AN ASSESSMENT OF THE IMPACT OF RESETTLEMENT SCHEMES ON LIVELIHOODS IN ZAMBIA: CASE STUDY OF LUKANGA NORTH, COPPERBELT PROVINCE

By

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DECLARATION

I declare that with the exception of the assistance acknowledged, this dissertation is the result of my own research. This research has not been submitted before for any other degree or examinations at this or any other university.

Name.....

Signature.....

Date.....

CERTIFICATE OF APPROVAL

This dissertation of Buumba Lebita (An Assessment of the Impact of Resettlement Schemes on Livelihoods in Zambia: Case study of Lukanga North, Copperbelt Province) is approved as partial fulfilment for the award of the Degree of Master of Science in Geography of the University of Zambia.

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ABSTRACT

Agricultural resettlement schemes have been introduced in Zambia as a way of curbing poverty and unemployment; increasing household and national food security; and creating new focal points for rural development through farming. Examining the mechanisms through which resettlement schemes are able to help the people is essential. The study considers many factors that people define as contributing to their livelihood improvements in Lukanga North resettlement scheme, in the context of the Sustainable Livelihood Framework (SLF). The SLF provides an approach to examining ways in which agricultural resettlement schemes fit into livelihood strategies or households with different types of assets. Applying this framework requires interdisciplinary research and a combination of qualitative and quantitative methods. The quantitative methods included the use of the questionnaire in the survey of 79 households in the scheme, 48 households in the control group (adjacent community). The qualitative methods included the interviews with 8 key informants, two community meetings and observations.

The research reveals that livelihood strategies in the scheme are based on a combination of activities relating to crop and livestock production, natural resource utilisation and non-farm activities such as trading. The results show that the average crop production, with maize as the main crop, is more in the scheme than in the adjacent villages, possibly contributing to improved livelihoods through food security and general income; while the mean number of Livestock Units is slightly higher in the scheme than the adjacent villages. The survey has also shown that households in the scheme has accumulated more assets in terms of land and physical assets such as well built houses, than the adjacent villages. It is also worth noting that households in the scheme employ more people than those in the adjacent villages, possibly a sign of more improved livelihoods in terms of income. Total income per household in the scheme proved to be about 2 times higher than that of the adjacent community.

Lack of resources and poor institutional support are identified as the major constraints to livelihood improvements in the scheme. The main strength identified is that the resettlement programme has given the people of Lukanga North a privilege of owning land with title deeds, which is necessary to avoid arbitrary evictions and landlessness. The creation of resettlement scheme has also promoted rural development in those places where they are located. The main weakness identified is that there is lack of information in the villages surrounding the scheme on the logistics of how to apply for land such that local people in villages are left out in this important venture of land entitlement. Nevertheless, given the positive findings, we need more resettlement schemes in the fight against rural poverty in order to promote livelihood improvements and rural development.

DEDICATION

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ACRONYMS

RRCs	Rural Reconstruction Centres
ZNS	Zambia National Service
SLF	Sustainable Livelihood Frame work
LRRP	Land Reforms and Resettlement Programme
FRA	Food Reserve Agency
SLA	Sustainable Livelihood Approach
LU	Livestock Units

CHAPTER ONE

INTRODUCTION

1.1 Background

Land is a fundamental livelihood asset. Most of the people in rural areas depend on land for agriculture in terms of livelihoods. This makes land a critical resource for rural development. According to Rigg (2006: 4), "the assumption, sometimes explicitly stated but more often implicit, is that the solution to global poverty lies in the invigoration of farming and the redistribution of land". In this regard, it is argued that interventions such as that of the creation of resettlement schemes where some land is allocated to people play a role in facilitating an increase in poor people's livelihood assets and resources through increased agricultural production (Merkle, 2007). Against this background, agricultural resettlement schemes have been introduced in all the provinces of Zambia as a way of curbing poverty and unemployment, increasing household and national food security, and creating new focal points for rural development through farming (GRZ, 1995). However, there seems to be no evidence, especially in the context of Zambia, of how the resettlement schemes contribute to improved livelihoods in rural areas. For example, according to Munshifwa (2007) the increase of maize production in Kambilombilo scheme could not be attributed to the resettlement scheme programme, as there was a record of an increase in maize production in the surrounding villages as well. In this study, there is no evidence on how the resettlement schemes have contributed to the improved livelihoods.

Like other developing countries, Zambia introduced voluntary agricultural resettlement schemes as a mechanism for poverty reduction and rural development mainly targeting the unemployed and retired people who want to engage in agricultural activities as part of their livelihood (GRZ, 1995). For instance, Chenoweth et al (1995), point out that between 1964 and the late 1980s rural resettlement programmes such as the Peasant Farmers Schemes, Master Farmer Scheme, and Area Development Projects were introduced. Chenoweth et al (1995) further argue that in 1975, Rural Reconstruction Centres (RRCs) were established as resettlement schemes for school leavers who later became individual members of the centre cooperatives. The farm block development

programme was established in 1980s, and in 1986 there was the establishment of the resettlement schemes for the handicapped (Chenoweth et al, 1995).

In 1988, the Department of Resettlement was established as a non-statutory organ of the Government. Its major task is to resettle unemployed and retired persons on land to engage in agriculture (GRZ, 1995). Since the establishment of the department, several schemes which had earlier been under Zambia National Service (ZNS) such as Mutundu, Mutenda, Musakashi, Milyashi, Lusushi and Kakolo in Copperbelt province were adopted by the department. There was also an adoption of those schemes which were formerly under youth centres such as Kanakantapa in Lusaka province and Kambilombilo in Copperbelt province. Several other schemes such as Kafubu, Katikula, Lukanda, Miengwe and, Lukanga North were established in the Copperbelt Province.

This study focuses on Lukanga North Resettlement Scheme in Mpongwe. Lukanga North resettlement scheme is chosen because unlike other resettlement schemes which were just adopted by the Department of Resettlement, it is one of the schemes which were founded by the department. In order to determine how the scheme has contributed to improved rural livelihoods, livelihoods of the people in the adjacent villages were also studied.

The study uses the Sustainable Livelihood Framework (SLF) in assessing the diverse positive and negative impacts that matter to local households. The SLF is a people centred approach and recognises resources or combination of resources which are important to people as they pursue their livelihoods, and acknowledges the livelihood strategies that people adopt to secure their livelihoods (Ellis, 2000). According to Ashley and Hussen (2000), the SLF contrasts with the conventional approach to studying of rural livelihoods which tends to focus exclusively on economic, commercial or environmental impacts; and also contrasts with narrow assessment focusing only on job creation and cash income as local benefits. The focus on livelihoods gives a useful understanding of the benefits of resettlement schemes to local people.

1.2 Statement of the Problem

The Government of the Republic of Zambia has a strategy of encouraging rural development by making agriculture competitive as a means of improving livelihoods

(GRZ, 2002). Resettlement schemes are among the strategies currently used by the government to improve rural livelihoods. However, evidence of studies, particularly in the context of Zambia, showing the impact of such schemes in improving livelihoods is not there, although there had been various studies in resettlement schemes such as that of Munshifwa (2007) and Phiri (2009). Munshifwa (2007), studied migration, land resettlement and conflict at Kambilombilo resettlement scheme on the Copperbelt province of Zambia; and reveals that resettlement schemes in Zambia have failed to achieve their objectives. Phiri (2009) studied the impact of differentiated land allocation in Miengwe and Kakolo resettlement schemes in which he concludes that there is differentiation in terms of accessing resources in the schemes leading to different livelihoods outcomes. In both studies, it is not clear whether the accumulation of assets or livelihood improvements in the scheme is as a result of resettlement programme or general improvement in the macro-economy of the country. It is therefore important to determine how Lukanga North resettlement scheme has contributed to the improvement of the settlers by including in the study the villages surrounding the scheme.

In Lukanga North resettlement scheme, particularly, improvements in people's livelihoods due to creation of the scheme are still unclear. Furthermore, available literature shows that there seems to have been no studies yet particularly in Lukanga North resettlement scheme, to show how the scheme has impacted on the livelihoods of the people. A focus on livelihoods, using the SLF, offers a useful perspective of how the resettlement scheme has or has not improved the way of life of settlers. Hence an assessment of the impact of resettlement scheme on livelihoods has a pragmatic need.

1.3 The aim of the study

The aim of this study is to investigate whether or not Lukanga North Resettlement Scheme has improved the settlers' livelihoods since its establishment in 1990.

1.4 Objectives

The objectives of this study are to:

i. examine household livelihood strategies of the people in Lukanga North resettlement scheme.

ii. analyse the extent to which the scheme has contributed to the improvement of livelihoods in the study area;
iii. evaluate the main factors that constrain livelihood improvements in the study area; and
iv. examine the strengths and weaknesses of the establishment of Lukanga North resettlement scheme as a strategy for rural development.

1.5 Research Questions

i. What types of strategies do households in the study area use to construct their livelihoods?
ii. To what extent has the scheme contributed to the improvement of livelihoods in the study area?
iii. What factors account for the failure or successes of the scheme?
iv. What are the main factors that constrain livelihood improvements in the study area?

1.6 Significance of the study

The need for improved livelihoods given that the majority of the people in the country especially in rural areas continue to live in poverty cannot be over emphasized (CSO, 2012). Arguably, hunger affects millions of people in Zambia. Therefore, resettlement schemes are aimed at empowering people especially the poor who are unemployed and landless so that they engage in economic activities to improve their livelihoods and contribute to economic development (GRZ, 1995). In this regard, the government of Zambia has invested a lot of resources into resettlement schemes as a way of providing land for farming and other social services to the disadvantaged population and retired civil servants (Chenoweth et al, 1995). In spite of such expenditures on resettlement schemes, their benefits remain unclear. It is therefore imperative to determine the ways in which resettlement schemes have contributed to the improvement of livelihoods of the settlers so that future investment may be more appropriately programmed.

The study would make a contribution to the existing literature on rural livelihoods. It is anticipated that the study would provide useful information to organisations, government and individuals interested in livelihoods in agricultural resettlement

schemes with a view of improving the resettlement programme. It is also anticipated that the study would contribute to a better understanding of the role resettlement schemes play in improving livelihoods.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews literature on resettlement schemes and rural livelihoods. The review focuses attention on the background of resettlement schemes; livelihood strategies in agricultural resettlement schemes; strengths and weaknesses of resettlement programmes, and challenges and constraints of resettlement programmes. Further, theoretical framework for livelihood analysis has also been discussed.

2.1 Background to Agricultural Resettlement

Agricultural resettlement scheme programmes go back to the time when many countries in Africa were colonised as well as post independent era.

2.1.1 Resettlement Programmes before Independence

According to Akayombokwa (1984), land for resettlement in Central Africa was first given to Cecil Rhodes under the British South Africa Company (BSA Co) by some African chiefs. He further explains that many Africans who were found occupying the given lands were relocated and concentrated, and given new lands in land native reserves. Kalapula (1984) argues that the purpose of the resettlement of Africans was not a means of promoting agricultural development, but it was to remove the Africans from the best land, although simple measures of agricultural control such as soil conservation and agricultural improvements were implemented in each of the reserves. In Northern Rhodesia (now Zambia) for instance, land was given to BSA Co in 1894 by Lewanika the Lozi king and later, the BSA Co had to set up the Native Reserves in which the Africans were resettled (Akayombokwa, 1984).

2.1.2 Resettlement Schemes after Independence

Most post-colonial states view resettlement schemes as show cases for rural development, and their aim is to create a new class of progressive smallholder farmers producing for the market (Chimhowu and Hulme, 2006). It is for this reason that many resettlement schemes like those of Zimbabwe were created to alleviate population

pressures in the communal areas, to improve agricultural production and improve the level of living of the majority of the people (Adams and Howell, 2001). According to Adams and Howell (2001), after independence, the Government of Namibia introduced new policies which included bringing the underutilised land into full production and reducing the inequality in land holdings. In Zimbabwe, Land Reforms and Resettlement Programme (LRRP) began in 1980; and by 1997 LRRP had redistributed 3.5 million of hectares to 71000 families from communal areas (Chimhowu and Hulme, 2006). After a decade of the implementation, however, the resettlement programme in Zimbabwe failed to have the positive impact on agricultural productivity and rural income as arguably intended (Kinsey, 2003) although some studies show that some farmers performed well (Adams et al, 1999). Although regional planners in Zimbabwe had projected double income in the resettlement schemes more than those in communal lands, livelihoods in resettlement schemes mirror those of communal land (Kinsey, 2003). In other words, there is no difference between people in the resettlement scheme and those in the adjacent villages in terms of livelihoods.

Many countries introduced agricultural resettlement schemes as a way of boosting agricultural development. In Kenya, for example, Belshaw (1964), explains that the resettlement of the landless, unemployed or under employed Africans on extensive mixed farm areas in the high farm land was aimed at providing subsistence for the peasant family engaged in agriculture in that area. The high farm land resettlement schemes occupied about 1.01 million hectares out of 3.04 million hectares of land. Belshaw (1964) further states that the partition and redistribution of land was however, on social-political rather than economic grounds. These schemes were discontinued due to the heavy capital demands and were therefore a failure.

Agriculture resettlement schemes continued to exist after independence. According to Chenoweth et al (1995), the importance of resettlement schemes as an important economic development strategy was emphasized by its inclusion in the January 1965 to June 1966 Transitional Development Plan and the First National Development Plan (FNDP) of 1966 to 1970. This shows that the government started giving land to people who wished to settle for agricultural purposes through resettlement schemes. Chenoweth et al (1995) further point out that the government was concerned with the

position of food insecurity in the country as it was depended more on imports in terms of food. The vacated European farms became the site for many original settlement schemes, and settled farmers were supported by research, credit, and extension services to facilitate expansion of production (Kalapula, 1984). According to Kalapula (1984), resettlement schemes were also aimed at diversifying the economy away from copper, and improve the living conditions of some people in rural areas. In 1989, the Department of Resettlement, which was responsible for the planning and coordination of the resettlement programmes, was established in Zambia (GRZ, 1995).

According to GRZ (1995), the resettlement programmes assist the Zambians to acquire land on which to carry out productive work to earn a living and be able to sustain development in general and agricultural development in particular. Chenoweth et al (1995) further says that the government established the resettlement schemes because of the awareness of the retrenched, the retired and the unemployed, and they are also part of rural development strategies.

2.2 Livelihoods Strategies in Agricultural Resettlement schemes

In many resettlement schemes, people do various activities to improve their livelihoods. Kinsey (2003) contends that livelihoods of the people in most resettlement schemes are primarily based on combining strategies and resources relating to livestock production, crop based agriculture and gardens, natural resource utilisation and the search for and exploitation of income opportunities. With regard to the types of crops grown in the schemes, some resettlement schemes in Africa grow a variety of crops such as maize (*zea mays*), sorghum (*sorghum bicolour*), cotton (*gossypium*), sweet potatoes (*ipomoea batatas*), pumpkins (*cucurbita*), soya beans (*glycine max*), millet (*panicum milaceum*) and groundnuts (*arachis hypogaea*). A study carried out by Kinsey (2003) shows that maize, groundnuts, and sorghum are the main types of crops grown in most of the resettlement schemes in Zimbabwe; other cash crops include cotton, sunflower (*helianthus annus*), sugarcane (*saccharum officinarum),* paprika (*caspium annum*) and wheat (*triticum aestivum*). Although some households in the schemes are engaged in irrigation, a research carried out in Nonno resettlement scheme in Ethiopia by Mulugeta

and Woldesemait (2011) show that rain fed farming is the most common type of agriculture in these resettlement schemes.

Since most households in resettlement schemes tend to have access to land, it can be assumed that they depend directly or indirectly on agriculture for their livelihoods. This may lead them to access other assets necessary for the utilisation of land if the production of crops is high. According to Ellis (2000), assets are utilised within people's livelihood strategies, that is, choices and activities through which people seek to generate a living or positive outcomes. In Zimbabwe's resettlement schemes, for instance, Kinsey (2003) reports that 15% of the households were engaged in off-farm livelihood strategies. This shows that there is diversifying of household incomes sources in the schemes. Ellis (1998) observes that diversification is a strategy out of poverty, and towards more resilience and sustainability. According to Gefors and Torsten (2004), agriculture no longer provides 50-60% of rural household incomes. Similarly, Rigg (2006) says that an increasing number of rural households have no commitment to farming, and access to land is no longer a necessary condition for reducing poverty.

In Zambia, livelihood strategies in most resettlement schemes are farming. The most popular grown crop is maize, while other crops such as soya beans, sweet potatoes and many others, are also grown (Munshifwa, 2007). Most households farming in Zambian resettlement schemes also depend on rainfall; and rainfall variability is one of the stresses that such households have to cope with (Phiri, 2009). Rearing of livestock such as cattle, goats and pigs, and poultry such as chickens, is also common in most of the Zambian resettlement schemes. In Miengwe resettlement scheme located in Copperbelt Province, for example, livestock provides products such as meat, milk, eggs, hides, skins, manure and draught power (Phiri, 2009). The presence of draught power and animal manure, probably leads to improved production and well being of some households. In Miengwe resettlement scheme particularly, settlers participate in non-farm activities through offering labour services within and outside the scheme (Phiri, 2009).

2.3 Strength and Weaknesses of the Resettlement Programmes

Despite the strong connection between broad based agricultural growth and overall economic growth in the world, there are many people in rural areas living in absolute poverty (World Bank, 2005). It is for this reason that some resettlement schemes are used as an important tool for poverty reduction and promotion of regional economic growth through agricultural activities (Adams and Howell, 2001). The study by Moyo and Skalness, (1990) has shown that there is a relationship between agriculture and economic growth, and this has a positive impact on livelihoods in terms of poverty reduction. For instance, in his studies of the resettlement schemes in China, Zhibin (2003) observes that there is improvement in the lives of most settlers through increase in income and food productivity; although it is the better-off who actually benefit from such intervention. According to Zhibin (2003), the better-off are in a privileged position financially to undertake such ventures and are able to afford farm implements. This shows that in China, most people without finances and other necessary assets can hardly benefit from the resettlement exercise. Further, literature shows that in North Western China, many people had abandoned the scheme and had gone back to places of origin because life was unbearable; and because the settlers lacked access to formal credit and had to borrow loans at a higher informal rate to develop their new lands (Merkle, 2007). Infrastructure such as schools and health centres was being constructed after settlers had already settled. Similarly, Woube (2005) notes that when factors that attracted people to resettle are no longer able to provide for their basic well being, the settlers are forced to move either back to their original settlements or elsewhere.

Some of the resettlement schemes in Africa, like those of Namibia and Zimbabwe, have been created as a way of improving the livelihoods of the settlers through an increase of income (Adams et al, 1999). Nonetheless, these resettlement schemes have mixed results in terms of success. For instance, in a survey of nine resettlement schemes in five regions in Namibia, Adams and Howell (2001), conclude that the projects were not economically viable, as most schemes remained welfare schemes depending on food rations since most settlers were not motivated or consulted during the planning process; and the staff assigned to the project were unsuitable in terms of qualifications. In contrast, in Zimbabwe, some literature has shown that the performance of small farmers

in resettlement schemes has generally been good both in terms of farm production and household income (Adams et al, 1999). A research carried out in the same country on eleven resettlement schemes by Kinsey (2003) however, shows that the resettlement schemes were generally failing to meet their objectives in terms of agricultural productivity unless they were also irrigation schemes. Kinsey (2003: 262) further contends that "poverty in resettlement areas remains high, perhaps, as high as communal areas from which resettlement was to have provided such a contrast". This shows that there is no consensus on livelihoods outcomes in resettlement schemes. There are differences in findings even within one country.

Some resettlement schemes, especially in Africa have brought negative changes in the environment such as land degradation. For instance, research carried out by Woube (2005) in Gambela region, South-West of Ethiopia reveals that most of the resettlement programmes are designed with short sighted political gains in mind, which has led to land use and ethnical conflicts, deforestation, and land degradation, damaging floods, food shortages and outbreak of various diseases. In most resettlement schemes, the population of both people and animals have increased, causing pressure on range land and land under cultivation. Gefors and Torsten (2004) further argue that increases in agricultural production to keep pace with population growth has largely taken place by area expansion instead of improvement in productivity, which has resulted in serious environmental hazards such as soil erosion and desertification. In contrast, the introduction of physical and social infrastructure such as roads and dams contribute significantly to positive changes in the life-style of the people (Woube, 2005). Where these are lacking, people may be vulnerable and their lives may be hard to lead.

In Zambia, most resettlement programmes are created with the aim of allocating idle land to the unemployed and retired to enhance household and national food security; and also to create new focal points for rural investment and rural development (Chenoweth et al, 1995). Literature showing the successes and failures of these resettlement schemes is scanty. A study of the Kakolo and Miengwe resettlement schemes in Copperbelt Province by Phiri (2009) however, shows that there is differentiated access to land by households, while land sizes are constantly changing over time in most resettlement schemes. Phiri (2009) concludes that agriculture is the

main economic and livelihood activity for most settlers in the resettlement schemes but it is characterised by differentiation in terms of accessing resources leading to different livelihood outcomes. He further says that seasonality of farming activity which leaves most poor farmers vulnerable during dry periods while the resource rich are able to use their own resources to access water and engage in agriculture all year round is one of the factors leading to differentiation; and this has made many settlers to diversify into other livelihood activities such as non crop farming and off farm activities out of necessity or choice. The poor offer their labour to the better off in order to continue surviving in the scheme.

Munshifwa (2007), in his study of the Kambilombilo scheme on the Copperbelt in Zambia, argues that although there was recorded increase in food production in terms of number of bags of maize sold, it was difficult to attribute the increase to the resettlement programme because even communities near the scheme sold their surplus produce to the government maize buying agency, the Food Reserve Agency (FRA). This shows that the contribution of the resettlement programmes to improved livelihoods in Zambia still remains unclear, as one could not determine whether the accumulation of assets are as a result of the resettlement scheme. This research is different from the preceding studies in that comparisons with communities outside the resettlement scheme but close to it are also studied. This is to assess whether the accumulation of assets or livelihoods improvements in the scheme are not as a result of general improvement in the macro-economy of the country. It is therefore important to control for this.

2.4 Challenges and Constraints of Resettlement Programmes

Haste in planning and in site selection is one of the challenges which may lead to unsuccessful stories of some schemes. In Ethiopia, for example, the emergency based technical resettlement implementation approaches are the main reasons for the failure of some agricultural resettlement schemes (Woube, 2005). Further, Woube (2005) argues that the resettlement schemes in most African and Asian countries are in marginal areas which are prone to disasters like drought, flood and diseases; and the absence of integrated work plans among researchers, planners and policy makers creates major obstacles to the improvement of resettlement sites. For this reason, Merkle (2007)

contends that resettlement scheme programmes are to be considered as long term migration and they should include a range of measures, packages, credits and options to attract settlers so that they become successful.

Lack of money for investment is one of the causes of failure for some resettlement schemes. Most resettlement programmes usually fail to achieve their objectives of reducing poverty among the poor mainly due to inadequate funds to meet the huge cost involved in running the programme (Kalapula, 1984). For instance, in his study on the Youth based resettlement programme under the Rural Reconstruction Centres in Zambia, Kalapula (1984:45) states that "with the absence of adequate finances, proper re-education process and strong ideological bent, the programme designed for school leavers cannot succeed without immediate tangible personal economic gains". This shows that the huge costs required for the resettlement exercise contributes to the failure of some resettlement schemes. Phiri (2009) further argues that most resettlement programmes are indirectly designed to meet certain political benchmarks and not poverty reduction; and this is why they prove to be failures in terms of poverty reduction and livelihood improvement.

Resettlement scheme investments involve long period for the results to show, and according to Obrerai (1988), the results become apparent at least after five years. This time could become too long for the poor who can hardly wait to improve their livelihoods. These may abandon the scheme while others may engage in off-farm activities such as becoming labourers on other people's farms to supplement their earnings (Merkle, 2007). When off-farm activities are not easy to access, the poor farmers are forced to get credit from people who charge high interests and leave them more vulnerable or place them in a permanent state of obligation to the lender (Ellis, 2000). Such credit does not always bring negative outcomes but also helps the poor households to be settled before the investment of resettlement schemes start bearing fruits (Obrerai, 1988).

Different motives for enlisting in resettlement programmes are one of the challenges of resettlement schemes. For instance, according to Zhibin (2003), schemes targeting the unemployed youths and the retired may have different categories of beneficiaries where

social and economic differentiations are promoted. The unemployed youth may want to use the land to realise the income in order to improve their well being while retirees look for opportunities to invest in land as security which they can use as collateral to acquire loans from the bank (Zhibin, 2003). This shows that the youths can easily abandon the land if no immediate returns in income are realised

Many African countries are faced with challenges in policy implementation including that of resettlement schemes. Wood et al (1990) observe that there are differences in policies pursued by the government agencies and farmers' actual use of land for their own purposes. Wood et al (1990) further say that most governments' policies are based on an inadequate understanding of the concerns behind farmer's land use decisions. This means that it is important to investigate the factors which affect the farmers' allocation of time and resources to help solve the problem. Additionally, changes in government system bring alterations to the existing relationship between people and the way they exploit the land (Woube, 2005). These changes may include the restructuring of settlement sites, with changes in technology, crop specialisation and the conversion of grazing and forest land into crop land, or vice versa.

In Zambia, studies of Miengwe and Kakolo resettlement scheme by Phiri (2009) show that water is the main constraint in the schemes. Water, both for consumption and farming is the major problem people face. Many people spend much time in drawing water instead of doing constructive work. This lack of water also limits the opportunities to engage into vegetable farming. This shows that one can still question whether the settlers in the resettlement scheme have improved livelihoods than the people in ordinary rural communities.

2.5 Theoretical Framework for Livelihood Analysis

Chambers and Conway (1992) define livelihoods as a set of capabilities, assets and activities required for a means of living. They further say that an ability or capability possessions involve good diet, security, good health and other necessities. Additionally, according to Prowse (2008), livelihoods include the creation and adoption of new opportunities such as coping with risks and uncertainties. Examples of risks and uncertainties are rainfall variations, diminishing resources, pressure on land, changing

life cycles and kinship networks, increasing food prices, inflation and epidemics such as Human Immune Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS).

According to Ashley and Hussen (2000), assets include human capital, social capital, natural capital, physical capital and financial capital. Livelihoods of the people direct the attention to the links between assets and the options people possess to pursue various activities that generate the income required for survival; and these livelihoods and ways define the ways of life of a household (Ellis, 2000). Chambers and Conway (1992) observe that livelihoods deal with people, their resources and what they do with them. Similarly, factors such as unstable economies, variable government policies and health crises threaten households directly (Chambers and Conway, 1992). These influence how material and social resources are managed and used in the choices people make. Additionally, choices need to be made according to people's social and personal characteristics, and this includes the use of resources, claims and access to the usage of material things (Ellis, 2000). Further, Ellis (2000) contends that it is not enough to have knowledge of capitals or goods a household has and it is also not enough to solely have knowledge on the perception they have on their own living conditions. This shows that it is necessary to recognise that the focus should be on livelihoods and the ends people pursue for their lives.

The Sustainable Livelihood Approach (SLA) aims at capturing interactions between people's resources and livelihood strategies. According to Scoones (1998), the framework shows how in different contexts, sustainable livelihoods are achieved through access to a range of resources such as financial, natural, physical, human and social assets; which are combined in pursuit of different livelihood strategies. Ashley and Hussen (2000) define livelihood strategies as the range and combination of activities and choices that people make in order to achieve their livelihood outcomes. Ellis (2000) argues that people's strategies can influence their choices of which activities to combine, which outcomes to pursue and which asset to invest in. This is because people have priorities in their pursuit of livelihood strategies. According to Ellis (2000), people's priorities and preferences are the people's own priorities which can help shape their livelihoods. Livelihood outcomes are achievements or outputs of livelihood strategies, such as income, increase in well-being, reduced vulnerability,

improved food security or more sustainable use of natural resource base (Ashley and Hussen, 2000).

Central to the framework is the analysis of the range of external formal and informal organisational and institutional factors, which influence sustainable livelihoods outcomes. According to Ashley and Hussen (2000), external influences are transforming structures and processes (organisations, policies, legislation and institutions) and these determine access to assets, and those with more assets are able to switch between different livelihood strategies to secure their livelihoods. Furthermore, Prowse (2008) states that this analysis shifts from aggregate variables concentrating on approximations of overall well being, which is often scaled down to income or consumption measures, and breaks the tradition approach in rural development research to focus on natural resources as the crucial element in living conditions.

The livelihood approach is people centred. Ellis (2000) reveals that the approach emphasises the ability of people to make strategic choices and exploit opportunities, thus play an active role in shaping their livelihoods. Additionally, Prowse (2008) contends that it breaks the negative view of the micro level household studies which often has an image of 'the poor' as passive marginalised victims, as people's assets do not only include resources they use in building livelihoods but also include capabilities. In other words, it has a focus on agency. According to Moser (1998), the poor are managers of complex asset portfolios and they have different management styles, thus different diverse strategies in dealing with their assets. This shows that people are regarded as subjects of their own development and are able to shape their own destinies. Additionally, Ansoms (2008) contends that although people may be deprived and constrained in their options and strategies, they remain active players who have different choices and are capable of making their own decisions. This is the same as the notion of agency, introduced by Sen (1997), in which he says that agency determines and is determined by the person's access to strategic resources.

On the other hand, Ashley and Hussein (2000) assert that although the people remain active players who have different choices and capable of making their own decisions, they may be deprived and constrained in their options by institutional structures.

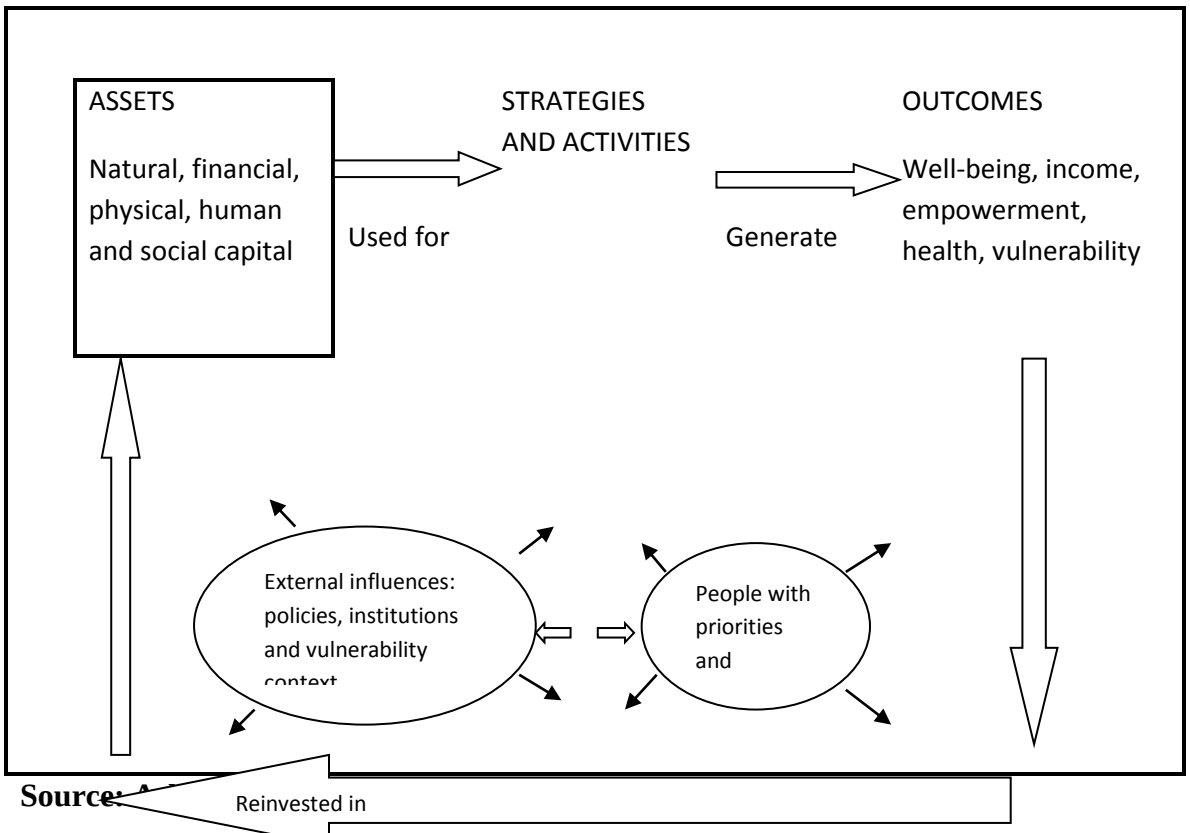
Therefore, poverty policy should be about raising the asset status of the poor or enabling existing assets that are idle or underemployed to be used productively (Ellis, 2000). This implies that the approach looks positively at what is possible than negatively at how desperate things are.

The livelihood approach has a dynamic analysis of well-being and poverty. Moser (1998) reveals that the poor cannot be a homogeneous or fixed group, they are heterogeneous both in material well being and in terms of their agency that defines their living. The application of the livelihood framework approach is on the understanding that livelihoods diversification is vital for stimulating growth in other parts of the economy. It provides opportunities to the millions of people to move out of poverty and food insecurity (Ashley and Hussen, 2000). Additionally, DFID (2003) explains that improvement in livelihoods is important in addressing the need to feed a growing population and improving their nutrition; and this creates social and economic ripple effects. This means that with increased livelihoods diversifications, farmers can have increased income to better feed their families, send their children to school, provide their health, and invest in their farms.

2.5.1 Sustainable Livelihood Framework (SLF)

For easy analysis, the research uses SLF as adapted by Ashley and Hussen (2000) as shown in Figure 1. The key framework components according to Ashley and Hussen (2000) are assets, livelihood strategies, livelihood outcomes, external influences, and people's priorities and preferences.

Figure 2.1 Simplified Sustainable Livelihood Framework



Source:

2.5.2 How the framework is applied to the study

An analysis of the impact of resettlement schemes in the context of SLF shows how people accumulate assets, and how they are affected by conditions in the study area. It identifies the current livelihood strategies and objectives of the poor in the context of vulnerability, the influence of policies, institutions and processes; and current level of access to assets and entitlements. The framework enables a holistic appreciation of the factors that mediate access to livelihoods assets and strategies of the settlers. This also shows how the people in the scheme cope with those situations which form the risk component of the livelihoods. This enables the researcher to know why settlers' coping mechanisms failed or succeeded. The knowledge of how livelihoods are constructed helps in identifying pathways towards the achievement of improved livelihoods. SLF provides a good method of capturing multifaceted impact of the resettlement scheme on settlers' livelihoods in terms of increase of their asset base and decrease in vulnerabilities. In this approach, the conditions of life are not only measured by goods or money but by the capacity individuals have to make use of these goods or resources

or money which are a means of obtaining improved livelihoods. Thus, there was need to identify success stories wherever possible and see what lessons could be learned from that in improving livelihoods in resettlement schemes.

CHAPTER THREE

DESCRIPTION OF THE STUDY AREA

3.1 Location

Lukanga North Resettlement Scheme is situated in Mponwe district of Copperbelt province of Zambia. It is within the geographical boundaries of 13°32'0" South and 28°9'0" East. It stretches from about 30 to 58 kilometres from the Mpongwe Township. The scheme is located in Chief Lesa's area of Mpongwe District. The location of the scheme is shown in Figure 3.1.

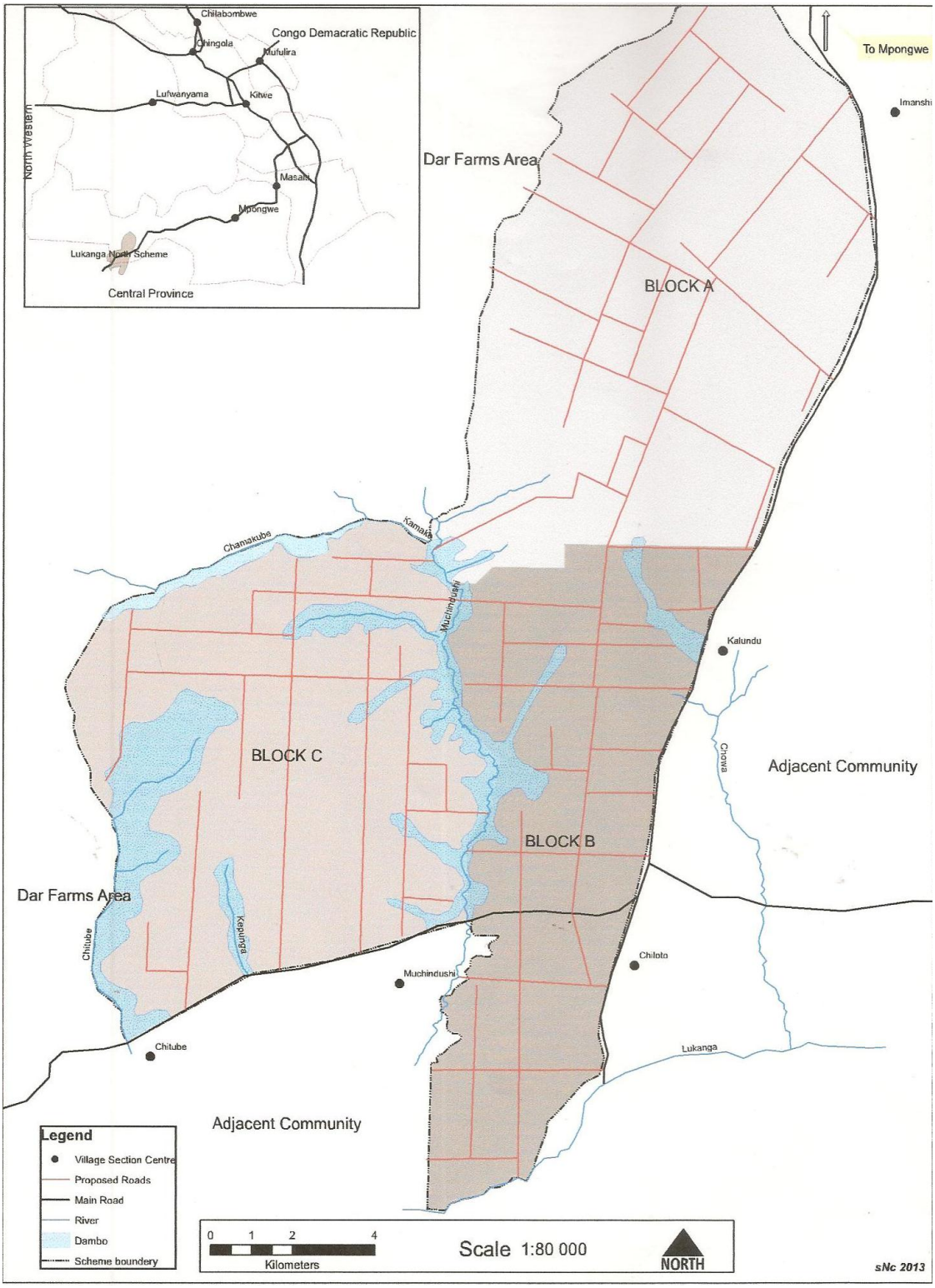
3.2 Climate

Mpongwe lies between the altitude of 1000 and 1300 metres above the sea level (Davies, 1971). The annual rainfall ranges are from 900 to 1250mm with mean maximum and minimum temperatures of about 32.3°C and 6.2°C respectively (Davies, 1971). July is usually the coldest month with clear skies at night, while October is usually the hottest month. This climate is suitable for a wide range of crops such as maize, millets, sorghum, tobacco, cotton, rice, wheat and groundnuts.

3.3 Soils

According to Davies (1971), the soils of Mpongwe fall in the category of Northern Ferrallitic soils. The northern ferrallitic soils are of the high rainfall areas of over 1000mm per annum. These soils are highly leached because of high rainfall. Consequently, this has impact on crops grown in the area as farmers have to use fertilizers in order to realise a good harvest. The clay content is generally high at the bottom and the soil textures change from clays to sand clays on top. Despite the poor soils, the favourable climate allows a range of crops such as maize, tobacco groundnuts. Crops such as cassava and sweet potatoes may be cultivated.

Figure 3.1 The location of the Lukanga North Resettlement Schemes in Copperbelt Province of Zambia



Source: Adapted from Department of Resettlement maps, 2013

3.4 Socio-economic characteristics

According to CSO (2012), Mpongwe District has 93,380 people, and the population in Lukanga North Resettlement Scheme is about 4, 300 with a total number of households of about 815. Most of the households in the scheme depend on agriculture for their livelihoods and grow crops such as maize, soya beans, sweet potatoes, pumpkins, cassava, beans and groundnuts.

CHAPTER FOUR

METHODS

4.1 Overview

This chapter outlines the methods used when collecting and analysing data on the impact of the resettlement schemes on livelihoods of the people in the Lukanga North Resettlement Scheme. The data was collected through a household survey, community meetings discussions and interviews of key informants.

A case study approach relying on the mixed methods is used in the assessment of the impact of the resettlement scheme on livelihoods of the people by comparing with the control group experiences in the villages surrounding the scheme. It is argued that livelihood studies are best pursued using mixed methods which brings together the use of qualitative and quantitative methods which often have greater validity of results (Simpson, 2007). This is used to create a complete picture of how the resettlement schemes have improved the livelihoods of the settlers. Similarly, Mugenda and Mugenda (2003) argue that data collected in this way can supplement each other. These combined methods assist in the understanding of households and assets they possess; and also enable a cross-checking and triangulation of findings and the complementary analysis of the results (Creswell, 2003). The qualitative analysis of the data gives insights of all the factors that could not be measured quantitatively. The combination of qualitative and quantitative data is important in order to provide additional depth and breadth, and a richer understanding of the data gathered in the assessment process (Creswell, 2003).

4.2 Data collection methods

In order to obtain a clear view of the impact of resettlement schemes on the livelihoods of settlers, data was obtained by using a combination of the following quantitative and qualitative methods.

4.2.1 Quantitative Methods

In the field, quantitative data was collected through household survey. This involved the administration of a questionnaire. The questionnaire was designed to collect data on demographic characteristics, household assets, and perceived impacts of the resettlement scheme on people's livelihoods, challenges and constraints people face in improving livelihoods in the scheme; and livelihood strategies of the people.

The questionnaire was administered by the interviewers to the respondents. As opposed to self administered mode of the questionnaire, direct administration is a good method to rural areas of less industrialised countries due to low literacy (Bless and Achola, 1988). The researcher with the help of three research assistants helped fill the questionnaire knowing that some people had no formal education. Before conducting the questionnaire interviews, the assistants were trained, all questions were explained to them. Any adult member of the household, who was above the age of 15 qualified as a respondent. The household survey targeted households both in the resettlement scheme and adjacent community (villages bordering the resettlement scheme).

4.2.1.1 Sampling Procedures

A sample for the questionnaire was taken from both the resettlement scheme and adjacent community. According to White (2005), 20 % of the total population has to be selected as the sample size if the size of the population is more than 500 but less than 1000. The scheme had about 815 households. In this case, a sample of 165 households in the resettlement scheme had to be selected. However, due to financial constraints and limited time, a sample of 80 households in the scheme was selected. For easy planning, the scheme is divided into three blocks. The cluster sampling method, that is, n/N x80 (where n=number of households in each block; N=total number of households in the scheme) was used for more coverage and representation of each block in the scheme. The total number of households in each block together with their sampled households is shown in Table 4.1.

Table 4.1 Total number of households sampled from each block in the scheme

Blocks	No. of households	Sampled households
Block A	294	29
Block B	244	24
Block C	277	27
Total	**815**	**80**

Source: field data, 2013

Simple random sampling method was used to select the sample from the population of each cluster. The lottery techniques, where a symbol for each unit of the population was placed in a container, mixed well and then the number was drawn which constitute a sample of each block (Bless and Achola, 1988). Although it was the intention of the researcher to interview 80 households in the scheme, one questionnaire for one household from Block A was nullified since it had just shifted into the scheme, reducing the sample from that block to 28. Therefore, the researcher just interviewed 79 sampled households for analysis. The selected households helped to collect quantitative data of livelihoods in the study areas and to some extent, even qualitative data was collected.

Since one single family unit or extended family made up a village in some instances, the adjacent community was researched according to the village groupings or sections which existed in the area. The adjacent community had five sections, with 22 villages bordering the scheme. The leaders of these sections, which were also called village overseers (*filolos*), were appointed by the chief to help him in governing the territories, and these were above the village headmen. In all these sections there were 165 households and the selection of the sample, according to White, the sample was supposed to be 45% of the population, which in this case would have been 74 households. But due to financial constraints, the number was reduced to 48. The number of households and selected households for the sample in each section is shown in Table 4.2. The selection of the sample for each section was done using cluster sampling, which was, n/N x 48; where n = total number of household in each section, N = total number of households in all the sections, while 48 is the sample size. This was followed by simple random sampling of the number of households in each section.

Table 4.2 Village sections and their sampled households

Village sections	No. of villages	No. of households	sampled households
Chitube	2	15	5
Muchindushi	5	47	14
Chiloto	5	42	12
Kalundu	6	39	11
Imanshi	4	22	6
Total	22	165	48

Source: field data, 2013.

4.2.2 Qualitative Methods

In the field, qualitative methods of data collection included the use of semi-structured interviews and community meetings.

4.2.2.1 Semi-structured interviews

Semi-structured questions were used to interview the key informants. The key informants included two technocrats from the department of resettlement (the Chief Planner and the Surveyor), two long term residents of the scheme and four village overseers. This was intended to gather information on people's perceptions of the impact of resettlement schemes on the livelihoods of the settlers. According to Simpson (2007), there is a big value in gaining qualitative information from key individuals. Typically, the information gathered through semi-structured interviews identified and assessed the priorities, needs, goals, and requirements of the resettlement scheme. Purposive or judgemental sampling method was used in choosing the key informants. This means that the sampling method was based on the judgement of the researcher (Bless and Achola, 1988).

4.2.2.2 Community Meetings

This was a form of group interview that capitalises on communication between research participants as guided by the researcher in order to generate data. The researcher conducted two community meetings, one in the scheme community and another in the

village community surrounding the scheme. Although the researcher had the intention of separating the males from females for possibilities of free discussions, this was not made possible due to the poor turn up of people (since it was rain season and many people were busy with field work); therefore women and men were just mixed in their discussions. During the two community meetings, questions pertaining to the benefits of the resettlement scheme, assets accumulated, and constraints of resettlement scheme as a strategy for rural development, solutions to the problems faced and many issues pertaining to the impact of resettlement scheme on settlers were discussed. These included impressions on successful stories and what lessons could be learnt from them on improving of livelihoods in rural communities and resettlement schemes. There was ranking of livelihood activities and discussion of coping and adaptive strategies. In the community meetings, people from different categories of wealth such as 'poor'/'rich' were included, and the meetings lasted for about two hours.

4.2.2.3 Observation

During the period of research, the researcher observed the daily activities of the people in both the resettlement scheme and the community. This helped contextualise the realities of the study areas.

4.3 Data analysis

Both qualitative and quantitative methods of data analysis have been used. The analysis of assessment of the impact of resettlement scheme on livelihoods of the settlers is underpinned by the SLF. This is mainly based on the qualitative data from key informants' interviews, community meetings discussion and household survey. In the analysis of livelihoods, the research findings of the scheme are compared with the research findings of the community. This has enabled the researcher to ascertain what would have been the social economic developments of the people if the resettlement scheme development intervention would not have taken place.

Quantitative data was analysed using descriptive statistics in Statistical Package for Social Sciences (SPSS) version 16.0. Presentations of quantitative data involve the use of frequencies, percentages, tables, charts and graphs. Comparison of the collected data between the village community surrounding the scheme and that of the resettlement

scheme was used to see the differences in terms of livelihoods. Qualitative data was analysed basing on experiences of individual participants, and on the stated meaning they attach to themselves, to other people and to their environment. Quantitative and qualitative results are reported together in such a way that qualitative results are used to elaborate and validate quantitative findings. In this way, data collected from the various data collection methods is compared and interpreted to address the livelihood questions. The analysis provides results that can be compared and later be synthesised into key impact on livelihoods.

CHAPTER FIVE

RESEARCH RESULTS AND DISCUSSION

5.1.1 Introduction

The aim of this study is to investigate whether or not Lukanga North Resettlement Scheme has improved the settlers' livelihoods since its establishment. In this study, further insights are given on household strategies; the extent to which the scheme has contributed to the improvement of livelihoods; constraints to livelihood improvements in the study area; and strength and weaknesses of the resettlement scheme as a strategy for rural development. The analysis of how the scheme has contributed to the improved livelihoods is in the context of SLF. This shows how people accumulate different types of assets and how they are affected by different situations. To show that the livelihood improvement is as a result of resettlement scheme, the adjacent villages are brought into the discussion.

To understand the impact of the resettlement scheme in improving livelihoods, it was important to identify resources people have or access, and also capture perceptions that the people have of their own living conditions. A number of household assets and livelihood strategies were assessed using the household survey. This was to understand the socio-economic status of the households.

5.1.2 Demographic Characteristics of the Respondents

The findings of the research show that a total of 60 (76.2%) and 39 (81.2%) of the selected households in the scheme and adjacent villages respectively were male headed; while 19 (23.8%) in the scheme and 9 (18.8%) in the adjacent villages were female headed. The survey's overall demographic characteristics are presented in Table 5.1.

Table 5.1 Composition of the respondents by demographic characteristics

Demographic characteristics		n=79 in RS;		n=48 in adjacent villages	
		N	%	N	%
Sex of the respondent	Male	61	77.2	39	81.2
	Female	18	22.8	9	18.8
	Total	79	100	48	100
Age (years) of the household head	16 to 19	1	1.3	3	6.3
	20 to 39	27	34.2	19	39.6
	40 to 59	30	38.0	15	31.2
	60 and above	21	26.6	11	22.9
	Total	79	100	48	100
Education level of the household head	No formal education	6	7.6	13	27.1
	Primary	29	36.7	26	54.2
	Secondary	40	50.6	8	16.7
	Tertiary	4	5.1	1	2.1
	Total	79	100	48	100

Source: Field data, 2013

From the research findings in Table 4.3, the majority of the respondents were males. It happened often that whenever the household head was present, other household members beckoned him to answer the questions from the questionnaire. With regard to age, the research findings from Table 5.1 show that most of the sampled household heads in the scheme were older than those from the adjacent villages. The average family size for the sampled households in the scheme was 6, and total number of household member ranged from 1 to 20. In the adjacent villages, the average family size was 7, and the family range was from 2 to 11 persons.

5.2 Livelihood Strategies in the Scheme and Adjacent Villages

The first objective that guided this research was the examination of the livelihood strategies in the scheme and adjacent villages. In this discussion, livelihood strategies are categorised into agricultural production which includes crop growing, and livestock keeping; and non-farm activities.

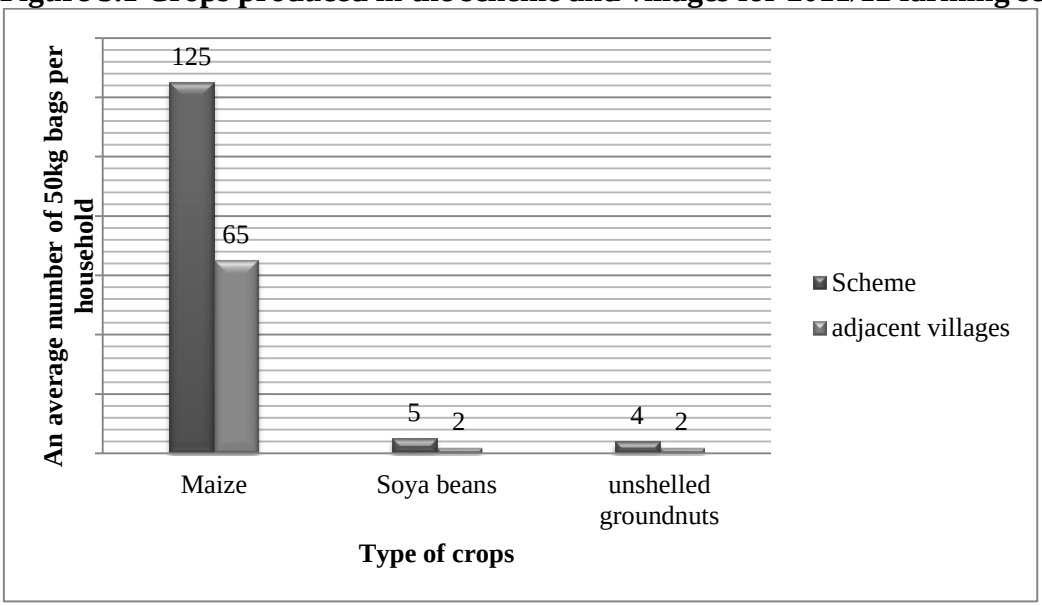
5.2.1. Crop Production

The research findings show that all the respondents in both the scheme and the adjacent villages were involved in crop farming. With regard to the variety of crops grown by the households, the research findings have shown that the majority, 43 (54.4%) of

households in the scheme, and 19 (39.6%) in the adjacent villages, grew mainly one type of crop. The rest of the interviewed households (45. 6% in the scheme and 60.4% in the adjacent villages) grew a combination of crops both for sale and for home consumption such as maize and groundnuts; and/or maize, soya beans, pumpkins, sweet potatoes and groundnuts. This implies that the growing of crops in both the scheme and villages provide food, cash and other goods to satisfy a wide variety of household needs such as shelter, clothing and groceries. Some of these outputs are consumed immediately, while others are stored to be consumed later or to be invested in other assets adding to the well being of households. Community meetings held in both the scheme and adjacent villages also show that good yields mostly depend on the availability of labour for the field work and inputs such as seed and fertilizer; and also on the use of draught power through the ox-driven ploughs. In the same vein, Phiri (2009) has shown that higher production and yield in Miengwe resettlement scheme of Copperbelt Province of Zambia depended mostly on the available inputs and labour, including the use of draught power through the ox-driven ploughs.

The research results show that a total of 77 (96.2%) households in the scheme and 46 (95.8%) of the households in the adjacent villages grow maize. Figure 5.1 shows a comparison of average crop production per household for both the scheme and adjacent villages, from the households interviewed for 2011/2012 farming season. For instance, from Figure 5.1, an average of 125 X 50kg bags of maize per household were produced in the scheme, while the adjacent villages produced an average of 65 X 50kg bags of maize per household.

Figure 5.1 Crops produced in the scheme and villages for 2011/12 farming season



Source: Field data, 2013

The research findings from Figure 5.1 show that maize is the major crop grown both in the scheme and adjacent villages. Other crops grown are soya beans, groundnuts, sweet potatoes, mixed beans and cotton. The research by Kinsey (2003) have also shown that livelihoods of the people in most resettlement schemes are primarily based on combining strategies relating to crop based agriculture and gardens; and maize, groundnuts, and sorghum are the main types of crops grown in most resettlement schemes in Zimbabwe. From the survey in Figure 5.1, the total production of maize, soya beans, and groundnuts in the scheme is much higher than that of the adjacent villages. In a comparative study in Gutu South Resettlement Scheme and Ndawi Communal lands of Zimbabwe, Chingwenya (2001) has confirmed that communal areas have lower figures for production and yields than the resettlement schemes.

Additionally, some households which are near the streams and *dambos,* that is, 34 (43%) in the scheme and 10 (20.8%) in the adjacent villages, grew some crops for consumption by irrigation during the dry season, especially vegetables such as rape, cabbage, and Chinese cabbage. These gardens are irrigated from a bucket, with water collected directly from the stream or *dambo*. These gardens are small, with big range in sizes depending on the availability of family labour. Similar to the research made by Timmermans (2004), in his study of rural livelihoods at Dwesa/Cwebe in South Africa,

in which he concluded that there was marked differentiation between garden sizes cultivated by rural farmers in those places, and crops grown included maize, beans, pumpkins, cabbage and potatoes.

5.2.2 Livestock Keeping

Livestock keeping is one of the strategies used to improve livelihoods in the scheme. In order to estimate an aggregate herd size from the respondents in the scheme and adjacent villages, the mean Livestock Unit (LU) equivalent measure was used. This was used to study different types of livestock (cattle, goats, pigs and donkeys). Table 5.2 show the relative contribution of different livestock types to total mean Livestock Units (LU)[1] among the respondents. Clearly cattle are the major contributor to the mean total of LU in both the scheme and adjacent villages, where they account for 6.25 and 4.7 in the scheme and adjacent villages, respectively.

Table 5.2 Livestock owned by selected households

Livestock Type	Total Number of Livestock		Mean Number of Livestock Type Owned Per Household		Mean Livestock Unit (LU) Per Household	
	Scheme	Adjacent Villages	Scheme	Adjacent Villages	Scheme	Adjacent Villages
Cattle	325	255	12.5	9. 4	6.25	4.7
Goats	323	279	10.1	8.7	1.01	0.87
Pigs	13	60	4.3	6	0.86	1.2
Donkeys		2		2		1
Total Mean LU					8.12	7.77

Source: Field data, 2013

Basing on the mean LU equivalent measure, the findings of the research show that among the respondents, the totals mean LU is 8.12 in the scheme and 7.77 in the adjacent villages. In terms of total mean LU, the scheme has shown superiority in livestock sizes. Similarly, when assessing the extent to which the resettlement programmes were meeting their objectives during the phase 1 of resettlement in

[1] A Livestock Unit represents an animal of 250kg live weight, and is used to aggregate different species and class of livestock as follows: cattle and donkey: 0.5; goat: 0.1; and pig: 0.2 (Kalinda et al, 2008).

Zimbabwe, Kinsey (1999) concludes that the values of livestock were higher in the resettlement areas than the neighbouring communal areas.

In both Lukanga North resettlement scheme and the adjacent villages, community meetings have shown that households do not involve themselves in the sale of capital assets anyhow, but they do sale livestock assets which serve as a buffer to help maintain consumption over a period of time when there is need. This is done especially during the rain season when there is a shortfall of maize which is the staple food. In his study, Ramirez (2006) also showed that rural people in developing countries do not sell their animals anyhow as these constitute important livelihood and financial asset. In Lukanga North Scheme and adjacent villages, the sales from livestock are also sometimes used to buy inputs such as fertilizers and seeds in time of need. This may suggest that people with livestock are likely to have more improved livelihoods than those without.

The community meetings have shown, however, that the number of livestock is increasing both in the scheme and the adjacent villages. According to Ramirez (2006), livestock development reduces the reliance on liquid financial resources. Livestock may act as insurance against poor weather which can make the crops to fail. In Lukanga North scheme and the adjacent villages, the benefits of owning cattle also include the use of draught power in cultivation and may also be a source of income if hired to others. Similarly, in Miengwe resettlement scheme particularly, livestock rearing has contributed to improved livelihoods through their sales when need arises (Phiri, 2009). It is also worth noting that despite a large number of households having livestock, especially goats; the results of the research show low incomes from livestock sales (see Table 5.6). This may mean that people are not desperate to sell, or it may mean that there is low demand for their animals. If people are not desperate to sell, it may be a good sign of improved livelihoods in both areas as large sale of livestock are signs of vulnerability, especially when done to purchase food (Ramirez, 2006). This is so because livestock act as what Simfukwe (2003: 34) has called, ‘food security bank.’

5.2.3 Non Farm Activities

Although agriculture remains central to livelihoods within the resettlement scheme and adjacent villages, the survey has shown that some households are not engaged in farming only. Findings from this study indicate that households in the scheme and adjacent villages have multiple livelihood strategies.

With respect to non-farm income generating activities, 49 (62%) of the respondents in the scheme and 20 (41.7%) of the households in the adjacent villages were found to be involved in activities other than agriculture. These figures are higher than the findings of Kinsey (2003), who reports that about 15% of the households in resettlement schemes of Zimbabwe are engaged in non-farm livelihood strategies; while the rest (75%) are engaged in farm activities. This may be due to the fact that at the early stages of the formation of resettlement schemes in Zimbabwe, there were restrictions on the settlers, and were not allowed to engage in other activities other than agriculture (Kinsey, 2003).

Out of those engaged in non-farming activities, for instance, a total of 26 (53.1%) and 8 (16.6%) in the scheme and adjacent villages respectively, were engaged in trading; other activities included offering of labour, transport or service of the hammer mill, including that of charcoal production as shown in Table 5.3. Income generated from non-farm activities are presented under financial assets in Table 5.6

Table 5.3 Non farm activities engaged in by scheme and adjacent villages

	Scheme		Adjacent Villages	
Non farm activity	**No.of Households**	**%**	**No.of households**	**%**
Trading	26	32.9	8	16.6
Offering Service-hammer mill	2	2.5	4	8.3
Offering Service-casual labour	9	11.4	3	6.2
Offering Service-transport	6	7.6	-	-
Charcoal production	3	3.8	1	2.1
Rental and pension from town	3	3.8	-	-
Fishing	-	-	4	8.3
Total of Non-farm Activities	49	62	**20**	41.5

Source: Field data, 2013

It is argued that involvement in non-farm activities facilitate rural development; but at the same time can draw labour out of agriculture and intensify farm labour shortages or the impact can vary according to class, agricultural systems and economic context (Ellis, 2000). In Lukanga North resettlement scheme, in particular, findings from some key informants indicated that households engaged in trading and offering of transportation services become active when it is not the rain season. For instance, one of the key informants in the scheme shows how his household earned a living with this option:

> *We depend on our land for our crops for consumption and later sell the extra for our home needs. Currently, we can say that there has been increase in both production of crops and livestock. When we just settled, we only had two cows; and we bought three more, while many more multiplied through breeding. We now have ten. With regard to the varieties of crops, we grow maize, groundnuts, soya beans, and sweet potatoes. The crops which we usually sell to find income for our households are maize and soya beans. This income, plus our small remittance from pension helped us to buy one vehicle. During the dry season when we are not busy and the roads are not very bad, we offer*

> *transportation services using our vehicle so as to realise more income for our household's needs such as groceries, and when we have served enough, we sponsor our children who are at colleges and sometimes we even buy cattle; and we have even managed to buy another vehicle (20/03/13).*

The findings of the research show that some households use their income from non-farm activities to increase their livestock; send their children to school and make household improvements. The results, however, have also shown that there are more households in the scheme engaged in non farm activities than the adjacent villages, as shown in Table 5.3. For instance, while 32.9% of the sampled households in the scheme engage in trading; and 7.6% offer transport service, only 16.6% in the adjacent villages engage in trading and no one is involved in transport service. This may imply that households in the scheme probably have accumulated more income in addition to seasonal agricultural proceeds; hence more improved livelihoods. It may also imply that some settlers had more income already before settling in the scheme which they could have used in non farm activities.

5.3 Scheme contribution to the Improvement of Livelihoods

The second objective that guided this research was to analyse the extent to which the scheme has contributed to the improvement of livelihoods. This is discussed in the context of SLF through the accumulation of assets.

5.3.1 Accumulation of Assets

In this study, these assets were reflected in the settlers' attitude towards the resettlement scheme. People build their livelihoods on a wider range of assets. The assets discussed in this study are natural, human, physical, financial and social assets.

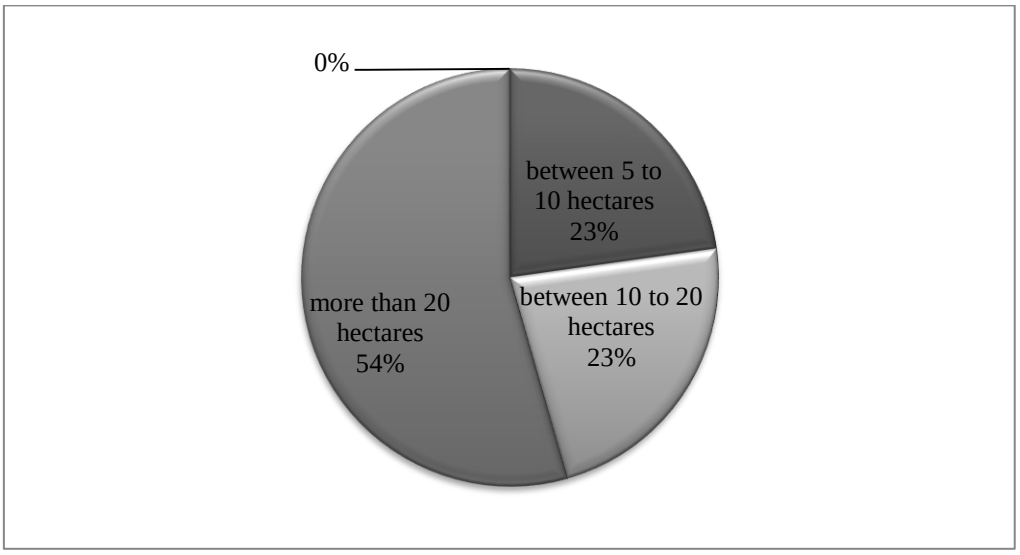
5.3.1.1 Natural Assets

Natural assets/capital is defined as natural resource stocks from which resource flows useful for livelihoods are derived (Ellis, 2000). Natural asset include land, water, wildlife, biodiversity and environmental resources. The main categories of natural asset described in this study are land, water and forest resources, these being the most important for livelihoods in the study areas. According to Scoones (1998) the existence

of natural assets does not mean that people can access these resources for livelihood purposes. In Lukanga North scheme, however, the study has shown that almost all households in the scheme have access to land which they use to grow crops and collect natural resources such as wild fruits ('*masuku'*) and mushrooms.

With regard to farm size, 18 (22.8%) of the households interviewed in the scheme had land of between 5 to 10 hectares, 18 (22.8%) had land between 10 to 20 hectares, and 43 (54.4%) had more than 20 hectares at the time of settlement. This is illustrated in Figure 5.2.

Figure 5.2 Farm Sizes owned by the respondents in the scheme



Source: Field data, 2013

Figure 5.2 show that slightly over half of all the respondents have land of more than 20 hectares. This is quite a big amount of land. Through the key informants' interview and the community meetings, the findings of research show that the biggest benefit of resettled households is access to land (with a 14 year lease although it is being upgraded to 99 year lease). This is supported by the findings of Potts and Mutambirwa (1997) where the people emphasized that resettlements in Zimbabwe had improved access to land for small-scale African farmers. According to Adams et al (1999), land redistribution is to enhance people's rights in order to provide tenure security; and this is to avoid the sufferings and social instability caused by arbitrary or unfair evictions, landlessness, and the breaking down of local arrangements to manage common pool

resources. In the adjacent villages where households are occupying communal land using traditional institutions, there may be the risk that some traditional leaders might choose to repossess the land or that the state might decide to evict them when there is need for developmental projects to be initiated in the area.

The research findings from the community meeting discussions further shows that in Lukanga North scheme, people are free from paying tributes to chiefs and the chief has no powers to chase them from their land unlike those in the villages who are subjected to the rules and norms of chiefdoms. This social stability may make people in the scheme to concentrate on creative activities which leads to livelihood improvement. For instance, among the households researched, one had even built a permanent shop and houses. The study of Breman and Wiradi (2002) show that access to land is closely linked to capital; and access to capital determines the types of non farm activities that households can become involved in. These have a positive impact on well being of households in terms of income diversity.

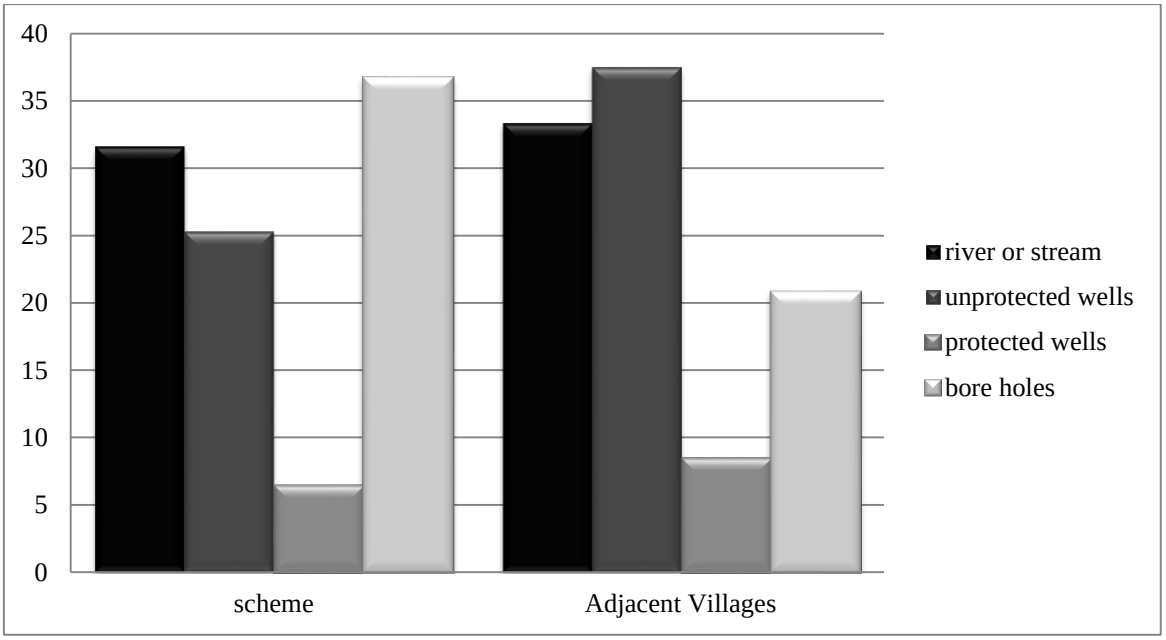
With regard to change in plot size, 74 (93.7%) of the respondents in the scheme said that there had been no change to their plot sizes from the time they were given. Only 5, that is, 6.3% of the households had their plot reduced in size; out of which 4 of these said that their land had been encroached upon by neighbours who reduced the amount of plot they were originally given, while one household said that part of their plot was sold by the household itself. This shows that there is informal selling and demarcations of land among settlers in the scheme. This may lead to the accumulation of the land in the hands of the better-off in future as the poor may sell their land out of necessity. In the same vein, the study of Miengwe resettlement scheme by Phiri (2009) shows that the control over land distribution has changed due to informal selling and demarcation among settlers.

Worth noting also are the findings that some households both in the scheme and the adjacent villages are engaged in charcoal production. Trees are an important natural asset in the scheme and adjacent villages. They are a source of income to households engaged in charcoal production as a survival strategy. A total of 3 (3.8%) of the interviewed households in the scheme and 1 (2.1%) of those in the adjacent villages are

engaged in charcoal production. A total of 193 X 50kg and 33 X 50kg bags of charcoal were recorded[2] to have been produced by the respondents in the scheme and adjacent villages respectively, in 2011/2012 farming season (income realised from the sale of charcoal is presented under financial asset in Table 5.6; also the percentages of people engaged in charcoal production is shown in Table 5.3). This is one of their strategies to improve their livelihoods and it has added to household income. This income is used to supplement on consumption needs of the households. This may, however, lead to tree resource depletion if the production and the number of households engaged in charcoal production increases in future.

With respect to access to water in the bore hole, only 29 (36.7%) had access to the bore holes in the scheme, although some still complained that the bore holes were at distant places of about two to three kilometres. As for those in the adjacent villages, only 10 (20.8%) of the households interviewed have access to bore holes that are in the villages. The other sources of drinking water include rivers or stream, unprotected wells and protected wells. Differences in access to drinking water in the scheme and adjacent villages are shown in Figure 5.3

Figure 5.3 Differences in access to water in the scheme and adjacent villages



Source: Field data, 2013

[2] In Zambia, we say 50kg of something as long as it is packed in a sack that is used to pack 50kg of maize flour/mealie meal. Therefore 50kg of charcoal does not weigh 50kg.

From Figure 5.3, most households in the scheme and adjacent villages use rivers and unprotected wells as a source of drinking water. When further inquiry was made on whether households treated the water before drinking, the results show that a total of 21 (26.6%) in the scheme as compared to 6 (12.5%) in the adjacent villages treated the drinking water with chlorine. The rest (73.4% in the scheme and 87.5% in the villages) did not treat the drinking water. This shows that many households, both in the scheme and adjacent villages may be at risk of water borne diseases. On a similar note, Phiri (2009) has shown that most settlers in Miengwe resettlement scheme of Copperbelt in Zambia, draw water from shallow wells, and probably drink it without treating it.

5.3.1.2 Human Assets

Human assets/capital refers to the labour available to the households, its education, skills, and health. As it is stated earlier in 4.2, 50.6% and 16.7% of the household heads of the respondents in the scheme and adjacent villages respectively, attained secondary school of education; while 5.1% in the scheme and 2.1% adjacent villages attained tertiary; 36.7% in the scheme and 54.2% in the adjacent villages attained primary level of education; and the 7. 6% in the scheme and 27.1% in adjacent villages respectively had no formal education. This shows that some households may lack the necessary agricultural written information as they are unable to read and write. There is however, a relatively larger number of household heads in the scheme who may have access to written agricultural information than the adjacent villages, as there are more people with formal education. Meena and O'keefe (2007), emphasizing on this, say that the importance of education in enabling access to formal sources of agricultural knowledge is apparent, and people with no education had a reduced opportunity of contact with extension service. These results show that the scheme may be expected to have slightly more improved livelihoods due to access of information pertaining to the well being.

The scheme is experiencing limited sources of agricultural training. At the time of research, the scheme had no camp extension officer. The findings show that only 15 (19%) and 5 (10.4%) of the households interviewed in the scheme and adjacent villages respectively, claimed to have benefited from the services of an extension officer, who at the time of research was even settled outside the scheme, but could help the people in

both the scheme and adjacent villages. The rest of the interviewed households said that they did not benefit at all. This may imply that most households both in the scheme and the adjacent villages probably lack this important aspect of agricultural training. This finding is keeping in line with the study in Kambilombilo resettlement scheme in the Copperbelt Province by Munshifwa (2007), in which he concluded that the extension services of the Ministry of Agriculture was non existence in the scheme.

Labour is one of the most important human assets in the scheme. Although there are rarely permanent jobs for people, the scheme improves the well-being of those families engaged in casual work. At the time of research a total of 14 (17.7%) households in the scheme and 1 (2.1%) in the adjacent villages were hiring labour, both permanent and casual workers (Table 5.4). The study findings from community meetings show that number of casual workers hired differs from year to year depending on the availability of money or goods available with the employing households. The hiring of labour for those households involved increases during the rain season, especially during the time of weeding. Qualitative studies, through the community meetings showed that the payment varied, but usually ranged from K1.5 to K2 per about half a kilometre of the line crop cultivated, if applied to weeding. Sometimes this was converted to quantity of maize depending on the market price during that particular season, so that the employer paid in kind. The permanent job identified at the time of field work was that of looking after the cattle, and the employee was given one cattle after three years of service. In terms of labour employment, the findings of the research show that the scheme had a higher percentage of households hiring labour as shown in Table 5.4. Community meeting discussions also show that most of those offering labour services are people from the adjacent villages. This shows that the scheme might have a positive impact on livelihoods as some households are capable financially to pay the workers, although it also depends on the availability of the labour market. The wages (income is shown under financial asset under Table 5.6) may partially be recycled within the local economy, creating a multiplier effect, and this is important for the poor who have few other options for earning cash (Morse et al, 2009). The findings of the research also show that most households use only family labour in addition to drought power due to resource constraints.

Table 5. 4 Types of labour used in the scheme and adjacent villages

Type of labour used	Scheme		Adjacent Villages	
	No. Of households	%	No. Of households	%
Used family labour only	65	83.3	47	97.9
Family labour and hired labourers	14	17.7	1	2.1
Total	79	100	48	100

Source: Field, 2013

With regard to access of health institutions, only 17 (21.5%) of the surveyed households in the scheme said that they had access to the clinic outside the scheme (since there were no clinics inside the scheme at the time of field work), as compared to 24 (50%) that had access to the clinic in the adjacent villages which was nearer to the settlers in Block C and about more than 10 kilometres to the settlers in these other blocks. Lack of health infrastructure in the scheme might have meant that there were virtually no health care services at the time of data collection. As a coping strategy, however, the community meeting in the scheme revealed that many people rely on indigenous knowledge of herbs and traditional healers as primary means of health care. Similarly, the study by Phiri (2009), of the Miengwe resettlement scheme of Copperbelt in Zambia, shows that the scheme had no health post and the settlers had to travel long distance of about 10 kilometres to Mwekera College.

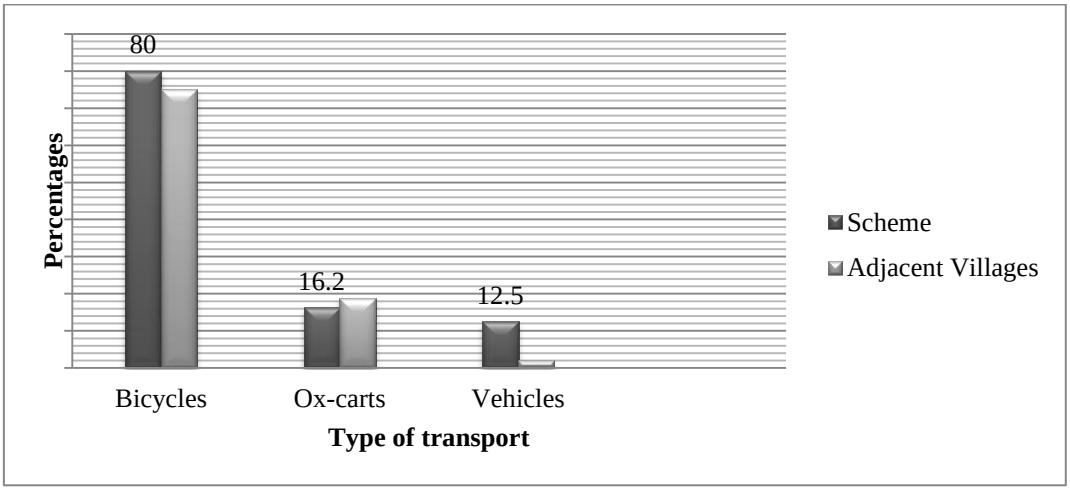
5.3.1.3 Physical Assets

Categories of physical capital that are discussed in this study are roads, transport facilities, tools, mobile phones, and household homes characteristics. According to Kinsey (2003), the area which scores higher in terms of physical asset accumulation is that with surplus income that could be used for that purpose, and thus, have more improved livelihoods.

In terms of transport for instance, a total of 63 (80%) of the interviewed households in the scheme had bicycles; 13 (16.5%) owned ox-carts, and only 10 (12.7%) of the households had vehicles. Meanwhile, in the adjacent villages there were 36 (75%) who owned bicycles, 9 (18.8%) owned ox-carts and 1 (2.1%) who owned a vehicle. The

comparison of transport used between the sampled households in the scheme and the adjacent villages is presented in the chart below (Figure 5.4).

Figure 5.5 Differences in Transport ownership in Scheme and villages



Source: Field data, 2013

From Figure 5.4, in both the scheme and the adjacent villages, the respondents used bicycles, ox-carts, and a small percentage used vehicles. Bicycles and ox-carts especially are more reliable means of transporting goods within both the scheme and adjacent villages. This makes life easier for the households with such modes of transportation. In this vein, according to the World Bank (1994), the availability of transport shortens travel times, and improved access to the market and social services.

In both the scheme and the adjacent villages, the telephone networks were poor at the time of field work. Despite this situation, 60 (75.9%) and 26 (54.2%) of the households interviewed in the scheme and adjacent villages respectively, had mobile phones. These had to travel long distances of about more than two kilometres (depending on where they are settled, that is, whether they are near to the network point) to access net works on hills and certain clear locations of the area. The results of the research show that there are more people with mobile phones in the scheme than the adjacent villages. The availability of mobile phones may make it easier for some scheme settlers to access information that probably helps to improve agricultural production in terms of inputs; trading and general communication that contributes to livelihood improvement. Duncombe (2007) confirms that information has an analytical role on how we measure

assets as well as functional role in terms of how information can be used to strengthen assets. This also shows that although some households may have mobile phones, it is possible that these assets may not be converted into productive activities, that is, may not be used to acquire information which adds to the well being.

Some households interviewed in the scheme said that some physical assets (tools) have been accumulated as a result of having access to private land tenure in the resettlement scheme. Just like in the scheme, the households interviewed in the adjacent villages said that there has been the accumulation of physical assets ever since the scheme was created. Table 5.5 below shows the type of physical assets reported to have been accumulated and the number of households claiming to have accumulated those assets both in the scheme and adjacent villages.

Table 5.5 Households who have accumulated some physical assets

Type of asset	Total number of respondents in the scheme, n=79		Total number of respondents in the Adjacent Villages=48;	
	N	%	N	%
Hoe	79	100	48	100
Plough	25	31.6	28	58.3
Bicycle	63	79.7	36	75
Ox-cart	13	16.5	9	18.8
Sawing machines	6	7.6	1	2.1
Vehicle	10	12.7	1	2.1
Hammer mill	4	5.1	5	10.4
Hand mill	3	3.8	1	2.1
mobile phone	60	75.9	26	54.2

(Source: Field data, 2013)

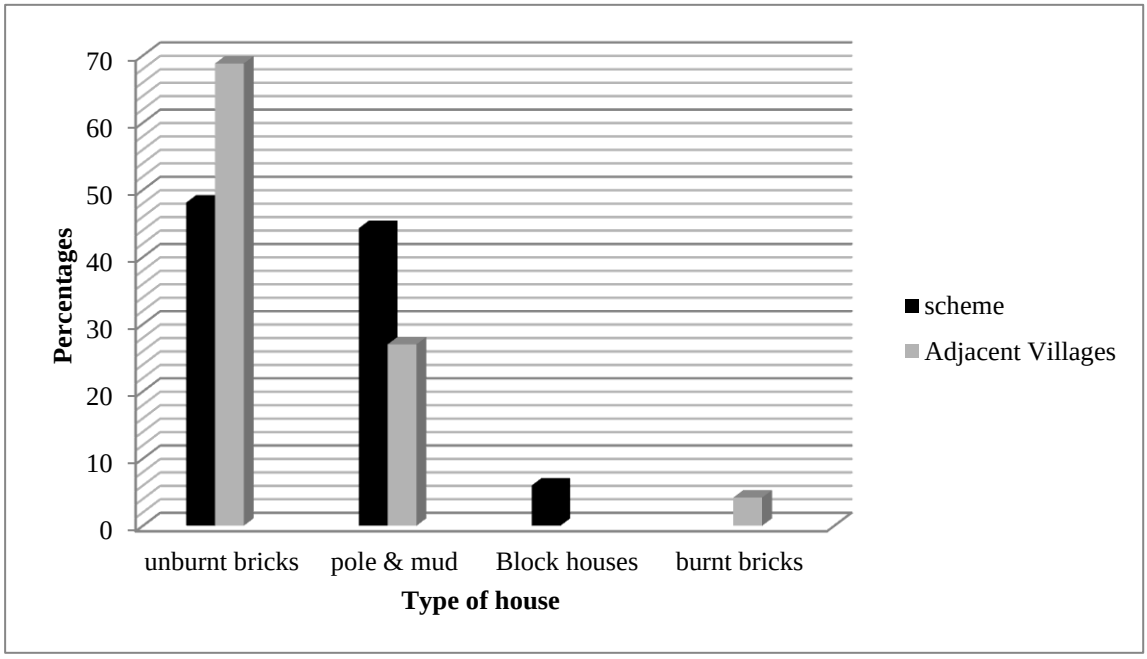
The results of the survey show that in the scheme, overall, many households claim to have accumulated physical assets such as hoes (100%), ploughs (31.6%), bicycles (79.7%), ox-carts (16.5%), sawing machines (7.6%), vehicles (12.7%), hammer mills (5.1%), hand mills (3.8%) and cell phones (75.9%) due to having access to land in the resettlement scheme. The community meeting held in the scheme show that these physical asset accumulations are due to hard work and access to private land tenure. This increase enables households to be more productive, contributing more to other forms of assets. Interestingly, the adjacent villages also claim to have accumulated a number of the above assets ever since the resettlement scheme was created. This probably may mean that the scheme has not only benefited the settlers, but also

households in the neighbouring community, since some kind of spill-over reflect which contributes to rural development in general.

In both the scheme and adjacent villages, households use these assets in activities that bring more income which can be used for consumption or investment into other assets, adding quality to life. For example, hoes are used mainly for weeding so as to have good harvest; ploughs are used to make tilling easier; bicycles, ox-carts, and vehicles are used as a means of transport. These activities may be related to farm or non-farm activities. This is confirmed by Ansoms (2008) who explained that the presence of physical capital may be an important underlying condition to engage in on-farm and off-farm remuneration livelihoods besides farming. This is also supported by Bebbington (1999) who said that households' assets are not only a source of sustainability and meaning, but also a source of power to do other activities. From the results, however, the respondents in the scheme have more bicycles, sawing machines, vehicles, hand mills and mobile phones than the adjacent villages. This means that the scheme may have contributed more to improved livelihoods in those mentioned physical assets. The respondents in the adjacent villages have also accumulated more ploughs (58.3%), ox-carts, and hammer mills (10.4%) and may have more improved livelihoods in that sphere, probably as a result of the establishment of the scheme or general improvement in the economy of those households.

Household houses may be associated with either poverty or prosperity. When it comes to house characteristics, the findings show that a total of 38 (48.1%) of the respondents in the scheme and 33 (68.8%) in the adjacent villages had improved traditional huts of un burnt bricks; 35 (44.3%) and 13 (27%) had traditional huts of pole and mud in the resettlement scheme and adjacent villages respectively; and the rest in the scheme (7.6%) and adjacent villages (4.2%) had their houses built of cement and burnt bricks, respectively (Figure 5.7).

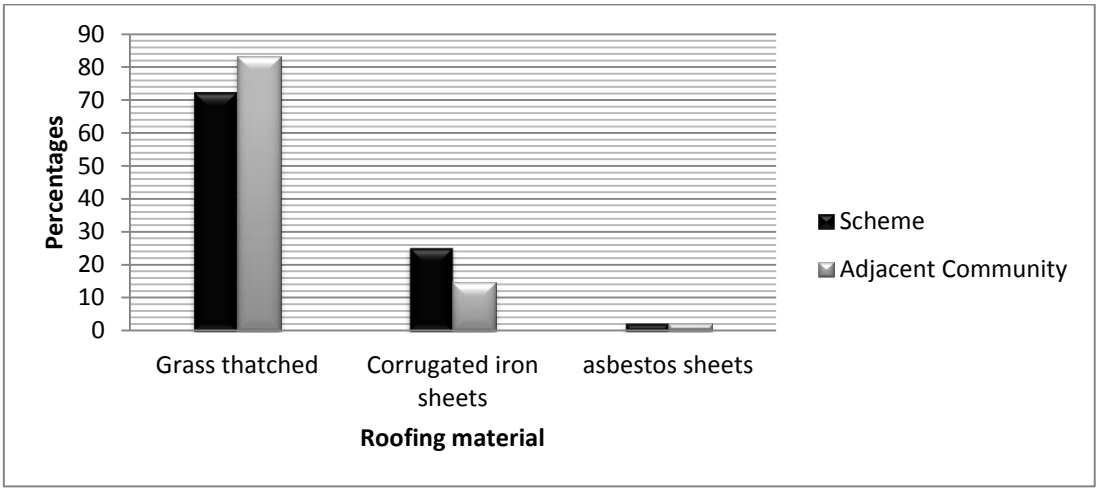
Figure 5.5: Household building characteristics in the scheme and villages



Source: Field data, 2013

Of the households researched in the scheme, 57 (72.2%) had their huts/houses roofs made of grass (grass thatched), while 20 (25.3%) used corrugated iron sheets for their roofs and 2 (2.5%) used asbestos sheets. While in the adjacent villages, a total of 40 (83.3%) of the households' huts were grass thatched, 7 (14.6%) used corrugated iron sheets and 1 (2.1) used asbestos sheets as their roofing material. This is shown in Figure 5.**6**.

Figure 5.6 Roofing material of households in the scheme and Adjacent Villages



Source: Field data, 2013

The conditions of housing may be an indicator of livelihood improvement of the households. Studies on poverty assume that rural households have a preference of cement brick houses, and housing styles are an indication of socio-economic status (Meena and O'keefe, 2007). Furthermore, Meena and O'keefe (2007) say that a cement house, and asbestos/iron sheets roofing materials may be an indicator of wealth as households with extra income are the ones capable of buying and using those materials (cement, iron sheets and asbestos) in house construction. For example, households with traditional huts of pole and mud with grass thatched roofs may be classified as poor. In this survey, the main hut or house was a subject of analysis. Overall, from the results of research, the scheme has more cement houses; and more houses with asbestos and iron sheets roofing materials than the adjacent villages. It can, therefore, be deduced that households in the scheme may have more improved livelihoods than those in the adjacent villages because of many cement houses.

5.3.1.4 Financial Assets

This includes stocks of money such as savings and access to credit in form of loans which are essential for any household strategy (Scoones, 1998). According to Samuel et al (2005), most rural households in Africa consume their own production as food and earn very little cash income seasonally, depending on the harvest, without necessarily recording this. It was therefore difficult to get accurate income data since the research depended on the memory of the respondent. The researcher used the income for the previous year (2011/2012 farming season)[3]. Income data were calculated by multiplying the market value of products sold or consumed at that time plus any income from employment, remittances, trading and any other source as shown in Table 5.6.

[3] Results from the community meetings in both the scheme and the community show that in 2011/2012 farming season, the 50kg bag of maize was sold at an average price of K50; charcoal was at K15 per pack in the sack of former 50kg bag maize meal, groundnuts were at K50 per 50kg bag pack, mixed beans was sold at K250 per 50kg bag pack; soya beans was sold at K140 per 50kg bag and cotton was at K1.6 per kg; while cattle were sold at an average price of K2500 per cattle and goats at K150 per head. These are the prices used to arrive at income of households in both the scheme and community.

Table 5.6 Income sources in Lukanga North Scheme and adjacent villages for 2011/2012 farming season

	Resettlement scheme (n=79)				Adjacent Villages (n=48)			
Item	**No. of 50kg bags**	**Total income (K)**	**Mean Income Per Household**	**% of income**	**No. of 50kg bags**	**Total income (K)**	**Mean Income Per Household**	**% of income**
Maize	9875	493750	6250	69.6	3120	156000	3250	75.2
Groundnuts	389	19450	246.2	2.7	106	5300	110.4	2.6
Soya beans	332	46480	588.4	6.6	79	11060	230.4	5.3
Cotton[4]		2736	34.6	0.4		5472	114	2.6
Mixed Beans	40	10000	126.6	1.4	1	250	5.2	0.1
Employment		59530	753.5	8.4		3940	82.1	1.9
Remittances		33050	418.4	4.7		3200	66.7	1.5
Trading		8864	112.2	1.3		21060	438.8	10.2
Charcoal	193	2895	36.6	0.4	33	495	10.3	0.2
Transport		22000	278.5	3.1				
Cattle sales		10000	126.6	1.4				
Goat sales		300	3.8	0.04		600	12.5	0.3
Total		709055	8975.4	100		207377	4320.4	100

Source: Field data, 2013

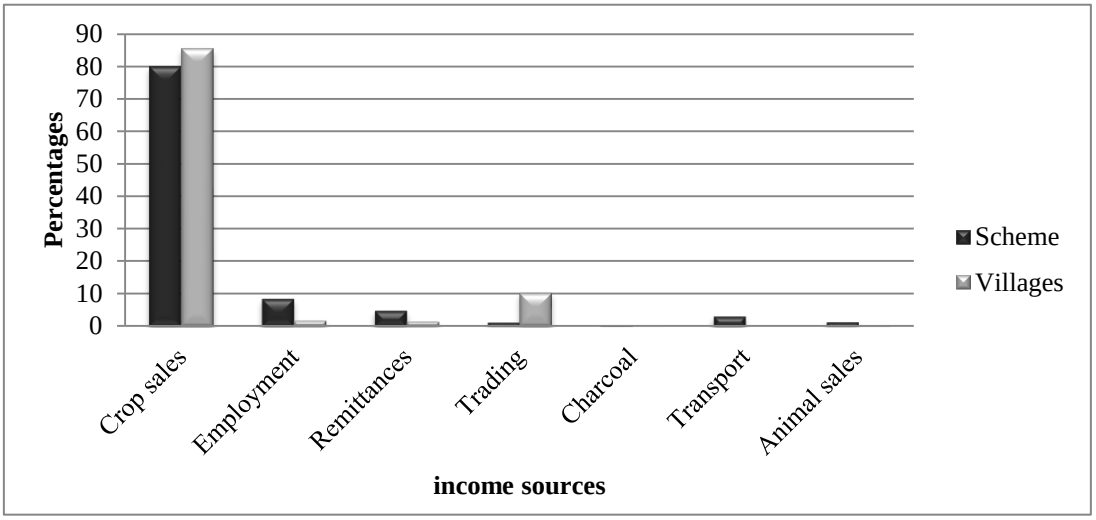
An important indicator of a livelihood system's status is its ability to provide each individual household with enough income to meet their basic needs (Chimhowu and Hulme, 2006). This implies that comparing income levels and sources gives an insight into the ability of the resettlement scheme and the adjacent villages to provide secure livelihoods. The results of the research show that average total income in 2011/2012 farming season per household surveyed in the scheme is K8975.4 and that of the

[4] Cotton harvested by the respondents for 2011/2012 season was 1710 kgs in the scheme and 3420 kgs in the community

adjacent villages is K4320.4; that is, average income in the scheme per household is about 2 times that of the adjacent villages. This figure is lower than that of Kinsey (1999) who studied land reform, growth and equity in Zimbabwe's land resettlement programme and discovered that resettled households in Zimbabwe on average earned 6.8 times what communal farmers earned. These differences may be due to poor infrastructure such as roads and market facilities in Lukanga North resettlement scheme as compared to those in Zimbabwe.

One of the research questions of the survey was to ask the respondents of their main income sources. Figure 5.7 shows the incomes sources of the respondents from both the scheme and the adjacent villages. From Figure 5.9, the results of the research reveal that, generally, there are no major differences of income sources between the scheme and the adjacent villages as the major income source for both areas are sales from crops. This finding is keeping in line with the study of Chimhowu and Hulme (2006), who recorded that crop incomes was a single most important source of income in some resettlement schemes in Zimbabwe. The adjacent villages however, have a slightly higher percentage (85.5%) of households who rely on sales from crops than the scheme (80.1%). While the percentages of those who rely on employment, remittances and transport as the main sources of income are also slightly higher in the scheme than adjacent villages. This reveals that income source in both the scheme and community are diverse. This means that many households are engaged in diverse income sources other than agriculture

Figure 5.7 Differences in income sources in the scheme and adjacent villages



Sources: Field data, 2013

In both the scheme and the adjacent villages, many households have problems in accessing credit. Only 33 (41.8%) and 14 (29.2%) of the households interviewed in the scheme and adjacent villages respectively, said that they had no problems in accessing formal lending institutions. A total of 29 (36.7%) in the scheme and 29 (60.4%) in the adjacent villages claimed that they have problems in accessing credits due to fear as shown in Table 5.7. They had fear of approaching the bank or any other institution to borrow the money they needed, due to lack of exposure. The community meeting held have shown that those households who were able to access credit in the scheme accessed it through the Zambia National Farmers Union (ZNFU).

Table 5.7 Problems encountered in getting credit

	Resettlement scheme		Adjacent Villages	
Problems	**No.**	**Percentages**	**No.**	**Percentages**
Lack of lending institutions in the area	19	24.1	7	14.6
Fear of approaching the bank	29	36.7	29	60.4
Fear or lack of lending institutions	2	2.5	-	-
Have no access to the bank	17	21.5	3	2.1
No need for credit	12	15.2	9	18.8
Total	79	100	48	100

Sources: Field data, 2013

From Table 5.7, the results of research show that many households in the scheme just like the community lack access or do not make use of credit facilities. These results corroborate with the findings of Kinsey et al (1998) who confirmed that the households in the scheme in Zimbabwe, appear to make little use of credit either formal or informal as part of their smoothing strategy. Additionally, it is also revealed by DFID (2003), that access to credit may reduce the negative effect of seasonal fluctuations in income generating opportunities. The results of the research show that the sampled households which do not have enough income may find it difficult to buy inputs such as fertilisers and seed, and therefore, this may prevent them from improving their livelihoods. The community meetings held both in the scheme and adjacent villages also reveal that high rainfall makes the soils to be highly leached such that without the use of inputs such as fertilizers, it is not possible to have a good yield. This in turn may inhibit the generation of surplus income required for payment for consumer goods, school fees and many other services. It is important to note that unavailability of credit to purchase and difficulties in obtaining chemicals may limit the potential for intensification to some households.

Availability of income may have led to the change of farming status or crop production levels ever since households settled in the Lukanga North resettlement scheme. The household survey showed that three quarters 60 (75%) of the households interviewed in the scheme had recorded positive changes in their farming status or crop production levels ever since they came to the resettlement scheme, while 13 (16.2%) recorded no change and only 6 (7.5%) had recorded negative change. A total of 15(31.2%) of the sampled households in the adjacent villages had recorded positive changes in farming status or production levels ever since the scheme was created; while 27 (56.3%) recorded no change; and 6 (12.5%) recorded a negative change. This may mean that there may be accumulation of assets in terms of income, for those households who recorded positive changes, which may be invested in other livelihoods. The recorded positive change of farming status or increase in production levels is more in the scheme than the adjacent villages. This may mean that the scheme has contributed to more improved livelihoods.

5.3.1.5 Social Assets

Formal institutions of social capital discussed in this research include agricultural extension services, membership of cooperative organisations, and membership to ZNFU. Informal social institutions discussed in this research include informal lending arrangements between friends and relatives, and remittances received (income for remittances is in Table 5.6). The results of the research on the access of agricultural extension services are already shown in 5.3.1.3 under human asset.

The presence of social capital in the scheme and the community can be identified through the utilisation of support networks. A total of 70 (88.6%) households in the scheme and 31 (64.6%) in the adjacent villages had access to fertilizer and seed for agriculture. Out of those who were able to access fertilizer and seed, 65 (82.2%) in the scheme as compared to 27 (87.1%) in adjacent villages bought it on their own, 2 (2.5%) in the scheme and 3 (9.7%) in the adjacent villages borrowed to buy inputs from relatives and friends, while 3 (3.8%) in the scheme and 1 (3.2%) in the adjacent villages get loans from ZNFU. A total of 16 (20.3%) and 25 (52.1%) of the households interviewed in the scheme and in the adjacent villages respectively, claimed to have borrowed food, or money to buy food, from relatives and friends. Borrowing of money and membership of support organisations show some existence of social capital in both the scheme and the adjacent villages. In his study of rural livelihoods in rural South Africa, Timmermans (2004) shows that social asset is embedded within kinship relations and social network. This shows that social capital is revealed in terms of social networks and organisations, which play a vital role in helping people act to improve their livelihoods both in the scheme and adjacent villages. According to Ellis (2000), social capital captures the community and wider social claims on which individuals and households can draw by virtue of their belonging to social groups. Further, Ellis (2000) states that apart from kinship relations and social interactions assistance, social capital includes economic relations that motivate individuals to engage in investments and transactions.

The results of the survey show that a total of 47 (59.5%) households in the scheme and 27 (56.3%) in the adjacent villages are members of a cooperative. Only 6 (7.5%) in the scheme and 1(2.1%) in the adjacent villages are the members of the ZNFU; while 4

(5.1%) in the scheme and 1(2.1%) in the adjacent villages are members of both the ZNFU and the cooperative; and the rest do not belong to any organisation. This may imply that social networks and organisations probably help some households both in the scheme and adjacent villages to mobilise assets and guarding them so as not to lose them. On a similar note, Sen (1997) says that social networks help people to question, interact, debate and discuss to gain more knowledge in issues pertaining to their livelihoods improvement; and this enhances the rural people to be their own agents of change. The research nevertheless, reveals that there are more people in the adjacent villages who borrow money from relatives and friends than the scheme, emphasizing more of the social assets in the adjacent villages.

In the 2011/2012 farming season, the sampled households interviewed in the scheme and adjacent villages had received remittances amounting to 4.9% and 1.6% of the total income (income received from remittances is shown in Table 5.6). Almost all the households interviewed identified friends and relatives as a source of these remittances. In addition, qualitative studies through the community meetings in both the scheme and adjacent villages have shown that people rely on each other in terms of draught power, ox-drawn carts, bicycles and many other things. Households have built social networks and help each other in times of need. This research has revealed that social capital has been important both in the scheme and adjacent villages. This may have helped to cover or close gaps experienced by households in their attempts to pursue agricultural activities. Transactions include exchanging equipments and information. From the community meetings and interviews from the key informants, farmers are making transactions in order to support each other as a means of facilitating the improvements and sustainability of production. It is also worth noting that households in the scheme have linkages with adjacent villages. The major linkages identified between resettled households and adjacent villages are access to resources in the villages. These resources include labour, transportation and markets. Thus, social capital is being built in this way.

Some households have animals which they use as draught power to make cultivation easier; while others do not have. But an exchange system seems to be emerging where farmers assist those who don’t have in return for either monetary remuneration or access

to equipment. For instance, 18.8% of the households in the scheme depend on hiring oxen when ploughing their fields as compared to 4.2% in the adjacent villages. On a similar note, the study of Timmermans (2004) show that social asset plays an important role in mobilising labour and access to cooperative ploughing arrangements. This implies that within the resettlement scheme, some households have more resources than others and have been able to build up the asset base faster than others. The research findings however, reveal that there are more people in the scheme who depend on hiring of animals than in the adjacent villages. This may show that some households in the scheme probably lack draught power, an important asset of the rural people, which can help them in livelihood improvements.

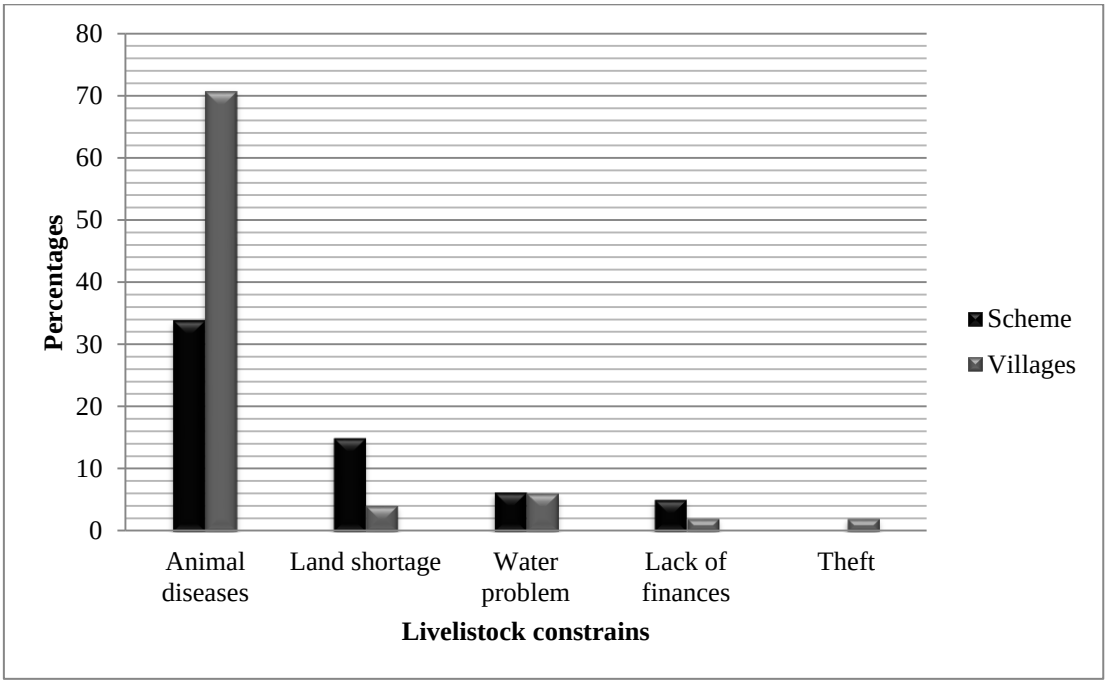
5.4 Constraints to Livelihood Improvements

Constraints pertaining to livestock, post-harvest losses, draught power, agricultural inputs, land entitlement, extension services, health facilities, education facilities, road networks, mobile phone networks and scarcity of water are discussed.

5.4.1 Constraints Facing Livestock Development

One of the questionnaire questions asked the respondents on the constraints to livestock improvements. Over half, 50 (63.3%) of the respondents in the scheme and 42 (87.5%) in the adjacent villages, experienced at least one of the following constraints in their livestock livelihood activities. These include shortage of grazing land, inadequate of water, and prevalence of animal diseases. Figure 5.8 shows a comparison of constraints in livestock improvement in the scheme and the adjacent villages.

Figure 5.8 Constraints in Livestock Livelihood Improvement



Sources: Field data, 2013

The research findings show that one of the constraints to livelihood improvement concerning the livestock is animal diseases. A total of 34.2% of the respondents in scheme and 70.8% in the adjacent villages mentioned animal diseases as their biggest challenge. This is probably due to lack of finances to buy medicine for livestock or lack of agricultural extension services with respect to veterinary services in the scheme. Similarly, a study carried out by Timmermans (2004) in South Africa shows that the declining agricultural extension services in terms of veterinary services were an increasing burden for livestock farmers. It is also worth noting that a small number of respondents in the adjacent villages (2.1%) mentioned that they had a problem of theft, and almost the same number both in the scheme and adjacent villages were faced with the challenge of shortage of water to give to animals, especially those households away from the streams or *dambos*. Similarly, in Miengwe Resettlement Scheme in Copperbelt of Zambia, Phiri (2009) says that although there were two dams near the grazing area meant to provide water to animals, water for animals was a problem as the plots near the dam were demarcated and were being used by the owners as vegetable gardens.

It is clearly observed that grazing land is one of the physical assets available for both people in the scheme and the adjacent villages. For instance, 15.2% of the households in the scheme as compared to only 4.2% in the adjacent villages said that grazing land was a biggest challenge to their livelihood improvement (Figure 5.8). This probably implies that accessibility to grazing land by some households in the scheme is limited by land holdings of that household, and some farms might have no good pasture for their animals such that livestock husbandry is limited. In the same vein, Chiwera (2000) studying on opportunities and constraints for sustainable grazing management in resettlement areas in Zimbabwe, says that grazing of other people's livestock on some farms in Gutu South resettlement scheme is prohibited. This lack of grazing land with some households in Lukanga North Resettlement Scheme is likely to be a major concern for settlers who want to make livestock keeping a core activity. This in turn may have a negative impact on livelihoods. Some respondents however, revealed that they have no problems with grazing areas as they do not regard boundaries due to good relationships they have with their neighbours. This may imply that some households in the scheme are able to work hand in hand with neighbours in their quest to improve their livelihoods in terms of livestock.

5.4.2 Post-harvest Constraints

Table 5.8 shows the post harvest constraints outlined by the sampled households in both the scheme and adjacent villages

Table 5.8 Post-Harvest Constraints

Post-harvest Challenge	Scheme		Adjacent Community	
	Number	Percentage	Number	Percentage
No Challenges	15	19	10	20.8
Storage Facilities	9	11.4	7	14.6
Low Prices	28	35.4	11	22.9
Accessing the Market	18	22.8	15	31.3
Theft	4	5.1	5	10.4
Both Low Prices and Distance to the Market	5	6.3		
Total	**79**	**100**	**48**	**100**

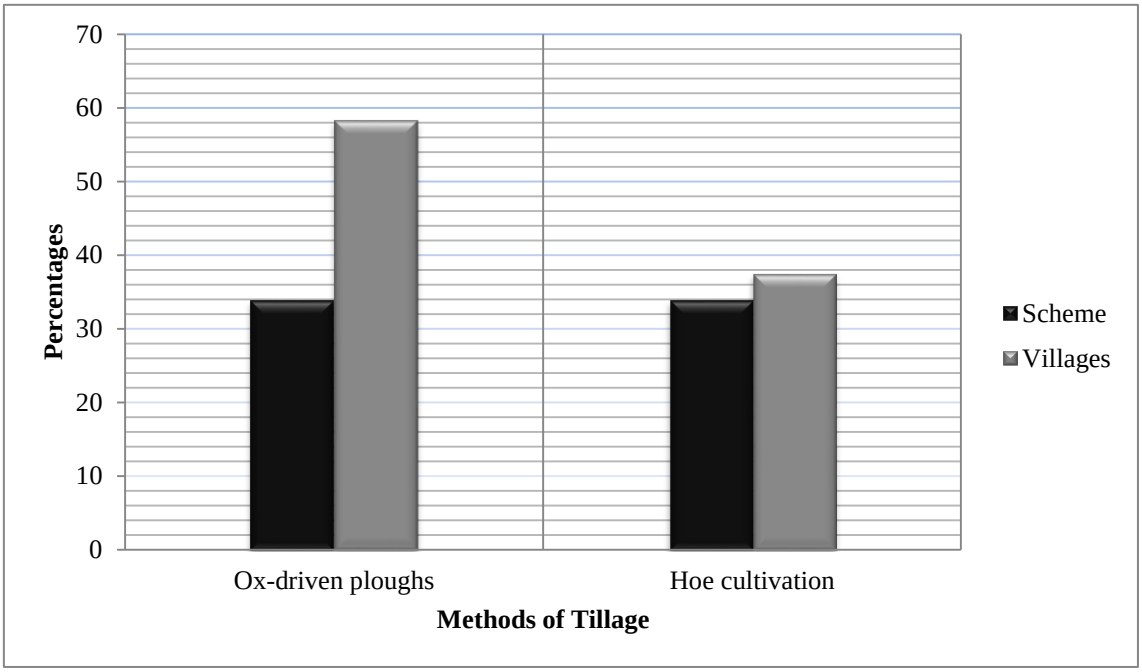
Sources: Field Data, 2013

The respondents explained that the infrequency of local transport has contributed to the poor operation of local markets. It was also revealed that the marketing services in the scheme are poor with Food Reserve Agency deports opening late and farmers experiencing considerable delays in receiving payments for the crops. This has probably led the traders to take advantage of this situation to impose unfair trading terms, leading to an increase in barter system of trade; where the prices of farm products are often lagging behind the rising production costs. For example, the price of maize was very low at the time of research, while at the same time, sorghum and millet remained with very little market prospect. This has made most households in the scheme and adjacent villages to concentrate on maize production. While lower prices of farm products benefit urban and rural non-farm households, they have negative effects on small and medium scale households who are reliant on crop income (Thurlow and Wobst, 2004). Furthermore, Thurlow and Wobst (2004) emphasizing on the importance of market say that increasing agricultural production without creating markets does not necessarily translate into sustainable livelihood improvements of the rural households.

5.4.3 Lack of draught power

Lack of draught power is yet another constraint to livelihood improvement in the scheme. Only 27 (34%) of the households interviewed in the scheme as compared to 28 (58.3%) in the adjacent villages, used draught power when ploughing their fields (Figure 5.9). Having sufficient animals for draught power may be important for timely ploughing and planting, which in turn is vital for agricultural production (Ramirez, 2006). It can be seen from the research findings that a number of households depend on hiring of oxen when cultivating their fields. Lack of draught power has been identified as a key problem delaying planting by some households in the scheme. This is also probably the reason why some households may not utilise their land fully. From the research findings of Phiri (2009), cultivation by the settlers in Miengwe Resettlement Scheme in Zambia had been made easier by the use of draught power.

Figure 5.9 Methods of Tillage in the Scheme and Adjacent Villages



Source: Field data, 2013

5.4.4 Lack of Agricultural Inputs

Research findings from the community meetings discussions show that the sampled households had faced problems in accessing inputs and support services for crop production. The specific inputs which most households said they had been able to access are seed and fertilizer, while a few others were able to buy weed killer. A total of 70 (88. 6%) of the households interviewed in the scheme and 31 (64.6%) in the adjacent

villages said that they had access to inputs either through government (Cooperatives) at a discount or through their own purchase. Most farmers could not access key inputs such as seed and fertilizer. In the same vein, Moyo and Skalness, (1990), notice that lack of access to inputs often constitutes as much of a constraint upon production as does land scarcity in most resettlement schemes in Zimbabwe.

5.4.5 Land Entitlement

As stated earlier, only 8.9% of the households in the scheme have title deeds for their land. This is comparable to the findings of Potts and Mutambirwa (1997) who say that most settlers in some resettlement schemes in Zimbabwe did not have title deeds. This probably implies that lack title deeds of some households may result in inadequate investment in infrastructure such as roads and transport, which is much needed for enhancement of livelihood improvements. Similarly, this is supported by Adams et al (1999) who say that tenure security can facilitate infrastructure development, service provision and economic development. Additionally, DFID (2003) contends that if land property rights are not secure, the vulnerability of households increases and will influence their livelihood strategies.

5.4.6 Lack of Extension Services

As stated earlier on, another constraint revealed by the survey is lack of agricultural extension services. This implies that the scheme lacked this important asset which could influence people's livelihood strategies in pursuit of income, security and well-being. Adato and Meinzen-Dick (2002), highlighting the need of this service say that agricultural research and technologies can reduce vulnerability of households, leading to improved livelihoods. This shows that agricultural extension service is important to households for dissemination of information on agricultural research and technologies. For example, in Zimbabwe, Adato and Meinzen-Dick (2002), contend that the richer farmers, who had increased incomes from higher maize yields because of agricultural research and technology of high breed maize seed, diversified into cattle and were better protected from drought shocks. Nevertheless, the results of the findings reveal that those in the scheme had more access to agricultural extension services than those in the adjacent villages, although the camp officer lived outside the scheme.

5.4.7 Health Facilities

The findings of research show also that households in the scheme have little access to health facilities. The only clinic building at the centre of the scheme was not yet in operation at the time of research. The clinics which are outside the scheme are too far for most households in the scheme; others go to the hospital in Mpongwe which is more than 30 kilometres, while others go the clinic in the adjacent villages, which is about the range of 5 to more than 30 kilometres depending on the location of the plot. According to Ellis (2000), health services are macro policies designed to raise the level of human capital, and distance to clinics may result in greater inequality in human capital arising overtime. The adjacent villages however, has better clinic infrastructure and the clinic was in operation although still many people had to walk long distances to access the facility.

5.4.8 Education Facilities

The findings of research also reveal that despite the fact that the scheme covers a large area of land (about 25,200 hectares), it has only one school. This may imply that except for households settled near that school, most children in the scheme do not have access to this school due to distance. Sen (1997) emphasising the importance of human capital in form of education, comments that the ability to read and write not only enhances people to secure better jobs and do them more efficiently, but also enhances their ability in discussions; to debate; to negotiate; to add their voice to the voice of multitudes influencing the households, local and national discourses on development. As a coping strategy however, the settlers in block B have organised a community school and employed a teacher whom they paid from their own resources at the time of research. Although untrained, a grade 12, the teacher was at least imparting basic knowledge to the children. The school was running from grade one to four.

5.4.9 Poor Roads and Transportation

One other constrain to livelihood improvement are poor road network. The research reveals that just like the community, the roads in the scheme are not in good condition. Similarly, Phiri (2009) argues that the roads in Kakolo Resettlement Scheme in Copperbelt Province of Zambia are not well maintained and are hardly passable during the rain season. The condition of roads is deteriorating due to heavy rains and poor maintenance. In addition, the research reveals that the bridges are very old and become impassable, cutting off communication between the scheme and urban areas during the rain season.

According to Ellis (2000), roads are part of the examples of physical assets that facilitate livelihood diversification as they have multiple effects in reducing the spatial cost of transactions of income generating activities. He further says that roads facilitate movements of people between places offering them different income generating opportunities; and they also create market and play an important role in transfer of information between places. This implies that in the scheme, poor roads have negative implications on livelihoods, like in the adjacent villages. As a coping strategy however, the settlers usually organise themselves and repair some roads so that some vehicles which buy maize can pass. Despite this effort, it was said that no vehicle from FRA actually reached as far as the agriculture storage shed at Block B in 2011/2012 farming season. This was because the roads were still not in good shape. The findings from the scheme community meeting show that most farmers just sold their maize to 'briefcase' buyers at a lower price of K36 per 50kg bag and at times at K50 per 50kg bag to the millers such as Antelope Milling Company, while the FRA price was K65. Those who still wanted to sell their maize to FRA had to travel long distances, and incurred high transportation cost plus the delay of payments, creating a negative impact on livelihoods. Discussions from the community meetings also show that motor vehicle owners usually inflate prices when transporting goods to the markets which are in urban centres; and essential government services such as mobile clinics and the supply of inputs are also rarely provided due to poor roads. This also means that difficulties in accessing the market, social services and agricultural inputs affect the sustainability of livelihoods of households in the scheme and adjacent villages.

This research also reveals that lack of adequate private or public transport to urban centres due to poor roads in the scheme is one of the constraints to livelihood improvement. As very few people own vehicles within the scheme, transport to any urban area or to Mpongwe is very limited, especially during the rain season as potential transporters avoid risk to damage their vehicles due to bad roads. According to the discussions in scheme community meetings, many people have to walk long distances to the far flung communities to chance vehicles going to Mpongwe and one may not be sure whether there would be transport on that day or not. Emphasising of the necessity of transport, Ellis (1999), says that it is the means by which households take their produce to the market; and it is the means of accessing facilities and services, including social bonding and development. This implies that many households find it difficult to transport and sell their produce due to inadequate transport facilities.

5.4.10 Poor Mobile Phones' Signals

The research reveals that both the scheme and the adjacent villages have poor signals of mobile phone network. Lack of mobile phone network may be a barrier to livelihood improvement in terms of information transfer of agricultural extension, market prices of goods and any other needed information in both areas. Duncombe (2007), emphasizing on the importance of information in terms of mobile phones says that information may be important in informing the short and long term decision making capacity of households. Poor mobile phone signals force those with mobile phones to go to the hills to obtain the signals. There are however, more people with cell phones in the scheme than the adjacent villages. This means that people in the scheme are more likely to have access to more information through mobile phones, which can improve their livelihoods than those in the adjacent villages.

5.4.11 Water Problem

Water is a problem in most parts of the resettlement scheme. Although the scheme has a vast land of about 25,200 hectares, it has only 15 boreholes which are inadequate to supply water to all the settlers because of distance, as most of the boreholes are more than three kilometres apart and people have to cover a distance of more than one and half kilometres. This implies that long distances to the water points deprive some

households the time for productive livelihood activities, and time is wasted in non productive activity of water collection. Similarly, in the study of Miengwe and Kakolo schemes, Phiri (2009) also argues that lack of water is the major reason for migration of the households out of the scheme. Unlike households in the scheme, most households in the adjacent villages draw water from nearby water sources of unprotected wells. It is also worth noting that the scheme has only one dam, which sometimes becomes dry, to retain water so as to supply the area during the time when there are no rains. This means that most households struggle to access water, especially that the number of boreholes are limited. This has affected households who want to engage in irrigation. According to Kemp-Benedict et al (2009), water related poverty emerges when there are inadequate water resources, and this impact negatively upon people's livelihood options and assets. This implies that the provisions of clean water has beneficial effects on rural livelihoods since it saves the labour time and avoid illnesses and diseases which comes with erratic water supply.

5.5 Strength and Weaknesses of the Resettlement Scheme

Many respondents suggested the strengths and weaknesses of Lukanga North Resettlement scheme as outlined below.

5.5.1 Strengths

The main strengths outlined in this research are those of land ownership and rural development.

5.5.1.1 Land ownership

When respondents were answering the survey question on whether the people in the scheme had better livelihoods than those in the adjacent villages, the responses in both the scheme and adjacent villages were different, thus 58 (73.4%) in the scheme and 21 (43.8%) in the adjacent villages said that the people in the scheme were better off than those in the adjacent villages. When those (58 in the scheme and 21 in the adjacent villages) were further asked on the reasons why they thought people in the scheme were better off than those in the adjacent villages, the reasons are given in Table 5.9. While the rest, 20(25.3%) in the scheme and 27 (56.2) in the adjacent villages said that there

was no difference between the people in the scheme and adjacent villages. A total of 1 (1.3%) of the respondents in the scheme did not know which group was better off than the other.

Table 5.9 Why people in the Scheme are perceived to be better-off

Reasons	No. of respondents in the scheme (n=58)	%	No. of respondents in the Adjacent village (n=21)	%
Independent of chiefs	18	31	5	23.8
No quarrels over land	9	42.9	1	4.8
Access to private land	31	53.4	15	71.4
Total	**58**	**100**	**21**	**100**

Source: field data, 2013

Through the findings of the survey and community meetings discussions, the resettlement scheme programme has given the people of Lukanga North an opportunity to have access to private land tenure, as already stated in 5.5.1.2. Furthermore, people are given an opportunity to enhance and secure land rights. This is very necessary in order to avoid arbitrary evictions and landlessness. The research findings have indicated that people appreciate and utilise their land according to their own capacity. This is supported by Adams et al (1999) who say that land may be much more essential if the rights holders are to invest in it and use it sustainably. Most households in the scheme claim that the resettlement programme has given them access to more land in contrast to the people in the adjacent villages. This is supported by An Agritex Writers' Group (1984) who said that resettlements offer the people more land than the communal land. Adams et al (1999) further says that most rural people have been unable to gain adequate and secure livelihoods from farming due to landlessness. The value of land is multiple. For instance, this land may be a family asset which can be sold in future or left in the custody of children and relatives in future. Land may also be used as mortgage to get loan from the bank, thus, that income may be invested to bring more livelihood assets, adding value to their well being.

5.5.1.2 Rural Development

Resettlement schemes in Zambia are used as mechanism for poverty reduction and rural development (GRZ, 1995). In this respect, the research findings from the key

informants' interviews indicate that resettlement schemes promote rural development in that most of them are situated in rural areas. Regarding this, Adams and Howell (2005), say that resettlement schemes are used as an important tool for poverty reduction and promotion of regional economic development through agricultural growth. According to May (1998), remoteness is associated with greater poverty and few livelihood options. This may imply that it is important to target those places rather than those already well integrated into diverse economic activities so as to reduce poverty.

5.5.2 Weaknesses

Weaknesses of the resettlement scheme as shown by the research results is lack of information

5.5.2.1 Lack of Information

One of the weaknesses highlighted by the community meeting discussants in the adjacent villages is that the information of land resettlement is not disseminated to the adjacent villages. This is because local people, except for those who were already settled in the scheme when it was created, have not benefited from the exercise of land acquisition. When asked of why they could not participate, most of them claimed that they were not aware of such an exercise, and that they also wanted that entitlement of land which they could call theirs rather than bowing down to rules and norms of chiefdom. Similarly, a research carried out by Potts and Mutambirwa (1997) shows that some community members were actually interested in the resettlement exercise although a few people had applied. This may mean that some local people in the adjacent villages are interested in settling in the resettlement scheme although they are not involved in the distribution of land due to lack of information on how to apply.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The research assessed the impact of the resettlement scheme on livelihoods of the settlers. It aimed at investigating whether or not Lukanga North resettlement scheme has improved the settlers' livelihoods. To achieve this, sustainable livelihood approach was used to provide a deeper analysis of the research questions on livelihood strategies; the extent to which the scheme has contributed to the improvement of livelihoods; strength and weaknesses of the resettlement scheme as a strategy for rural development as viewed by the people; and factors that constrain livelihood improvements in the scheme.

The livelihood strategies in the resettlement scheme include crop cultivation, livestock keeping and non-farm activities such as trading, and offering labour services. The research has shown that the average maize production per household is 125 X 50 kg and 65 X 50kg bag in the scheme and adjacent villages respectively, thereby possibly, showing more improved livelihoods in the scheme. Maize is the main crop grown both in the scheme and adjacent villages. The total mean Livestock Unit is more in the scheme (8.12) than adjacent villages (7.77). Evidence has also shown that 62% of households in the scheme and 41.7% in the adjacent villages do engage in multiple activities and rely on diversified income portfolios. The results also show that those in the scheme have comparatively the most diverse livelihoods, in comparison with households in the adjacent villages. This may imply that the former may be relatively well off and probably having more income for diversification than the later.

In terms of natural assets, the study findings have shown that all households in the scheme have access to private land tenure. For example, slightly more than half (54.4%) of the sampled households in the scheme had access to land of more than 20 hectares. Through the use of land, settlers are able to grow crops and keep livestock. The research has also shown that there a small percentage (6.3%) of the settlers involved in informal selling and demarcation of land, which may lead to accumulation of bigger land to the better off in future. The research findings also show that trees are important source of income to few households (3.8% in the scheme and 2.1% in the adjacent villages)

engaged in charcoal production, although this may lead to tree resource depletion, especially if the production and the number of households involved in this venture increases. The findings have shown that the source of drinking water in both the scheme and the adjacent villages are the rivers or streams, unprotected wells, protected wells and bore holes. A total of 36.7% and 20.8 of the sampled households in the scheme had access to bore holes.

In terms of human capital, the research has shown there are some household's heads with no formal education (7.6% in the scheme and 27.1% in the villages). This may show that some households may lack the necessary agricultural written information as they are unable to read and write. There was also no camp officer in the scheme at the time of field work although 19% in the scheme and 10% in the villages had access to the services of the camp officer residing outside the scheme. The research findings also indicated that there are more households in the scheme hiring labour than the adjacent villages; and also some households in the adjacent villages rely on the resettlement schemes to exchange their labour for money or any other goods such as maize for consumption.

In terms of physical assets, the research has shown that most households in the scheme have claimed to have accumulated some physical assets due to resettling in Lukanga North scheme. The presence of physical assets helps households to make use of them to improve their livelihoods. The survey revealed that physical assets such as ploughs and ox-carts are more numerous in the adjacent villages than in the scheme. This may imply that households in the adjacent villages are better off in terms of local transport and ploughing than those in the scheme. It is also worth noting that the survey findings showed that most households in the scheme are better-off in terms of socio-economic status as they have built more cement houses, since this may be an indicator of more income to undertake such ventures.

The research findings have shown that average income per household in the scheme is 2 times that of the adjacent villages, and the major sources of income in both the scheme and the adjacent villages are the sales from crops. The findings of the research have also shown that in both the scheme and the adjacent villages, most households have

problems in accessing credits. This may indicate that some households may find it difficult to buy inputs such as fertilizer and seed.

The research findings also show that the general accumulation of assets is better in the resettlement schemes than the adjacent villages. The resettlement scheme has provided access to private land tenure but has not complemented it with infrastructure development to enhance sustainable livelihoods. Access to land is a source of power to survive and make a living. Unlike the adjacent villages where households have access to customary land tenure where they are subjected to rules and norms of the chiefs, households in the scheme have access to private land tenure. Households in the scheme, however, need to secure their land in terms of title deeds as the findings of the research have shown that most households do not have title deeds for their land. Additionally, lack of grazing land may be a major concern for some households in the scheme, especially for those who want to engage in livestock keeping.

Social capital is identified in the utilisation of support networks. Social assets in both the scheme and villages include such things as exchange of information, equipment and hiring of draught power. Borrowing of money from friends, and membership of support organisations show some existence of social capital. These facilitate the improvement of crop production and have helped close gaps experienced by households in their attempts to pursue agricultural activities.

With regard to strengths of the resettlement scheme programme, the findings of the research indicated that the scheme promotes rural development in the area where it is situated. Additionally, the survey showed that the scheme has given the people of Lukanga North the opportunity to have access to private land tenure, which is one of the important livelihood assets which may lead to the well-being of households. Most households, however, in the scheme lack title deeds, which is a drawback to improving livelihoods. The other weakness identified is that of lack of information to the local community. This shows that people who are interested to have access to private land among the local people may not do so due to lack of information of the process required, and sometimes due to the incapability of handling the process of land application.

The survey revealed that lack of grazing land and livestock diseases are some of the constraints to livelihood improvement of some households in the scheme. Further, lack of access to clean water; and also distance to water points, are critical problems in the scheme just like in the adjacent villages. These constrain the livelihood improvement efforts. The survey also shows that most households in the scheme lack access to physical infrastructure such as schools and clinics. There are also poor road networks, coupled with lack of adequate transport to urban centres. These also constrain livelihood improvements in terms of access to education, health and the market, which are vital to the well-being of the people. Similarly, agricultural extension services in the scheme are missing, causing doubt on the ability of the programme to continue improving livelihoods in terms of education on agricultural productivity.

Overall, it can be said that the resettlement programme has a positive impact on livelihoods as the accumulation of assets are more in the scheme than the adjacent villages. Additionally, the overall percentage of households who claim to have accumulated some physical assets as a result of having access to land in resettlement scheme is high than that of the households in the adjacent villages who claim to have accumulated some physical assets as well ever since the resettlement scheme was created. More over, 75% of the respondents recorded positive changes in the production levels ever since they settled in the scheme, but only 31.2% in the adjacent villages recorded positive changes in their production levels ever since the scheme was created.

6.2 Recommendations

1. The scheme management in conjunction with other responsible ministries such as Ministry of lands, Ministry of Agriculture need to improve physical infrastructure such as roads, health facilities, schools and water sources in the scheme. These are the building blocks of households' resiliencies to vulnerabilities.
2. The Ministry of Agriculture should provide an agricultural camp officer in the scheme. This can help the farmers to have more knowledge on crop production and animal husbandry, which in turn will improve productivity adding to food security at household level.

3. Dams for water storage need to be made. The storage of water in the dams can help households to start irrigation schemes during the dry season, adding to more food security and better income. In addition to this, some more bore holes need to be sunk in the scheme so as to improve accessibility of water by scheme members.
4. The Scheme management through the office of the Vice President should encourage the settlers to acquire title deeds. This will make them have a sense of ownership which induces prudent stewardship. This in turn will motivate households to improve and maintain productivity, and improve livelihoods.
5. There is also need for the money lending institutions to help the settlers to have access loans. The scheme leadership ought to talk to lending institutions on the need to help the settlers. It is also the duty of the scheme leadership to educate the settlers of procedures on how to borrow money. This will increase the capital base for more improved livelihoods.
6. People in the community surrounding the scheme need to be informed of the procedures to apply for land in the resettlement scheme so that those interested can apply and own land in the scheme.
7. Generally, given the positive findings especially of private land ownership, there is need to create more resettlement schemes as it is one of the ways to help the poor have entitlements to land. This can also help in the fight against rural poverty and can promote rural development.

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APPENDIX 1

LIVELIHOOD QUESTIONNAIRE

GENERAL HOUSEHOLD INFORMATION				
1.	sex of the household head	1=male 2= female	|__|
2	sex of the main respondent	1=male 2= female	|__|
3	Age of the household head (in years)	**1=** Up to 15years **2=** 16 to 19 years **3=** 20 to 39 years **4=** 40 to 59 years **5=** 60 years or older	|__|
4	What is the education level for the Household head?	**1** = Never been to school **2** = Primary **3** = Secondary **4** = Tertiary **5** = Other, specify:_____	|__|
5	How many people eat and stay in the household Permanently?	**4a –** males |__|__|	**4b** females |__|__|
6	Number of children under 15 years of Age	**5a –** males |__|__|	**5b** females |__|__|
7	Number of persons aged **16-59** years	**6a –** males |__|__|	**6b – fe**males |__|__|
8	Number of persons aged **60** years and above	**7a –** males |__|__|	**7b – fe**males |__|__|

LIVELIHOOD STRATEGIES			
9	What is the main livelihood for your households?	1=farming 2=other, specify.....	|__|
10	Do you grow any of the following crops on your farm? 1=yes 2=no		

	Type of crop grown	**Amount produced (50kg)**	**Quantity sold (50kg)**	**Quantity Given (50kg)**
10a	Maize |__|	|__||__|	|__||__|	|__||__|
10b	Groundnuts |__|	|__||__|	|__||__|	|__||__|
10c	soya beans |__|	|__||__|	|__||__|	|__||__|
10d	Sun flower |__|	|__||__|	|__||__|	|__||__|

	Cotton |__|	|__||__|	|__||__|	|__||__|
	Other, specify |__|	|__||__|	|__||__|	|__||__|

11	Does your households own livestock	1=yes 2=no	|__|
12	Indicate the number of livestock that your household own		

	Type of Asset Indicate 1= yes 2=no	**Number of Assets owned**	**Increase/Decrease** 1=increased 2= decreased	**Reason for change** 1=sale 2=purchase 3=Gift 4=damaged 5=stolen 6=other, specify
12a	Cattle	19a |__|	20a |__|	21a |__|
12b	Goats	19b |__|	20b |__|	21b |__|
12c	Sheep	19c |__|	20c |__|	21c |__|
12d	Donkey	19d |__|	20d |__|	21d |__|
12e	Pigs	19e |__|	20e |__|	21e |__|
12f	Other, specify.....	19f |__|	20f |__|	21f |__|

13	Has there been any change in farming status ever since you moved to the scheme (for those in the scheme) or is there any change in your farming status ever since the scheme has been created? (for community)	1=no change 2=positive change 3=negative change	|__|
14	Does your household conduct any irrigation?	1=yes 2=no	
15	If no, to the above question in 36a, why don't you conduct irrigation?	1=lack of enough water 2= there is too much work 3=other, specify.....	|__|
16	How many main meals does your household normally have in a day?	1 = One 2 = Two 3 = Three 4 = More than three	|__|
17	Have the household members regularly reduced the number of meals eaten per day?	1=yes 2=no	|__|
18	What other livelihood activities apart from farming is your household engaged in?	1=selling and buying 2=offering a service-hammer mill 3=offering a service-labour 4=offering a service-transport 5=other, specify	|__| |__| |__|

19	How many hired workers do you have on your farm?	|__|
20	Which of the following livelihood activities are you engaged in?	

	Type of activity	**Amount realised**
20a	Employment |__|	|__|__||__|
20b	Remittances |__|	|__||__||__|
20c	Trading |__|	|__||__||__|
20d	Others, specify |__|	|__||__||__|

ASSET ASSESSMENT

Natural assets

21	How many years have passed since you acquired this farm site	1= less than 2 years 2= between 2 to 5 years 3=more that 5 years but less than 10 years 4= 10 and above years	|__|
22	How many hectares is your land	1= less than 5 hectares 2= between 5 to 10 hectares 3=between 10 to 20 hectares 4=more than more than 20 hectares	
23	Do you have a title deed for your farm	1=yes 2=no	|__|
24	Has there been any change to the household land size over the past years	1=no, it has remained the same 2=Yes it has decreased 3=Yes it has increased	|__|
25	What was the reason for change	1= sold 2=bought 3=others, specify	|__|
26	What is the main source of drinking water?	1= river or lake 2= unprotected well 3= protected well 4= borehole 5= piped water 6= Other, Specify.....	|__|
27	Do you treat the water before drinking?	1=yes 2=no	|__|
28	What should be done to improve your livelihood than is the case now?	.....	
29	Are you engaged in charcoal production	1=yes 2=No	|__|
30	If yes to the above question, how many bags of charcoal did you produce for the 2011/2012 farming season	|__|	

Human assets			
31	Which of the following services do have in your area?	1=clinic 2=schools 3=agricultural officer's 4=other, specify	|__|
32	How many hired workers do you have on your farm?	|__|	
33	What type of labour do you use	1=family labour only 2=family labour and hired labour	|__|
Physical assets			
34	What type of housing is occupied by the household?	**1** = Traditional hut (pole & mud) **2** = Improved traditional hut (unburnt bricks) **3** = Improved traditional hut (Burnt Bricks) **4** = Conventional house **5** = Other, specify_____	|__|
35	What material is the roof made of?	**1** = Asbestos sheets **2** = Corrugated Iron sheets **3** = Thatch **4** = Other, specify _____	|__|
36	How many of the following assets have been accumulated as a result of settling in the resettlement scheme? (For those in the scheme) or how many of the following assets do you own? (for those in the community)		

	Type of Asset **Indicate** **1= yes** **2=no**	**Number of Assets owned**	**Increase/Decrease** **1=increased** **2= decreased**	**Reason for change** **1=sale** **2=purchase** **3=Gift** **4=damaged** **5=stolen** **6=other, specify**
36a	Hoe |__|	15a. |__|	16 a. |__|	17a. |__|
36b	Plough |__|	15b |__|	16b |__|	17b. |__|
36c	Bicycle |__|	15c |__|	16c |__|	17c |__|
36d	Ox-cart |__|	15d |__|	16d |__|	17d |__|
36e	Tractor |__|	15e |__|	16e |__|	17e |__|
36f	Sawing machine |__|	15f |__|	16f |__|	17f |__|

36g	Vehicle |__|	15g |__|	16g |__|	17g |__|
36h	Hammer mill|__|	15h |__|	16h |__|	17h |__|
36i	Hand mill|__|	15i |__|	16i |__|	17i |__|
36j	Cell phone|__|	15j |__|	16j |__|	17j |__|
36k	Other assets.....	15k |__|	16k |__|	17k |__|

	Financial assets		
37	What is your livelihood main income source?	1=sales from crops 2=employment 3=trading 4=sales from charcoal 5=other, specify	|__|
38	Do you have any problems in accessing formal financial lending institutions?	1=yes 2=no	|__|
39	What problems do you have in getting the credit you need?	1.lack of lending institutions 2=fear 3= have no access to the bank 4=no need for credit 5=other, specify.....	|__| |__| |__|
	Social assets		
40	How do you access such inputs?	1=purchasing 2=borrowing 3=loan 4=other, specify	|__|
41	Which organisations do you have access to?	1=farmers association 2=farmers cooperatives 3=other, specify.....	|__|
	CONSTRAINTS		
42	Do you use inputs for your agriculture?	1=yes 2=no	|__|
43	How do you access such inputs?	1=purchasing 2=borrowing 3=loan 4=other, specify	|__|
44	What kind of input do you use?	1=fertiliser 2=seed 3=weed killer 4=other, specify	|__|
45	How do you plough your fields?	1=ox-driven plough 2=tractor 3=hiring 4=hoe-cultivation 5=other, specify	|__|

46	What constraints/challenges do you face in your livestock livelihood activities	1=shortage of grazing land 2=lack of water 3=animal diseases 4=other, specify.....	|__|
47	What constraints/challenges do you face in your post-harvest management	1=lack of enough storage facilities 2=low prices of farm products 3=theft 4=other, specify	|__|
48	What are the solutions to the constraints in your livelihood activities?	....	
	STRENGTH AND WEAKNESS OF THE RESETTLEMENT SCHEME		
49	Do people in the resettlement scheme have better livelihoods than those in the community?	1=yes 2=no	|__|
50	If yes to the above question, what are the reasons why you think they are better than those in the community	1=independent of chiefs 2=No quarrels over land 3=own land 4=others, specify	|__|
51	What are the advantages and disadvantages of the resettlement scheme	Advantages .... Disadvantages	

APPENDIX 2

INTERVIEW GUIDE FOR KEY INFORMANTS

Personal Information:

1. Name……

2. Position……

3. Contact details……

Information on Resettlement Schemes

1. When was the scheme established?

   ……
   ……

2. Do you think people have benefited from the resettlement exercise?

   ……

3. Why do you say so?

   ……
   ……

3. How different are the benefits of the settlers compared to these other village settlements?

   ……

   ……
   ……...
   ……

4. What are the changes (positive and negative) in the people's lives because of the resettlement schemes?

Positive changes	Negative changes
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

5. What challenges do Resettlement Schemes face?

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

6. What are the solutions to these challenges?

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

7. Do farmers utilise fully the land allocated to them? .....

8. Why do you say so?

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

9. Do you encourage the farmers to do other activities apart from farming? .....

10. If yes, how? And what are these other activities?

.....
.....

11. Which category of people have access to financial services or credit markets, and why?

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

12. Do the people utilise fully the benefits of these financial services to improve their livelihoods? If yes in which way?

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

13. Are these resettlement schemes easily accessible in terms of roads and transport?

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

14. What kind of training (if at all you give) do you give the farmers and how have they benefited?

.....
.....

.....
.....

15. What other comments can you pass over resettlement schemes?

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

APPENDIX 3

QUESTIONS FOR DISCUSSIONS IN THE COMMUNITY MEETINGS IN THE SCHEME AND ADJACENT VILLAGES

1. What are the livelihood activities that you undertake? (List them in order of importance or contribution to income)

2. Have people's livelihoods improved since they joined the settlement?

3. If yes how?

4. If no, why?

5. List the livelihood assets that people have accumulated in the resettlement scheme since you came here?

6. List the advantages and disadvantages of staying in the resettlement scheme.

7. What are the problems which people face in this resettlement scheme? And what are the solutions to these problems?

8. How do you manage with these problems? (What are the coping short term and Long term adaptation strategies?)

9. Have resettlement schemes contributed to poverty reduction?

10 If yes, how?

11. If no, why?

12. What kind of people has benefited most in the resettlement programme?

13. Why do you say so?

14. What are the differences between the households in the scheme and community?

15. Any other things you would to comment about the resettlement schemes?