

**INFLUENCE OF SETTLEMENT SCHEME PROGRAMMES
ON THE SOCIO-ECONOMIC LIVELIHOODS OF LAKE
KENYATTA I SETTLEMENT SCHEME SETTLERS, LAMU
COUNTY, KENYA**

BY

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**A Research Project Report Submitted in Partial Fulfilment of the
Requirements for the Award of the Degree of Master of Arts in
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DECLARATION

This research project report is my original work and has not been presented for academic purposes in the University of Nairobi or any other University.

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DEDICATION

This work is particularly dedicated to my family members: my wife Hyline and my children: Eunice, Rachael and Corliss thank you all for your unconditional love and for showing me by example what it means to cherish, love and treat others with respect.

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LIST OF ABBREVIATIONS AND ACRONYMS

FGDs	Focus Group Discussions
GASP	German-Assisted Settlement Programme
LAKWA	Lake Kenyatta Water User Association
LAPSSET	Lamu Port Southern Sudan Ethiopia Transport Corridor
NCAPD	National Coordinating Agency for Population and Development
NEMA	National Environmental Management Authority
NLC	National Land Commission
PBOs/NGOs	Public Benefit Organizations/Non-Governmental Organizations
SPSS	Statistical Package for Social Sciences
TJRC	Truth, Justice and Reconciliation Commission
WARMA	Water Resources Management Authority

ABSTRACT

The purpose of this study was to assess the influences of settlement scheme programmes on the socio-economic livelihoods of the settlers in Lake Kenyatta I settlement scheme, Lamu County. The study specifically sought to establish the influence of land title deeds as collateral, land access rights for agriculture influences settler's household income in Lake Kenyatta I Settlement Scheme and infrastructure development on settler's socio-economic livelihoods in Lake Kenyatta I settlement scheme. The study adopted a descriptive survey design. This study targeted 3,500 household heads of Lake Kenyatta I settlers, 10 community/county leaders and 8 religious leaders. This added up to a target population of 3,518 respondents. Simple random sampling technique was used to select the sample of 342 from the household heads. For the community/county leaders and religious leaders, the study took a census approach. This added up to a sample size of 360 respondents. The study employed the use of questionnaires to collect primary data. The questionnaire was administered through drop and pick-later method to the sampled population. Quantitative method involved descriptive analysis such as absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Content analysis was employed for the qualitative data and then presented in prose. The study also conducted a Pearson's correlation and Correlation analysis to establish the relationship between the variables. Frequency tables were used to present the data for easy comparison. The study found out that household heads, community/county leaders and religious leaders interviewed had title deeds and that they were affected positively by owning a title deed. The findings revealed that there is a positive relationship between socio-economic livelihood and infrastructure development, land use rights for agriculture and use of land titles as collateral of magnitude 0.638, 0.764 and 0.622 respectively. The study concludes that land use rights for agriculture has the highest effect on socio-economic livelihood, followed by infrastructure development while use of land titles as collateral had the lowest effect on the socio-economic livelihood of Lake Kenyatta settlement scheme beneficiaries, Lamu County, Kenya. The study recommends that all people living within the settlement should be awarded title deeds for lands that they own. This will ensure that they enjoy the benefits of having a title deed to improve their socio-economic livelihoods.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of settlement scheme programmes may have originated from the Group Settlement Scheme Programme, which was an assisted migration scheme that operated in Western Australia and other parts of Europe from the early 1920s, following the Soldier Settlement Scheme Programme that came into being immediately after World War I (Gabbedy, 1988).

By the end of the 20th century, there were over 4,500 settlement schemes in over 140 countries. The period of economic growth following the Second World War saw a phenomenal rise in the global settlement scheme programmes, lasting well into the 1970s and 1980s. At its peak, nearly 500 settlement schemes were opened worldwide in the period from 1970 to 1975. However, there has been a decline in the pace of settlement scheme development over the past two decades in North America and Europe where most technically attractive sites are already developed. The average settlement schemes today are about 35 years old (Asmal, 2000).

The overall objective of settlement schemes programmes is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, particularly the rural poor (Work, 2011). Because of rapid economic growth, population pressure and the degradation of natural resources, the settlement of people in the settlement schemes has become a dominant development in many parts of the world (Mengistu 2005). Settlement scheme programmes involve moving people from original settlement sites to resettle in new areas where they can begin new trends of life by adapting themselves to the biophysical, social and administrative systems of the new environment (Kassahun, 2000). They involve inducing development in previously underdeveloped areas and contribute positively to the socio-economic development of the rural areas where the programs are thus bringing significant benefits to communities through construction of roads, health, educational facilities, creation of jobs and other economic opportunities (ICMM, 2006).

Settlement schemes have been promoted as an important means of meeting perceived needs for community and as long-term, strategic investments, which have many additional benefits. Some

of these additional benefits are typical of all large public infrastructure projects, while others are unique to settlement schemes and specific to particular programs. Regional development, job creation, and fostering an industry base with export capability are additional considerations for community socio-economic empowerment. Some countries such as Brazil have developed settlement scheme programs for their citizens to enable them carry on their socio-economic livelihoods normally (Canter, 2004).

Settlement schemes have been utilized as a strategy for rural development in some continents such as Asia and Africa (Chambers, 1983). Settlement schemes and the expansion of the agricultural market were deliberately created by the British colonial government to defuse growing dissatisfaction over land shortage. There was also a strong desire to satisfy the demand for raw materials for both regional and metropolitan industries (Gann et al, 1983). Secondly changes in agricultural sector led to an interaction between the traditional and the capitalist mode of production which subsequently led to a process of social and economic differentiation among the settlers in the settlement schemes (African Affairs Annual Report, 1987).

In Africa the main objective of establishing settlement schemes was to re-distribute land that had been alienated by the colonial government to the hitherto disinherited landless peasants. The settlement program was meant to enable Africans take over large scale white settler farms and continue with agricultural production. The settlement program was therefore not just a political expedient. It was meant to stimulate an agrarian revolution which alone could guarantee economic prosperity for the majority (Gachagua & Wangu, 2007). Originally, the schemes were planned in such a way as to be self-sufficient in terms of infrastructure and basic social amenities. Agricultural extension services and other farm inputs were also made available to the settled populations at affordable prices.

In Kenya, settlement scheme programmes were initiated by the Kenyan Government immediately after independence in 1963 (Harbeson, 1971). According to him, land resettlement was promised by the British Government in return for the moderate European settlers' support of the decision to move Kenya towards independence. The first phase of land resettlement enabled 5,000 experienced farmers, who had proved their ability and accumulated some savings, to purchase and develop sub-divisions of European farms with the financial aid of the World Bank,

the Commonwealth Development Corporation and the British Government. The programme was intended to integrate the White Highlands in accordance with the multi-racial thinking of moderate Europeans, while serving two important economic purposes - developing previous underdeveloped areas of the White Highlands and restoring a market in land for the benefit of African and White farmers.

Chambers (1969) noted that the settlement schemes have been used by the government to achieve a variety of goals. These have included redistribution of population from high pressure to low pressure areas, achieving economies of scale in agriculture, resettling landless household, redistribution of land and ethnic integration. While the objectives may vary, settlement programs have two broad features in common; geographical movement of population and a large element of control by the state or its agents.

Between 1969 and 1980 the Kenyan government established settlement schemes in different parts of the country to improve the socio-economic status of rural population, promote ethnic integration and ultimately serve as nuclei of rural towns (Kandawire, 1985). The post-independence settlement strategy was part of a broader agricultural development policy which aimed at raising rural farm practices. The schemes were to be established on highly productive but unoccupied land (Mphande, 1984). Agricultural extension was to play an important role in the strategy. Embedded in the settlement schemes policy was the political objective of promoting inter-ethnic cooperation and nationhood by bringing together on one site people from different ethnic backgrounds (Kishindo 1997). It is upon this backdrop that the present study was born in trying to investigate the influence of settlement scheme programmes on the socio-economic livelihood of the settlers. Lake Kenyatta I Settlement Scheme in Lamu County has been selected as the case for study.

1.1.1 Lake Kenyatta Settlement Scheme

Lake Kenyatta Settlement Scheme, located in Lamu County, is one of the oldest government settlement schemes to have been established in the country. It was initiated in 1976 as a cotton growing scheme under the then Ministry of Agriculture and Livestock Development (Leo, 2008). Other settlement schemes found within the county include Hindi Mahogoni Settlement Scheme and Witu Settlement Scheme (phases 1 and 2). Lake Kenyatta Settlement scheme is situated in

Mpeketoni Division of Lamu County and was implemented in 1977-1986 to settle the jobless and landless people of Coast and other areas of Kenya (Hoorweg, 1996).

It was implemented through the Kenya-German Cooperation under the German-Assisted Settlement Programme (GASP). The settlement scheme is approximately 14,224 hectares, with a total of 3,557 plots; the number of settlement plots is 3, 480, while the remaining 77 plots are public utility plots (Kenya National Bureau of Statistics, 2013). It is a fully developed settlement scheme with an average acreage under cultivation of 9 out of 10 acres (Leo, 2008). It is a model scheme in Lamu and Kenya at large.

1.2 Statement of the Problem

In most developing countries such as Kenya, the livelihood of the majority depends on agriculture (Worku, 2011). The idea of settlement, if properly planned and implemented, it would help tackle widespread environmental degradation and the country's structural dependence on foreign food aid. In fact, moving people away from overpopulated and famine affected areas would not only benefit those resettled, but it would also help the people who remained in the famine areas (Gebre, 2004).

Settlement scheme programmes are a solution that could go beyond livelihood improvement and put into use areas that were assumed infertile and underutilized. However, most of the settlement programmes undertaken in Kenya have been characterized by challenges and problems leaving the settled people facing the risks of more impoverished rather than improving their livelihood (Gebre, 2004).

Lake Kenyatta settlement scheme is one of the oldest land settlement schemes in Kenya which was established and implemented through the Kenyan-German co-operation (GOK 2004) under the German Assisted Settlement Programme (GASP). The two governments invested a lot of resources in planning and establish physical infrastructure like access roads, Schools and farmers training institution, health facilities and Piped water. Social infrastructure like CBOs, environmental conservancy groups and social halls. This study Government also issued title deeds to the settlers to ensure security of tenure and secure land rights for agriculture and for collateral. The study therefore sought to find out the influence how these resources invested by

the government, development partner and the non-governmental organizations on the settlers socio-economic livelihood.

Previous studies conducted on settlement scheme have concentrated mostly on the environmental impacts of government land settlement schemes in Lake Kenyatta. Mwangi (2012) observed that settlers in Lake Kenyatta settlement scheme have negatively impacted on the environment ICMM (2006) in their study found out that Settlement scheme programs induce development in previously undeveloped areas and they contribute positively to the socio-economic development of the rural areas where the programmes take place. Settlement schemes can bring significant benefits to communities as construction of roads, health, educational facilities, creation of jobs and other economic opportunities.

Although numerous studies have been conducted on the issue of landlessness in Kenya (Adan & Pkalya, 2006; Meur et al., 2006), few studies have been conducted to establish the influences of government-initiated land settlement scheme programmes on the settlers' socio-economic livelihoods. This study therefore investigated how the use of title deeds as collateral, access land rights for agriculture and the infrastructure development has influenced the settlers' socio-economic livelihood in Lake Kenyatta settlement scheme. This enabled the policy makers and other interested stakeholders evaluate the effectiveness of these programs and, therefore, make informed decisions on whether to carry on with the interventions.

1.3 Purpose of the Study

The study aimed at assessing the influence of settlement scheme programmes on the socio-economic livelihoods of the settlers of Lake Kenyatta settlement I scheme, Lamu County.

1.4 Objectives of the Study

The objectives that guided this study included the following:

- i. To establish how land title deeds as collateral influences settlers' socio-economic livelihoods.
- ii. To assess the extent to which land access rights for agriculture influences settlers' socio-economic livelihood in Lake Kenyatta Settlement Scheme.

- iii. To determine how infrastructure development in Lake Kenyatta settlement scheme influences settler's socio-economic livelihoods.

1.5 Research Questions

Due to the gaps in knowledge, the study therefore sought to answer these research questions:

- i. To what extent has the use of land titles as collateral influenced the settlers' socio-economic livelihoods?
- ii. What are the influences of land access rights for agriculture on the settler' socio-economic livelihood in Lake Kenyatta settlement scheme?
- iii. To what extent do infrastructure development in Lake Kenyatta settlement scheme influence settler's socio-economic livelihoods?

1.6 Significance of the Study

The findings from this study will be of great importance to various stakeholders, and policy makers - especially those charged with the responsibility of ensuring equitability in the allocation, use and management of land and other natural resources related to land in the country and even beyond (such as the County Governments, Ministry of Lands, housing and urban development, the National Land Commission, NEMA and WARMA) in formulating and implementing proper laws that will help in achieving sustainable and fair utilization of land and other natural resources.

The study will also be of great significance to the beneficiaries in settlement schemes as they will have a better understanding of the roles the government should play to better their lives while in the settlement schemes. They will also have a better knowledge on the procedures involved in accessing land title deeds and how they can use these title deeds to better their lives. This study will also highlight the need for a better infrastructure to improve the settlers' socio-economic livelihoods of the settlement scheme.

In addition, findings from the current research will serve as a key tool for evaluating the effectiveness and sustainability of land settlement scheme programs in the country as a means of settling the landless peoples and communities.

The study will be of great significance for future scholars and academicians who may want to advance further studies on the issue of the role of settlement scheme programs in influencing the life of the beneficiaries in Kenya by serving as the basis for such studies through its findings, conclusions and suggestions for further studies, hence leading to generation of more new, and perhaps better, knowledge.

1.7 Delimitations of the Study

The study aimed at understanding the influences on settlers' socio-economic livelihoods of Lake Kenyatta I settlement scheme residents in Lamu County. The data collection was on Lake Kenyatta I settlement scheme settlers. The region was ideal for the study because the socio-economic activities of settlement scheme residents are similar to a large extent to other areas in Kenya. Therefore, the results that were obtained from Lake Kenyatta I settlement scheme residents could be generalized across board to represent other settlement scheme settler in the country.

1.8 Limitations of the Study

Due to time limitation, the researcher could not carry out the study in the whole of Lake Kenyatta settlement scheme residents in Lamu County. However, the researcher tried to come up with a representative sample to ensure the findings was a representative of Lake Kenyatta settlement scheme residents. The study also suffered inadequacy of funds for fieldwork. However the researcher ensured that the sample size guaranteed ease of work and was representative of the entire population. The researcher ensured the questions were precise and to the point in designing the questionnaire.

Other limitations that the researcher is likely to encountered especially during the field work were as follows: Some respondents not willing to filling-in the key informant questionnaires; This was be overcome by seeking for permission from the leadership of the targeted groups of respondents and by organizing a familiarization forum with the respondents themselves. In addition, alternative tools to the use of questionnaires - such as FGDs and interviews – were also be explored. Lastly, inadequate time was allocated for collecting, analyzing, interpreting and presenting field data.

1.9 Definition of Significant Terms

Settlement Scheme Programmes: These are government-initiated programmes – established at the dawn of independence in 1963 to date - with the main aim of settling jobless and landless people in Kenya. The government initiated various programmes which included planning, surveying, and allocation of parcels of land, development of infrastructural facilities and issuance of title deeds. The beneficiaries who were allocated land for farming are the settlers who moved from their original home started living in the settlement scheme.

Infrastructure Development: Refers to the basic physical and organizational structures and facilities (such as buildings, access roads, schools, piped water, electricity and health centres) needed for the operation of a government, Society, or enterprise.

Socio-economic livelihoods: These are elements or activities that are based on specific social activities which influence, regulate or determine how a certain society/community operates and are organized (such as language, farming activities, etc.) It is an individual's or group's position within the hierarchical social structures. It depends on combination of variables including occupation, education, income, wealth and place of residence.

Title as Collateral: Pledging title deed by a borrower to secure a loan or other credit, and subject to seizure in the event of default.

The land Access Rights for Agriculture: Right to land is bound up with countries identity, its livelihood and its survival. Access is the ability of a community to actually benefit from a certain essential resource, and it includes a wider range of relations than those derived from property ownership rights alone. This is the freedom or ability to use a certain piece of land for any purpose. The rights are given by the government through issuing title deed to show the ownership rights of the piece of land.

1.10 Basic Assumptions of the Study

This study will have the following assumptions: that the subjects of the study will be willing to respond to the questions raised in the questionnaire. It will also assume that there will be no

serious changes in the composition of the target population that would be fundamental enough to affect the effectiveness of the sample.

1.11 Organization of the Study

The study is organized into five chapters. Chapter one will contain the introduction to the study. It presents background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitations of the study, limitations of the Study and the definition of significant terms. On the other hand, chapter two shall review the literature based on the objectives of the study. It further looks at the conceptual framework and finally the summary. Chapter three covers the research methodology of the study. The chapter describes the research design, target population, sampling procedure, tools and techniques of data collection, pre-testing, data analysis, ethical considerations and finally the operational definition of variables. Chapter four presents data analysis Presentation, Interpretation and Discussion of the study as set out in the research methodology. The study finally closes with chapter five which presents the summary, conclusion, and recommendations for action and further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this second chapter, relevant literature information that is related and consistent with the objectives of the study is reviewed. Important issues and practical problems shall be brought out and critically examined so as to determine the current facts. This section is vital as it determines the information that link the current study with past studies and what future studies will still need to explore so as to improve knowledge.

2.2 Theoretical Review

Land has always been critical to Kenya's economic, social, political and cultural development. Consequently, a number of principles have guided land settlement policy in Kenya. According to Hoorweg (1995) and Hazlewood (1985), two principles stand out as being key determinants: (1) The political need to meet the demand for land among the growing population; and (2) The agricultural need to assure national agricultural production.

When Kenya gained her independence in 1963, it inherited a highly unequal land distribution pattern that disadvantaged the African population in terms of ownership over productive land. This has resulted in pressing questions about land distribution and reform strategies up to the present day (FIAN, 2010). In a country where 85% of the population relies on agriculture as their primary livelihood source, yet 88.4% have access to less than three hectares of land, tensions over land simmer (O'Brien, 2011). This is particularly true for minority ethnic groups who have been systematically excluded from land ownership (Syagga, 2006).

Land was also a major trigger for the struggle for independence against colonial settlers who occupied the choicest arable land, commonly referred to as the Kenyan Highlands. Consequently, there has been an endless, ongoing struggle with land reforms from as early as 1895, involving pertinent land issues including, among others: review and repealing of outdated land laws; review of long and tedious process of planning, surveying, adjudication and registration of land; addressing irregular allocation of land, squatting and landlessness; tackling

unsustainable land utilization, and utilization of arable land for housing and non-agricultural activities; as well as examining lack of access to land by some members of the society (such as women). This chapter aims at examining how the formation and implementation of government-initiated land settlement scheme programmes have influenced the socio-economic livelihood of the settlers in Lamu County. The study is underpinned in diffusion theory resettlement and chambers participatory development model.

2.2.1 The Diffusion Theory Resettlement

The diffusion theory has its origin in the natural sciences, particularly in plant and animal studies. It has also been of great concern to researchers in geography and sociology; who are interested in the diffusion or spread of phenomena over space and time. Diffusion theory attempts to interpret resettlements in terms of location. The theory focused on the interaction, spread, contact, change, and growth of resettlement patterns and the physical distances separating the original settlements from the new resettlements, and the local economic resources of the new sites (Woube, 2005; Akpanudoedehe, 2010).

Diffusion theory identified three types of diffusion processes. The first type reveals that first adopters of innovators, who are early majority, are followed by the second adopters who are the late majority, and the third adopters are those who arrive last. Adoptive process of affected persons depend on a number of factors including geographical barriers such as mountains, rivers, lakes and deserts, other factors are languages, cultures, ethnicity, income, and bureaucracy (Hagerstrand, 1965). Diffusion theory highlights four stages in which resettlement manifest it. The first stage refers to the physical transfers of affected persons to a new site; the second is the adoption process to the biophysical and human environments. The third is the achievement of socio-economic development by the affected persons; and the fourth is the ability of affected persons to manage the biophysical and human environment (Woube, 2005).

The theory enables the researcher to understand the stages of resettlement process. That first people most move, they have to adopt to the new environment; and adoption here entails giving and taking new culture, domestic, economic reform to match the new environment and a new set of social relations. The theory also amplified barriers to effective settlement schemes or factors

that may limit or fast track the process of settlement scheme programs. These include desert, mountains, lakes, river, culture, ethnicity, income and bureaucratic bottleneck. The theory therefore will guide the making of the research questionnaire and also aid the discussion of findings in chapter five of this study.

2.2.2 Chambers Participatory Development Model

According to Chambers (1983), the model has its origin from the works of Ghandhi (1962). CPDM focused on small scale development that allows the poor to be adequately involved and participate effectively in development process of their communities with external agents acting as facilitators and financier (Chambers, 1983). External agents here refer to local or international organization or agencies that intervene in the plight of communities to carryout development projects. The model stresses citizen participation in decision making as a panacea for effective community development programme (Nkpoyen, Agba, Okoro & Ushie, 2009).

CPDM posits that top-down development strategies, where decisions and programmes about community development are done without inputs from affected communities (ACs) or APs is ineffective and disempowering in both developed and developing nations. The model argued that development should not be limited to material wellbeing of members of affected people; but should incorporate capacity building, political, economic and socio-cultural well-being. The thrust of the model include the advocacy for adopting strategies to empower the most disadvantage group (Chambers, 1983).

CPDM is imperative in this study because it enables us to view government and other agencies or organizations involve in the development of “Lake Kenyatta settlement scheme program” and livelihoods of Lake Kenyatta settlement scheme residents as external agents. And as such, the external should incorporate the affected people in the planning process for effective decision making and implementation of the settlement scheme programs. Operating within the frames of CPDM, external agents are not expected to concentrate on the material development of the people of Lake Kenyatta settlement alone, but should develop their capacity including training on commercial skills acquisition as well as ensuring their socio-economic well-being. In other words; the development of the affected persons (APs) of Lake Kenyatta residents should be holistic and broad-based.

2.3 Use of Land Titles as Collateral and Settlers' Socio-Economic Livelihoods

People's lives and their livelihoods are strongly influenced by property rights to land and the way those rights are produced and reproduced throughout the world. As a result, enhancing the use of land titles as collateral and other productive resources for the settlement scheme residents is fundamental to poverty reduction and inclusive development. Use of land titles as collateral is also key element for the working of the entire economy, whether for subsistence or market-oriented economies. Secure rights to land are a basis for shelter, for access to services and for civic and political participation. They are also a source of financial security, as collateral to raise credit or as a transferable asset that can be sold, rented out, mortgaged, loaned or bequeathed (Lorenzo, Camilla & Julian, 2006). Moreover, secure access to land creates incentives for the user to invest labor and other resources in it, so as to maintain or enhance its value and sustain its productivity, and to access social and economic development opportunities.

Land is an advantageous form of collateral due to the fact that it cannot be removed and does not easily devalue; it is widely believed that many borrowers face barriers securing transactions with land simply because ownership rights are not formally documented (Fleisig & de la Pena, 1996). The benefit derived from the opportunity to use land as collateral, largely depends on the existence of financial institutions that are willing and able to make credit available for the type of investment settlement scheme residents would like to make (Antle et al, 2003). Use of land title to secure credits enables land owners to extend their control as distinct from their ownership of resources. This provides a command over resources and thus removes the financial constraint, if it was present prior to receipt of it (Weerawan, 1994). Land titles as collateral in accessing credit is widely used by governments and international organizations proponents of land titling to persuade people register their land and that land registration is an essential foundation for economic growth. Developing countries are being blamed for not capitalizing land, to them land is a 'dead' capital. De Soto (2000) argues that the major stumbling block that keeps the rest of the world from benefiting from capitalism is its inability to produce capital, and that whilst the poor already possess the assets they need to make capital work for them; they hold these assets in defective form. By this he mean poor people in developing countries lack the process to represent their properties and create capital.

The issue of having tenure security becomes a necessary condition for accessing credit using land as collateral to lenders. For land to serve as collateral, the lender must be assured that the borrower is indeed the owner, and thus a secure title is needed (Feder & Feeny 1991; Feder & Nishio 1998). So that if the loan is not repaid the property will be transferred to the lender. Barnes(2003), Federand Nishio (1998), Roth et al (1994), Barrow and Roth(1990) and Feder et al (1988) all agree that tenure security does the following: Promotes greater incentives for landholders to invest on land and thereby increase the availability of credit; Increases land transactions and facilitate transfers of land from less efficient to more efficient uses by increasing the certainty of contracts and lowering enforcement costs; Reduce economic costs of dealing with land disputes as the documented evidence can easily be produced; Raises productivity through increased agricultural investments. Use of land as collateral effects the availability of resources for financial investment. According to Henssen (1990), the supply of credit, especially from institutional or formal resources (such as Banks), depends usually on the borrower's ability to provide documented evidence of ownership.

2.4 Land Access Rights for Agriculture and Settlers-Economic Livelihoods

Economic analysis has long recognized the importance of secure property rights for growth, and therefore for the poverty reduction which growth can bring. Increased land access for the affected persons in the settlement schemes can also bring direct benefits of poverty alleviation, not least by contributing directly to increase household food security (Lorenzo, Camilla & Julian, 2006).

In countries where agriculture is a main economic activity, access to land is a fundamental means whereby the residents in the settlement schemes can ensure household food supplies and generate income. This applies both to societies in which subsistence agriculture is prevalent, where ancestral land is the Source of household food security; and to societies where agriculture is more market-oriented, in which family farming provides a principal source of employment generating the income with which to buy food. Even where agriculture and land are becoming less important with the growth of alternative sources of income, secure land rights provide a valuable source of income for investment, retirement or security in case of unemployment.

Food crop and cash crop farming practices have had a positive impact on the lives of the beneficiaries of Lake Kenyatta Settlement Scheme by encouraging increased agricultural production, as well as spurring economic growth. However, despite this encouraging trend, a farm survey conducted by Heyer and Waweru (1976) established that about 60% of the beneficiaries within the settlement schemes were not able to meet the cost of living from their farm proceeds due to low cost of finished produce, high cost of purchasing farm input and also due to not taking agricultural farming seriously by the masses. According to another survey carried out by Neunfinger et al (1987), it was also discovered that only 20% of the farmers were able to meet their needs through farming, while a similar percentage of the settlers was non-farming dependent; about 45% of the beneficiaries earned income through farm labour, whereas another 25% of them earned their living by engaging in different forms of employment in the non-farm sector.

In addition, Hazlewood (1985) observes that despite the many gains accrued as a result of the socio-economic activities of the inhabitants of Lake Kenyatta Settlement Scheme, some of the groups' practices, especially those practiced by the indigenous communities within the settlement scheme (such as land inheritance for male siblings only) have made some segments of the community – especially women and girls – to be discriminated against, and not to fully benefit from the gains of the settlement scheme programme. Also because of the strong cultural belief in the values of communalism (or communal villages) and ancestral land, some of the indigenous community members within the settlement scheme have ended up selling their land to the 'upcountry' people, eventually rendering themselves landless and making the exercise of issuance of title deeds and allotment letters a cumbersome and challenging undertaking for the government (Maloba, 1994). Sale of settlement scheme land by the indigenous communities has also been a source of constant inter-clan and inter-ethnic tensions, which sometimes break into violent conflicts and confrontations among different concerned groups leading to loss of lives, property and displacements (Berman, 1990).

2.5 Infrastructure Development and Settlers Socio-economic Livelihoods

Infrastructural facilities, according to Hirschman (1958), refer to those basic services without which primary, secondary and tertiary productive activities cannot function. In its wider sense,

infrastructural facilities embrace all public services from law and order through education and public health to transportation, communications and water supply (Mabogunje, 1974; Kahn, 1979). Kahn (1979) asserts that settlement scheme infrastructural facilities can be classified into three main types; namely, physical infrastructure such as roads, water, electrification, and processing facilities; social infrastructure namely, health and educational facilities, community centers, fire and security services; institutional infrastructure which include credit and financial institutions, agricultural research facilities and social infrastructure. It is perceived that the adequate provision of these types of infrastructures will enhance the introduction and adoption of innovations offered by institutional infrastructure.

When the Kenyan government established the Lake Kenyatta Settlement Scheme, it also started to put in place infrastructure facilities and other social amenities to help support the local population and other beneficiaries of the scheme. Some of these facilities included road network, piped water, schools, health centers, social halls, administrative buildings and offices, police posts and the social infrastructure (i.e., CBOs and NGOs). For instance, by the end of June 2004, a total of 736km of road had been done, 36 primary schools had been constructed in the project area and the host villages, 11,000 pupils had been enrolled in these primary schools - with a ratio of boys to girls being 1:1, and a community-based central water supply system (i.e., LAKWA) had been developed to ensure that every settler has adequate potable water (Wasserman, 2003). Other infrastructure development within the settlement scheme include: development of Mpeketoni Township Electricity Project (MTEP); construction of District offices; establishment of cut lines and firebreaks; and establishment of a community-based health care system.

There was also an establishment of the social infrastructure, with the formation and founding of CBOs, NGOs and other social welfare associations. These were formed mainly to support various communities and individual members financially and help improve the conditions of living of the local settlers. With time, the same CBOs have proved to be an invaluable tool in the management and conservation of the established infrastructure network. The NGOs, on the other hand, have played a significant role mainly in the health and education sectors. This has indeed had a positive impact, not only on the lives of the inhabitants of the settlement scheme, but also on the overall physical and human infrastructure network within the settlement scheme.

Consequently, formation of more of such initiatives within the settlement scheme is currently underway and is being highly encouraged by the leadership (Wasserman, 2003).

2.6 Conceptual Framework

Magenta and Magenta (2003) define a conceptual framework as a graphical or diagrammatic representation of the relationships among various variables under study. A conceptual framework is very useful in research since it helps the researcher and future readers to identify the proposed relationship between different variables easily and quickly. It also helps to capture and summarize, in a diagrammatic form, the research topic and objectives. In this study, the researcher adopted the model indicated in Figure 1, considering the variables under study.

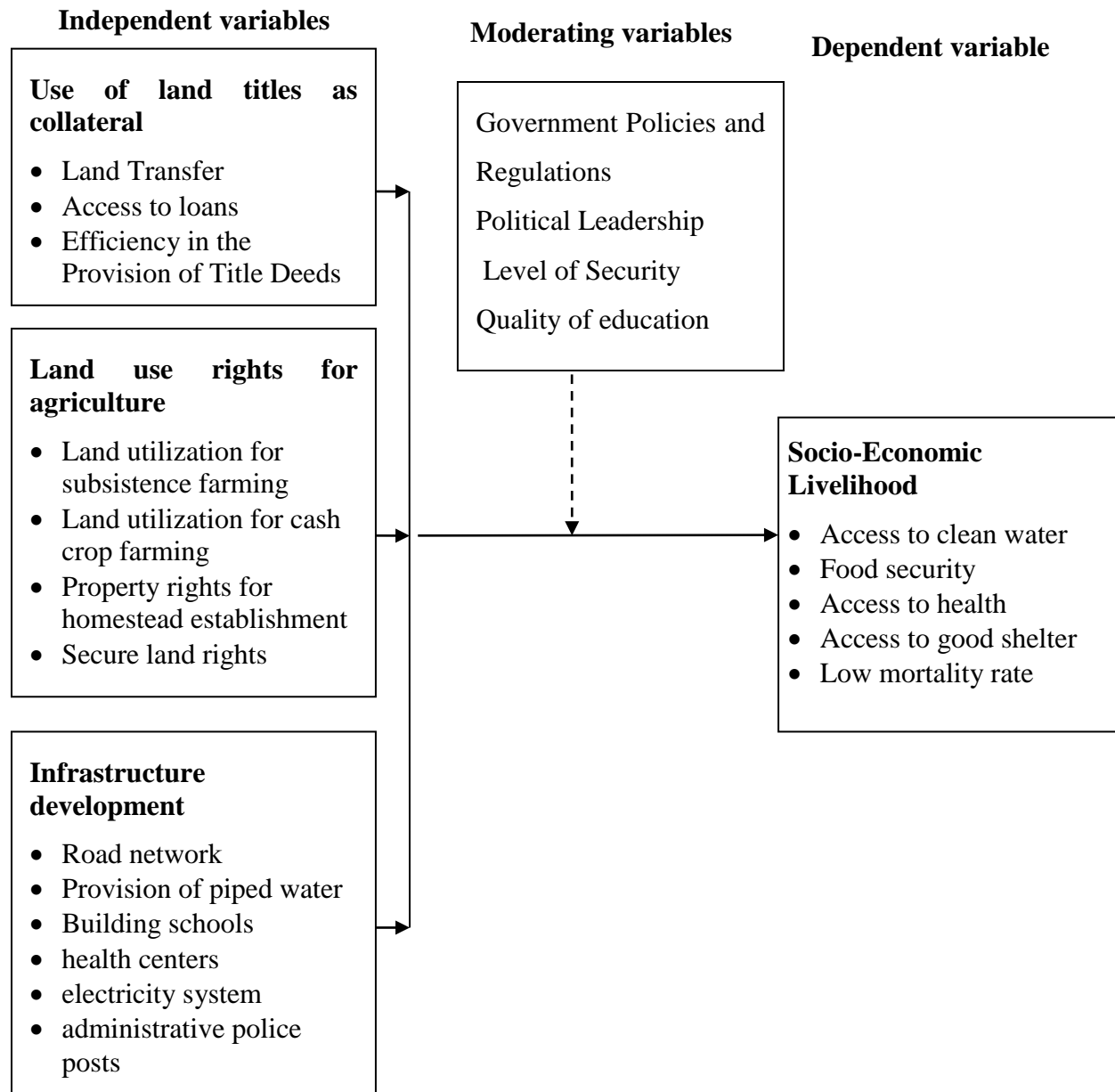


Figure 1: Conceptual Framework

2.7 Knowledge Gaps

Although literature has been reviewed on impacts of settlement schemes programs on the socio-economic livelihoods of settlement scheme residents showing how its various factors affect the socio-economic livelihood of settlers, most of these studies have been done in other countries whose strategic approach and financial footing is different from that of Kenya. Locally, Mwangi

(2012) conducted a study on the environmental impacts of government land settlement schemes in Lake Kenyatta and established that settlers in Lake Kenyatta Settlement Scheme have negatively impacted on the environment. Another study conducted by Ludeki and Chwenya (1998) was on social-political influences on bureaucratic resource allocation and utilization for rural development: A case study of Tongaren Settlement division of Western Kenya. It is evident therefore that a literature gap exists on the influence of settlement scheme programs on the settlers' socio-economic livelihood in the settlement schemes. This study therefore sought to fill this gap by focusing on the influence of settlement scheme programmes on the socio-economic livelihoods of Lake Kenyatta settlement scheme residents, Lamu County, Kenya.

2.8 Summary of the Chapter

This study is grounded on the diffusion theory resettlement and chambers participatory development model. This chapter also reviewed the existing literature on the influence of settlement scheme programs on the socio-economic livelihoods of the beneficiaries from a global perspective, and then later narrowing this phenomenon down to Lake Kenyatta Settlement Scheme in Lamu County, Kenya. The chapter also looked into specific objectives and presented a conceptual framework on which the entire study will be based.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology used in this study. This chapter covers research design, target population, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

The study adopted a descriptive survey design. Mugenda and Mugenda (1999) described descriptive survey as the process in which data is collected in order to test hypothesis or to answer questions concerning the current status of the subject under study. Descriptive study according to Kothari (2004) also engages an assessment of the situation of affairs describing, analyzing and reporting conditions that exist or that existed. The choice of this type of research design was because the study investigated the influence of settlement scheme programmes on the socio-economic livelihoods of Lake Kenyatta settlement scheme beneficiaries, Lamu County-Kenya

3.3 Target Population

A population can be defined as any set of persons or objects that possesses at least one common characteristic (Barton, 2001). It can also be said to be a well-defined or set of people, services, elements, events, group of things or households that are being investigated (Miles and Huberman, 1994). A target population is very significant in research, since it provides a solid foundation and first step upon which to build population validity of the study (Gall et al., 2008). A similar view is shared by Barton (2001), who holds that any scientific research targets a given population through which questionnaires; interview guides, focused group discussions or observation guides are distributed so as to get the desired or the required data for analysis. This study targeted 3500 household heads of Lake Kenyatta residents, 10 community/county leaders and 8 religious leaders (Lamu County Registry, 2015). This added up to a target population of 3523 respondents.

3.4 Sample Size and Sampling Procedure

Ngechu (2004) underscores the importance of selecting a representative sample through making a sampling frame. From the population frame the required number of subjects, respondents, elements or firms will be selected in order to make a sample. Simple random sampling technique will be used to select the sample from the household heads. According to Cooper and Schindler (2003), simple random sampling frequently minimizes the sampling error in the population. This in turn increases the precision of any estimation methods used. According to Mugenda and Mugenda (1999), from normal distribution the population proportion can be estimated to be

$$n = \frac{Z^2 PQ}{\alpha^2}$$

Where: Z is the Z – value = 1.96
P Population proportion 0.50
Q = 1-P
 α = level of significance = 5%
 $n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2}$
n= 384

Adjusted sample size

$$n' = 384 / [1 + (384/3500)]$$

Approx. = 342 Household heads.

For the community/county leaders and religious leaders, the study took a census approach. This added up to a sample size of 360 respondents.

3.5 Research Instruments

The study employed the use of questionnaires to collect primary data from the household heads. Gall and Borg (1996) points out that, questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes,

accomplishments as well as experiences of individuals. They further observe that questionnaires have the added advantage of being less costly and using less time as instruments of data collection. The questionnaire, which was semi-structured, was administered through drop and pick-later method to the sampled population. In addition, the study used an unstructured interview schedule for the community/county leaders and religious leaders.

3.6 Validity of Instruments

Data validity refers to the degree to which results obtained from analysis of data actually represents phenomenon under study, Mugenda and Mugenda (1999). Validity will be ensured by having objective questions included in the questionnaire and by pre-testing the instrument to be used to identify and change any ambiguous, awkward, or offensive questions and technique as emphasized by Cooper and Schindler (2003). Expert opinion may be requested to comment on the representativeness and suitability of questions and give suggestions for corrections to the structure of the research tools. This helped improve the content validity of the data that was collected.

3.7 Reliability of Instruments

Reliability on the other hand refers to a measure of the degree to which research instruments yield consistent results (Mugenda & Mugenda, 2003). The pre-testing aims at determining the reliability of the research tools including the wording, structure and sequence of the questions. The research instruments were subjected to overall reliability analysis using the split half method. This was done by collecting data from a given number of respondents into two halves (often odd-even). The two halves are correlated using Pearson's correlation. A coefficient of 0.7 or more implies that there is a high degree of data reliability (Trochim, 2006). The purpose is to refine the research tools so that respondents in the major study will have no problem in answering the questions and examining whether the same response is obtained. The research tool had a composite reliability of 0.847 showing it was highly reliable.

3.8 Data Collection Procedure

Data collection was a very crucial and time involving activity. In this connection, the questionnaires were to be delivered to the respondents and collected by research assistant. The

method of hand delivery and collection on the following day was used. The interview guides were administered using face to face discussions.

3.9 Data Analysis Techniques

Mugenda and Mugenda (2003) assert that data obtained from the field in raw form is difficult to interpret unless it is cleaned, coded and analyzed. The collected data will be analyzed using both quantitative and qualitative data analysis methods. Quantitative method involves descriptive analysis. Descriptive analysis such as frequencies, percentages will be used to present quantitative data in form of tables and graphs. Data from questionnaire will be coded and logged in the computer using Statistical Package for Social Science (SPSS V 21.0). This involves coding both open and closed ended items in order to run simple descriptive analyses to get reports on data status. Descriptive statistics involved the use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Frequency tables were also used to present the data for easy comparison. Content analysis will be employed for the qualitative data and then presented in prose. The study also conducted a Pearson's correlation analysis to establish the relationship between the variables.

3.10 Ethical Considerations

According to Kerridge, Lowe and McPhee (2005), ethics involves making a judgment about right and wrong behavior. Ethics as noted by Minja (2009) is referred to, as norms governing human conduct which have a significant impact on human welfare. Indeed as observed by Devettere (2000), ethics is about choice between good and bad. In this study, confidentiality was of concern as the information relevant to the study is of strategic importance. In this regard, the names of the respondents were not disclosed. In addition, where a response is attributed to specific individuals the said information was maintained in strict confidence.

3.11 Operationalization of Variables

The operationalization of variables is shown in Table 3.1

Table 3.1: Operationalization of variables

Objective	Variable	Indicators	Measurement scale	Tools of analysis	Type of data analysis
To determine how infrastructure development in Lake Kenyatta settlement scheme influences settler's socio-economic livelihoods.	Independent: Infrastructure development	<ul style="list-style-type: none"> • Road network • Provision of piped water • Building schools • health centers • electricity system • administrative police posts 	Ordinal Ordinal Interval Ordinal	Mean Percentage	Descriptive Correlation
To assess the extent to which land access rights for agriculture influences settler's household income in Lake Kenyatta Settlement Scheme.	Land use rights for agriculture	<ul style="list-style-type: none"> • Land utilization for subsistence farming • Land utilization for cash crop farming • Property rights for homestead establishment • Secure land rights 	Ordinal Ratio Ordinal Ordinal	Mean Percentage	Descriptive Correlation
To establish how land title deeds as collateral influences settlers household's socio-economic livelihoods.	Use of land titles as collateral	<ul style="list-style-type: none"> • Land Transfer • Access to loans 	Nominal Ordinal Ordinal Interval	Mean Percentage	Descriptive Correlation

	Dependent: Socio- Economic Livelihood	<ul style="list-style-type: none"> • Access to clean water • Food security • Access to good health • Access good shelter • High life expectancy • Low mortality Rate 	Ordinal Ordinal Interval	Mean Percentage	Descriptive Correlation
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CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter discusses the interpretation and presentation of the findings. This chapter presents analysis of the data on the influence of settlement scheme programmes on the socio-economic livelihoods of settlers in Lake Kenyatta I settlement scheme, Lamu County. The chapter also provides the major findings and results of the study.

4.1.1 Response Rate

The study targeted a sample size of 360 respondents from which 250 filled in and returned the questionnaires making a response rate of 69.5%. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

4.2 Demographic Characteristics

The researcher sought to establish the background information of the respondents and the companies including respondents' gender and how long have they lived in this settlement scheme as a beneficiary or inhabitant.

4.2.1 Gender of the respondents

The respondents were asked to indicate their gender. The responses received were as shown in table 4.1.

Table 4. 1 : Gender of the respondents

	Frequency	Percent
Male	198	79.2
female	52	20.8
Total	250	100.0

From the findings, 79.2% of the respondents indicated that were male while 20.8% indicated they were female. Clearly, most of the household heads, community/county leaders and religious leaders interviewed were male.

4.2.2 The period of residence within the settlement

The respondents were also asked to indicate how long they have lived within the settlement as a beneficiary or inhabitant. The responses were as shown in table 4.2.

Table 4. 2: Period of residence within the settlement

	Frequency	Percent
10 years or less	31	12.4
10 - 15 years	44	17.6
15 - 20 years	55	22.0
20 - 25 years	77	30.8
More than 25 years	43	17.2
Total	250	100

From the findings table 4.2, 30.8% of the respondents indicated that they have lived within the settlement as a beneficiary or settlers for a period of between 20 and 25 years, 22% indicated a period of between 15 and 20 years, 17.6% indicated a period of between 10 and 15 years, 12.4% indicated a period of 10 or less years while 17.2% indicated a period of more than 25 years. Clearly, most of the household heads, community/county leaders and religious leaders

interviewed have lived within the settlement as a beneficiary or inhabitant for a period of between 20 and 25 years.

4.3 General Information

The study further sought to establish the respondents' average total acreage of land, any leadership roles or responsibilities within the Scheme.

4.3.1 Average total acreage of land

The respondents were also asked to indicate the average total acreage of land they own. The responses were as shown in table 4.3.

Table 4. 3: Average total acreage of land

	Frequency	Percent
Less than 1 hectare	12	4.8
1 - 3 hectares	15	6.0
3 - 5 hectares	25	10.0
5 - 8 hectares	40	16.0
More than 8 hectares	158	63.20
Total	250	100

From the findings in table 4.3, 6.0% of the respondents indicated that they owned 1 to 3 hectares, 10.0% indicated 3 to 5 hectares, 4.8% indicated less than 1 hectare, and 16% indicated 5 to 8 hectares while 63.2% indicated more than 8 hectares. Clearly, most of the household heads, community/county leaders and religious leaders interviewed owned more than 8 hectares.

4.3.2 Leadership roles or responsibilities

The respondents were also requested to indicate whether they hold any leadership roles or responsibilities within the Lake Kenyatta Settlement I Scheme community. The responses were as shown in table 4.4.

Table 4. 4: Leadership roles or responsibilities

	Frequency	Percent
Yes	80	32
No	170	68
Total	250	100

According to the findings in table 4.4, 32% of the respondents indicated that they hold leadership roles or responsibilities while 68% indicated they do not hold any. Clearly, most of the household heads interviewed did not hold leadership roles.

4.3.3 List of leadership roles

The respondents also listed the leadership roles they have which included Village elder, Leader of CBOs, Religious leader, Member of county assembly and Departmental head in the County or National Government.

4.4 Use of Land Title deeds as Collateral and Settlers' Socio-Economic Livelihoods

The study meant to establish how land title deeds as collateral influences settlers' household socio-economic livelihoods. The results were as shown in the subsequent sections.

4.4.1 Land Title Deeds

The respondents were asked to indicate whether or not they have a title deed. The responses were as shown in table 4.5.

Table 4. 5: Land Title Deeds

	Frequency	Percent
Yes	200	80.0
No	50	20.0
Total	250	100.0

The findings in table 4.5 indicate that 80% of the respondents own a title deed while 20% do not have any. From these findings we can infer, most of the household heads, community/county leaders and religious leaders interviewed had title deeds.

4.4.2 Methods by which the settlers acquired their land

The respondents were asked to indicate how they acquired their parcels of land. The responses were as shown in table 4.6.

Table 4. 6: Methods by which the settlers acquired their land

	Frequency	Percent
Allocated by the government	180	73.0
Bought from a former allottee	60	24.0
Through inheritance	8	3
Total	250	100

According to the findings in table 4.5 above, 73% of the respondents acquired their parcels of land through allocation by the government, 24% bought their land from some of the beneficiaries of indigenous origin while the remaining 3% acquired their title deeds through inheritance. From

the finding we can most of the respondents were allocated land by the government and some bought their land from the original beneficiaries.

4.4.2 Effect of title deeds on settlers' livelihoods

The respondents were also requested to indicate whether or not they thought owning a land title deed has affected the settlers' socio-economic livelihood within the settlement scheme positively or negatively. The findings were as shown on table 4.6.

Table 4. 7: Effect of title deeds on settlers' livelihood

	Frequency	Percent
Positively	155	62.0
Negatively	37	14.8
Neutral (neither positive nor negative)	31	12.4
No effect or impact at all	27	10.8
Total	250	100

The study establishes that, 62% of the respondents were affected positively by owning a title deed, 14.8% indicated negatively, 12.4% indicated neutral while 10.8% indicated that lives affected were not affected at all by owning a title deed. From these findings we can deduce that, household heads, the lives of community/county leaders and religious leaders affected positively by owning a title deed.

4.4.3 Process of issuing land title deeds

The respondents were further asked to indicate their opinion on the process of issuing land title deeds within the settlement scheme is both fair and efficient. The results were as shown in table 4.7.

Table 4. 8: Process of issuing land title deeds

	Frequency	Percent
Yes	176	70.4
No	74	29.6
Total	250	100.0

According to the findings, 70.4% of the respondents indicated that the process of issuing land title deeds within the settlement scheme is both fair and efficient while 29.6% indicated they it was not. From these findings we can infer, the process of issuing land title deeds within the settlement scheme is both fair and efficient.

4.4.4 Land title deeds as collateral

The respondents were additionally asked to indicate their level of agreement with how the following aspects on use of land title as collateral influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The results were as shown in table 4.8.

Table 4. 9: Land title deeds as collateral

	Mean	Std. Deviation
Land Transfer	4.4716	.56106
Access to loans	4.1373	.63552
Efficiency in the Provision of Title Deeds	4.4925	.68253

From the findings in table 4.8, the respondents agreed that efficiency in the provision of title deeds influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 4.4925. Further, the respondents agreed that Land Transfer influences

the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 4.4716. Lastly, the respondents agreed that access to loans influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 4.1373.

4.5 Infrastructure Development and Settlers’ Socio-Economic Livelihoods

The study meant to determine how infrastructure development in Lake Kenyatta settlement scheme influences settler’s socio-economic livelihoods.

4.5.1 Influence of infrastructure development on settlers’ socio-economic livelihoods

The study explored how infrastructure development influences settler’s socio-economic livelihoods. The results were as shown in table 4.9.

Table 4. 10: Influence of infrastructure development on settlers’ socio-economic livelihoods

	Mean	Std. Deviation
Road network	3.5716	.56106
Provision of piped water	3.5373	.63552
Building schools	3.5925	.68253
Health centers	3.9424	.97424
Administrative police posts	3.8142	1.0492

According to the findings in table 4.9, the respondents agreed that health centers influence settler’s socio-economic livelihoods as shown by a mean score of 3.9424. Further, the respondents agreed that administrative police posts influence settler’s socio-economic livelihoods as shown by a mean score of 3.8142. In addition, the respondents agreed that building schools influence settler’s socio-economic livelihoods as shown by a mean score of 3.5925. Furthermore, the respondents agreed that road network influence settler’s socio-economic livelihoods as shown by a mean score of 3.5716. Lastly, the respondents agreed that

provision of piped water influence settler’s socio-economic livelihoods as shown by a mean score of 3.5373.

4.5.2 Commonest form of infrastructure development

The respondents were also asked to indicate the commonest form of infrastructure development within the settlement scheme. The results obtained were as shown in table 4.10.

Table 4. 11: Commonest form of infrastructure development

	Frequency	Percent
Schools	54	21.6
Access roads	50	20.0
Piped water systems	47	18.8
Health centers/ Hospitals	40	16.0
Electricity systems	16	6.4
Social amenities (such as public toilets and social halls)	12	4.8
Administration and police posts	31	12.4
Total	250	100

From the findings on table 4.10, 21.6% of the respondents indicated that the commonest form of infrastructure development within the settlement scheme is the primary schools, 20% indicated access roads, 18.8% indicated piped water systems, 16% indicated health centres/hospitals, 12.4% indicated administration and police posts, 6.4% indicated electricity systems while 4.8% indicated social amenities (such as public toilets and social halls). From these findings we can infer that the commonest form of infrastructure development within the settlement scheme is the schools.

4.5.3 The state of the infrastructure

The respondents were in addition asked to indicate whether or not they were happy with the current state of the existing infrastructure. The results were as shown in table 4.11.

Table 4. 12: The state of infrastructure

	Frequency	Percent
Yes	165	66.0
No	85	34.0
Total	250	100.0

According to the findings in table 4.11, 66% of the respondents indicated that they were happy with the current state of the existing infrastructure while 34% indicated they were not. From these findings we can infer that the household heads, community/county leaders and religious leaders interviewed were happy with the current state of the existing infrastructure.

4.5.4 Adequacy of infrastructure in the settlement scheme

The respondents were asked to indicate whether the existing infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta in Settlement Scheme. The respondents are as indicated in table 4.12.

Table 4. 13: Adequacy of infrastructure in the settlement

	Frequency	Percent
Yes	170	68.0
No	80	32.0
Total	250	100.0

According to the findings in table 4.12, 68% of the respondents indicated that the existing infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta in Settlement Scheme while 32% indicated the infrastructure was not adequate. From these findings we can infer, the existing infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta in Settlement Scheme.

4.5.5 The influence of infrastructure on settlers' Socio-Economic Livelihood

Additionally, the respondents were asked to indicate how the current infrastructure impacted on your Socio-Economic Livelihood within the settlement scheme. The results were as shown in table 4.13.

Table 4. 14: The influence of infrastructure on settlers' Socio-Economic Livelihood

	Frequency	Percent
Positively	173	69.2
Negatively	24	9.6
Neutral (neither positive nor negative)	26	10.4
No effect or impact at all	27	10.8
Total	250	100.0

According to the findings in table 4.13, 69.2% of the respondents indicated that the existing infrastructure influence the settlers’ Socio-Economic Livelihood in the settlement scheme positively, 10.8% indicated there was no effect at all, 10.4% indicated neutral while 9.6% indicated that the existing infrastructure influenced the settlers’ Socio-Economic Livelihood within the settlement scheme negatively. From these findings, we can deduce that the existing infrastructure influenced the settlers’ Socio-Economic Livelihood in the settlement scheme positively.

4.5.6 Social infrastructure system

The respondents were further asked to indicate whether social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme. The results were as shown in table 4.14.

Table 4. 15: Social infrastructure system

	Frequency	Percent
Yes	140	56.0
No	110	44.0
Total	250	100

According to the findings in table 4.14, 56% of the respondents indicated that social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist in the settlement scheme while 44% indicated it does not. From these findings, we can infer that the social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme.

4.5.7 Use of title deeds

The respondents were asked to indicate the use of title deeds. They indicated that they are used as collateral, to give security of tenure, as land transfer and also to increase the value of land. They further stated that the use of title deeds for collateral was to security for obtaining loan from banks and to the money given by banks is invested in various development activities.

4.5.8 Infrastructure facilities

On infrastructure facilities and whether they have positive influence, the respondents indicated that people transport their agricultural produce to market, easy transportation of goods and people, people have benefited from piped water, there is electricity, schools have improved the education standards, farmer training has impacted modern farming methods to settlers and that health facilities have lead reduction of diseases leading to high life expectancy and low mortality rates.

4.5.9 Improving infrastructure facilities

The respondents further indicated that the following can be done to improve the infrastructure facilities: Roads should be maintained more, schools to be more equipped and classes built, the electricity should be extended to local market centres, schools and to private homes and that health centres to be built and equipped.

4.6 Land use rights for agriculture and Settlers' Socio-Economic Livelihoods

The study additionally purposed to assess the extent to which land access rights for agriculture influences settler's household income in Lake Kenyatta Settlement Scheme.

4.6.1 Influence of land use rights for agriculture on the socio-economic livelihood

The respondents indicated that the extent to which land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents. Their responses were as shown in table 4.15.

Table 4. 16: Influence of land use rights for agriculture on the socio-economic livelihood

	Frequency	Percent
Very great extent	55	22.0
Great extent	105	42.0
Moderate extent	45	18.0
Low extent	32	12.8
Very low extent	13	5.2
Total	250	100

From the findings shown in the table 4.14, the 42% of the respondents indicated that land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents to a great extent, 22% indicated to a very great extent, 18% indicated to a moderate extent, 12.8% indicated to a low extent while 5.2% indicated very low extent. From these findings, we can deduce that land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents to a great extent.

4.6.2 Influence of land use rights on socio-economic livelihood

In addition, the respondents indicated that their level of agreement with how the following aspects on land use rights for agriculture influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The findings were as shown in table 4.16.

Table 4. 17: Influence of land use rights on socio-economic livelihood

	Mean	Std. Deviation
Land utilization for subsistence farming	4.4908	.86225
Land utilization for cash crop farming	3.8718	.79898
Property rights for homestead establishment	4.1941	.96770
Secure land rights	3.7363	.96827

From the findings in table 4.16, the respondents agreed that land utilization for subsistence farming influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 4.4908. Further, the respondents agreed that property rights for homestead establishment influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 4.1941. As well, the respondents agreed that Land utilization for cash crop farming influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 3.8718. Lastly, the respondents agreed that secure land rights influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by a mean score of 3.7363.

4.6.3 Socio-economic activities

The respondents were further requested to indicate which one of the following socio-economic activities they were mainly involved in. Their responses were as shown in table 4.17.

Table 4. 18: Socio-economic activities

	Frequency	Percent
Food crop farming	50	20.0
Cash crop farming	85	34.0
Animal farming	40	16.0
Fish farming	32	12.8
Trade/ Business	43	17.2
Total	250	100

From the findings shown in table 4.17, the study established that 34% of the respondents were involved in cash crop farming, 20% food crop farming, 17.2% trade/Business, 16% animal farming while 12.8% fish farming. From these findings we can deduce that household heads, community/county leaders and religious leaders interviewed were involved in cash crop farming.

4.6.4 The other socio-economic activities

The respondents were additionally asked to indicate whether there were any other socio-economic activities they were involved in. Their responses were as shown in table 4.18.

Table 4. 19: Other socio-economic activities

	Frequency	Percent
Yes	150	60.0
No	100	40.0
Total	250	100

From the results, 60% of the respondents indicated that there were other socio-economic activities they were involved in while 40% indicated there were not. From these findings, it is clear that household heads, community/county leaders and religious leaders had other socio-economic activities they were involved in.

4.6.5 List of socio-economic activities

The respondents also went ahead to list the other socio-economic activities. They included crop farming, rearing of animals like cattle, goats and sheep, the tree nurseries for planting trees as farmers are required to set aside at least one acre for tree planting, small scale business activities and employment on the farms.

4.6.6 Socio-economic practice(s) the settlers were involved in

The respondents were also requested to indicate how the socio-economic practice(s) they are currently involved in impacted on their Socio-Economic Livelihood within the settlement scheme. The findings were as shown in table 4.19.

Table 4. 20: Socio-economic practice(s) the settlers were involved in

	Frequency	Percent
Positively	161	64.4
Negatively	33	13.2
Neutral (neither positive nor negative)	35	14.0
No effect or impact at all	21	8.4
Total	250	100

According to the findings in table 4.19, 64.4% of the respondents indicated that the socio-economic practice(s) they are currently involved in impacted on their Socio-Economic Livelihood within the settlement scheme positively, 14% indicated neutral (neither positive nor negative), 13.2% indicated negatively while 8.4% indicated that the socio-economic practice(s) they are currently involved in do not impacted on their Socio-Economic Livelihood within the settlement scheme. From these findings we can deduce that, the socio-economic practice(s) they are currently involved in impacted on their Socio-Economic Livelihood within the settlement scheme positively.

4.6.7 Influence of independent variables

They were further requested to indicate the extent to which the independent variables affected or impacted on their Socio-Economic Livelihood within the settlement scheme. Their responses were as shown in table 4.20.

Table 4. 21: Influence of independent variables

	Mean	Std. Deviation
Provision of land title deeds has affected my Socio-Economic Livelihood within the settlement scheme	3.6006	.49875
Infrastructure development has influenced the settlers' socio-economic livelihood	3.7418	.51745
As a beneficiary of Lake Kenyatta I Settlement Scheme, the existing agro-ecological activities have affected my Socio-Economic Livelihood.	4.5166	.59548
The socio-economic practices that I am currently engaged in have affected my Socio-Economic Livelihood as an inhabitant of the settlement scheme	3.8645	.92425

According to the findings in table 4.20, the responders indicated that as a beneficiary of Lake Kenyatta I Settlement Scheme, the existing agro-ecological activities have affected my Socio-Economic Livelihood within the settlement scheme to a very large extent as shown by a mean score of 4.5166. Further, the respondents indicated that the socio-economic practices that they are currently engaged in have affected my Socio-Economic Livelihood as an inhabitant of the settlement scheme to a large extent as shown by a mean score of 3.8645. Additionally, the respondents indicated that infrastructure development has influenced the settlers' socio-economic livelihood to a large extent as shown by a mean score of 3.7418. The respondents also indicated that provision of land title deeds has affected their Socio-Economic Livelihood within the settlement scheme to a large extent as shown by a mean score of 3.6006.

4.6.7 Influence of the living standards of beneficiaries on socio-economic livelihood

Additionally, the respondents were requested to indicate the extent to which they agree with the following aspects of the living standards of the beneficiaries influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The results were as shown in table 4.21.

Table 4. 22: Influence of the living standards of beneficiaries on socio-economic livelihood

	Mean	Std. Deviation
Access to clean water	3.4908	.86575
Food security	3.6718	.79008
Access to health	3.9941	.96753
Access to health	4.0363	.96357
Low mortality rate	4.6352	1.05353

From the findings in the table 4.21, the respondents that low mortality rate influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by mean score of 4.6352 to a very great extent. Additionally, the respondents also agreed that access to health influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by mean score 4.0363 to a great extent. As well, the respondents agreed that access to health influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by mean score 3.9941 to a very great extent. Furthermore, the respondents agreed that food security influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by mean score 3.6718 to a very great extent. Lastly, the respondents agreed that access to clean water influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents as shown by mean score 3.4908 to a moderate extent.

4.7 Relationship between the Moderating Factors and the Dependent Variable

The study further sought to establish the relationship between the moderating factors such as government policies and regulations, political leadership, level of security and quality of education and Settlers' Socio-Economic Livelihoods.

4.7.1 Influence of cadre of leadership settlers’ socio-economic livelihoods on the

The respondents were further asked to indicate how the present cadre of leadership influences the socio-economic livelihoods of settlers in Lake Kenyatta I Settlement Scheme in general. The results were as shown in table 4.22.

Table 4. 23: Influence of the cadre of leadership on the settlers socio-economic livelihoods

	Frequency	Percent
Positively	184	73.6
Negatively	20	8.0
Neutral (neither positive nor negative)	25	10.0
No effect or impact at all	21	8.4
Total	250	100.0

According to the findings in table 4.22, 73.6% of the respondents indicated that the cadre of leadership influenced the settlers’ socio-economic livelihood Lake Kenyatta I Settlement Scheme in general positively, 10% indicated neutral, 8.4% indicated no effect at all while 8% indicated that the cadre of leadership influenced the settlers socio-economic livelihoods in Lake Kenyatta I Settlement Scheme in general negatively. From these findings we can deduce that the present cadre of leadership impacted on their standards of life as a beneficiary of Lake Kenyatta I Settlement Scheme in general positively.

4.7.2 Quality of education being offered

In addition, the respondents were requested to indicate how the quality of education being offered influenced the settlers’ socio-economic livelihood in the settlement scheme. The findings obtained were as shown in table 4.23.

Table 4. 24: Quality of education being offered

	Frequency	Percent
Positively	135	54.0
Negatively	40	16.0
Neutral (neither positive nor negative)	55	22.0
No effect or impact at all	20	8.0
Total	250	100.0

According to the findings in table 4.23, 54% of the respondents indicated that the quality of education being offered affected their living standards within the settlement scheme positively, 22% indicated neutral, 16% indicated negatively while 8% indicated no effect at all. From these findings we can deduce that the quality of education being offered affected their living standards within the settlement scheme positively.

4.7.3 Level of security

Moreover, the respondents were requested to indicate how the level of security influenced the settlers' socio-economic livelihood in Lake Kenyatta settlement scheme. The results obtained were as shown in table 4.24.

Table 4. 25: level of security

	Frequency	Percent
Positively	170	68.0
Negatively	14	5.6
Neutral (neither positive nor negative)	31	12.4
No effect or impact at all	35	14.0
Total	250	100.0

According to the findings in table 4.24, the study established that 68% of the respondents felt that level of security influenced the settlers' socio-economic livelihood of the settlers, 14% indicated no effect at all, 12.4% indicated neutral while 5.6% indicated that the current level of security influenced the settlers' socio-economic livelihood negatively. From these findings we can deduce that the current level of security influenced the settlers' socio-economic livelihood.

4.7.4 Influence of moderating factors on Socio-Economic Livelihood within the settlement scheme

Further, the respondents were requested to indicate the extent to which each of the following aspects (moderating factors) affected or impacted on their Socio-Economic Livelihood within the settlement scheme. The results were as shown in table 4.25.

Table 4. 26: Influence of moderating factors on Socio-Economic Livelihood within the settlement scheme

	Mean	Std. Deviation
The cadre of leadership has influenced the settlers' socio-economic livelihood in the settlement scheme	4.2006	.49645
The present quality of education has influenced the settlers' socio-economic livelihood in the settlement scheme	4.0418	.51645
The prevailing level of security has affected my Socio-Economic Livelihood as a resident of Lake Kenyatta I Settlement Scheme	4.4166	.59038

According to the findings, the respondents indicated that the prevailing level of security has affected their Socio-Economic Livelihood as a resident of Lake Kenyatta I Settlement Scheme to a large extent as shown by a mean score of 4.4166. As well, the respondents also indicated that the current cadre of leadership has affected my standards of life within the settlement scheme to a large extent as shown by a mean score of 4.2006. Further, the respondents further indicated that the present quality of education has influenced settlers' socio-economic livelihood in the settlement scheme to a large extent as shown by a mean score of 4.0418.

4.8 Content Analysis

The study established that the process of issuing of title deeds was fair and efficient. However the respondents indicated that proper vetting should be done to get the deserving cases to be allocated land and that the selling of settlement scheme land should be restricted because settlers especially the Local communities sold their land to people from up country and therefore become landless. This leads to tension between the local and the settlers from up country. According to the study the title deeds are used as collateral to secure loans from lending institutions. The money is invested in farming and therefore the farmers earn high income from their farms. This has great influence on the socio-economic livelihood on the settlers in Lake Kenyatta I settlement scheme

The respondents further indicated ways in which land access rights for agriculture influenced the socio-economic livelihoods of the settlers in the scheme. They indicated that the land access right give the settlers security of tenure, the settlers earn income from crop farming, animal rearing and tree planting, some hire their land to other people who utilize the land for farming and therefore earn income, there is security because the youths within the scheme are employed in the farms and that people have high living standards. Further, the respondents indicated that land access rights for agriculture also led to deforestation due to clearing of forest, through cutting and burning of forest trees to pave way for growing of crops. These destructive activities may lead to environmental degradation and cutting of trees also affect the wildlife in habitats.

The respondents further stated that the political leadership, religious and community leaders have encouraged people to co-exist and leave together teaching peace to prevail. They also stated that

some political and religious leaders incite the indigenous settlers against the settlers from up country. This has led to tension between the two groups.

The study established that the quality of education offered, the respondents indicated that it is high and has benefitted the settlers, the children of the settlers get employment because of their education and skill, and that the education offered has led to high literacy levels in the settlement scheme. They also indicated that it has reduced the fertility rates among women, reduced mortality rates and increased the life expectancy of the settlers in Lake Kenyatta I settlement scheme.

According to the study government Policies and regulation influenced the socio-economic livelihood of the settlers in Lake Kenyatta 1 settlement scheme, the respondents indicated that government policies like provision of farmer training, provision of fertilizer, seeds and other farm inputs and looking for market for farm produce has improved the income from crop farming. They also indicated that the Government policies like the LAPSSET project lead to increase of land prices and this has positively influenced the socio-economic livelihood of the settlers in Lake Kenyatta 1 settlement scheme.

The study established that the level of security the responsibility indicated that the scheme has been for a long time peaceful and this led to development of the scheme. They also stated that the government built infrastructure facilities like roads, schools, health centres, and electricity. Further, they stated that the farmers practiced their farming activities peacefully. They grew and sold their crops and earned income. Additionally, they indicated that the prevailing peace enabled young people to obtain education and therefore are able to compete with the rest of the people in the country for available employment opportunities. However the problem of local people feeling that they were left out led in land allocation leading to tension between the two communities from time to time.

On the threat of Al Shabaab terrorist attacks and its negative impact on development, the respondents indicated that the businesses were affected, agricultural activities were also affected and that education was affected too.

4.9 Correlation analysis

Table 4. 27: Correlation Matrix

		Socio-economic livelihood	Infrastructure development	Land use rights for agriculture	Use of land titles as collateral
Socio-economic livelihood	Pearson Correlation	1			
	Sig. (2-tailed)	.			
Infrastructure development	Pearson Correlation	0.708	1		
	Sig. (2-tailed)	0.032	.		
Land use rights for agriculture	Pearson Correlation	0.848	0.581	1	
	Sig. (2-tailed)	0.019	0.018	.	
Use of land titles as collateral	Pearson Correlation	0.690	0.825	0.663	1
	Sig. (2-tailed)	0.034	0.010	0.002	0.016

The data presented before on infrastructure development, land use rights for agriculture and use of land titles as collateral and cultural beliefs were computed into single variables per factor by obtaining the averages of each factor. Pearson's correlations analysis was then conducted at 95% confidence interval and 5% confidence level 2-tailed. The table 4.26 indicates the correlation matrix between the factors (infrastructure development, land use rights for agriculture and use of land titles as collateral) and socio-economic livelihood. According to the table, there is a positive relationship between socio-economic livelihood and infrastructure development, land use rights for agriculture and use of land titles as collateral of magnitude 0.638, 0.764 and 0.622 respectively. The positive relationship indicates that there is a correlation between the factors and the socio-economic livelihood. This infers that land use rights for agriculture has the highest effect on socio-economic livelihood, followed by infrastructure development while use of land titles as collateral had the lowest effect on the socio-economic livelihood of Lake Kenyatta settlement scheme beneficiaries, Lamu County, Kenya.

4.10 Discussion

This section sought to discuss the influence of land title deeds as collateral, land access rights for agriculture and infrastructure development on settler's socio-economic livelihoods in Lake Kenyatta settlement scheme in the light of previous studies done.

4.10.1 Use of Land Titles as Collateral

The study established that household heads, community/county leaders and religious leaders interviewed had title deeds and that they were affected positively by owning a title deed. Lorenzo, Camilla and Julian (2006) indicated that the use of land titles as collateral is key element for the working of the entire economy, whether for subsistence or market-oriented economies.

Further the study established that the process of issuing land title deeds within the settlement scheme was both fair and efficient. The study further established that efficiency in the provision of title deeds influences the socio-economic livelihood of Lake Kenyatta settlement scheme settlers, Land Transfer influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents and that access to loans influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The money is invested in both farming and other non-farming ventures and therefore earns more income. These findings agree with those of Fleisig and de la Pena, (1996), land is an advantageous form of collateral due to the fact that it cannot be removed and does not easily devalue; it is widely believed that many borrowers face barriers securing transactions with land simply because ownership rights are not formally documented.

However the study established that some of the settlers from the indigenous communities who were allocated land in the scheme sold their plots to the upcountry people and returned to the villages and therefore in effect they became land less. This can be attributed to their culture as a communal society where people live together in villages. This has led to tension between the indigenous communities and the up country people.

4.10.2 Infrastructure Development

The study found out that health centers influence settler's socio-economic livelihoods, Leading to better health and thus low mortality rates and high life expectancy among the settlers in the scheme administrative police posts assist in maintaining security within the scheme to enable settlers perform their socio-economic activities without fear. Building schools has led to high literacy levels settlers' families and this has led to settlers undergoing significant social-economic transformation. The road network within the scheme enables the settlers transport their agricultural produce to the market. The income earned from the produce has raised the settlers' standard of living. Infrastructural facilities, according to Hirschman (1958), refer to those basic services without which primary, secondary and tertiary productive activities cannot function.

The study also established that the commonest form of infrastructure development within the settlement scheme is the health centers/hospitals. Additionally, the study established that the household heads, community/county leaders and religious leaders interviewed were happy with the current state of the existing infrastructure. As well, the study established that the existing infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta in Settlement Scheme. Furthermore, the study revealed that the current infrastructure influenced on the settlers' Socio-Economic Livelihood within the settlement scheme positively. In its wider sense, infrastructural facilities embrace all public services from law and order through education and public health to transportation, communications and water supply (Mabogunje, 1974; Kahn, 1979).

The study also found out that the social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme. Kahn (1979) asserts that settlement scheme infrastructural facilities can be classified into three main types; namely, physical infrastructure such as roads, water, electrification, storage and processing facilities; social infrastructure namely, health and educational facilities, community centers, and security services; institutional infrastructure which include credit and financial institutions, agricultural research facilities and social infrastructure. It was established from the study that the settlers have socially to a large extent adapted to a new living environment by leading high living standards than the pre-settlement time.

4.10.3 Land use rights for agriculture

The study found out that land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents to a great extent. The study also establishes that land utilization, property rights for homestead establishment, land utilization for cash crop farming and secure land rights influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents. Lorenzo, Camilla and Julian (2006) postulated in agreement that increased land access for the affected persons in the settlement schemes can also bring direct benefits of poverty alleviation, not least by contributing directly to increase household food security.

The study also established that household heads, community/county leaders and religious leaders interviewed were involved in cash crop farming. The study further established that the settlers had other socio-economic activities they were involved in. As well, the study found that the socio-economic practice(s) they are currently involved in impacted on their Socio-Economic Livelihood within the settlement scheme positively. Also, the study revealed that as beneficiaries of Lake Kenyatta I Settlement Scheme, the existing agro-ecological activities have affected my Socio-Economic Livelihood within the settlement scheme to a very large extent. Most of the settlers derive adequate income from their farming activities which they invest in the improvement of their living standards. In brief, they have taken farming as a commercial activity.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the objective of the study.

5.2 Summary of Findings

The study sought to establish the influence of settlement scheme programmes on the socio-economic livelihoods of the settlers in Lake Kenyatta settlement 1 scheme, Lamu County.

5.2 1 Use of Land Titles as Collateral

The study established that household heads, community/county leaders and religious leaders interviewed had title deeds and that they were affected positively by owning a title deed. Further the study established that the process of issuing land title deeds within the settlement scheme is both fair and efficient. The study further established that efficiency in the provision of title deeds influences the socio-economic livelihood of Lake Kenyatta settlement scheme, Land Transfer influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents and that access to loans influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents.

5.2.2 Infrastructure Development

The study found out that health centers influence settler's socio-economic livelihoods, administrative police posts influence settler's socio-economic livelihoods, building schools influence settler's socio-economic livelihoods, road network influence settler's socio-economic livelihoods and that provision of piped water influence settler's socio-economic livelihoods. The study also established that the commonest form of infrastructure development within the settlement scheme is the health centers/hospitals. Additionally, the study established that the household heads, community/county leaders and religious leaders interviewed were happy with the current state of the existing infrastructure. As well, the study established that the existing

infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta in Settlement Scheme. Furthermore, the study revealed that the current infrastructure influences the settlers' Socio-Economic Livelihood in the settlement scheme positively. The study also found out that the social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme.

5.2.3 Land use rights for agriculture

The study found out that land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents to a great extent. The study further found that land utilization, property rights for homestead establishment, land utilization for cash crop farming and secure land rights influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The study also established that household heads, community/county leaders and religious leaders interviewed were involved in cash crop farming. The study further established that household heads, community/county leaders and religious leaders had other socio-economic activities they were involved in. As well, the study found that the socio-economic practice(s) they are currently involved in influenced the settlers' Socio-Economic Livelihood in the settlement scheme positively. Also, the study revealed that as a beneficiary of Lake Kenyatta I Settlement Scheme, the existing agro-ecological activities have affected their Socio-Economic Livelihood within the settlement scheme to a very large extent. Additionally, the study found that the socio-economic practices that they are currently engaged in have and provision of land title deeds affected their Socio-Economic Livelihood as an inhabitant of the settlement scheme.

5.2.4 Relationship between the Moderating Factors and the Dependent Variable

The study further established that the present cadres of leaders have influenced the settlers' socio-economic livelihood in Lake Kenyatta I Settlement Scheme in general positively. The study further established that the quality of education being offered affected their living standards within the settlement scheme positively. Additionally, the study established that the prevailing level of security, current cadre of leadership and the present quality of education has

influence on the settlers' socio-economic livelihood in Lake Kenyatta settlement scheme to a large extent.

5.3 Conclusion

The study concludes that efficiency in the provision of title deeds influences the socio-economic livelihood of Lake Kenyatta settlement scheme, Land Transfer influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents and that access to loans influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents.

Further, the study concludes that health centers, administrative police posts, building schools, road network and provision of piped water influence settler's socio-economic livelihoods. The study also concludes that the social infrastructure system (such as community-based organizations/CBOs, not-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme.

The study concludes that land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme residents to a great extent. The study further concludes that land utilization, property rights for homestead establishment, land utilization for cash crop farming and secure land rights influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents. The study finally concludes that land use rights for agriculture has the highest effect on socio-economic livelihood, followed by infrastructure development while use of land titles as collateral had the lowest effect on the socio-economic livelihood of Lake Kenyatta settlement scheme beneficiaries, Lamu County, Kenya.

5.4 Recommendations

1. This study recommends that all settlers in Lake Kenyatta I settlement should be issued with title deeds for the parcels of land that they own. This will ensure that they enjoy the benefits of having a title deed to improve their socio-economic livelihoods.
2. For the community to develop, more women should be allocated land in the settlement schemes to enable them more land use rights.

3. The government should partner with NGOs in the area to ensure that health facilities are improved and accessible to all. This will help in reducing the number of sick people and the socio-economic livelihoods will improve greatly.
4. The effect has been positive as the study further established therefore, the government should further improve the agro-ecological activities in the area. This will not only improve the socio-economic status of the people in the settlement, but will also earn a lot of revenue in the area through other the taxation of the trade transactions of the area.

5.5 Suggestions for further studies

Following this study,

1. A similar study should also be done on other counties since settlement scheme programmes may be different with regard to operations from that of Lamu County based on their geographical positioning.
2. Secondly, in most cases settlement schemes have been established without due consideration of the carrying capacity or the population a given land can support. Further studies need to be carried out to determine the minimum acreage to be allocated to a beneficiary of settlement scheme land and also for planning for provision of the services.

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APPENDICES

Appendix I: Introductory Letter

**University of Nairobi,
P.O. Box 342 - 01000,
Nairobi, Kenya.
Telephone: +254 20 2088310
+254 20 2338143/6/8**

**Philip G. Abong'o,
P.O. Box 30297,
Nairobi, Kenya.
Mobile Phone: +254720 640817
Email: philipabongo@yahoo.com**

Dear Respondent,

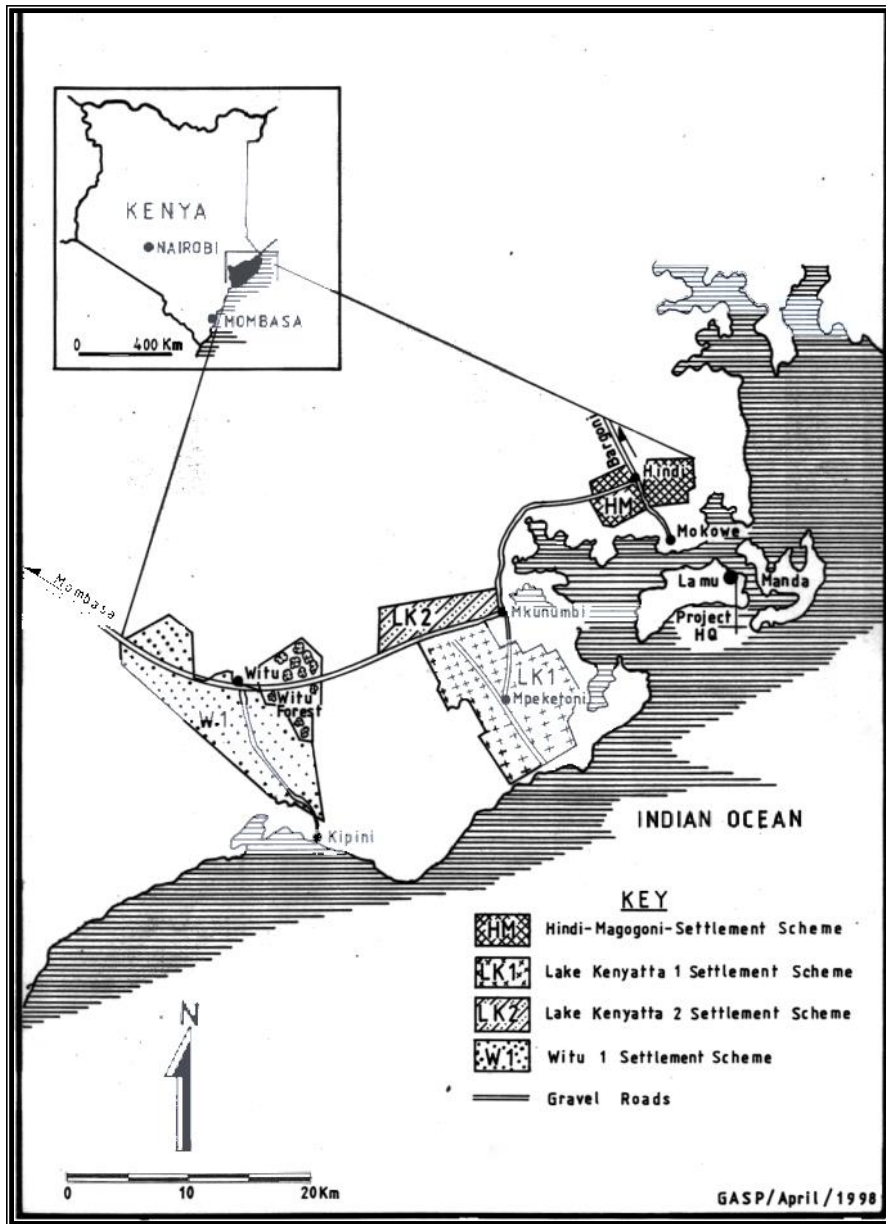
This questionnaire is aimed at collecting data for research purposes on “THE INFLUENCE OF SETTLEMENT SCHEME PROGRAMMES ON THE SETTLERS’ SOCIO-ECONOMIC LIVELIHOODS IN LAKE KENYATTA I SETTLEMENT SCHEME, LAMU COUNTY - KENYA.” The research will be in partial fulfillment of the requirements for the award of the Degree of Master of Arts in Project Planning and Management of the University of Nairobi. Please note that any information collected from this questionnaire will be treated with utmost confidentiality and will be strictly used for academic purpose. Your co-operation in this exercise will be highly appreciated.

Thanks in advance.

Yours sincerely,

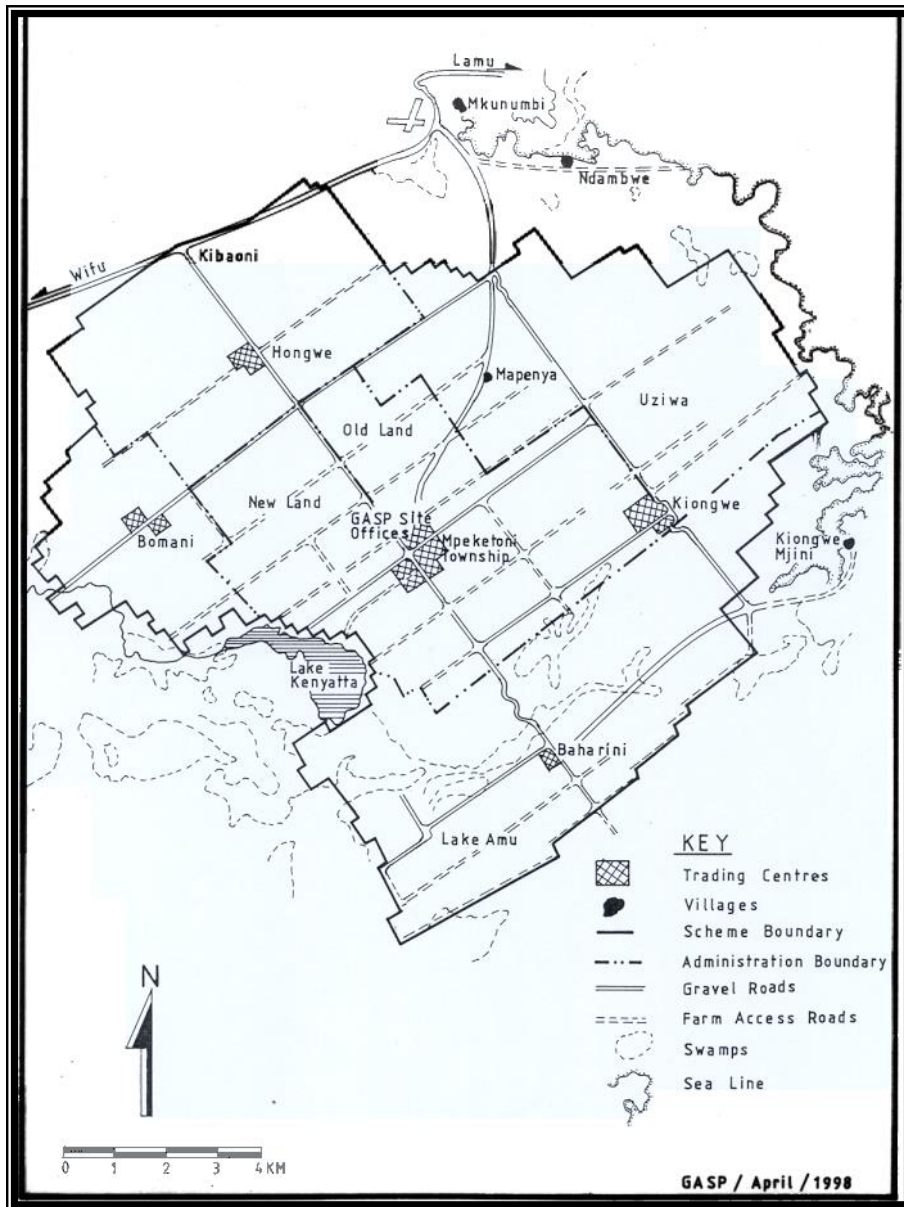
Philip G. Abong'o.

Appendix I: Map of Kenya showing the settlement schemes in Lamu County



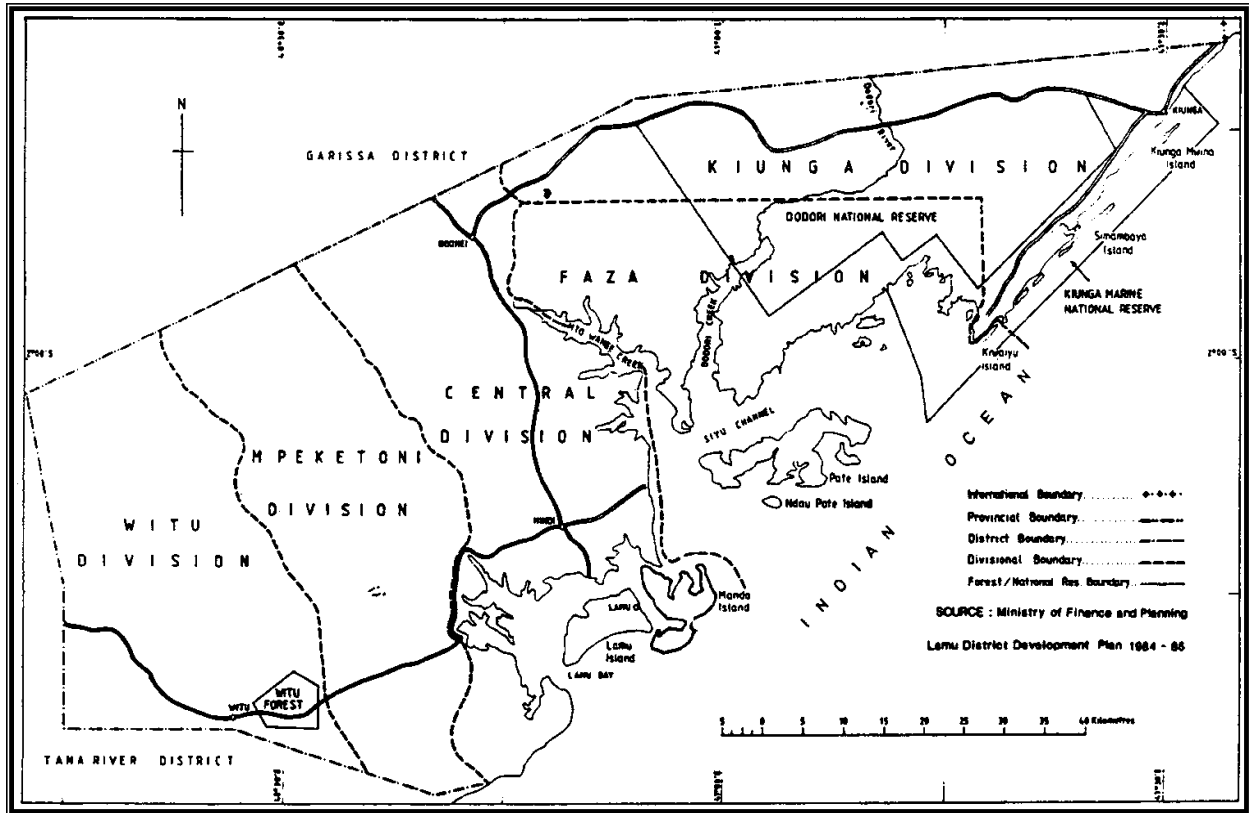
Source GASP/April 1998

Appendix II: Map of Lake Kenyatta I Settlement Scheme



Source GASP/April/1998

Appendix III: The Map of Lamu County, Kenya



(Source: <http://www.savelamu.org/about-lamu/>)

Appendix IV: Number of Settlement Schemes within Lamu County (as of the year 1995)

Name of settlement scheme	Starting date	Size (in Ha)	Number of plots	Plots occupied	Plot size (in Ha)
Lake Kenyatta I	1976	17,000	3,556	3,550	4.0
Lake Kenyatta II	1986	3,000	650	350	4.0
Hindi-Magogoni	1980	7,200	726	398	4.0-6.0
Witu I	1989	12,500	1,728	700	4.0-6.0
Witu II	1993	8,000	1,400	0	4.0

Source: GASP surveys and estimates in Hoorweg, (1996)

APPENDIX V: QUESTIONNAIRE

I am carrying out a study on the influence of settlement scheme programmes on the socio-economic livelihood of Lake Kenyatta I Settlement Scheme settlers. I would like to get some information from you by filling this Questionnaire. Any information from you will be treated with highest confidentiality and will only be used for the purpose of this research.

Kindly answer the following questions fully by either ticking the appropriate response in one of the boxes provided, or by providing a brief explanation where needed. Do NOT write your names anywhere in this questionnaire. Please try to be as honest as possible.

SECTION ONE: GENERAL INFORMATION QUESTIONS

- 1) What is your gender?
Male []

Female []

- 2) For how long have you lived in this settlement scheme as a beneficiary or inhabitant?
10 years or less []

10 - 15 years []

15 - 20 years []

More than 25 years []

- 3) What is your average total acreage of land?
Less than 3 hectare []

3 - 5 hectares []

5 - 8 hectares []

8 - 10 hectares []

- 4) How did you acquire your parcel of land?

Allocated by the government []

Bought from the allottee []

Through inheritance []

If other please specify.....

5) (a) Do you hold any leadership roles or responsibilities within the Lake Kenyatta Settlement Scheme community?

Yes []

(b) If 'Yes,' state your role

.....
.....

(c) Besides the role you mentioned in 3(b) above, are there any other leadership roles or responsibilities (such as community, religious or administrative roles) that you are aware of which exist within the settlement scheme?

Yes []

No []

(d) If 'Yes,' list some of these leadership roles that you personally know?

.....
.....

6) What socio economic activities do you practice?

.....
.....

SECTION TWO: Use of Land Titles as Collateral

Sub-section 1: Questions on Land Title Deed:

7) Do you have a title deed (or allotment letter) for your land?

Yes []

No []

(b) If 'No.' why? Briefly explain.

.....
.....

8) (a) Do you think owning a land title deed has affected your life within the settlement scheme positively or negatively?

Positively []

Negatively []

Neutral (neither positive nor negative) []

No effect or impact at all []

(b) How? Explain your answer.

.....
.....

9) (a) In your opinion, do you think the process of issuing land title deeds within the settlement scheme is both fair and efficient?

Yes []

No []

(b) Briefly explain your response in 9(a) above
(If Yes)

.....
.....

10) What do you propose should be done, if any, to make the process of issuing title deeds more efficient and fair?

.....
.....

11) What is your level of agreement with how the following aspects on use of land title as collateral influence the socio-economic livelihood of Lake Kenyatta settlement scheme settlers?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Land Transfer					
Access to loans					
Security of tenure					
if other, specify					

Sub-Section 2: Questions on Infrastructure Development

12) What is your level of agreement with how the following aspects infrastructure development influences the socio-economic livelihood of Lake Kenyatta settlement scheme settlers?

Type of infrastructure	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Road network					
Provision of piped water					
Building schools					
Health centers					
Administrative police posts					

13) What are some form of infrastructure development within the settlement scheme? Tick as many as possible.

Roads []

Schools []

Health centers/ Hospitals []

Piped water systems []

Electricity systems []

Social amenities (such as public toilets and social halls) []

Administration and police posts []

Any other (specify).....

14) (a) Are you happy with the current state of the existing infrastructure?

Yes [] No []

(b) Do you think the existing infrastructure in general is adequate in meeting the needs of the inhabitants of Lake Kenyatta I Settlement Scheme?

Yes []

No []

15)(a) How has the infrastructure in the settlement scheme influenced your socio-economic livelihood?

Positively []

Negatively []

Neutral []

No impact at all []

(b) Why? Please explain.

.....
.....

16) Does social infrastructure system (such as community-based organizations/CBOs, non-for-profit making organizations/NGOs and social welfare associations) exist within the settlement scheme?

Yes []

No []

(b) If 'Yes,' name some of the CBOs, NGOs or social welfare associations that you are aware of.

.....
.....

17) What do you suggest should be done to improve the quality of the existing infrastructure? Briefly describe

.....
.....

Sub-section 3: Land use rights for agriculture

18) To what extent do land use rights for agriculture influence the socio-economic livelihood of Lake Kenyatta settlement scheme settlers'?

Very great extent	<input type="checkbox"/>	Moderate extent	<input type="checkbox"/>	Very extent	<input type="checkbox"/>	low	<input type="checkbox"/>
Great Extent	<input type="checkbox"/>		<input type="checkbox"/>				

19) What is your level of agreement with how the following aspects on land use rights for agriculture influences the socio-economic livelihood of Lake Kenyatta settlement scheme residents?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Farmer training					
Modern Farming Practices					
Farms are used for agricultural activities					
Crop farming					
Livestock farming					
if other, specify					

20) Which one of the following socio-economic activities is you mainly involved in?

Food crop farming []

Cash crop farming []

Animal farming []

Fish farming []

Trade/ Business []

Any other? (Please specify).....

21)(a) How have the agricultural activities you are currently involved in influenced your socio-economic livelihood within the settlement scheme?

Positively []

Negatively []

Neutral []

No impact at all []

(b) Please explain your answer in 19(a) above

.....

22) What do you suggest should be done, if any, to improve the quality of socio-economic practices and activities that settlers engage in?

.....

23) To what extent has each of the following aspects (independent variables) influenced on your socio-economic livelihood? (Key: **VLE** – Very Large Extent; **LE** – Large Extent; **N** – Neutral; **LE** – Low Extent; and **VLE** – Very Low Extent)

ASPECT	LEVEL OF EXTENT				
	VLE	LE	N	LE	VLE
(a) Use of land title deeds as collateral has affected your socio-economic livelihood.		✓			
(b) Infrastructure development has influenced your socio-Economic livelihood.	✓				
c) As a beneficiary of Lake Kenyatta I Settlement Scheme, the access rights for agriculture has influenced your socio-economic livelihood.		✓			
(d) The socio-economic practices that I am engaged in have affected my living standards as an inhabitant of the settlement scheme			✓		
If other, specify					

24) To what extent do you agree with the following aspects have influenced the socio-economic livelihood of Lake Kenyatta I Settlement Scheme settlers.

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Access to clean water					
Access roads					
Food security					
Access to good health facilities					
Security					
If other, specify					

SECTION THREE: QUESTIONS TOUCHING ON THE RELATIONSHIP BETWEEN THE MODERATING FACTORS AND THE DEPENDENT VARIABLE

25) How has the present cadre of leaders influenced on the socio-economic livelihood of the settlers of Lake Kenyatta I Settlement Scheme in general?

Positively []

Negatively []

Neutral (i.e., neither positively nor negatively) []

No effect at all []

(b) Justify your answer in 21 (a) above

.....
.....

(c) What do you think needs to change or improve in order to make the level of leadership better?

.....
.....

26) How has the quality of education being offered affected your socio-economic livelihood?

Positively []

Negatively []

Neutral []

No effect at all []

(b) Why? Briefly explain your answer.

.....
.....

(c) What do you propose should be done to improve the quality of education that is offered within the settlement scheme?

.....
.....

27) How has the current level of security influenced on your socio-economic livelihood?

Positively []

Negatively []

Neutral []

No effect at all []

(b) Please explain your response.

.....

(c) What do you suggest needs to change, if any, to make better the level of security within the settlement scheme?

.....

28) (a) To what extent has each of the following aspects (moderating factors) affected your socio-economic livelihood in the settlement scheme? (Key: **VLE** – Very Large Extent; **LE** – Low Extent; **N** – Neutral; **LE** – Low Extent; and **VLE** – Very Low Extent)

ASPECT	LEVEL OF EXTENT				
	VLE	LE	N	LE	VLE
(a) The cadre of leadership has influenced my socio-economic livelihood in the settlement scheme		✓			
(b) The present quality of education has influenced my socio-economic livelihood in the settlement scheme	✓				
(c) The prevailing level of security has affected my socio-economic livelihood in Lake Kenyatta I Settlement Scheme	✓				
if others, specify					

29) Useful/relevant suggestions, comments or recommendations, if any?

.....

APPENDIX VI: INTERVIEW GUIDE

This interview guide is to be used to interview mainly community, religious and administrative/political leaders within the settlement scheme.

- 1) What is your role, or at what capacity do you serve as a leader, here in the settlement scheme?
- 2) For how long have you served in this capacity?
- 3) What has been your experience, in general, insofar as this settlement scheme and its inhabitants are concerned?
- 4) How beneficial is it for one to have a land title deed here at Lake Kenyatta I Settlement Scheme?
- 5) How has the use of title deeds as collateral influenced the socio-economic livelihood in the settlement scheme
- 6) As a leader, do you think the process or procedure of acquiring and allocating land title deeds is fair and efficient within the settlement scheme? What needs to change or improve, if any?
- 7) How has the infrastructure development influenced on the socio-economic livelihood of the beneficiaries of this settlement scheme?
- 8) What needs to be done to make the existing infrastructure become more beneficial to the inhabitants within the settlement scheme?
- 9) Are there any socio-economic activities that are being practiced in this settlement scheme? If 'yes,' what are some of the commonest?
- 10) In what ways has the land access rights for agriculture influenced the socio-economic livelihood of the settlers in the settlement scheme
- 11) How have these activities influenced the settlers' socio-economic livelihoods of your people in the settlement scheme?
- 12) In your opinion, how has the leadership, at various levels, influenced settlers' socio-economic livelihoods in Lake Kenyatta I Settlement Scheme? Is there anything that needs to change in leadership for it to be more beneficial to the people?
- 13) Do you think the quality of education being offered has an effect on the quality of life of the settlers in the settlement scheme?
- 14) In what ways has the government Policies and regulation influenced the socio-economic livelihood of the settlers in Lake Kenyatta I settlement scheme
- 15) How has the level of security influenced the settlers' socio-economic livelihoods in Lake Kenyatta I Settlement Scheme? What needs to change or improve on this aspect?