houses which makes 22 houses at point B (see figure 11.7 and table 11.3 below).

Figure 11.7: The housing densities in Sango village in January 2015.



Source: Google Earth, 2015

Table 11.3: The number of houses per identified location in January 2015.

Points/Locations	**A**	**B**
Number of houses	33	22

Source: Field surveys in Sango village January-April, 2015

Therefore, from the satellite image analysis, we can see that the trends of land transformation into housing land in Sango village and other villages on the slopes of Mount Kilimanjaro is on the increase. However, looking at the images alone, it is not easy to state clearly whether the houses we see on the images were for residential or other purpose. Thus, the researcher selected Sango village and conducted a survey with 64 households who owns 'modern' residential houses in order to justify the phenomenon under study (see the methodology chapter).

11.2.2 Farming land consumption

Through the use of standardised household questionnaires, satellite images, observations and photographs as tools and methods of data collections, followed by the data analysis and the interpretation of the results, it has become clear that the main use of the land at household level in Sango village and other villages on the slopes of Mount Kilimanjaro is mainly for housing and farming. However, housing investments are on the rise, especially in the lowland areas which traditionally it is mainly for farming (sees chapter eight and this chapter).

The standardised households survey analysis reveals that 40 out of 64 households surveyed used their pieces of land for farming and housing while 21 households used mainly for housing see table 11.4 and figure 11.8 below. Therefore, from the satellite image data discussed above, household data and photographs, we can see that there is a transformation of the village farming land into housing land.

The researcher wonders what can spatial planning do to ensure that the pace of transformation goes concurrently with a balanced land use, including the protection of nature in the villages on the slopes of Mount Kilimanjaro.

Table 11.4: The main use of the village land.

S/n	Main use of the village land	Frequency	Percent
1	Housing	21	32.8
2	Farming and housing	40	62.5
3	Farming, housing and livestock keeping	3	4.7
	Total	**64**	**100**

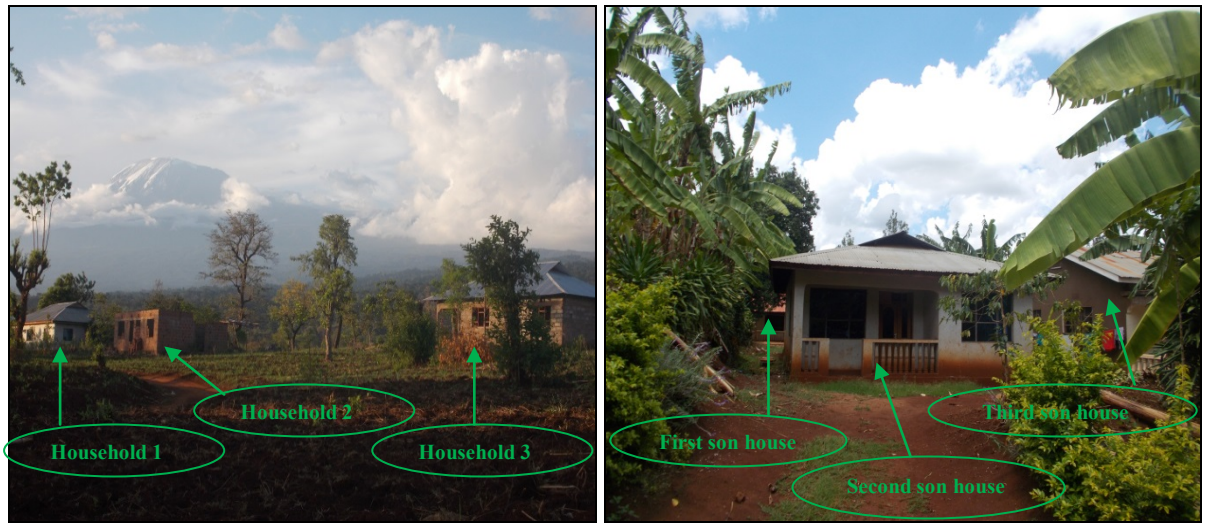
Source: Field surveys in Sango village January-April, 2015

Also, the empirical secondary data reveals similar results. Soini (2005:306) for example, claimed that, land scarcity on the slopes of Mount Kilimanjaro now hinders expansion of agriculture, because farm sizes have seriously decreased. The decreasing farm size due to population pressure and land scarcity poses a great challenge on the slopes of Mount Kilimanjaro. Farms have simply become too small to sustain a family under the present management (ibid: 307).

The population increase has also accelerated housing densities. This is exacerbated by excessive subdivision of the inherited clan/family land for housing investments and cemeteries in the villages on the slopes of Mount Kilimanjaro see figure 11.8 below.

Magimbi (2007:75) further added that due to inheritance land customs in Moshi district, farms have dwindled in size to the point that the returns for most peasants are likely to be very small even when prices are fair or high. This is the reality in most of the villages on the slopes of Mount Kilimanjaro. The intervention is needed to balance the space use and nature (see chapter twelve).

Figure 11.8: The new houses emerging on the farming land in Sango village.



Source: Field surveys in Sango village January-April, 2015

The empirical primary data have further revealed that, the housing investments are currently to a larger extent consuming the village farming land space. Evidences have shown that, in the past, it was mostly used for agriculture; however, recently, the practice has shifted because of multi-locational households and population increase.

The statistical evidence shows that, 58 out of 64 households surveyed have claimed that there is a reduction of land for subsistence crop farming (maize, beans and banana) see table 11.5 and table 11.6. Also, findings have realised that, coffee which used to be a commercial crop in most of the villages on the slopes of Mount Kilimanjaro is currently being replaced by subsistence crops because

of the decline of its market and /or climate change. The prices of coffee in the world market remain low, farmers are trying to intensify and diversify their farm production (Soini, 2005:306).

Therefore, the findings are telling us that without professional guidance (such as realistic spatial planning, policies, standards, strategies, programs and plans parallel to effective development control, including enforcement of the existing laws/bylaws, appropriate institutional framework, man power and adequate budget), the human development activities in the villages will pose a problem on nature and on the climate now and escalate more in the future.

This argument concurs with Soini (2005:320) who argued that, planning is also required to guide the future development of the semi-urban landscape on the slopes of Mount Kilimanjaro, and multidisciplinary approaches are needed in guiding the recreation of the landscapes without undermining the natural resource base.

Table 11.5: The effects of farming land space transformation in Sango village.

S/n	Effects of farming land space transformation	Frequency	Percent
1	Reduction of land for subsistence crop farming (maize, beans and banana)	58	90.6
2	Reduction of land for commercial crop farming (coffee)	0	0
3	1 and 2	6	9.4
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

Table 11.6: The spatial challenges related to housing investments in the village.

S/n	Spatial challenges of housing investments	Frequency	Percent
1	Transformation of the agricultural land into housing land	13	20.3
2	Reduction of agricultural land	11	17.2
3	Expansion of informal housing	3	4.7
4	Boundary conflicts	2	3.1
5	Land use conflicts	5	7.8
6	Both 1,2, 3, 4 and 5	30	46.9
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

In addition to that, the findings show that, all 64 households surveyed in Sango village own lands in the highlands and on the lowland areas. The lowland area is characterised by dry vegetation (with scattered trees) while the highland area has natural vegetation (wet with many trees).

Traditionally, the lowland area is to be used for seasonal agriculture (growing maize and beans once a year) and for grazing after harvesting, while, the highland area is for permanent residence, agriculture (growing maize, beans, banana and coffee) and zero grazing. However, the situation today has changed. The lowland area is in the process of transforming into housing land because of the growth of Moshi town and the practice of multi-locational households see figure 11.9 below.

Figure 11.9: The transformation of the lowland farming land into housing land in Sango village.

Source: Field surveys in Sango village January-April, 2015

Perceptions on farming land transformation

The study further discloses that, there are different perceptions on the transformations of the village land. It has revealed that 29 out of 64 households surveyed were not happy about the land transformation, especially in the lowland areas (see table 11.7). This is because it is the land that was formerly/traditionally used for agriculture, however, in recent years the situation has changed. The households are worried that it might bring hunger in the village now and/or in the future. As one respondent claimed that:

"*… Now the population has increased compared to the past… the population has increased in such a way that people have started building even in the areas where we used to use for agriculture… normally, the highland areas are for residential purpose while the lowland areas are for agriculture, however, nowadays people have started building even in the lowland areas…. I see hunger in the future…"*-Mchungaji SM-Standardised household questionnaire no. 15 conducted on 13 January 2015.

On the other hand, findings show that 19 households see it as development, arguing that, no one who can resist the growth of Moshi town and development in the village. As one of the respondents argued that:

"… H*owever, this is also the development, Moshi is also growing, we cannot resist development…"* - (ibid).

This means that the households and the villagers in Sango village and other villages on the slopes of Mount Kilimanjaro are in a dilemma. Therefore, there is a need of experts (such as spatial planners, architects, environmentalists, rural sociologist, etc.) to intervene. For example, through the provision of detailed land use planning and ensure effective development control in order to balance land uses, protect the nature and ensure sustainable development in the villages on the slopes of Mount Kilimanjaro.

Table 11.7: Perception on the farming land transformation into housing in the village.

S/n	Perception of farming land transformation into housing	Frequency	Percent
1	Yes (e.g. It is development)	19	29.7
2	No (e.g. It will bring hunger in the village)	29	45.3
3	Yes and No	16	25.0
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

11.2.3 Ghost houses/homes in the village of origin of multi-locational households

The findings have shown that there are a lot of ghost houses/homes in Sango village and most of the villages on the slopes of Mount Kilimanjaro (see for example figure 11.10). This is the outcome of multi-locational households (see chapter nine and the motives for such investments in chapter ten).

This means that there is a huge 'dead' assets accumulated in these villages. Thinking about how we can change these 'dead' assets into 'live' assets will add an economic value to the house owners in the village (see recommendations in chapter twelve).

Again, through observational method, it has been revealed that the villagers on the slopes of Mount Kilimanjaro are no longer surrounded by nature (trees) but rather by concrete (i.e. The ghost houses which are inhabited once or twice a year or not inhabited at all). This reality poses more pressure on the farming land, security and nature in the villages, including Mount Kilimanjaro and its forest.

Thus, thinking of changing the mind-set of the multi-locational households and the societies are important for the sake of the environment. This is something that will not happen overnight, it is a task that will require a sooner polite talk (negotiation) between the house owners (MLHs), villagers, NGOs, CBOs, associations, cooperatives, local governments and the Ministry of Lands, Housing and Human Settlements Development.

Figure 11.10: Ghost houses in Sango village.

Source: Field surveys in Sango village January-April, 2015

11.2.4 Village sprawl and increased scattered cemeteries

This is the spatial planning issue which requires immediate spatial planning interventions. To continue thinking that the village areas are dormant areas is totally wrong. The villages are our future towns and cities, planning in advance means better towns and cities of tomorrow.

The findings have shown that the real home in the context of developing countries in Asia, Africa and Tanzania in particular is the village of origin. The findings from Sango village and almost all the villages surrounding Mount Kilimanjaro, including many other villages in Tanzania are evident.

The added evidence is that, the multi-locational households in the villages on the slopes of Mount Kilimanjaro will want to return to their village of origin when they are 'alive' through housing investments in their inherited pieces of land, but also will want to return when they are 'dead' through being buried in their inherited individual plots "Kihamba". This all creates a village sprawl because of absence of spatial planning guidance and standards at the village level.

Awareness of existing laws for development control in the village

Despite the fact that, there are laws that govern any development in the village, for example, the Village Land Act No.5, 1999 section 29 (2) (b) which states that any permissions that are required to be obtained before any building is erected will be obtained and no building will be erected until those permits have been so obtained. Though, this condition stands for those who have Certificates of Customary Right of Occupancy. For example, findings from Sango village have shown that, all 64 households surveyed have no Certificates of Customary Right of Occupancy and indeed, they have no idea of the existence of the laws governing development in the village. Therefore, all the houses constructed have neither building permits, including planning standards nor an organ to monitor the construction process.

On the other hand, households are aware of some government authorities and some bylaws. For example, the findings in Sango village have revealed that households are not required to cut trees without permission from the office of the Kilimanjaro Regional Administrative Secretariat (KRAS), however, the trees are cut-down in the weekends. This means that sustainable education, effective and closer follow up and enforcement of the existing laws governing any development in the village are highly required in order to protect different land uses and ensure sustainable development in the villages on the slopes of Mount Kilimanjaro. However, this cannot be realised without a well-established and financed institutional framework.

It has also been realised that, there are several initiatives that have been carried out to ensure sustainable (compact) development in the villages surrounding Mountain Kilimanjaro. These include sustainable agriculture policies, strategies, programs and projects; control of trees cutoffs and planting new trees in the villages surrounding Mount Kilimanjaro, including its forest. However, the policies, strategies, programs, projects and researches on housing investments in the villages surrounding Mount Kilimanjaro are inadequately done.

The findings in Sango village have shown that, there are several challenges contributed by housing investments in the villages on the slopes of Mount Kilimanjaro. These include reduction of farming land, expansion of informal housing, accumulation of ghost houses/homes, scattered cemeteries, safety of dwellers left at risk (this is because the area has sometimes experienced earthquakes and most of the houses are built by "Mafundi" refer chapter eight) and destruction of nature, especially in the villages on the slopes of Mount Kilimanjaro. This is because the development activities/projects which are happening in the villages on the slopes of Mount Kilimanjaro are not adequately guided by the responsible government authorities.

Lastly, it has been realised that, there has been an inadequate priority in terms of financing, provision of experts, guidelines, development control mechanisms, standards, realistic policies, laws and enforcements in the villages in Tanzania. These weaknesses have impeded the sustainable development in most of the villages. The following section offers evidences on the environmental challenges posed by unguided housing investments in the villages on the slopes of Mount Kilimanjaro.

11.3 Environmental challenges

This section provides the environmental challenges which have and continue to emerge due to unguided housing investments in the villages on the slopes of Mount Kilimanjaro with evidence from Sango village. These results will shed light, especially for actors who are responsible for the environment protection, especially on the slopes of Mount Kilimanjaro and other villages surrounding national parks and natural resources (e.g. Forest).

In Tanzania there are several policies such as the National Environmental Policy, 1997; the National Forest Policy 1998; the National Land Policy, 1995/1997; the National Human Settlements Development Policy, 2000; the National Housing Policy, 1981 and the recent National Housing Policy draft, 2009. Indeed, there are Acts such as the Land Act, 1999; the Village Land Act, 1999; the Land Use Planning Act, 2007; the Environmental Management Act, 2004; the Forest Act, 2002; the Village Land Regulations, 2002; and the village bylaws.

Despite the existence of such policies and acts still, the implementation has become so inefficient. For example, one of the village bylaws restricts cutting trees without getting formal permission from the office of the Regional Administrative Secretariat (RAS), however, findings have revealed that it has never been implemented successfully. As a result, there have been a lot of environmental challenges, especially resulting from the demand for building materials such as timber and exploitation of gravel for housing.

The literature also shows that, there is a slight decrease in riverine forest, which mostly happened between 1961 and 1982 in Moshi district (Soini, 2005:316). Lowland riverine forest covers very narrow areas along the rivers. These areas are increasingly exploited for firewood and timber (ibid).

The environmental challenges associated with housing investments with detailed empirical evidences from Sango village are provided below.

According to the standardised household survey analysis outcomes, in-depth interviews, photographs and satellite image analyses it has become clear that, there are environmental challenges associated with exploitation of housing building materials (sand, rock blocks and stones) from Sango and Kawawa hills; Rau and Nanga Rivers see table 11.8; figure 11.11 which shows the depletion of trees in the villages on the slopes of Mount Kilimanjaro; and the satellite images which shows changes of Sango hill from 2001 to 2015 (see this chapter and chapter eight).

Table 11.8: The environmental challenges contributed by housing investments in Sango village

S/n	Environmental challenges	Frequency	Percent
1	Extraction of timber from villagers farms	4	6.2
2	Climate change (e.g. Nowadays no enough rain and the temperature is too high due to development activities)	3	4.7
3	Construction along/in water sources	1	1.6
4	Destruction of water sources (e.g. Rivers and springs)	1	1.6
5	Soil erosion (exploitation of building materials)	2	3.1
6	Destruction of river beds due to sand and stone extraction	2	3.1
7	Destruction of hills/mountains (source of building materials such as blocks and sand)	7	10.9
8	Reduction of farm trees (banana, coffee and timber) at household level	11	17.2
9	Both 1, 4, 5, 6, 7 and 10	32	50.0
10	People are extracting timber secretly from Mt. Kilimanjaro forest	1	1.6
	Total	**64**	**100**

Source: Field surveys in Sango village January-April, 2015

These findings also concur with the claim of the Chief Park Warden of Kilimanjaro National Park (KINAPA) Mr. Erastus Lufungulo who had claimed that:

"... Snows on the peak of Mount Kilimanjaro have decreased to about 85 percent and it is expected to vanish by 2060 because of deforestation in Mount Kilimanjaro forest and climate change..." The Chief Park Warden of Kilimanjaro National Park (KINAPA) Mr. Erastus Lufungulo further added that:

"*... The research done by experts in Tanzania and abroad shows that the reduction of the snow on the peak of the mountain had increased the temperature of the Indian Ocean..."*-(ibid).

However, Mr. Lufungulo claimed that there are a number of measures that have recently been taken by the Kilimanjaro National Park. These include patrols in the whole forest area to prevent people from cutting trees and reducing fire events (http://www.itv.co.tz/news/local/1729-24167/Theluji_mlima_Kilimanjaro_imepungua_kwa_asilimia_85_na_inakadiriwa_kumalizika_ifikapo_mwaka_2060. html accessed on Sunday 08 November 2015).

Figure 11.11: Trees cut down (without permission) for making roofing-timber (rafter) in Sango village.

Source: Field surveys in Sango village January-April, 2015

11.3.1 Deforestation (at household level, village farms and Mount Kilimanjaro forest)

Also, findings show that, some households' cut-down trees from their own farms for roofing their modern residential houses see figure 11.12. These activities are mostly done over the weekends or during holidays in order to avoid the government officers (controller/forest department). Theoretically, it is not allowed to cut any trees without permission from the Kilimanjaro Regional Administrative Secretariat (KRAS). However, in practice this has never been effective. This could be a result of an institutional weakness.

Figure 11.12: Trees cut down for making roofing (rafters) timber in Sango village.

Source: Field surveys in Sango village January-April, 2015

Again, the research findings from Sango village reveal that, the sources of building materials pose a great challenge on nature and especially in the villages on the slopes of Mount Kilimanjaro. It has been revealed that, timber for roofing; making doors and windows of these modern houses have been secretly exploited from the Mount Kilimanjaro forest, individual plots and villagers' farms see figure 11.13.

Figure 11.13: The depletion of trees in the villages & on the slopes of Mount Kilimanjaro forest.

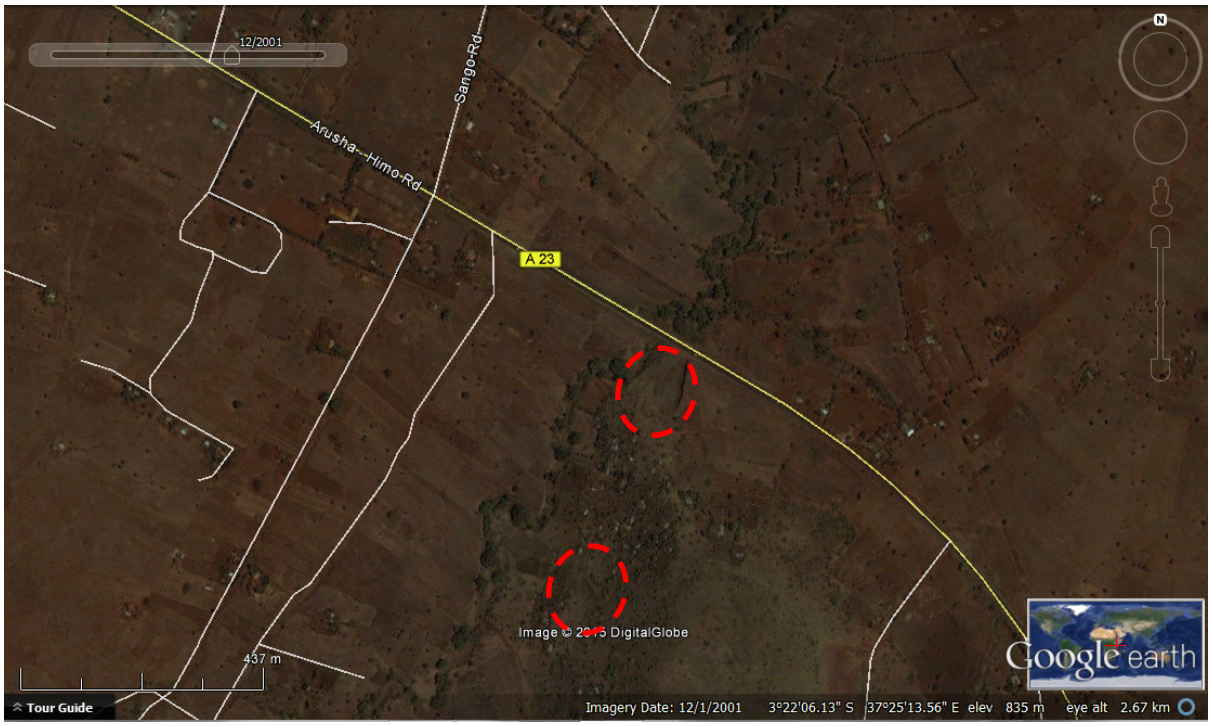
Source: Field surveys in Sango village January-April, 2015

11.3.2 Over-exploitation of Sango hill

Furthermore, the findings show that Sango and Kawawa hills have been used as the main sources of building materials such as gravels and rock blocks. The demand for such materials has made Sango and Kawawa hills depleting over the years. The researcher traces the trends of change of the Sango hill from 2001 to 2015 see figure 11.14 to 11.23 and see also chapter eight. This trend could be a wakeup call for the diverse actors to search for alternative building materials or technology for the sake of the environment.

The figure 11.14 below shows that the trend of exploitation of gravel at Sango hill in 2001 was very negligible. However, as time went on and the population increase had made the consumption of gravel for housing to increase see figure 11.15 to 11.18. The large scale further shows the trends of change of Sango hill see figure 11.19 to 11.23.

Figure 11.14: The trend of exploitation of building materials (gravel) in the Sango hill in 2001.

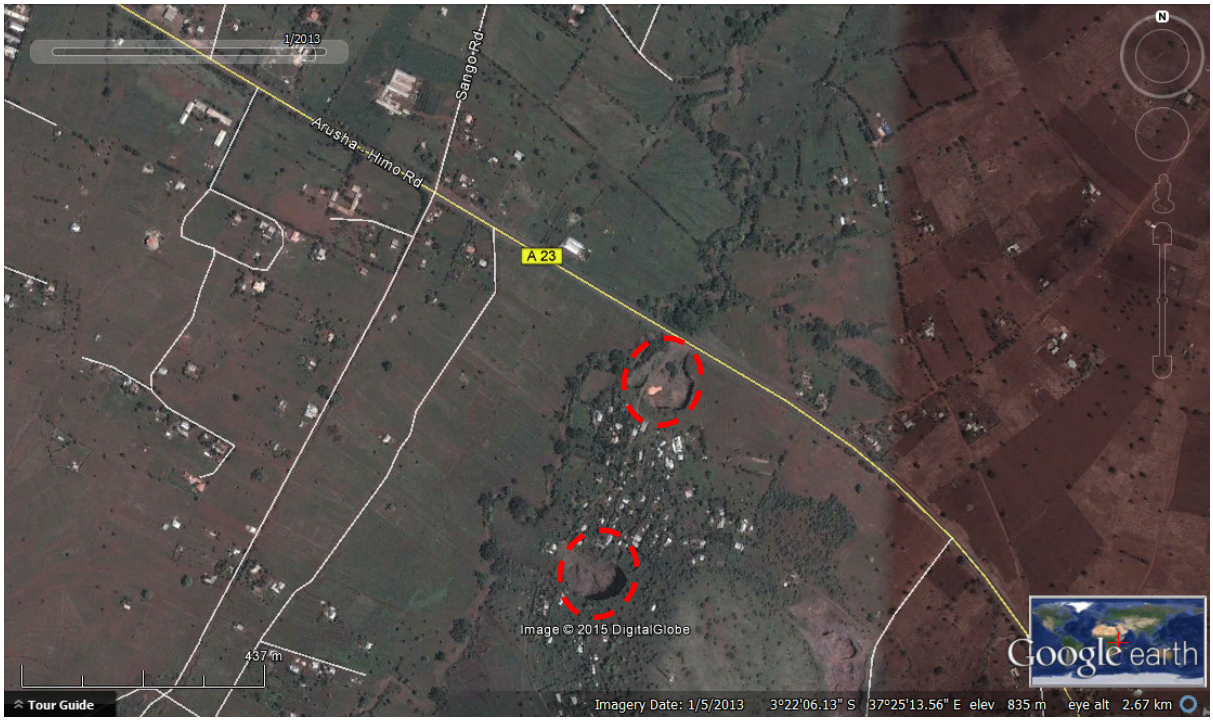


Source: Google Earth, 2015

Figure 11.15: The trend of exploitation of building materials (gravel) in the Sango hill in 2012.

Source: Google Earth, 2015

Figure 11.16: The trend of exploitation of building materials (gravel) in the Sango hill in January 2013.



Source: Google Earth, 2015

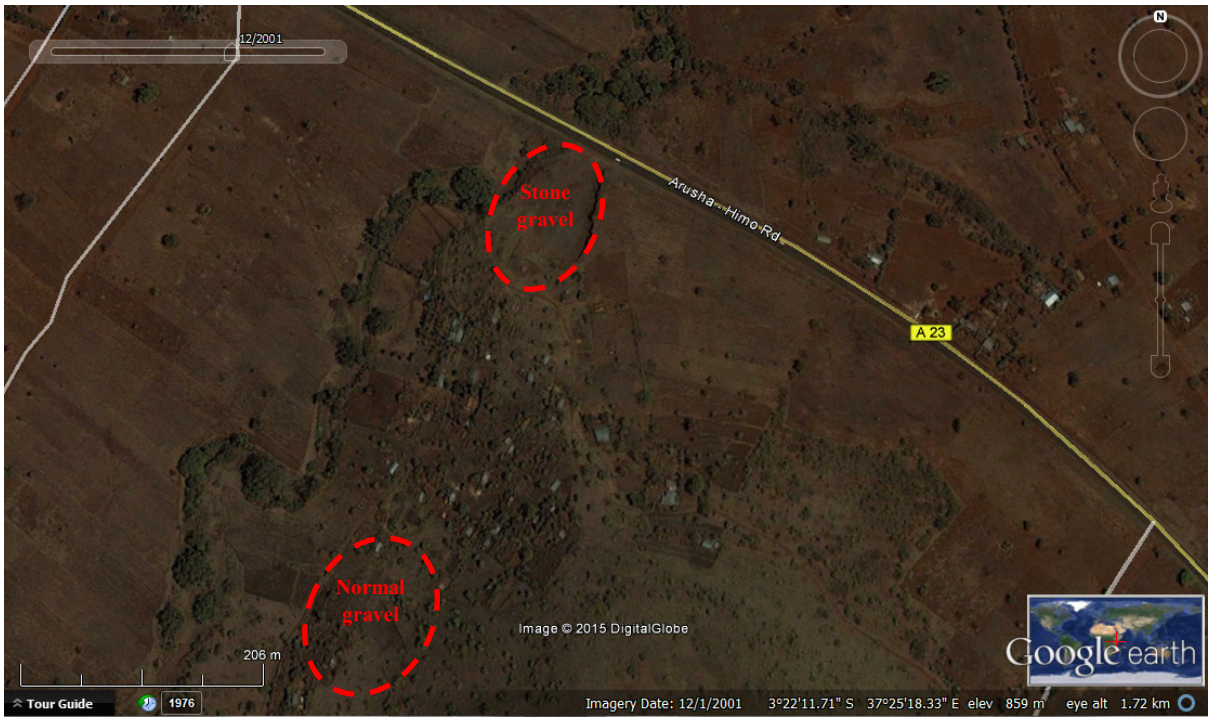
Figure 11.17: The trend of exploitation of building materials (gravel) in the Sango hill in November 2013.

Source: Google Earth, 2015

Figure 11.18: The trend of exploitation of building materials (gravel) in the Sango hill in January 2015.

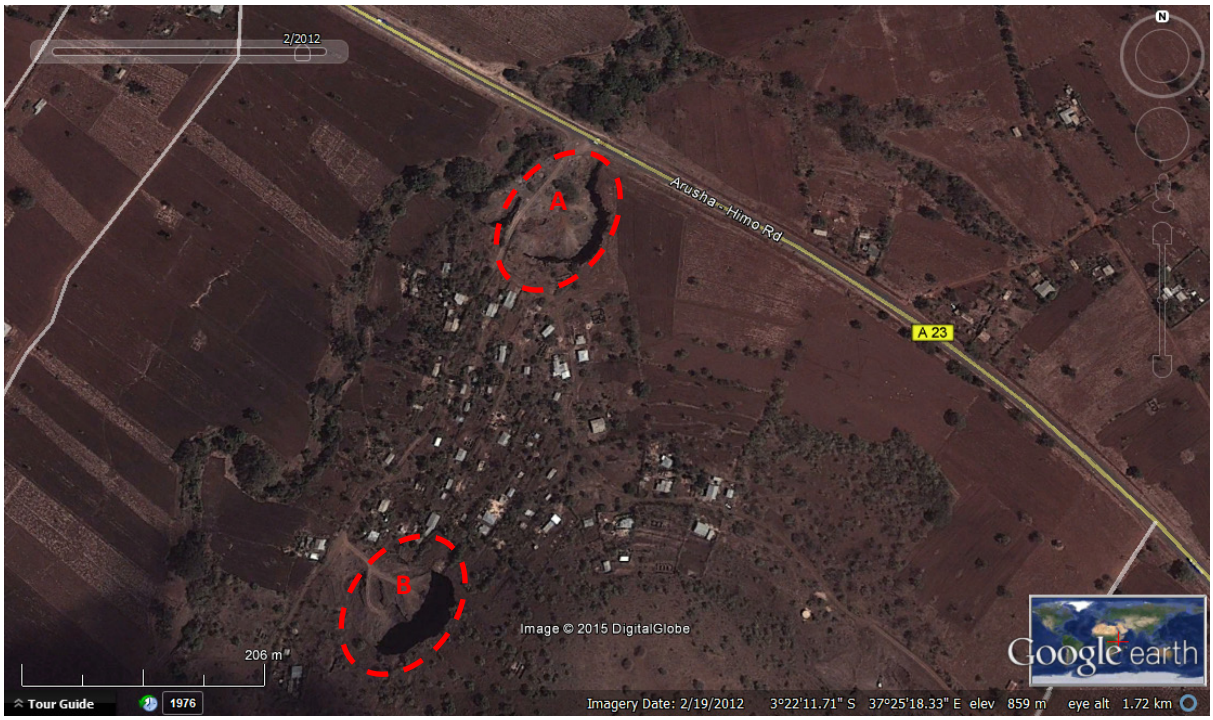
Source: Google Earth, 2015

Figure 11.19: The trend of exploitation of building materials (gravel) in the Sango hill in 2001.



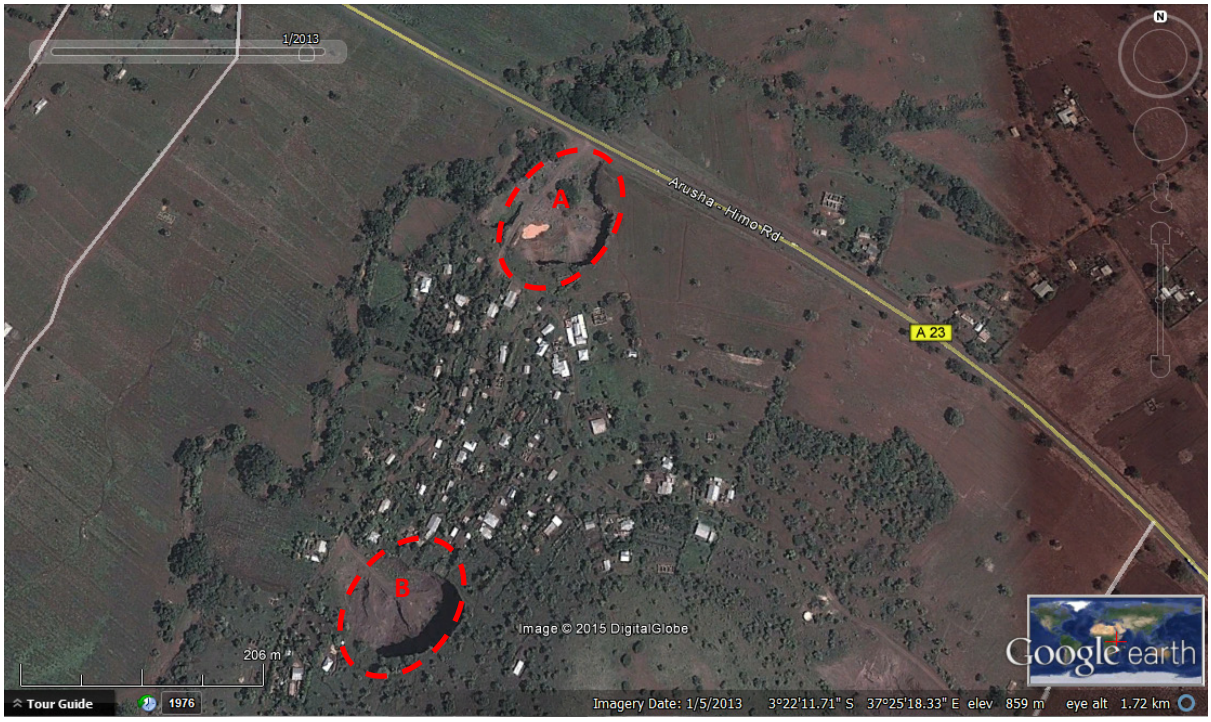
Source: Google Earth, 2015

Figure 11.20: The trend of exploitation of building materials (gravel) in the Sango hill in 2012.



Source: Google Earth, 2015

Figure 11.21: The trend of exploitation of building materials (gravel) in the Sango hill in 2013.

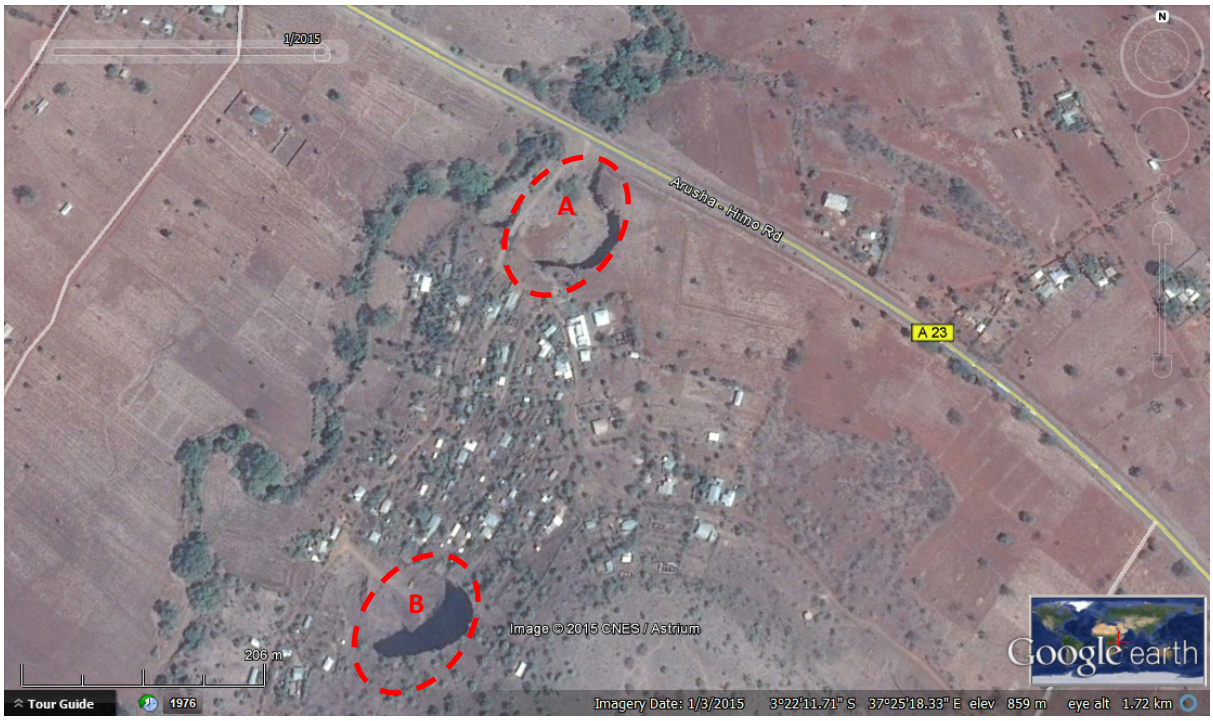


Source: Google Earth, 2015

Figure 11.22: The trend of exploitation of building materials (gravel) in the Sango hill in 2013.

Source: Google Earth, 2015

Figure 11.23: The trend of exploitation of building materials (gravel) in the Sango hill in 2015.



Source: Google Earth, 2015

11.4 Spatial planning challenges

The spatial planning challenges we see in Sango village and in most of the villages on the slopes of Mount Kilimanjaro and of course other villages in Tanzania are a result of institutional weaknesses and the inadequate spatial planning priority in the village. The villages have been to the bottom end of the government priority areas. This attitude has to change because every town or city we see today was once upon a time in a form of a village. Therefore, the early we set realistic plans and implements those plans in our villages, the better future towns and cities we create (see the recommendations in chapter twelve).

11.5 Concluding remarks

It has become evident that the unguided housing investments in the villages of origin of multi-locational households, especially in the villages on the slopes of Mount Kilimanjaro have positive and negative impacts at the household and community levels. However, the negative impacts (e.g. Deforestation, soil erosion, housing densities, scattered cemeteries, etc.) needs to be addressed at the very infancy stage in order to ensure sustainable development in all the villages surrounding Mount Kilimanjaro forest. The next chapter proposes the alternatives to address such spatial planning and environmental challenges emerging due to housing investments in the villages in Tanzania.

CHAPTER TWELVE

SUMMARY OF THE KEY FINDINGS, INSTITUTIONAL AND POLICY REFLECTIONS, RECOMMENDATIONS AND CONCLUSIONS

12.1 Introduction

This chapter presents a summary of the key findings on multi-locational households, including their motives for housing investments in their village of origin. The spatial and environmental challenges resulting from such investments are also highlighted. The chapter also pinpoints some institutional and policy challenges associated with spatial planning and housing investments in the villages in Tanzania. It further provides some recommendations and areas that require further investigations for the better progress of the villages in Tanzania. In addition to that, this chapter reflects on the conceptual framework of this study, including its methodology. Lastly, it concludes the study.

12.2 Summary of the key findings

Through this research, it has become clear that, most of the 'modern' residential houses that we see in the villages on the slopes of Mount Kilimanjaro are because of multi-locational households (see chapter nine).

It has also been revealed that, there are significant reasons/motives raised by multi-locational households on why they need to invest in 'modern' residential houses in their villages of origin. The motives behind such investments include: social status (prestige), event use (Christmas, Easter and other ceremonies), culture to own a house in the village of origin, taking care of the elderly and a place to retire. The findings from Sango village, which of course represent the rest of the villages on the slopes of Mount Kilimanjaro are evident (see chapter ten).

This research has also shed light on the positive contribution of multi-locational households, especially in addressing the village housing poverty. It has also highlighted the spatial and environmental challenges resulting from the 'modern' residential housing investments in their villages of origin.

The challenges emerged includes: farming land transformation, scattered houses and cemeteries, accumulation of ghost houses, over exploitation of building materials and deforestation (see chapter eleven).

Again, the village of origin is an important place for multi-locational households who would want to return either when they are "alive" through investing in a 'modern' residential housing and regular visit, but also they would like to return when they are "dead" through buried in their inherited pieces of land "Kihamba".

In addition to that, it is still not so clear if the children of the house owners will prefer to return or live in the village or the transition will last after the death of the house owners, parents or grandparents. Posing a doubt whether the investments are wasted or not. But due to the extended culture of the Chagga tribe to inherit and respect the inherited piece of land ("Kihamba"), regular visits to the graves of their beloved ones, presence of Mount Kilimanjaro, and the hardship of life in urban areas, we will still see the village as a 'sweetie home' for the many generations to come.

These findings send signals to a number of actors, both from the central to the local governments, including the private sectors and international organisations. The message is also cut across to the practitioners (spatial planners, architects, environmentalists and rural sociologist). The key actor to intervene is the Ministry of Lands, Housing and Human Settlements Development (MLHHSD).

It is, therefore, argued that, in order to achieve more positive impacts than the negative ones, there are land and housing policies and institutional loopholes at the central and local government

authorities that need urgent attention. For instance, there is a need of an inclusion of spatial planning and housing section/institution at the ward or village level. It is a hope that, this is a better way of creating healthier and planned towns and cities of tomorrow. This is possible if the spatial planning and the village become one of the local and central government priority areas (see some more recommendations in this chapter).

12.3 Institutional and policy reflections on the key findings

The main issue that needs attention here, particularly in the villages surrounding Mount Kilimanjaro is an institutional framework for the village land use and housing investments/development. It is obvious that a well-structured institutional framework will set realistic housing and space standards and regulations to manage and monitor the village land and housing investments.

The village housing and land institutional and policy gaps in the context of Tanzania are clarified in chapter seven and conceptualized in chapter five.

To address the observed spatial and environmental challenges resulting from the need to own a 'modern' house in the village of origin of multi-locational households the following questions guide the argument.

12.3.1 Do we need an institutional framework for managing and monitoring housing investments and land use in the village?

The scholars on the topic of rural-urban linkage have argued that the two continuums should not be isolated. Though, still today the evidences show that the rural/village areas have hardly been a local and central governments priority areas in developing countries.

This is the result of institutional (organisational) weaknesses. As the UNCHS had pointed out that, one of the most serious problems which have impeded the implementation of lasting solutions to shelter problems in developing countries has been an institutional weakness (UNCHS, 1995:11).

In the context of Tanzania, this has been reflected in the spatial planning and housing institutions as highlighted in chapter seven (for example, the lack of housing sections/committee at the ward or village levels). The observed weaknesses are many, including the inadequate planning instruments. Also, spotting, for example, section 8 of the Tanzania Village Land Act, of 1999, it gives power the Village Council and the Village Assembly to manage all the village land. However, in most of the villages (see Sango village) there is vague roles and autonomy, inadequate budget, manpower, tools and offices allocated to pursue this fundamental responsibility.

The weak institutional framework has resulted in the lack of monitoring of housing investments and land use in the villages. These weaknesses have also contributed to the environmental challenges (see, for example, chapter eleven and figure 12.1), land use conflicts, rural sprawl, informalities, and scattered houses, ghost houses and cemeteries.

Figure 12.1: An example of the existing institutional weakness in Sango village.

Source: Sango village fieldwork, January 2015

Note: The billboard displays that it is restricted to excavate gravel in Sango hill, however, because of institutional weaknesses, still people are extracting gravel for construction (see the trucks collecting gravel from the Sango hill).

Therefore, establishing the Wards or village's land and housing institutions, including the rural/village housing associations to monitor the village land use and housing investments is needed for the sake of sustainable rural/village development (refer North, 1990).

The rural/village housing institutions should have an autonomous, clearly stated responsibilities, allocated enough budget and manpower. This institution should be located at the Ward or village office. The role of the Ministry of Lands, Housing and Human Settlements Development and the President Office, Regional Administration and Local Government (PO-RALG) in Kiswahili "TAMISEMI" should be to facilitate the implementation process (office at the Ward or village level with experts such as a spatial planners, surveyors, housing experts/architects, valuers, rural sociologist/development officers). The following are some of the proposed responsibilities of the Ward or village land and housing institutions:

- To ensure that a village in its area of jurisdiction is registered, has a Village Certificate of Registration and every piece of land in the village is mapped and documented using computer software such as Geographical Information System (GIS).
- To prepare detailed Village Land Use Plans showing all the village land uses. This data should be stored at the Village Land Registry Office and at the District Land Registry Office.
- To create a mechanism to allow frequent updating of the Village Land Use Plans to keep the village land use changes and housing investments up to date in order to avoid future land use conflicts.
- To use the Village Land Act 1999 to facilitate the process of issuing the Certificates of the Customary Right of Occupancy to all the land and house owners in the village (supported by the Village Chairperson and the Village Executive Officer).

- To formulate and implement guidelines (standards) for spatial planning and housing investments in the village. For example, this research has found out that 22 out of 64 households surveyed in Sango village own a piece of land less or equal to 2,500 square meters while 26 out of 64 own a piece of land range from 2,500-5,000 square meters. The same study shows that most (37) out of 64 households surveyed owns houses range from 101-110 square meters. Therefore, basing on these findings the proposed maximum plot "Kihamba" size could be 2,500 square meters and the house size should not exceed 110 square meters for the sake of the environment (e.g. Consumption of timber) and farming space.
- To involve and agree with the villagers, including the multi-locational households on the land uses and housing standards and no changes or developments shall be made unless allowed by the village land and the housing institution (supported by the Village Land Act 1999). This will ensure a balanced land use for different uses.
- To encourage and assist the villagers to access alternative building materials (such as steel and aluminium) to replace the use of timber for the sake of the environment.
- To offer spatial planning, housing and environment related education to the villagers.
- To ensure that the agreed housing and plots standards are implemented in the village.
- To establish best development control and monitoring procedures.
- To ensure that the boundaries and uses agreed between villages, national parks, forests and reserved areas are neither distorted nor invaded.
- To formulate some bylaws to punish those who behave contrary to the agreed procedures and conditions for housing investments in the village.
- To facilitate the process of eco-tourism (there should be a mechanism to encourage the tourists who climbs Mount Kilimanjaro to live with the local in the modern houses) in order to improve the incomes of the locals and attracts more tourists (cut-down costs of accommodation).

The rural/village housing institutions should have clearly stated procedures and conditions for housing investments/development in the village. The proposed procedures include:

- Submission of the house drawings in the office of the village land and the housing institution/ section/committee for assessment before approval;
- Site visits and assessment of the sites;
- Approval/disapproval plans with conditions; and

In order to avoid village sprawl and ensure compact villages on the slopes of Mount Kilimanjaro. The following are some of the proposed buildings/housing/settlement conditions:

- Build a small house which does not consume most of the plot (maximum house size is 110 square meters). There must be an area left for farming, planting trees and vegetation;
- No cemeteries on individual plot/farm. There should be an agreed public or family place in the village for cemeteries;
- The house should be accessible, but not closer to the access road (at least 6 meters away from the access road); and
- The households must plant trees on their individual plots "kihamba". These are just a few more or modifications can be added after negotiation with the villagers, multi-locational households, village authorities, district authorities, Ministry of lands, NGOs, CBOs and international organisations.

We should remember that, the towns or cities we see today were once upon a time in the form of villages. It is therefore a hope that this kind of thinking will ensure sustainable development in the villages and creates better future towns and cities in Tanzania. To achieve all these, it has to be reflected in the housing policy, supported by legislations and good leadership.

12.3.2 Do we need housing policies, legislations and regulations in the village?

Through this research, it was also found out that, the motive to invest a 'modern' house in the village of origin is the phenomenon which is there to stay. It has also revealed that the motive to go back to the village of origin will continue to be there for decades to come.

This spirit has been practiced for several decades ago. It has also been transferred from one generation to the next generation for decades now. This has been possible through regular visits to the home village, especially during occasions (e.g. Christmas, Easter and burial ceremonies).

During Christmas, for example, multi-locational households go back to their home village together with their families to celebrate with the village families, relatives and villagers whom they had hardly missed for a year or so. The children who were/are born in urban areas (place of destination) have also inherited the taboos, norms and properties (e.g. "Kihamba") in their home village (place of origin). If this is the practice until today, it means that this phenomenon is sustainable. However, it usually slows down after the death of the parents and grandparents of the house owners (the trend to return to the home village usually becomes weaker).

Despite the existence of the phenomenon under study, still, there has never been a policy which has recognised it as one of the rural/village housing issues. The existing policies (National Human Settlements Development Policy, 2000 and the National Housing Policy draft, 2009) have been too general and focusing more on urban housing while paying little attention in the villages.

Therefore, the housing policy, legislation and regulation reflecting the village areas are highly needed in the village today. This is because the village areas are no longer dormant. Though, the implementation of the legislations and regulations has been observed to be a greater challenge in Tanzania. This has been also the result of institutional weaknesses which needs to be changed. For example, section 29 (2) (b) of the Village Land Act, 1999, it states that any permit that is required to be obtained before any building is erected will be obtained and no building will be erected until those permits have been so obtained. However, to a large extent it has never been implemented because the owners must have a Certificate of the Customary Right of Occupancy in order to adhere to that condition.

The evidences from Sango village have shown that, all the houses constructed in the village do not have building permits. This is an issue that needs to be addressed in order to ensure sustainable development in the villages on the slopes of Mount Kilimanjaro and other villages in Tanzania.

These findings send signals to a number of actors, both from the central to the local governments, including the private sectors and international organisations. The message is also cut across to the practitioners (spatial planners, architects, environmentalists and rural sociologist). The key actor to intervene is the Ministry of Lands, Housing and Human Settlements Development (MLHHSD).

12.3.3 Do we need housing and planning standards in the village?

This research has found out that there are existing traditional planning and housing standards in the villages. In the case study area, for example, we see houses oriented towards the main entrance to the plots "Kihamba" traditionally called "Kichumi". We also see the adoption of rural-urban housing standards and skills in the village context.

Despite the existence of this traditional planning and housing skills in the village, still the professional standards and guidelines are needed in order to ensure a fair play in the village (refer North, 1990 and see the proposed standards and regulations under the institutional framework in this chapter).

The standards and regulations should also incorporate some components of economics, social and culture of the respective villages in Tanzania. Some parts of Tanzania are also experiencing

irregular earthquakes. For, example, we heard it in Kagera region in September 2016 that 17 people were dead while 440 were injured and about 2,063 houses completely destroyed, 14,081 houses severely destroyed and 9,471 houses with minor distractions, including about 126,000 households affected (http://rai.co.tz/2016/10/27/njaa-yawanyemelea-waathirika-wa-tetemeko-kagera).

Kilimanjaro region is also experiencing irregular earthquakes, the involvement of professionals and provision of standards in housing construction might lower the negative impacts of the earthquakes in the community today and in the future. For example, this research has found out that 39 out of 64 households surveyed in Sango village used local experts "Mafundi" to construct their houses. This has implication on the quality of the houses invested.

Therefore, to address the underpinning housing and land use related challenges in the village, it requires negotiation between the professionals, the house owners (MLHs), the villagers, the village authorities, the district authorities and the central government (i.e. Ministry of Lands, Housing and Human Settlements Development) and the international organisations (e.g. UN-Habitat, World Bank, etc.).

It has been revealed that, the planned urban areas are guided by the Urban Planning and Space Standards and Regulations, 2011. Though, its implementation is not so effective, but at least there is a guideline which is missing an effective guider. In the same line of thinking, it is also argued that provision of detailed housing and planning standards and regulations to guide development in the village is vital for the community and for the environment (see the proposed standards and regulations under the institutional framework in this chapter).

12.4 Recommendations

The research findings show that, there are spatial and environmental challenges which are emerging due to unguided human development activities in the villages surrounding Mount Kilimanjaro. It has also found out that, they are emerging mainly because of institutional weaknesses together with the lack or inadequate and/or unrealistic strategies and programmes for the villages.

Therefore, the following recommendations will shed light on the housing and land institutions, policies, regulations, standards, programmes, strategies, plans and projects in the villages, particularly those surrounding National Parks and natural resources in Tanzania. The key actor is the Ministry of Lands, Housing and Human Settlements Development.

12.4.1 Institutional thoughts

In order to address the existing and prevent the future spatial and environmental challenges contributed by housing investments/development and other human development activities in the villages surrounding Mount Kilimanjaro, it is recommended that, there should be a negotiation fuelled with good coordination and cooperation between the International organisations (e.g. UN-Habitat through UNEP, UNCCD, UNFCCC, the World Bank, etc.), the Ministry of Lands, Housing and Human Settlements Development (though the village section), the National Land Use Planning Commission, Property and Business Formalization Programme Tanzania (MKURABITA), Moshi municipality and all the districts and village authorities surrounding Mount Kilimanjaro (Moshi district, Hai district, Siha district, and Rombo district), multi-locational households, private sectors, the villagers, housing associations, housing cooperatives, NGOs and CBOs. This should be initiated and facilitated by the Ministry of Lands, Housing and Human Settlements Development (MLHHSD).

It is also recommended that, one of the strategies for addressing the institutional weakness at the village level is to call for 'an institutional framework for guiding rural/village housing investments/development' (i.e. The Ministry of Lands in collaboration with TAMISEMI should establish a housing and land section/committee at the Ward or village level). This instrument will

work with the village environmental committee, which is existing today in addressing the issues of spatial planning and housing (development control) in the village (see the proposed roles of these institutions in this chapter).

This recommendation will address the following gaps:

Following the restructuring of the civil service in the late 1990s, which did away with the Regional Development Directorates and established the Regional Secretariats to coordinate regional development, the position of housing officer was abandoned. To-date, nobody is directly in-charge of housing at the regional secretariat and local authority levels (National Housing Development Policy draft, 2009:15). Adding that, *until the re-establishment of the Housing Department in the Ministry of Lands, Housing and Human Settlements Development, in 2008 there was no institutional framework within which housing development, was coordinated at the Central Government level. Though the Department of Housing is now in place, there is no office or anybody responsible for housing development matters at Local Authority levels (ibid: 56).*

According to the above policy statement the government (MLHHSD) claimed that, it will:

(i) Build the capacity of the newly established Department of Housing in the Ministry of Lands, Housing and Human Settlements Development;

(ii) Ensure that the capacitated Department of housing is facilitated to deliver on its mission of promoting, guiding and coordinating the housing sector so that it contributes to national development;

(iii) Establish Department of housing in Local Authorities, build their capacities and facilitate the departments to promote, guide, regulate and coordinate the housing sector; and

(iv) Ensure that there is a committee to deal with housing development matters at ward level (ibid: 57).

The established Ward or village housing and land institutions will need to guide the village housing development and facilitate the provision of Certificates of the Customary Right of Occupancy to enable individual households to own and use it as collateral.

Despite the fact that, this research has found out that, the 'modern' residential houses, that are booming in the villages on the slopes of Mount Kilimanjaro have more 'cultural values' than 'economic values'. However, from an economic perspective, it is disappointing that they are still 'dead' assets. It is a hope that, the institutional change will add a financial value to these houses, including improving the village environment, the balanced use of land, the household's (MLHs) income and the local government revenue through property tax.

In addressing all the underpinning institutional weaknesses pointed out above, it is argued that, the village areas should be a government priority area. This is because it is the place where most of the people still live. Thus, planning for this population is vital. This rational way of thinking will creates better towns and cities of tomorrow. This is not an overnight task; it will require the will and the full commitment of the country (through the Ministry of Lands, Housing and Human Settlements Development; the TAMISEMI; Ministry of the state-environment; etc.).

In addition, there must be enough budget set in every financial year (Ministry of Lands and TAMISEMI) if we really want to address the spatial planning and housing related issues in the country. The adequate budget will enable our local authorities to get enough manpower, working tools, offices, etc. It will also facilitate in the preparation and implementation of the realistic laws, regulations, standards, plans, programmes and projects which will address the real housing and planning issues in the village. These institutional thoughts have to be reflected in the housing policy.

12.4.2 Policy reflections

The National Housing Policy, 1981 was formulated in 1981 with the objective of providing a framework for the housing sector development in the country. This policy outlined the need for addressing broad housing problems. These problems among others included; housing shortage in urban areas; poor housing quality in both urban and rural areas; rapid growth of unplanned settlements; and inadequate infrastructure and services in urban areas. The policy called for concerted efforts from all stakeholders and greater government involvement in housing sector development. This policy was not implemented due to government budgetary constraints and a change in economic policy direction from central planning to a market economy (URT, 2009:12).

Again, we have the Human Settlements Development Policy, 2000. This policy was approved in 2000 with the objective of addressing the broader issues of shelter and human settlements. The objective of this policy is to create an enabling environment for all to access adequate shelter. The policy advocates for, among others, efficient land delivery system, simplified building regulations and standards; upgrading of unplanned settlements; housing finance; infrastructure and service provision; and better rural housing. However, it has been increasingly recognized that this policy falls short of providing a comprehensive framework for housing development (URT, 2009).

Currently, the Housing Development Policy draft 2009 is in the process of becoming the main policy to guide housing development in the country. Though, like the previous housing policies, still there is little attention (from the government) in terms of implementation mechanisms that has been paid in addressing the real village housing issues. For, example, the National Housing Policy draft, (2009:38-39) claimed that:

Most of the houses in the rural areas are of poor quality as they are constructed by using poor techniques and temporary building materials. Most of these houses lack basic services and infrastructures as such; they do not meet environmental, safety and health requirements. Besides, in some areas there are cultural beliefs and traditions that hinder the improvement of housing conditions.

According to the above policy statement the government (MLHHSD) claimed that, it will:

(i) Facilitate effective implementation of rural integrated housing programmes in partnership with communities, CBOs and NGOs in order to create employment and increase income through housing development;

(ii) Support innovative arrangements for mobilizing savings from the communities in order to assist rural households to construct and improve their houses;

(iii) Facilitate, educate and sensitise local communities to use improved building materials and the application of appropriate building standards and techniques;

(iv) Encourage formation of cooperatives and building societies for housing delivery;

(v) Promote the use of locally available durable building materials; and

(vi) Put in place a programme to systematically and regularly improve existing rural housing.

Therefore, the Housing Development Policy draft 2009 should be reviewed to reflect and incorporate the real housing issues in the villages. These include the institutional issues mentioned above. The policies should also recognise and appreciate the presence of multi-locational households, including their positive contributions in the village. This will ensure their inclusion in the development agendas and therefore address the rural/village development challenges including their negative impacts.

The sensitization of the practice of multi-locational households in other villages is important in addressing the rural/village housing poverty in Tanzania. The other policies that need to be linked with the phenomenon under study are the Land Policy, 1997; the Environmental Policy, 1997 and the

Population Policy, 2006. Also, this phenomenon (the concept of multi-locality) should be taken by policy makers, practitioners and academics (e.g. Through inclusion in the teaching curriculum).

12.4.3 Housing regulations

The areas (villages) on the slopes of Mount Kilimanjaro are sensitive areas which need some regulations to monitor the development activities (refer North, 1990). Therefore, it is important to have some planning and housing laws, bylaws and regulations to monitor the development in the area.

There have been some legal instruments to monitor such development in a general sense, though; narrowing down to the village level and implement them could ensure sustainable development in the villages in Tanzania.

It has been observed that, Tanzania has no building regulations for the village. The focus is mainly in urban areas, the village areas are still in a dilemma. The review of the existing building regulation 1930 to reflect the real urban housing issues, including formulating a new building regulations and standards for the village is needed for the sake of the economy, socio-cultural, spatial and environmental sustainability.

For example, the existing building regulations and standards stipulated in the Township Building Rules (Cap 101) are restrictive, outdated and un-affordable. Hence, they do not encourage people to build; instead they rather act as a hindrance to potential housing developers. Continued usage of these regulations impedes adoption of innovative technologies in the housing construction industry. The challenge is to have in place simple building regulations and standards that are responsive to the present housing needs and technology (National Housing Development Policy draft, 2009:26). The existing used building regulations and standards contained in the Township (Building) Rules (Cap. 101) of 1930, are inflexible and outdated to meet current housing development needs (ibid: 55).

According to the above policy statement the government (MLHHSD) claimed that, it will:

(i) Enact a comprehensive housing law to enable the department of housing to guide, monitor and regulate the housing sector (ibid: 55); and

(ii) Hasten the review of building regulations and standards to ensure their appropriateness to support efficient housing development under the various climatic, sociocultural, and economic situations (ibid: 56).

We see from this policy draft that the building regulations and standards for the villages are not clearly stated.

Again, the enactment or formulations of laws/regulations is not enough, the enforcement or implementation mechanism is essential. For example, the Village Land Act, 1999, under section 29 (2) (b), states that any permit that is required to be obtained before any building is erected will be obtained and no building will be erected until those permits have been so obtained. However, it has never been implemented because the owners must have a Certificate of the Customary Right of Occupancy in order to adhere to that condition.

The case study area is evident that all 64 households surveyed had neither Certificate of the Customary Right of Occupancy nor Building Permit. This is also because the village has no the Village Land Use Plan (VLUP). But, the question to ask is: why should someone request for a Certificate of the Customary Right of Occupancy while in reality it is still not the same as the Certificate of the Statutory Right of Occupancy? This inconsistency needs to be addressed through giving the village areas a priority.

The review of the Environment Act, 2004 and the enactment of the National Housing Law and Regulations to give the Housing Policy 2009 (draft) the power to monitor and regulate housing development in the country is essential.

Therefore, in order to put considerable effort in protecting the nature and spatial challenges, the laws, regulations and standards need to be reviewed to include statements like, no development activity that will be allowed in the villages and particularly in all the villages surrounding National Parks, forestry or reserved/restricted areas without a building or development permit and a comprehensive Environmental Impact Assessment. These permits should be issued at the Ward or village level by the proposed 'land and housing institution/section or committee'. The idea is to protect our natural resources and the environment and give value to the spatial planning profession in Tanzania.

12.4.4 Spatial planning and housing standards

The spatial planning and housing standards intend to ensure orderly and quality of housing investments/development in the villages in Tanzania. This research has also revealed that, there are no housing and detailed spatial planning standards in the villages. Therefore, there is a need to set detailed housing and spatial planning standards in the village in order to ensure orderly development of land and protection of nature in the villages and particularly in all the villages surrounding national parks such as Mount Kilimanjaro. This argument also concurs with recent statements from government officials who said that:

"…Our country is facing a new type of poaching - and this is the latest wave of people driving livestock in conservation areas, annexing parts of game parks and reserves for agriculture and illegal harvesting of firewood, logs and trees from forests…" -Prof. Maghembe-Minister of Natural Resources and Tourism.

Also, the Board Chairman of TANAPA Retired Chief of Defence Forces, General George Waitara added that:

"…We are also facing land and territorial conflicts between conserved areas and surrounding villages whose residents need land for farming, grazing, housing and even mining…" (Tanzania Daily News, 6 January 2017: All 16 Tanzania National Parks for Re-Mapping by Jan. 31 2017).

Though, the preparation of the realistic standards needs to involve the villagers, the house owners (MLHs), the village authorities, the district authorities and the central government (Ministry of Lands, Housing and Human Settlements Development and the Ministry of Natural Resources and Tourism, etc.).

The standards should also reflect the existing and the new housing and plot sizes (land availability), cultures of the villagers, the nature, and the existing natural resources. For example, the presence of cemeteries/graves on the "Kihamba" lowers the value of the property (it cannot be sold or used as collateral). The proposed spatial planning and housing standards for the villages based on the findings in Sango village see the institutional thoughts section in this chapter.

12.4.5 Programs for preparation and implementation of the Village Land Use Plans (VLUPs)

The established partnership between government organs (Ministry of Lands, Housing and Human Settlements Development; Land Use Planning Commission; districts; village authorities) and the private sectors will speed up the preparation and implementation of the realistic general and detailed Village Land Use Plans (VLUPs) for all the villages and particularly in all the villages surrounding national parks (such as Mount Kilimanjaro) in Tanzania.

This study is in-line with the current government agenda of surveying all the land in Tanzania in order to address the existing and the future land use conflicts (e.g. Areas of natural resources, agriculture, pastoralism, housing, cemeteries, etc.) in the country.

It has also been observed that, the Property and Business Formalization Programme Tanzania (in Kiswahili MKURABITA) is also a milestone ahead towards addressing the land related challenges through facilitating the preparation of Village Land Use Plans and enable individual households to

own Certificates of the Customary Right of Occupancy. For example, Kilimanjaro region has 157 villages out of those only 6 have Village Land Use Plans (Shayo-MKURABITA-Moshi district).

However, the pace is not so promising; MKURABITA needs an adequate budget in order to accomplish its goals in the village. This will ensure that, all the villages in Tanzania have the Village Land Use Plans. It will then enable individual households to own Certificates of the Customary Right of Occupancy. This will help them to transfer the village housing 'dead' assets into 'live' assets through using these certificates as collateral. Though, it is not yet known whether the ownership of a Certificate of the Customary Right of Occupancy is a burden or a benefit. This requires further investigation.

12.4.6 Strategies for protecting the village nature and Mount Kilimanjaro

The spatial planning profession is the main tool for protecting the nature and ensure the orderly use of land. It further ensures that the land is used in a sustainable (spatial, economic and environmental) manner.

This study has found out that there are also other environmental strategies which need to be exercised in order to ensure that the housing investments continues without impeding the nature, especially in the villages on the slopes of Mount Kilimanjaro (see the proposed conditions for housing investments in the village in this chapter).

The proposed strategies include planting of trees at household levels. More emphasis should be to every house owner (MLHs). This should be one of the conditions to qualify for a building permit. It is recommended that, households should plant trees surrounding their houses and plots. Through working closely with the forestry experts it will be easier to recommend the types of trees to be planted in the village. The guidance and monitoring role should be done by the village authority (the village land and housing institution/section/committee). It is also argued that, whenever necessary an Environmental Impact Assessment needs to be carried out before any housing investment project in the village.

This research has also noted that all the houses surveyed used timber as their main roofing materials (rafters). This finding sends signals to housing researchers and architects to come up with alternative building materials to replace timber. Although, the use of steel and aluminium is expensive, it could replace timber for the sake of the environment. The government of Tanzania has embarked on the policy of revamping industries. This is an opportunity where the government and the private sector (business people) can agree on how to realise alternative and affordable building materials.

Again, the world is now focusing on combating the climate change and its impacts, including protecting the life on land (sustainable development goals 13 and 15). Thus, it is argued that, the use of renewable energy such as solar which is plenty in Tanzania could add positive value to the climate and nature in the villages surrounding Mount Kilimanjaro, the mountain itself, including its forest. The findings show that most of the households in Sango village and all the villages on the slopes of Mount Kilimanjaro still use firewood as the main source of energy for cooking (see chapter eight).

This study has further realised that there are cultural motives related to housing investments in the villages of origin of multi-locational households.

It is therefore recommended that, professionals from diverse sectors (rural sociologist, spatial planners, environmentalists, architects, etc.) need to offer diverse education in order to ensure cultural change (e.g. Stop building huge houses and bury their beloved ones in their individual pieces of land). It should also ensure environmentally friendly housing investments in the village. This is a tough task, but it will require a polite talk and negotiation. In the end it will ensure spatially aesthetic and environmentally friendly rural/village areas in Kilimanjaro region and Tanzania in general.

12.4.7 Multi-locational households outlook

Through this study, it has become clear that, the multi-locational households have positive and negative impacts in both the place of origin and destination. Thus, their inclusion in the development agenda, including in the population and housing census reports and curriculum in the universities is essential. In this way it will be easier to address their negative impacts in the villages at the same time appreciate their positive impacts for the betterment of the village communities and the country at large.

It is also recommended that, there should be a mechanism (from the local authorities and at family level) to encourage multi-locational households (MLHs) to return to their village of origin, so they can address the existing housing poverty and other challenges (health, water, income poverty, etc.) which are still persisting in most of the villages in Tanzania. This is possible if the village areas become a priority.

12.4.8 Ghost village houses (homes) overview

The ghost houses (homes) are on the increase in the villages on the slopes of Mount Kilimanjaro. For example, the findings from Sango village have shown that, 13 out of 64 houses surveyed stay vacant until when there are occasions/events (e.g. Christmas, Easter or burial ceremonies) in the village while 11 out of 64 are inhabited by housekeepers and 26 out of 64 are inhabited by relatives while 14 out of 64 are inhabited by the owners.

The ghost houses (homes) are 'dead assets', but also some are hiding places for criminals and threats to nature (village communities surrounded by vacant concretes instead of trees/nature) and space for farming.

Thus, in order to address the challenge of ghost houses (homes) in the villages on the slopes of Mount Kilimanjaro, it is argued that, the new village land and housing institution/section/committee should create a mechanism (e.g. Supporting Eco-tourism) whereby the village house owners (mostly multi-locational households) can partner with private sector (e.g. Tour operators for tourists who visits Mount Kilimanjaro) so they can use these houses.

This will reduce the accumulation of ghost houses at the same time improve the income of the house owners (MLHs) in all the villages surrounding Mount Kilimanjaro. The support is needed from the Ministry of Natural Resources and Tourism (MNRT) together with the Ministry of Lands, Housing and Human Settlements Development (MLHHSD).

12.5 Reflections on the conceptual framework and methodology

The conceptual framework (see figure 5.1) which guided this research was formulated by the researcher based on the literature reviews, own experiences as a spatial planner and from the field. It shows that, the modern housing investments which are practiced by most of the multi-locational households (MLHs) in the villages of origin on the slopes of Mount Kilimanjaro are associated with individual motives/reasons (see chapter ten).

From the theoretical perspective, it has also become evident that, the village will continue to be a 'sweet home' for the majority of the multi-locational households in Tanzania and Kilimanjaro region in particular.

The literature has also shown that, this is the practice of most of the countries in Africa and Asia. The theory of urban transition which had claimed that, once people move to urban areas their next generations will not return to the village of origin still does not hold water in Africa and Asia. These households fall under circular, seasonal or temporal migration and therefore, they do return at some

point in a year (see also Schmidt-Kallert and Frank, 2013; Deshingkar and Farrington, 2009; Schmidt-Kallert, 2009; Smit 1998; etc.).

Their return might be associated with positive or/and negative impacts. This practice sends signals to several actors (sociologist, planners, architects, environmentalist etc.) who have a stake in the village.

On the other hand, the spatial and environmental challenges (see chapter eleven) which are associated with their housing investments in their village of origin are a result of institutional weaknesses at the village level (see chapter five, seven and twelve).

This conceptual framework, therefore, claims that, addressing these institutional and policy issues at the village level are paramount. This is because by doing that we are creating better villages, towns and cities of tomorrow.

The methodological reflection on this study is promising. This is a case study research strategy which employed a mixed method approach because of the nature of the study, including its research questions. It is an exploratory study which intended to know why multi-locational households (MLHs) contest to invest 'modern' residential houses in their villages of origin. This was followed by how had that contributed to spatial and environmental challenges in the village of origin of MLHs.

The Sango village has been used as a source of empirical evidences. Therefore, it is a case study and qualitative kind of study because of the why and how questions (see chapter five and six). On the other hand, it is also a quantitative study because of the data collection and analysis methods used.

In terms of data collection and analysis, it is clear that, this study had employed both quantitative and qualitative data collection and analysis methods. The quantitative method which was used to collect the socioeconomic data of households who owns 'modern' houses in Sango village was households survey (i.e. A standardised household survey of 64 households). It was then followed by qualitative methods (i.e. In-depth interviews of 8 households who are MLHs and owns modern houses in Sango village). The other qualitative methods which were used includes: transect walk, observations, photographs and satellite images. It also went parallel with officials/experts' interviews (see chapter six and ten).

The methodology applied in this study was relevant in the sense that it was able to respond to the five research questions which had guided this study, including meeting the aim of the study.

It is also possible to use this study for internal generalizations (for instance, arguing that, most of the 'modern' residential houses that we see in most of the villages on the slopes of Mt. Kilimanjaro are the results of multi-locational households). However, for external generalization, it is best to conduct a comparative study to confirm if the 'modern' residential houses that we see in other villages in Tanzania are also a result of multi-locational households. Though, we can use theoretical generalizations. However, this was not the focus of this study. Therefore, due to the limited resources (time and finance) this is an area for further investigation. Though, the literature in the global south shows that, housing investments in the village of origin is the practice of multi-locational households.

12.6 Limitation of the study and areas for further research

This study is able to respond to the main research questions which have guided the whole study. However, for the benefits of the village communities and the house owners (MLHs), it has been revealed that, there are areas which still need further investigations. These include the following:

- The 'modern' residential housing investments, which is booming in the villages of origin of MLHs on the slopes of Mount Kilimanjaro seems to have more 'cultural values' than 'economic values'. It has also become clear that the village home visit will continue to exist, and there will continue to be a lot of vacant 'modern' houses in the village. For, instance, this study has shown that 11 out of 64 households surveyed in Sango village are inhabited by

housekeepers and 13 out of 64 stay vacant. Though, it will be interesting and rewarding to conduct a thorough research to understand how these 'dead capitals/assets' can or have been transformed into 'live capitals/assets' in the villages (especially those with Village Land Use Plans and whose villagers own Certificates of the Customary Right of Occupancy) in Tanzania. There is a need of a paradigm shift of housing investments which is more of socio-cultural values to both socio-cultural and economic values (i.e. From "dead asset" to "live asset"). This paradigm shift will have economic impacts to the house owners, the village communities, the village authorities, the private sectors (e.g. Financial institutions), the local government and the central government. The established research will need to respond to the following research questions: first, how many households in a particular village own or have applied for the Certificate of the Customary Right of Occupancy? The second question might be how many have used it as collateral? The follow up question could be what is the response from the financial institutions? And the last could be, is it a burden or a benefit to own a Certificate of the Customary Right of Occupancy? These are some of the very few questions which will shed light on the reality and the myth of the Certificate of the Customary Right of Occupancy in the villages in Tanzania;

- Also, the other focus of the research could be on how the owners (MLHs) of these 'modern' residential houses can partner with tourist companies facilitated by the Ministry of Natural Resources and Tourism through Kilimanjaro National Park (KINAPA) and the Ministry of Lands, Housing and Human Settlements Development in order to be used by tourists who visit Mount Kilimanjaro. This research should consider the principles of Ecotourism;
- Again, the focus of this study was in the village of origin. It will be interesting also to focus on the place of destination. Though, this study has highlighted the assets that multi-locational households own in urban areas (place of destination) it will also be interesting to trace their impacts in the urban context (e.g. Housing investments as a livelihood strategy of multi-locational households). It will establish a clear rural-urban linkage in relation to multi-locational households;
- In addition to that, the focus of this research was on a single case in terms of boundary (Sango village, Moshi district, Kilimanjaro region, Tanzania). For the external generalisation purpose, it will be interesting to capture the motives for housing investments in the villages of origin in other regions in Tanzania, including realising whether the owners are MLHs or not. This has implications to the village space and development;
- Moreover, the idea of multi-locational households to invest 'modern' housing in their village of origin observed to be a good way to address the rural/village housing poverty. The challenge is how to scale the idea in an environmentally and spatially friendly manner by other multi-locational households in all villages in Tanzania;
- Furthermore, from a gender perspective, it will be interesting to trace the position of multi-locational women with respect to land and house ownership in the villages of origin in Tanzania; and
- Last but not the least, this research has also noted that the village agricultural land is now changing into housing land. This means that, the households are no longer depending only on agriculture in order to survive. It will also be interesting to trace the current livelihood strategies of the villagers on the slopes of Mount Kilimanjaro.

12.7 Conclusions

This research has realised that the extent and characteristics of 'modern' residential housing investments in the villages on the slopes of Mount Kilimanjaro are on the increase. It has also

confirmed that, the 'modern' residential housing that we see in the villages on the slopes of Mount Kilimanjaro is because of multi-locational households.

It has again become clear that the multi-locational households have significant reasons/motives for investing residential 'modern' housing in their village of origin. This study has also provided evidence of their positive contributions, including addressing the village housing poverty. The appreciation and involvement of multi-locational households in the village development programmes, strategies, plans and projects is revealed utmost.

In addition to that, it has been observed that, the housing investments have contributed some negative impacts such as spatial challenges (e.g. Scattered and unguided housing and cemeteries, reduction of farming land, rural/village sprawl, etc.), and environmental challenges (e.g. Over exploitation of timber, and rocks as sources of building materials).

This is the result of the existing institutional weaknesses associated with the lack of a housing policy, law, regulation and standards for the village.

This study, therefore, concludes that the recommendations made on institutional, policy, regulations, standards, strategies, programmes and projects for the villages, especially those which surrounds Mount Kilimanjaro needs to be reflected and implemented by the identified actors (village land and housing institutions/sections/committees, village authorities, ward authorities, district authorities, private sectors, NGOs, CBOs, house owners, villagers etc.), guided by the Ministry of Lands, Housing and Human Settlements Development (MLHHSD). It is a hope that, this approach will create better village and healthier future towns and cities in Tanzania.

It has also been concluded that the implementation of the detailed Village Land Use Planning Programme in all the villages could be one of the feasible strategies for addressing the existing and the future spatial and environmental challenges in the villages in Tanzania. This includes also guiding the village housing investments of the multi-locational households.

In addition to that, in protecting the nature, especially in the villages surrounding Mount Kilimanjaro, it is concluded that, there is a need to replace the use of building materials that are extracted from the forest and rocks. For example, all doors and roofs (rafters) of these 'modern' residential houses are made up of timber. It is argued that the use of steel, aluminium and modified building materials could be an alternative to replace the use of timber and rocks building materials. It is, so to say that, all these are possible if the institutions (rules of the game see North, 1990) are clear and fairly implemented by the responsible actors mentioned above.

Lastly, the methodology applied in this study is relevant in relation to the aim of this research. This is reflected in the research questions which were under investigation. The single case study area (Sango village, Moshi district, Kilimanjaro region, Tanzania) was enough to respond to these research questions. However, for comparative reasons and external generalisation, it will require enough resources (time and money) to add the case study areas. This was not the focus of this study. The main focus of this study was to explore the motives for housing investments in the villages of origin of multi-locational households, particularly on the slopes of Mount Kilimanjaro, including the spatial and environmental challenges associated with their investments. The idea is to ensure that, the housing investments continue without impeding the nature in the villages, Mount Kilimanjaro forest and the mountain.

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APPENDICES

Appendix 1: A standardised questionnaire for households with modern residential houses[i] in Sango village, Moshi district, Kilimanjaro region, Tanzania.

The following has to be filled out before the interview.

Interview serial no……... Date ……..……

Name of supervisor…… Interviewer's name ……...……...

Name of interviewee ……..…. Phone no……...……

Region ……... District ……..…Ward...….……

Village ……..…….…… Location...….....……..… House no…….

Time at the beginning of the interview……..…….. Time at the end of the interview..…..……..

SECTION A: Household Social Information

1. Who is the head of household?
☐ 1. Husband ☐ 2. Wife ☐ 3. Child ☐ 4. Others (specify)……

2. What is the employment of head of household?
☐ 1. Self-employed ☐ 2. Full time employed ☐ 3. Part time employed

☐ 4. Unemployed ☐ 5. Retired ☐ 6. Others (specify) .....

3. What is your profession?
☐ 1. None ☐ 2. Teaching ☐ 3. Business/entrepreneurship ☐ 4. Doctor/nursing

☐ 5. Agriculture/livestock ☐ 6. Accounts/banking ☐ 7. Construction/ engineering

☐ 8. Others (specify)……

4. What is the level of education of head of household?
☐ 1. None ☐ 2. Finished primary school ☐ 3. Finished ordinary /advanced secondary school

☐ 4. Finished college/university ☐ 5. Others (specify) ……...…...…….

5. What is your age?
☐ 1. 18-35 years ☐ 2. 36-54 years ☐ 3. 55-60 years ☐ 4. 61+ years

6. What is your marital status?
☐ 1. Single ☐ 2. Married ☐ 3. Not married ☐ 4. Divorced/ separated

☐ 5. Widow/Widower ☐ 6. Others (specify) ……..……..

7. How many children do you have?
☐ 1. 0-2 ☐ 2. 3-5 ☐ 3. 6-9 ☐ 4. 10-12 ☐ 5. Others (specify) ……..…

8. How many male children do you have?
☐ 1. 0-2 ☐ 2. 3-5 ☐ 3. 6-9 ☐ 4. 10-12 ☐ 5. Others (specify) ……..…

9. How many female children do you have?
☐ 1. 0-2 ☐ 2. 3-5 ☐ 3. 6-9 ☐ 4. 10-12 ☐ 5. Others (specify) ……...…

10. How many people regularly live and eat in the household[ii]? (Define household to include all the people who take meals regularly from the same pot) i.e. what is the total number of household members?
☐ 1. 0-2 ☐ 2. 3-5 ☐ 3. 6-9 ☐ 4. 10-12 ☐ 5. Others (specify) ……...…

11. How many multi-locational households[iii], members/children do you have? i.e. how many children who live temporarily (e.g. during occasions such as Christmas and Easter) in your household?
☐ 1. 0-2 ☐ 2. 3-5 ☐ 3. 6-9 ☐ 4. 10-12 ☐ 5. Others (specify) ……...…

12. Which regions do these multi-locational members/children live?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Other (specify).

13. What is your religion?
☐ 1. Roman Catholic ☐ 2. Lutheran ☐ 3. Islam ☐ 4. Others (specify) ……

14. What is your tribe?
☐ 1. Chagga ☐ 2. Pare ☐ 3. Others (specify)……..…….

15. Where were you born?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Other (specify) ……..……..

16. Which places did you live in your lifetime?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Other (specify)

SECTION B: Household Income Information

17. What kind of job or type of work is your primary or main source of income?
☐ 1. None ☐ 2. Teaching ☐ 3. Business/entrepreneurship ☐ 4. Doctor/nursing

☐ 5. Agriculture/livestock ☐ 6. Accounts/banking ☐ 7. Construction/ engineering

☐ 8. Others (specify)……

18. What are the occupations or types of works of households members and multi-locational households >18 ages.

S/N	Household Members Names (1)	Relation to the head of household (2)	Gender (3)	Age (4)	Marital status (5)	Education (6)	Occupations (7)	Name of Organisation and Location (8)	The income they bring into the household per month (9)
1									
2									
3									
4									
5									

19. What else, if anything brings income into the household, including from overseas sources?

☐ 1. None ☐ 2. Remittances ☐ 3.Grants ☐ 4. Others (specify)……..

20. What do you think is the household's monthly average income from everyone's sources of income? (In Tanzania shillings then convert into EUR or US Dollar[iv])

☐ Daily income	☐ Weekly income	☐ Monthly income
☐ 1. Less than 1,000	☐ 1. Less than 3,500	☐ 1. 0 – 299,999
☐ 2. 1,000 – 1,499	☐ 2. 3,500 – 5,999	☐ 2. 300,000 – 499,999
☐ 3. 1,500 – 5,999	☐ 3. 6,000 – 24,999	☐ 3. 500,000 – 999,999
☐ 4. 6,000 – 9,999	☐ 4. 25,000 – 39,999	☐ 4. 1,000,000 and above
☐ 5. 10,000 – 19,999	☐ 5. 40,000 – 79,999	
☐ 6. 20,000 – 29,999	☐ 6. 80,000 – 129,999	
☐ 7. 30,000 – 59,999	☐ 7. 130,000 – 149,999	
☐ 8. 60,000 and over	☐ 8. 150,000 and over	

21. What other benefits do you get from your children?
☐ 1. None ☐ 2. Health service ☐ 3. Pay school fees for brother and sisters

☐ 4. Others (specify)……..

22. How many times do your children visit you per year?
☐ 1. One ☐ 2. Two ☐ 3. Three ☐ 4. Others (specify) ……...…

23. How do you feel when they visit you?
☐ 1. Wonderful ☐ 2. Very good ☐ 3. Good ☐ 4. Fair ☐ 5. Other (specify) ……...…….

24. How often do you visit your children per year?
☐ 1. One ☐ 2. Two ☐ 3. Three ☐ 4. Others (specify) ……...…

SECTION C: Household Housing Information

25. Which physical assets do you own in the village?
☐ 1. None ☐ 2. Land ☐ 3.House ☐ 4.Others (specify)…….

26. Which physical assets do you own in other places/towns/cities?
☐ 1. None ☐ 2. Land ☐ 3.House ☐ 4.Others (specify)…….

27. Where are these assets located?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga

☐ 6. Other (specify) ……...…….

28. Who owns the village house?
☐ 1. Head of household

☐ 2. Wife of head of household

☐ 3. Son of head of household

☐ 4. Daughter of head of household

☐ 5. Others (Specify) ……

29. How many modern houses do you own in this village?
☐ 1. One ☐ 2. Two ☐ 3. Three ☐ 4. Others (specify) ……..…

30. How many modern houses do you own in other places/town/cities in Tanzania?
☐ 1. One ☐ 2. Two ☐ 3. Three ☐ 4. Others (specify) ……..…

31. Where are these houses located?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga

☐ 6. Other (specify) ……..…….

32. How many modern houses do your male children own in this village?
☐ 1. one ☐ 2. two ☐ 3. three ☐ 4. four ☐ 5. Others (specify) ……..…

33. How many modern houses do your female children own in this village?
☐ 1. one ☐ 2. two ☐ 3. three ☐ 4. four ☐ 5. Others (specify) ……..…

34. How many modern houses do your children own in other places/town/cities in Tanzania?
☐ 1. one ☐ 2. two ☐ 3. three ☐ 4. four ☐ 5. Others (specify) ……..…

35. Where are these houses located?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga

☐ 6. Other (specify) ……..……. (There is a possibility of more answers)

36. Which places/town/cities do your multi-locational households have more houses?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga

☐ 6. Other (specify) ……..……. (There is a possibility of more answers)

37. Why was the modern house constructed in the village?
☐ 1. Taking care of the parent's ☐ 2. Renting/source of income ☐ 3. Social status (be respected)

☐ 4. For use after retirement ☐ 5. For use on occasions ☐ 6. Culture to have a second home in the place of origi ☐ 7. Other (specify)…..……..……. (There is a possibility of more answers)

38. How was the village house transformed/improved?
☐ 1. Old house partially modified

☐ 2. Old house totally modified

☐ 3. Old house totally demolished (i.e. demolition of mud and pole house and put up a new house)

☐ 4. New house built on a bare land

☐ 5. Vertical or horizontal extension of the old house

☐ 6. Others, specify……

39. When was the construction/improvement of your village house started? .....when was it finished? ……

☐ 1. 1981-1990 ☐ 2. 1991-2000 ☐ 3. 2001-2010 ☐ 4. 2011-2015

40. What is the house type (in terms of building materials)?

☐ 1. Traditional house type (Traditional/local building materials)

☐ 2. Traditional and industrial building material house type

☐ 3. Industrial building material house type

☐ 4. Others, specify……

41. What is the house type (in terms of design/forms/shapes)?

☐ 1. Detached house type (two-three bedroom house)

☐ 2. Bungalow house type (one storey house type).

☐ 3. Maisonettes house type (two storey house type).

☐ 4. Other house type (specify) ……..

42. How many numbers of rooms per house?

☐ 1. One bedroom house + Kitchen+Lounge+Toilet/Bath

☐ 2. Two bedroom house + Kitchen+Lounge+Toilet/Bath

☐ 3. Three bedrooms house+ Kitchen+Lounge+Toilet/Bath

☐ 4. Four bedrooms house+ Kitchen+Lounge+Toilet/Bath

☐ 5. Five bedrooms house+ Kitchen+Lounge+Toilet/Bath

☐ 6. Other (Specify) ……

43. What is the size of the house?

☐ 1. 0-50 m²

☐ 2. 51-100 m²

☐ 3. 101-150 m²

☐ 4. 151-200 m²

☐ 5. Other (Specify) ……

44. Which building materials used on the outer walls?

☐ 1. Timber ☐ 2. Blocks ☐ 3. Bricks ☐ 4. Metal ☐ 5.Rock Blocks

☐ 6. Other (specify) …..……..……..

45. Which building materials used on the roof cover?
☐ 1. Tiles ☐ 2. Corrugated Iron Sheet ☐ 3. Concrete ☐ 4. Other (specify) ……..

46. Which building materials used on the roof?
☐ 1. Timber ☐ 2. Metal ☐ 3. Concrete ☐ 4. Other (specify) …..……..

47. Which building materials used on the floor?
☐ 1. Tiles ☐ 2. Timber ☐ 3. Concrete ☐ 4. Earth ☐ 5. Other (specify) ……..

48. Which building materials used on the windows?
☐ 1. Timber frame plus metal/iron plus glass ☐ 2. Timber frame plus metal/iron plus timber

☐ 3. Metal/iron frame plus glass ☐ 4. Aluminium frame plus glass

☐ 5. Other (specify)…….

49. Where did you get timber?
☐ 1. Own farm ☐ 2. Mt. Kilimanjaro Forest ☐ 3. Villagers farms ☐ 4. Other (specify)..

50. Where did you get soft sand, Moram (one inch stones), Kokoto (two inch stones) and large stones?
☐ 1. Own farm ☐ 2. Along/on the rivers ☐ 3. Hills/Mountains ☐ 4. Other (specify) ..

51. Where did you get building materials for outer walls?
☐ 1. Small scale industries making cement and sand blocks ☐ 2. Small scale industries making bunt

bricks ☐ 3. Rock blocks extracted from Hills/Mountains ☐ 4. Other (specify) ……..……

52. Do you live and eat in this modern house?
☐ 1. Yes

☐ 2. No

53. Do you like or dislike these modern houses?
☐ 1. Like, why? ……

☐ 2. Dislike, why? ……

54. What is your assessment on the quality of housing improvement in your village?
☐ 1. Excellent ☐ 2. Very good ☐ 3. Good ☐ 4. Fair ☐ 5. Poor

55. Do you have the house in the village that stay vacant for a long period of time without inhabitants?
☐ 1. Yes

☐ 2. No

56. Do you or your children pay a house guard to take care your village house?
☐ 1. Yes

☐ 2. No

57. What were the main sources of fund used to build the village house?

☐ 1. Own source

☐ 2. Salary

☐ 3. Loan

☐ 4. Grant

☐ 5. Others, specify……

SECTION D. Availability of Infrastructure Services

58. What are the main sources of energy for lighting?

☐ 1. Electricity ☐ 2. Kerosene ☐ 3. Solar ☐ 4. Gas ☐ 5. Other (specify) ……..

59. What are the main sources of energy for cooking?

☐ 1. Electricity ☐ 2. Kerosene ☐ 3. Solar ☐ 4. Firewood ☐ 5. Charcoal

☐ 6. Gas ☐ 7. Other (specify) …..……(There is a possibility of more answers)

60. What is your main source of water?

☐ 1. Piped tap inside the house

☐ 2. Piped tap outside the house within the plot

☐ 3. Public standpipe

☐ 4. Others, specify……

61. Who supply water in your area?

☐ 1. Government

☐ 2. NGOs

☐ 3. CBOs

☐ 4. Others, Specify……

62. How many tins of 20 litres of water does your household use per day on average?

☐ 1. 0-3

☐ 2. 4-5

☐ 3. 6-7

☐ 4. Others, Specify……

63. What is the usual price you pay for a tin of 20 litters of water?

☐ 1. 0-50 TShs

☐ 2. 51-100 TShs

☐ 3. 101-150 TShs

☐ 4. Others, Specify……

64. Is the price affordable for you?

☐ 1. Yes

☐ 2. No

☐ 3. N/A

65. At what distance is water collection points?

☐ 1. 0-50 m

☐ 2. 51-100 m

☐ 3. 101-150 m

☐ 4. Others, Specify……

66. Is the available source of water, adequate/reliable?

☐ 1. Yes

☐ 2. No

67. Is the quality of water good?

☐ 1. Yes

☐ 2. No

68. Which type of sanitation facility are you using?

☐ 1. Traditional pit latrine

☐ 2. Ventilated Improved Pit latrine

☐ 3. Flush toilet

☐ 4. Ecological sanitation toilet

☐ 5. Others, Specify……

69. Where do you pour liquid waste?

☐ 1. In farms

☐ 2. In special pits

☐ 3. Others, Specify……

70. How do you treat solid waste?

☐ 1. Dumping in farms

☐ 2. Buried on farms

☐ 3. Burned

☐ 4. Recycled

☐ 5. Others, Specify……

71. Are the roads accessible throughout the year?
☐ 1. Yes
☐ 2. No

72. What is the standard of roads in your village?
☐ 1. Tarmac road
☐ 2. Gravel road
☐ 3. Earth road
☐ 4. Others, Specify……

SECTION E. Multi-locational Households and Land Use Changes

73. How much land (in Square Metres[v]) do you own in this village?
☐ 1. 0-2,500 m²
☐ 2. 2,501-5,000 m²
☐ 3. 5,001-7,500 m²
☐ 4. 7,501-10,000 m²
☐ 5. 10,001-12,500m²
☐ 6. Other (Specify) ……

74. How much land do you own in other places/towns/cities in Tanzania?
☐ 1. 0-2,500 m²
☐ 2. 2,501-5,000 m²
☐ 3. 5,001-7,500 m²
☐ 4. 7,501-10,000 m²
☐ 5. 10,001-12,500m²
☐ 6. Other (Specify) ……

75. Where are these plots/land located?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga
☐ 6. Other (specify) ……..…… (There is a possibility of more answers)

76. Does your children own land in other places/town/cities in Tanzania?
☐ 1. Yes ☐ 2. No

77. Where are these plots/land located?
☐ 1. Dar es Salaam ☐ 2. Arusha ☐ 3. Moshi ☐ 4. Morogoro ☐ 5. Tanga
☐ 6. Other (specify) ……..…… (There is a possibility of more answers)

78. How did you acquire your land?
☐ 1. Inherited from family

☐ 2. Bought

☐ 3. Granted

☐ 4. Other (Specify) ……

79. Can you sell the village land/inherited land?
☐ 1. Yes

☐ 2. No

80. What is the main use of your village land now?
☐ 1. Agriculture

☐ 2. Housing

☐ 3. Other (Specify) ……

81. How is the subdivision of your village land to your sons/daughters affected your agriculture outputs?

☐ 1. Reduction of land for subsistence crop farming (maize, beans and banana)

☐ 2. Reduction of land for commercial crop farming (coffee)

☐ 3. Other (Specify) ……

82. Are you comfortable with the trend of agricultural land transformation into housing development in your village?
☐ 1. Yes

☐ 2. No

SECTION F: Multi-locational Households and Environmental Challenges

83. What are the environmental challenges associated with housing construction in your village?
☐ 1. Extraction of timber from Mount Kilimanjaro Forest

☐ 2. Construction along/on water sources

☐ 3. Destruction of water sources (e.g. rivers, springs)

☐ 4. Soil erosion

☐ 5. Destruction of river beds due to sand extraction and stones

☐ 6. Destruction of hills/mountains (source of building materials such as bricks and sand)

☐ 7. Reduction of farm trees (banana, coffee and timber trees) at household level

☐ 8. Other (Specify) …….

84. What are the spatial planning challenges associated with housing construction in your village?

☐ 1. Transformation of the agricultural land into housing land

☐ 2. Reduction of agricultural land

☐ 3. Expansion of informal housing

☐ 4. Boundary conflicts (specify)

☐ 5. Land conflicts (specify)

☐ 6. Other (Specify) …….

85. What are the economic impacts associated with housing construction in your village?

☐ 1. Employment creation (e.g. labour employed in house construction)

☐ 2. Income generating livelihood strategies (e.g. rent some rooms/house)

☐ 3. Other (Specify) …….

86. What are the social impacts associated with housing construction in your village?

☐ 1. Social status (i.e. respected and trusted at household and community level)

☐ 2. Rural housing improvement

☐ 3. Other (Specify) …….

87. What are the cultural impacts associated with housing construction in your village?

☐ 1. Eradication of the traditional housing (i.e. mud and pole houses)

☐ 2. Behaviour change (i.e. from traditional to modern way of living)

☐ 3. Other (Specify) …….

88. If this land is to be developed in accordance with the Moshi District and village land use layout plans would you like or dislike? I.e. do you need planning and development control in your village?

☐ 1. Like/Yes

☐ 2. Dislike/No

89. Do you know whether there are laws and regulations governing the use of land in your village? (For example Sect. 29 paragraph b of the Village land act 1999 states that before you construct a house you must get a building permit)

☐ 1. Yes, do you have a building permit? …….

☐ 2. No

90. Do you have any question that you want to ask me?

☐ 1. Yes

☐ 2. No

91. Would you like to participate in the in-depth interview?

☐ 1. Yes

☐ 2. No

Thank you very much for your time.

Appendix 2: A survey of modern residential house owners in Sango village Moshi district, Kilimanjaro region, Tanzania

House Owners /Multi-locational Households Information

1. Name ……. Gender……..Age…….Phone ……...

2. What is your occupation? …….

3. What is your profession? …….....

4. Which organisation are you working with? …….

5. Where is the organisation located? .....

6. What are your livelihood activities? ……..……..

……

7. What kind of job or type of work is your primary or main source of income? ……..

……

8. How much is your income in Tanzania shillings per day…… per month……...……..

9. What is your level of education? ……...

10. What is your religion? .....

11. What is your marital status? …….

12. How many children do you have? …….

Male …… Female……..

13. Where do you live with your family? .....

Asset ownership, housing financing processes and affordability

14. Which physical assets do you own in your village/place of origin? ……..……

……

15. Which physical assets do you own in urban/town/cities? ……

……

16. Which town/cities are these physical assets located? .....

……

17. Among all the physical assets which one is your first priority? .....

Second priority ……..…….third……..

Why? ……..

18. How many houses do you own in town/cities? .....…….

19. Which town/cities are these houses located? .....

……

20. When did you build the first house in urban? .....

21. How many houses do you own in this village? .....

22. When was the construction of the village house started? .....

When was it finished? ……..……

23. What were the rationales to construct a modern house in your place of origin/village?

……

24. How was the decision to construct a house in your village reached? .....

……

25. What were the main sources of fund you used to build the village house?

1. Own source, specify……..
2. Salary, specify……...
3. Loan, specify…….
4. Grant, specify……
5. Others, specify……..

26. How was the housing transformation process?

1. Old house partially modified ……..
2. Old house totally modified ……
3. Old house totally demolished (e.g. demolition of mud and pole house and put up a modern house)
4. New house built on a bare land ……..

5. Vertical or horizontal extension of the old house……..

27. What was the price of the building materials?

S/N	Building Materials	Type	Size/Weight	Price
1	Wood/Timber			
2	Sand	Soft sand,	Per lorry/tons	
		Moramu,	Per lorry/tons	
		Kokoto	Per lorry/tons	
		Stones	Per lorry/tons	
3	Iron Sheets	Gauge 28	2, 3, 4, 6 meters	
		Gauge 30	2, 3, 4, 6 meters	
		Gauge 32	2, 3, 4, 6 meters	
4	Blocks	Cement and sand blocks		
		Burnt bricks		
		Rock blocks		
5	Tiles	Roof tiles		
		Floor tiles		
6	Cement		50 Kg	
7	Paint	Water paint	20 Litres jerry can	
		Cream paint	20 Litres jerry can	
8	Ceiling board	Gypsum		
		Normal		
9	Nondo/Steel	10 inch	10 inch	
		12 inch	12 inch	
10	Water		20 litres jerry can	

28. How did you get the "fundi"[vi]/contractor/Engineer to construct your house? ……

……

29. How did you negotiate? ……..

……

30. How much did you pay him? …….

31. How was the payment arrangement made? ……..…….

……

32. Who was supervising the construction of the house? …….

Why? …….

33. Did you build this house incrementally/progressively or it was at once? .....

Why? .....

How? ……..
34. How much it costs you to construct your village house? .....

35. How much do you think is the value of your village house today 2015? .....

36. Are you regretting on the money you invested on building such a modern house in the village?

Yes, why? ……..

No, why? ……..

37. How do you maintain the village house? ……

38. Do you pay a house guard to take care your house? Yes or no? ……

If yes, how much do you pay him/her per months? ……..

39. Can you use this house as collateral? Yes or no? ……

If yes, have you tried and how does it work? ……..

If no, why? ……..

40. What is the future use of the village house? .....

41. Which infrastructure services exist in your house/portion of land? When did you install them and how much did you pay?

S/N	Infrastructures	Exist	Cost paid to install the infrastructure	Year Installed	How much fees do you pay per Month?
1	Electricity				
2	Water				
3	Sanitation				
4	Road				
5	Other				

42. How is the condition of the village roads?

1. Tarmac road ……..

2. Gravel road ……

3. Earth road ……..

4. Others (specify) ……

43. Are the roads accessible throughout the year? Yes or no? ……

44. Do you think the improvement of roads in your village is one of the factors that made you to construct a modern house in your village? Yes or no? .....

If yes, how? ……..
If no. why? ……..
45. Do you think the presence of Mount Kilimanjaro and tourism in your district is one of the factors that made you to construct a modern house in your village? Yes or no? .....

If yes, how? ……..

If no. why? ……..

46. Do you think it is important to have a modern house in the village (place of origin)? Yes or No?

If yes, why? ……..

If no, why? ……..

47. Are your parents living in this modern house? Yes or no? .....

If yes, what are their perceptions and comments? ……..

If no, why? ……..

48. How is the village community/village dwellers respond/react when they see these modern houses?

…….

49. What can you recommend to other people to do in their place of origin? ……

……

50. What are the things that you like most in your village? …….

…….

51. What are the things that you dislike in your village? .....

……..

52. What do you consider the most important things that are missing in your village? ……

……..

Multi-locational households and space transformations in the village of origin

53. How did you get the plot to build your house? ……..

54. What were the conditions to develop the plot? …….

55. Did you pay any cash in order to be given the plot? No or Yes? ……

If yes, how much? ……..

56. Is there any problem of transforming agriculture village land into housing? ……

……
57. Apart from building a house on your plot what else do you plan to use for the remained portion of land? ……..

58. How do you assess the housing condition in your village? ……..

59. Do you know if there are laws and regulations governing the development of land in your village? Yes or no……..…….....

If yes can you explain it? ……..

60. Is your plot surveyed? Yes or no? …….

If yes, what were the procedures? ……

If no, do you have any plan to survey it? Why? ……

61. What is the size of your portion of land? ……..

Multi-locational households and environmental challenges in the village of origin

62. What are the environmental challenges emerging due to housing investment, especially in your village, including Mount Kilimanjaro forest and its mountain? ……..……...

……

63. Do you have any comments or recommendations on how to address the environmental challenges associated with housing investments/development in your village? .....

……

Rural-Urban Linkages Information

64. Which places did you live (in Tanzania and abroad) in your lifetime? …….

65. Can you explain your life trajectory in short? ……..

……

66. After retirement will you live in your village or in town? ……..

Why? …….

67. How do you maintain the rural-urban linkage? ……..……..

68. Where do you consider being your real home/sweetie home? Village or town? ……..

Why? .....

69. How many times per year do you visit your village of origin? ……...

Why? …….

Participation aspects

70. Do you participate in village meetings? Yes or No. ……...

If yes, when did you participate …….. What motivated you to participate in this meeting?

……..

If no, why? …….

……

71. If the government wants to prepare a land use plan for your village will you accept it? Yes or no?

If yes, why? ……

If no, why? …….

Thank you very much for your time.

Appendix 3: A survey for officials/experts responsible for lands, housing and environment in Moshi district, Kilimanjaro region, Tanzania

A. Ward and Village Executive Officers

1. What is the current population in your village? ……..

2. What is your village registration number? .....

3. Is there any land use conflicts in your village? Yes or no? ……

If yes, explain…….

……

4. Do you have a land use plan in your village? Yes or no? ……..

If yes, explain…….

……

If no, do you have a plan to prepare a land use plan for this village? Yes or no? ……...

If yes, how? .....…….

……

5. Are the modern houses in your village on the increase or decrease? .....

If increase, why? ……....

……

6. Do you like or dislike these modern houses in the village? ……

If like, why? .....……..…….

……

If dislike, why? .....…….…….

……

7. Sometimes the modern houses in your village stay empty for several months or years why? ……

……

What happens at Christmas? .....

8. What are the benefits when you have modern houses in your village? .....

……...

9. Do you have multi-locational households in your village? Yes or no? ...…….....

If yes, explain .....……

……

10. Are multi-locational households, causing problems in your village? Yes or no? ……...…….

If yes, how? .....…….

……

11. What are the emerging issues related to modern housing investment in your village? (Evidence)...

……

12. How do you control housing investments/development in your village? ……..……

……

13. Where do people get the building materials such as timber, sand and stones? ……..……

……

14. Are there environmental problems associated with multi-locational households in your village? Yes or no? ……

If yes, explain? .....…..……

……

15. Do you have a department/committee dealing with land, housing, natural resources and environmental issues in your village? Yes or no? ……..……

If yes, how does it address the environmental issues, especially those related to housing investments/development in your village? ……..

……

16. How do you protect the nature in the village and Mount Kilimanjaro? .....

……

17. What are the challenges you are facing in addressing the environmental issues associated with housing development in your village? ……..……

……

18. Is there a plan to engulf your village to be included in Moshi Municipality? Yes or no……..……..

If yes, what is your comment? ……..

……

19. If the government wants to prepare a land use plan for your village would you like? Yes or no? ….

If yes, what will be your recommendations? ……

……

20. What are your strategies for ensuring sustainable housing investments/development in the villages surrounding Mount Kilimanjaro? ……..…….……..

……

B. Ministry of Lands, Housing and Human Settlements Development; Ministry of Environment; Moshi Municipal Council; Moshi District Council; Departments of Lands, Natural Resources and Environment; Kilimanjaro National Park; NGOs and CBOs.

1. What are the current strategies and plans to control housing investments/development in the villages surrounding Mount Kilimanjaro? ……..……...

……

2. What are the problems/limitations do you face in controlling housing investments/development, especially in the villages surrounding Mount Kilimanjaro? ……
……
How do you solve them? ……..
……
3. What are your future plans and strategies to control housing investments/development, especially in the villages surrounding Mount Kilimanjaro? ……....
……
4. How do you work with the villagers and other actors in addressing the environmental challenges related to housing investments/development especially in the villages surrounding Mount Kilimanjaro? .....
……
5. Do you see any benefits of these modern houses in the villages surrounding Mount Kilimanjaro?
If yes, explain……..
……
6. What are your opinions in order to ensure sustainable housing investments/development in the villages surrounding Mount Kilimanjaro……..……
……

Thank you very much for your time.

Appendix 4: Data collection permission letter

JAMHURI YA MUUNGANO WA TANZANIA

OFISI YA WAZIRI MKUU

TAWALA ZA MIKOA NA SERIKALI ZA MITAA

HALMASHAURI YA WILAYA YA MOSHI

(Barua zote ziandikwe kwa Mkurugenzi Mtendaji)

MKOA WA KILIMANJARO:

Unapojibu Tafadhali Nukuu

Kumb. Na. MS/LD/5165/III/97

OFISI YA ARDHI (W),
S.L.P. 97,
MOSHI.

07/01/2015

VEO WA SANGO,

MOSHI.

YAH: **KUMTAMBULISHA JEROME M. KESSY MWANAFUNZI WA SHAHADA YA UZAMILI KATIKA CHUO CHA DORTMUND–UJERUMANI.**

Ndugu husika na kichwa cha habari hapo juu. Nawaombeni Mpeni Ushirikiano katika Utafiti wake katika Maeneo tajwa hapo juu.

Ni muhimu akapewa Ushirikiano wa kutosha ili aweze Kupata Shahada yake kwa muda Uliopangwa katika Makazi,Nyumba na Mipango Vijiji na Miji.

Ndimi,

Christopher Sanga,

Kny: **MKURUGENZI MTENDAJI (H/W),**

MOSHI

Kny. MKURUGENZI MTENDAJI
HALMASHAURI (H/W) MOSHI

Appendix 5: An action plan for addressing spatial and environmental challenges related to multi-locational households and housing investments in the villages of origin on the slopes of Mt. Kilimanjaro, Tanzania.

Strategy	Activity	Resources	Actors	Duration
1. Implement /prepare detailed village land use plans in all the villages surrounding Mt. Kilimanjaro forest.	1.1 Preparation 1.2 Participatory rural appraisal for land use management 1.3 Supplementary surveys 1.4 Participatory village land use planning and administration 1.5 Implementation of appropriate land management measures 1.6 Consolidation	-Fund to facilitate the process; -Human resources; -Working tools; and -Office.	-Ministry of Lands representative (village section); -National land use planning commission representative; -District spatial planner, surveyor, valuer, sociologist, environmentalist; -MKURABITA representative; -World Bank and UN-Habitat representatives; -MPs and Councillors; -All the Wards Executive Officers and Village Executive Officers in Kilimanjaro region; -VLUM committee; -Village technicians; -Environmental activist institutions; -Housing associations; and -Households/house owners/villagers.	1-5 years
2. Establish a spatial planning and housing section at the Ward/Village level.	1.1 Negotiation 1.2 Implementation 1.3 Monitoring	-Fund to facilitate the process; -Human resources; -Working tools; and -Office.	-Ministry of Lands representative (village section); -National land use planning commission representative; -World Bank and UN-Habitat representatives; -Academic and research institutions; -District spatial planner, surveyor, valuer, sociologist, environmentalist; -TAMISEMI representative; -MPs and Councillors; -All the Wards Executive Officers and Village Executive Officers in Kilimanjaro region; -Environmental activist institutions; -Housing associations; and -Households/House owners/Villagers.	1-5 years
3. Prepare the village housing policy, legislation, standards and regulations.	1.1 Prepare a village housing policy 1.2 Prepare the village housing legislation 1.3 Prepare the village housing standards 1.4 Prepare the village housing regulations 1.5 Offer spatial planning education to the villagers.	-Fund to facilitate the process; -Human resources; -Working tools; and -Office.	-Ministry of Lands representative (village section); -National land use planning commission representative; -District spatial planner, surveyor, valuer, sociologist, environmentalist; -MKURABITA representative; -World Bank and UN-Habitat representatives; -Academic and research institutions; -MPs and Councillors; -All the Wards Executive Officers and Village Executive Officers in Kilimanjaro region; -VLUM committee; -Village technicians; -Environmental activist institutions; -Housing associations; and -Households/House owners/Villagers.	1-5 years

4. Environmentally friendly projects in all the villages surrounding Mt. Kilimanjaro.	1.1 Sensitization and supply of alternative building materials such as Aluminium and steel.	-Fund to facilitate the process; -Individual traders; and -Private consultants and associations.	-Ministry of lands; -Ministry of industry, business and investments; -Building materials traders; -Building consultants; -Academic and research institutions for instance the National Housing Building Research Agency; -Professional bodies e.g. AQRB; -Environmental activist institutions; -Housing associations; and -Households/House owners/Villagers.	1-5 years
	1.2 Sensitization and supply of solar energy in all the villages surrounding Mt. Kilimanjaro.	-Fund to facilitate the process; -Individual traders; and -Private consultants and associations.	-Ministry of energy; -Ministry of lands; -Ministry of industry, business and investments; -Solar suppliers/traders; -Building and solar consultants; -Professional bodies e.g. AQRB; -Housing associations; and -Households/House owners/Villagers.	1-5 years
	1.3 Implement Ecotourism in all the villages surrounding Mt. Kilimanjaro.	-Fund to facilitate the process; -Tourist firms; -Private consultants and associations.	-Ministry of tourism; -Kilimanjaro National Park (KINAPA); -Private tourist firms; -Private consultants and associations; -Environmental activist institutions; -Housing associations; and -Households/House owners/Villagers.	1-5 years
	1.4 Sensitization on plastic bottle recycling.	-Fund to facilitate the process; and -Plastic bottle recycling machines.	-Ministry of environment; -Private waste recycling firms; -Environmental activist institutions; and -Households/Villagers.	1-5 years
	1.5 Education on environment protection (e.g. Planting trees).	-Seed funds to facilitate the process.	-Ministry of environment; -Environmental activist institutions; -Housing associations; and -Households/Villagers.	1-5 years

Source: Author's own construct, 2017

[i] Housing means a house structure (building materials and design) + plot (security of tenure and space use) + physical infrastructures (indoor and outdoor infrastructures such as water, electricity, sanitation, and roads) + environment (landscape, trees and gardening). Therefore, a "modern house" is the durable house with the structure (i.e. the walls, floors, windows and roofs) made up and well finished with industrial building materials including new design, availability of physical infrastructures, environmentally friendly, good space use and security of tenure. Larsson, in her study of *"Modern Houses for Modern Life"* asserts that housing modernisation implies housing improvements. She concludes that modernisation of housing consists mainly of change from traditional to modern building materials (Larsson, 1990:31 cited in Nguluma, 2003:49). It is also assumed that the village housing investments of multi-locational households in their villages of origin is the result and an attempt to cope with the modern way of life.

[ii] Household are members who regularly live under one roof and eat in the same pot (URT, Census report, 2002).

[iii] Multi-locational households are defined as the households who consciously live in two locations, a rural and an urban one, which are often far away from each other and take advantage of both urban and rural opportunities and social networks to enable the individuals households to bridge the gap between the two locations (Schmidt-Kallert, 2009:319).

[iv] 1 USD = 1,704.48 TZS; 1 EUR = 2,129.03 TZS (November, 2014).

[v] One hectare = 2.47 acres; One hectare = 10,000square meters; One acre = 4,050 square meters.

[vi] "Fundi" is a Swahili word which means a person with local skills, for example, on housing construction.