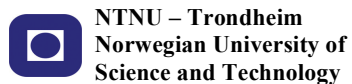


**SAMUEL YAO DOGBEY**

**Analyzing Post Coastal Erosion Livelihoods After the Construction  
of the Keta Sea Defence Project and the Resettlement of Coastal  
Dwellers in Keta, Ghana**



**Master Thesis for the Award of Master of Philosophy (MPhil) in Development  
Studies – Specializing in Geography**



**Department of Geography, Norwegian University of Science and Technology,  
Trondheim, May, 2015**



## **DECLARATION**

With the exception of references used, which have been duly cited, I Samuel Yao Dogbey, do hereby declare that this thesis is the result of my own work under the supervision of Professor Cathrine Brun at the Department of Geography, Norwegian University of Science and Technology (NTNU), Trondheim, during the 2014/2015 academic year. This work has neither been submitted in whole nor in part for any degree in this University or elsewhere.

.....  
Samuel Yao Dogbey

.....  
Prof. Cathrine Brun

## **DEDICATION**

I dedicate this thesis to my mother and father; Mr. Dogbey Moses and Mrs. Abla Ametepee. Thanks for always being there for me.



## **ACKNOWLEDGEMENT**

I am grateful to God for the good health and wellbeing that were necessary to complete this thesis.

I wish to express my sincere thanks to the Norwegian Government for granting me the Quota Scheme Scholarship to pursue my master degree in NTNU.

I am also grateful to Professor Cathrine Brun, in the Department of Geography. I am extremely thankful to her for sharing her expertise and valuable guidance throughout the thesis period.

I would like to express my gratitude to all the Department faculty members for their help and support. I also thank my parents for their encouragement, support and attention.

Finally, I take this opportunity to express my gratitude to one and all, who directly or indirectly, have lent their hand in this thesis.

## ABSTRACT

Over the years, coastal erosion has posed a serious threat to many coastal dwellers. Coastal erosion has destroyed the livelihood and properties to affected communities which led them to impoverishment. The effect is largely felt by the developing countries since a larger number of people in these regions depend directly on the sea for their livelihoods. To address this menace, coastal defence projects and resettlement of the affected people were the approaches adopted by many governments. The thesis the current assets of the people of Keta, their livelihood strategies and how they organized their livelihoods after the construction of the Keta Sea Defence and the resettlement project. Specifically, the thesis address the governance and institutional mechanisms that affect the resettlement process and how people's livelihoods are organized, The contributions of the resettlement process in in strengthening or weakening the local capabilities and access to livelihood asset and the livelihood strategies adopted by the affected people to achieve their livelihood outcome.

Findings from the research show that the resettlement process has been influenced by various actors which affect people's livelihood in the affected community. The quantity of the houses built is not up to the number promised, as a result many people could not get the houses. The problem of who deserve to be given the house was a major issue and the residents believe some of the people living in some of the houses were not from the community. The quality of the house did not live to expectation due to insufficient supervision during the construction stage.

Despite the fact that people express some level of satisfaction about the assets they have in the new area, they also indicate that the improvement in those assets did not lead to satisfactory livelihood outcomes. They express satisfaction about the road network, education and health provision in the community which was not the case before the resettlement.

Due to challenges posed by the erosion, many people could not continue the livelihood they had before the project. They adopted other strategies in order to gain a

living. Reduction in fish catch and inaccessibility of the seashore has forced some fishermen to migrate seasonally to other fishing areas outside the community or to neighbouring countries to fish. Remittances sent by those who travelled to other areas help in the upkeep of the families.

Based on the findings, I recommend construction of more houses to accommodate those who are still homeless as a result of the erosion. Secondly, the government must develop the salt industry in Keta to create job for the community and also establish fishing harbour as promised in the Keta Sea Defence Project. Also, the Keta lagoon has a great potential for tourism development and if harnessed can create job for the unemployed in the community.

## LIST OF ABBREVIATION

KSDP	Keta Sea Defence Project
DfID	Department for International Development
SLF	Sustainable Livelihood Framework
IRR	Impoverishment Risk and Reconstruction
PNDC	Provisional National Defence Council
GLDD	Great Lakes Dredge & Dock Company
NDC	National Democratic Congress
CERGIS	Centre for Remote Sensing and Geographic Information Services
UNDP	United Nations Development Programme
RAPID	Revitalizing Areas by Planning, Investment and Development
IIED	International Institute for Environment and Development
IDS	Institute of Development Studies
UN	United Nations
WB	World Bank
FAO	Food and Agriculture Organization
WFP	World Food Programme
SIDA	Sweden International development cooperation
NAZI	New Zealand Agency for International Development
NGO	Non-Governmental Organization
WCED	World Commission on Environment and Development
GLOPP	Globalization and Livelihood Options of People living in Poverty
AU	Africa Union
GSS	Ghana Statistical Service
PHC	Population and Housing Census
FCUBE	Free Compulsory Basic Education
NHIS	National Health Insurance Scheme
NADMO	National Disaster Management Organization
GoG	Government of Ghana

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# Chapter 1 INTRODUCTION

This study is about analyzing post coastal erosion livelihood recovery after the construction of the Keta Sea Defence project and resettlement of coastal dweller in Keta, Ghana. Chapter one presents the general introduction to the topic, the research objectives, the significance of the study, the conceptual understanding of the objectives and the thesis outline.

## 1.1 General Introduction

Many coastlines are changing as a result of sea erosion which has put many coastal dwellers to risk, and has led to the destruction of their livelihood sources. Over 70 percent of the world beaches experiencing coastal erosion (Schwartz, 2005). “ About 20 percent of the world’s coast is sandy and backed by beach ridges, dunes, or other sandy depositional terrain. Of this, more than 70 percent has shown net erosion over the past few decades.” (Viles & Spencer, 1995, cited in M. Krantz, 1999, p. 8). It is estimated that sea retreat will pose a serious hazard to about 25 percent of coastal regions where productivity occur, 60 percent of which occupied by human lives (Al-Tahir, 2004).

Many countries in the world have experienced sea erosion in one form or another. In Texas coast erosion is a severe problem. For example, at the Sargent beach in Matagorda County, sea erosion has left only 600 feet of land between the gulf and the intercoastal waterway (M. Krantz, 1999). In Africa, the Nile Delta coast has experienced erosion especially at Rosetta and Damietta arms of the river. This resulted in the destruction of the coastal roads and caused loss of buildings and other important agricultural lands and other recreational resorts along the beach (Frihy, 1992, p. 65). In Europe, Denmark and Sweden, the west coast of Jylland and Krane, south of Sweden respectively experienced the erosion of the beaches due to longshore sediment transport (M. Krantz, 1999).

There has been a severe sea erosion problem on the coast of Ghana, Togo, Benin and

Nigeria, at various points. “Erosion is a chronic issue along the Ghanaian coastline” (Anim, Nkrumah, & David, 2013, p. 2). Erosion has affected the coastal infrastructure and valuable beach resorts and this has raised a great concern to the people living along the coast. Much has not been done by the Government of Ghana to curb the situation. It is estimated that the ocean claims 1.5 to 2m of the 560 km coastline annually (Ibid). The cause of coastal erosion in Ghana includes both the man-made induced causes and natural phenomena. Some of the factors identified by Anim et al. (2013) were sand mining for building of houses, bridges and roads. Other factors were poor management of the coastal communities, deforestation along the coast as a result of urbanization, mineral mining such as Gold and salt, rising sea levels and heavy storms etc. Figure 1 below is some images from the sea erosion along the coast of Ghana.

**Figure 1. Some images from the sea erosion along the coast of Ghana**



Source: ("Battling Ghana's eroding coastline," 2010)

The most severe and internationally known areas hit by sea erosion are located in the Volta estuary basin, at Keta and Ada stretch. Coastal erosion is one of the major challenges for Keta Municipality and the coastal dwellers in the region. Sea erosion

had put the life of about 500,000 people at risk over the years (Danquah, Jeanette Attippoe, & Ankrah, 2014). Most of these people were the poor who depends directly on fishing and small-scale farming as their source of livelihood. Sea erosion has led to negative consequences on the farmlands along the coast and has destroyed the seashore for fishing.

The exposure to the risk of the erosion has created intense poverty among the people in the affected regions. Poverty in this case is linked to the coastal erosion which has overstretched the already existing inequality among the people of Keta and their counterparts in the urban areas of Ghana. To prevent the erosion, the Government of Ghana undertook a sea defence project which was one of the major projects in Ghana. The resettlement project started in 1999 with the aim of resettling about 1,200 households (Ibid). The aim of the resettlement projects are to provide shelter to inhabitants which fall victim of certain disasters as intervention or measures to restoring their livelihood or providing them better life than the former (Ibid). The sea defence project work is under the purview of the Ministry of Water Resources, Works and Housing which was the ministry responsible for water resources and housing projects in Ghana. The ministry oversees all the construction work in the sea defence project.

There have been many resettlement projects in other parts of Ghana. For example, during the construction of the Akosombo dam in the 1960s, people who were affected by the project were resettled to another area. There were other resettlement projects in Obuasi, Ahafo and Bosomtwe to give way for mining activities. All these projects have their shortfalls.

The main concern of the KSDP was to reclaim the land from the lagoon in the area of Keta, Vodza and Kedzi, providing areas where housing and businesses can be rebuilt and also construct a residential unit for the affected people.

## **1.2 Research Objectives**

The main objective of this research is to study the current assets of the people, livelihood strategies and how people organized their livelihoods after the construction of the Keta Sea Defence and the resettlement project.

Specifically, the research has examined the following questions;

- ❖ How do the governance and institutional mechanisms affect the resettlement and how people's livelihoods are organized?
- ❖ How do the Keta Sea Defence and resettlement process strengthened weakened the local capabilities and access to livelihood assets?
- ❖ How do the affected people develop their livelihood strategies to achieve their livelihood outcomes?

## **1.3 Significance of the Study**

This research will add knowledge to existing knowledge on the subject matter and also provide areas for further study.

Lesson learnt from this study may help the Keta Municipal assembly and the government to modify future resettlement projects to improve the conditions of the affected people. Therefore the study contributes to new perspectives about sea erosion and resettlement and the effect on peoples' livelihoods.

This thesis is also a requirement for the fulfillment of the Masters of Philosophy (MPhil) in Development Study at Norwegian University of Science and Technology (NTNU).

## **1.4 Conceptual Understanding of the Objectives**

**Question 1.** How do the governance and institutional mechanisms affect the resettlement and how people's livelihoods are organized?



This question is about transformational structures and processes. In Ghana, there is local government and traditional governance structures that operate within the umbrella of the state government. These structures play a role in how people organize their livelihood activities. This question attempts to gain the local people's knowledge about their understanding of the processes involved in the resettlement project, their satisfaction of the processes and their level of involvement in decision prior to the construction of the houses. It also seeks to understand the role of other actors in the Keta Sea Defence Project and the resettlement. The institutional and policy arrangements of the project were also explored.

**Question 2.** How do the Keta Sea Defence and resettlement process strengthened weakened the local capabilities and access to livelihood assets?

This is mainly about the five livelihood assets available to the people of Keta. This includes the Natural capital, Human capital, physical capital, Social capital and financial capital. This question purposely seek to gain first and foremost an accurate and realistic understanding of people's strength and assets endowments and how they were able to convert these assets to achieve their livelihood outcomes. I used assets in order to understand the assets needed by the resettlers to undertake their livelihood activities. This gives an understanding of how vulnerability context affect the access to assets by the people of Keta.

**Question 3.** How do the affected people develop their livelihood strategies to achieve their livelihood outcomes?

Livelihood activities and outcome in the livelihood framework is used in this context to understand the alternative strategies that the affected people adopt to gain a living and the outcome of the assets and their alternative strategies. In an attempt to gain a living after the resettlement, the affected people engaged in a range of livelihood strategies some of which did not yield their intended outcomes.

## 1.5 Thesis Outline

This thesis has seven chapters.

**Chapter 1:** Provides the general introduction to the topic. It has provided the overview of the coastal erosion with specific examples from different regions of the world. The chapter continues to bring out the sea erosion problem in Keta and the consequent resettlement. It continues further by stating the objectives of the thesis and the specific objectives that has been explored throughout the thesis.

**Chapter 2:** Chapter 2 is divided into two sections. Section one presents the background of the study area. It started by giving a brief overview of Ghana and narrowed it down to Keta specifically. The section explains the geography of Keta, their economic activities and their demographic environment. Section two introduces and discusses the vulnerability context within which the people of Keta operated. It examined the security of the resettled people and the factors that influenced the possibilities for their livelihood systems.

**Chapter 3:** Presents the basis for analyzing the livelihood of the people of Keta. It presents the overview of the displacement and resettlement literature. The chapter also introduced the Cernea's (1997) IRR Model. It presented the problems faced after resettlement. The chapter continues by providing discussion of the DFID's (1999) Sustainable livelihood framework upon which the analysis is based. It examined briefly the value of sustainable livelihood framework to resettlement and livelihood reconstruction.

**Chapter 4:** Explained the methodological approach that was applied in this research. It highlighted the methods and procedures used in collecting the data. It also discussed the ethical issues involved in the fieldwork. It further explained the reasons for the type of method adopted.

**Chapter 5:** This chapter presents the result and analyses of objective one. The chapter explores the policy arrangements and the processes involved in the KSDP including the resettlement project. It explored the role of some actors in the KSDP

and the resettlement project. It also talked about the effect of the policies and process on the KSDP.

**Chapter 6:** Presents the analyses of objective two. The chapter explores the livelihood assets available for people in the community after the resettlement project. The chapter explains whether the project has strengthened or weakened the various assets.

**Chapter 7:** Chapter eight present the additional livelihood strategies or alternative livelihoods that people are now using to cope with the shocks they have experienced. It continues by assessing whether the Assets and the alternative livelihoods that people engaged helped them to achieve their livelihood goals (Livelihood Outcomes).

**Chapter 8:** This chapter provides Conclusion and Recommendations for further action and research based on the research findings.



## **Chapter 2 BACKGROUND OF THE STUDY AREA**

This chapter is divided into two sections. Section begins with a brief profile of Ghana and then narrows it to the study area. The section continues by giving necessary information about the study area. It comprises the geography of the study area, topography and drainage, climate and vegetation, demographic environment, age and sex composition of the population, labour force, employment by sector, economic activities in the area and the rationale for the choice of this area for the study.

Section two of this chapter introduces and discusses the vulnerability context within which the people of Keta Lived. This section describes, in brief, the causes of sea erosion and flooding. It also discusses the various attempts by the government of Ghana to curb the situation throughout history. The construction of the KSDP, which was the greatest intervention in the area, and the components of the project have been discussed.

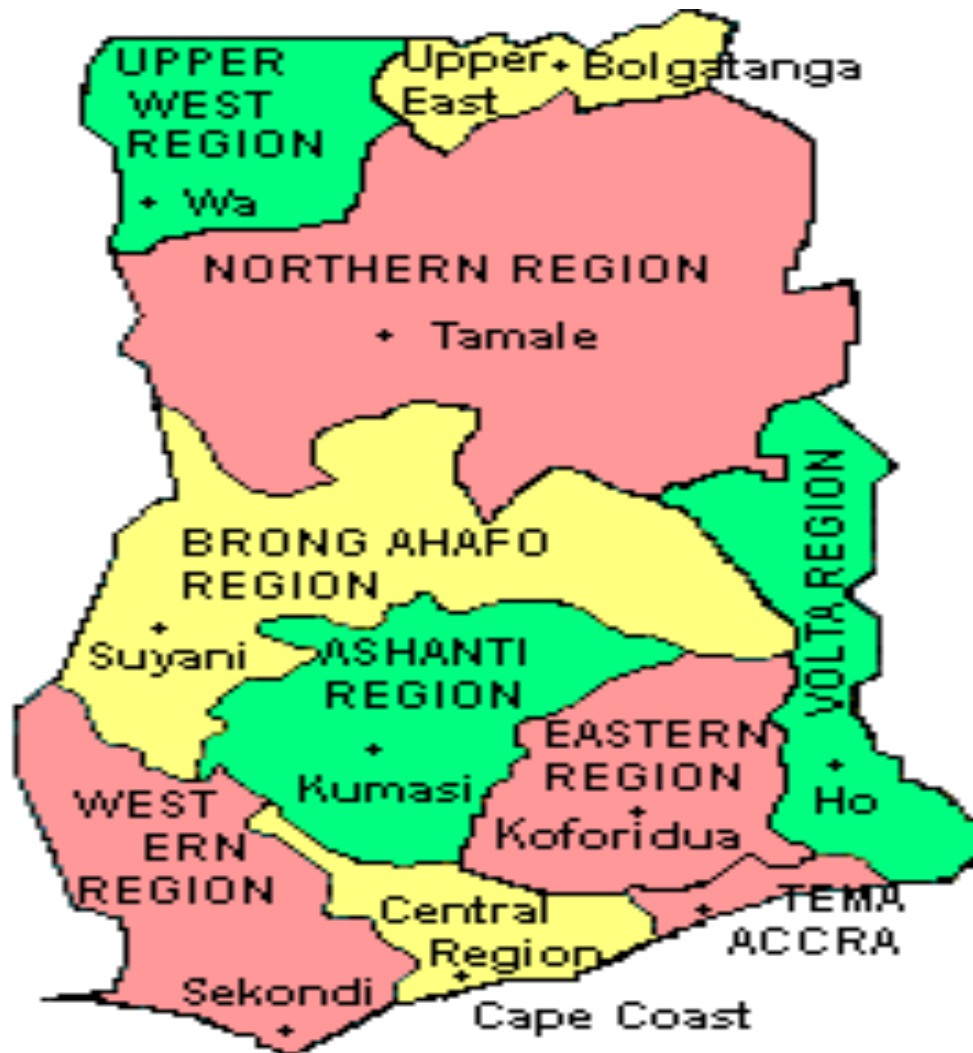
### **2.1 Brief Profile of Ghana**

#### **2.1.1 Introduction**

Ghana is located in West Africa, bordered by Cote D'Ivoire on the West, Togo on the East, Burkina Faso on the North and the Atlantic Ocean on the south. Ghana has a total land area of 238, 537 square kilometers. Ghana has a low-lying topography with tropical and savanna vegetation. The temperatures are comparatively warm and dry along the southeastern coast and humid in the southwest, and hot and dry in the north. Ghana is divided into 10 regions with Accra as its Capital City (AU, nd).

Ghana's population is 24,658,823 according to 2010 population and housing census of Ghana. Ghana's population is projected in 2014 to reach 27,043,093 (GSS, 2012). The life expectancy at birth stands at 64 years for men and 66 years for women ("Ghana Homepage - Government of Ghana,"). Fig. 2 shows the map of Ghana with the 10 administrative regions.

Figure 2 Map of Ghana Showing the 10 Regions and their capital Cities



Source: Ghanaweb

### 2.1.2 Geography of Keta Municipality

Keta is the capital city of the Keta municipality in the Volta region of Ghana. It is one of the twenty (25) administrative districts and municipalities in the Volta region. It was carved out of the former Anlo District, which also comprised Akatsi and Ketu Districts (GoG, 2011, July 6). The Municipality lies within Longitudes 0.30E and 1.05E and Latitudes 5.45N and 6.005N. The Keta municipality is located east of the Volta estuary, which is about 160km to the east of Accra. The municipality shares boundary with Akatsi district to the north, Ketu district to the east, South Tongu district to the west and the Gulf of Guinea to the south. It have a total land surface

area of 1,086km<sup>2</sup>, by which approximately 362km<sup>2</sup> (about 30 per cent) covered by water bodies (GoG, 2011, July 6).

### **2.1.3 Topography and Drainage**

The topography of Keta is a flat land with a large area of lagoon along the coast. Keta, Kedzi and Vodza Township have the lowest point of about 1 – 3.5 meters below sea level. The highest point is about 53 meters above sea level around Abor in the northern part of the municipality. The area has three main geographical belts, which are narrow coastal strips, the lagoon basin in the middle belt and the plain in the northern belt of the municipality. The municipality have Keta, Angaw, Agbatsivi, Logui, Nuyi and Klomi lagoons as the main drainage basins (GoG, 2011, July 6). The Keta lagoon is biggest and the main drainage basin in the municipality and serve as one of the major livelihood sources for inhabitants in the municipality. It covers about 12 km at its widest section and 32km long.

The lagoon was formed when the sea retreat the land or moved further away from its previous position 1000 years ago. This created a sandy deposition along the seashore. Other people were of the view that there might be coastal rivers, which have dried up and leave behind large pound as a result of the remains of oyster shells (GoG, 2011, July 6). Another theory also explain this by linking it to the ice age and that the ponds were remain of an ice which melt due to rise in temperature and it was infiltrated by the sea water (Smith, Cable, Martin, Cherrier, & Roy, 2006).

### **2.1.4 Climate and Vegetation**

The municipality is within the equatorial climate with an annual rainfall of less than 1,000mm. As one travels to the south, the rainfall reduces to about 800mm annually. The municipality is one on the driest along the coast of Ghana. The major raining season is between March and July and the month September and November usually recorded the lowest rainfall in the region. The average daily temperature is usually around 30 degrees Celsius with high humidity and high evapo-transportation (GoG, 2011, July 6). Five vegetation zones can be identified in the region, which are mostly

coastal savanna vegetation. These vegetation zones are the coastal strands – it is sparse grassland interspersed by wood shrubs bordering the seashore, the blackish water vegetation – this comprises of the common grass species found along blackish lagoons and streams and on the silt clays. These are mostly mangrove that constitute the major source of fuel wood for people in the region and also serve as a source of livelihood for them. The third vegetation zone is the fresh water vegetation – this vegetation zone is located at the northern side of the region and contains grasses used for manufacturing of local mat and bags. Also found in the region is the guinea savanna vegetation – this vegetation zone is also found at the northern part of the region and its mainly tall grasses scattered all over the place. The fifth vegetation zone found in the municipality is the salt flat vegetation – these are flat salt that are scattered on pieces of land between streams and on islands in the lagoon. It is commonly found in most areas in the municipality (GoG, 2011, July 6). Table 1 shows the size and topographical characteristics of the Keta Municipality.



**Table 1 Size and the Topographical Characteristics of the Keta Municipality**

Land area	1,086km <sup>2</sup>
Population of land covered by water	362 km <sup>2</sup>
Relief	
Highest point	53m above sea level
Lowest point	3.5m below sea level
Drainage (lagoons)	Keta, Angaw, Agbatsivi, Logui, Klomi
Climate	Dry coastal equatorial temperature (average 30 <sup>0</sup> C)
Annual average rainfall	800mm-1000mm
Vegetation	Coastal savannah vegetation
Main soil type	Sandy soil, loamy soils and clayey soils
Geological resource	Clay deposit

Source: Keta Municipality – Ministry of food and Agriculture

### **2.1.5 Demographic Environment**

The population of the Keta Municipal Assembly according to the 2000 Population and Housing Census is 133,661. This figure represents 8.2 percent of the total regional population. Out of the total population of 133,661, 62,827 that represent 47.0 percent were male whilst the female constitute 70,834 that represent 53.0 percent. Refer to table 2 for detail. This figure shows clearly that there were more female to males in the municipality (GSS, 2012). The reason for this is due to migration and education. This disparity is discussed in the subsequent chapters.

**Table 2 Demographic Characteristics of the Population in Keta Municipality**

Total population	133,661
Population growth rate	1.3%
Males	62,827 (47.0 Percent)
Female	70,834 (53.0 Percent)

Source: Keta municipal Assembly development document

### **2.1.5.1 Age and Sex Composition of the Population**

The age structure of the 2000PHC of Keta municipal assembly shows that, the population of the municipality is youthful. 63.1 percent of the population aged below 30 years while those below 15 years form 36.9 of the total municipal population. The older population that is the population above 60 years forms 12 percent of the total population in the Keta Municipality. The situation may differ in other region due to some physical factors. Table 3 shows the age and sex structure of the population

**Table 3. Age and Sex Structure of the Population**

Age group	Male		Female		Total	
	NO.	%	NO	%	NO	%
0-14	26,620	42.3	25,665	36.2	52,285	39.1
15-29	16,126	25.7	15,905	22.5	32,031	24.0
30-34	8,707	13.9	11,418	16.1	20,125	15.1
45-59	5,525	8.8	7,624	10.8	13,149	9.8
60+	5,849	0.1	10,222	14.4	16,071	12.0
Total	62,827	100	70,834	100	133661	100

Source: 2000 Population and Housing Census

### **2.1.5.2 Labour Force**

The labour force comprised the economically active population of 15 years and above. This population constitutes 53,397 people which represent 40 percent of the total population in the municipality are employed in year 2000. As shown in table 4,

there were more female in economically active age group than male. They represent 55.4 percent of the economically active population in the municipality.

**Table 4 Economically Active Population (15 years +) by Employment**

Sex	All	Employed	Self employed without employee	Self employed with employee	Unpaid family worker	Apprentice	Domestic employer	Others	Total
		%		%		%			
Total	53,397	11	82	4	1	2	0	1	100
M	23827	16	75	4	1	2	0	1	100
F	30	7	86	3	1	2	1	0	100

Source: 2000 Population and Housing Census

### **2.1.5.3 Employment Sector**

Table 5 shows that the employment in the private sector is far higher than in the public sector. The private sector employs 94.6percent whilst the public sector employs 5.4 economically active populations.

**Table 5 Economically Active Population by Sector**

Sex				
Total	53,397	5.4	94.6	100
M	23,827	7.2	92.8	100
F	29,570	4.0	96.0	100

Source: 2000 Population and Housing Census

### **2.1.6 Economic Activities in Keta**

The majority of people in the municipality get their livelihood from fishing, farming and livestock keeping. Petty trading is also one of the livelihood sources in the municipality.

**Crop Production:** The major crops cultivated in the Keta municipality is shallot, okro, tomatoes, pepper and recently, they have started cultivating carrot. The region also cultivates some minor crops such as maize, cassava, beans etc. Crop cultivation is not widely spread in the municipality but located in some area. Sugar cane is also one of the crop which is cultivated in the flood prone areas in the district and it is purposely used for brewing local gin popularly call Akpeteshi.

**Fishing:** The municipality has a lot of water bodies, lagoons creeks as well as Atlantic Ocean, which serves as a major livelihood source for the majority of the people in the municipality especially along the coast and lagoons. Many people livelihood depends on these rivers and the ocean and fishes caught form an essential part of their diet.

**Livestock:** The municipality is noted for small scale rearing of fowls, ducks and geese in a small quantity as a secondary vacation for many households in the region. It is usually kept in a free-range and sometimes the pose a lot of problem to local farmers.

### **2.1.7 Rationale for the Choice of Study Area**

First all, I chose Keta to undertake my research because I lived in the Municipal and am an indigene of the Keta Municipality. Secondly, there is a peculiar problem in this area, which I am interested in (Sea erosion and livelihood recovery) and this could not best be researched in any other parts of the region. Thirdly, throughout my experience and looking at what people are going through in the area, I think there is more work to be done because most of the studies conducted in the area focused on the physical aspect of the sea erosion without actually looking at what happened to people after the erosion and how they were resettled and how they are coping with the shocks and

stress they go through over the years. This has informed my choice of this area to undertake my research. Lastly, giving the limited time for collecting the data, I deemed it necessary to choose an area in which language will not be a barrier for me

## **2.2 Overview of Vulnerability Context of Keta**

### **2.2.1 Introduction**

Vulnerability context is the external environment in which people exist. Peoples' livelihoods are affected by the external environment in which they live. These external factors may be trends, shocks and seasonality. The concept of vulnerability is explained further in chapter 3. To analyze the livelihood security of the resettled people of Keta, it is important to understand the vulnerability context of the affected people. This will help in understanding the range of macro-factors that influence the possibilities for livelihood systems. We must consider the environment, social, demographic, political and historical context in which these people live. This information sets the stage within which livelihood strategies are formed. This information is basically obtained from secondary data to reduce cost and time spent on the field. This section seeks to present the vulnerability context within which the people of Keta lived.

### **2.2.2 Sea Erosion, Flooding, and the Affected Communities**

The affected communities are communities within Keta; these are Kedzi and Adzido. History has it that Keta was also known as Quittah and was assigned B27 as a postal mark. The settlement of Keta contains a sub-group of the Ewe people who migrated to the area from Ketu, in Benin in the 17<sup>th</sup> century. The name 'Keta' is an Anlo Ewe Language, which means 'top of the sand'. This name was given to the place because the land is filled with sand hence that name 'Keta' (top of the sand) and since then, Keta has become the official name of the area. The people occupied the land Keta for more than 300 years ("Keta," n.d). The sea erosion in Keta is not a recent phenomenon. History has it that the problems of sea erosion start to surface in Keta around 1907 when the first sea erosion has been noticed. The following ones occurred in the years 1924, 1949, 1986, 1996 and 1997 (Garr, 2010). Different state actors have

played different roles in curbing the menace, which dates back to the last 100 years. Among these actors was the colonial government (British Gold Coast), which is followed by the post-colonial government. Refer to table 6 below for details about plans and proposals for solving the sea erosion problem during the 20<sup>th</sup> century. The problem of sea erosion was explained in terms of natural causes, human interventions like sand mining as well as the construction of harbours and dams in the 20<sup>th</sup> century (Kraan, 2009).

*“Dams and other impoundments prevent sediment from reaching down-stream water courses. Deficiency in nutrients and sediment reaching deltas results in coastal erosion and reduction in the natural productivity of some aquatic life forms. For example, the normal nutrient and sediment supply circle for the lower Volta Basin downstream of Akosombo was disrupted by the construction of the dam, and has resulted in increased sea erosion in the Keta and Ada-Foah areas of the coastline”* (Republic of Ghana, 1999, cited in Kraan, 2009, p. 272).

According to Boateng “the reduction of littoral sediments supply caused by Akosombo dam led to the fast erosion of the coastline down-drift the Volta Estuary” (Boateng, 2009, p. 4). The already precarious situation has become worse in 1965 as the Keta Lagoon overflow its bank and started flooding the communities between Keta and Hlorve (Boateng, 2009). The fluvial sediment supplied from the Volta River has reduced from 71m<sup>3</sup>/a to a little as 7million m<sup>3</sup>/a (Ibid). According to Kraan, the sea had swallowed two-thirds of Keta. This has led to the first attempt to take real action to solving the problem. The PNDC government in 1986 commissioned a group of consultants to study the erosion problems along the coast of Ghana (2009, p. 272). As much as twenty-two spot of erosion along the coastline was identified by the Italian firm Cooperativa Muratori and Cementisti as responsible for the sea erosion in Keta. Integrated plans for sea defence, lagoon flood control and economic development were presented to the government of Ghana in 1987 (Ibid).

**Table 6 Plans and Proposals geared towards solving the sea erosion at Keta in the 20th century**

Year	Event/Report/Who	Proposal/Activity	Cost
1923	Director of public Works, arranged by the Commissioner of the Eastern Province	Erect groynes as part of the seashore at Keta	
1929	A.T. Coode; contracted by colonial government	Permanent sea defence works	\$1,000,000
1938	Anlo State Council	Building retaining wall along the shore at Keta	\$70
1851	New African Gov't – Officer in charge Keta District Public Works Department	Anti-erosion work at Keta & temporary groynes	\$8,000
1956	Sir William Halcrow and Partners, ordered by the Minister of Works and housing	Report: Halcrow lagoon land reclamation project	
1963	Aryee – Officer in charge of Keta District public Works Department	Cut a canal at Kedzi	
1978	Volta Regional Commissioner, Commissioner for Works and Housing – contracted Messrs Marine Salvage	Stoneworks	C450, 000
1985	Blueprint for coastal protection with Togo, Benin, Nigeria – PNDC		
1986	Study Coastal Erosion – Prof Mawuse Dake - PNDC		
1987	Report of Cooperativa Muratori and Cementisti – PNDC	Integrated plan for sea defence, lagoon flooding control and econ	\$44,148,000 (Donors) \$488,000(Gov) C634420, 000 (Gov)
1996	GLDD – NDC Gov't	Keta Basin Integrated Development project: Sea defence walls (groynes and offshore breakwaters), Lagoon flood control, Land reclamation, Resettlement communities, 8.3km Asphalt link road	\$84 million (Gov loan – EXIM Bank) US\$916,000,000 GOV

(Garr, 2010, p. 56)

### **2.2.3 The Construction KSDP**

In an attempt to combat the sea erosion in Keta, the Ministry of Works and Housing of the Republic of Ghana undertook a sea defence project to protect and stabilize the shoreline from Keta to Hlorve with 8.3km long road. Figure 3 below shows part of the sea defence construction.

**Figure 3 Cross Section of the Sea Defence Wall**



(Anane, 2015)

The project was awarded to the American company Great lakes Dredges and Dock Company (GLDD) in 1996. GLDD Company conducted several studies and tests in order to generate a cost-effective, environmentally sound solution to the sea erosion problem. The studies were conducted in association with GLDD and its subcontractors Baird & Associate and Research Planning Development.

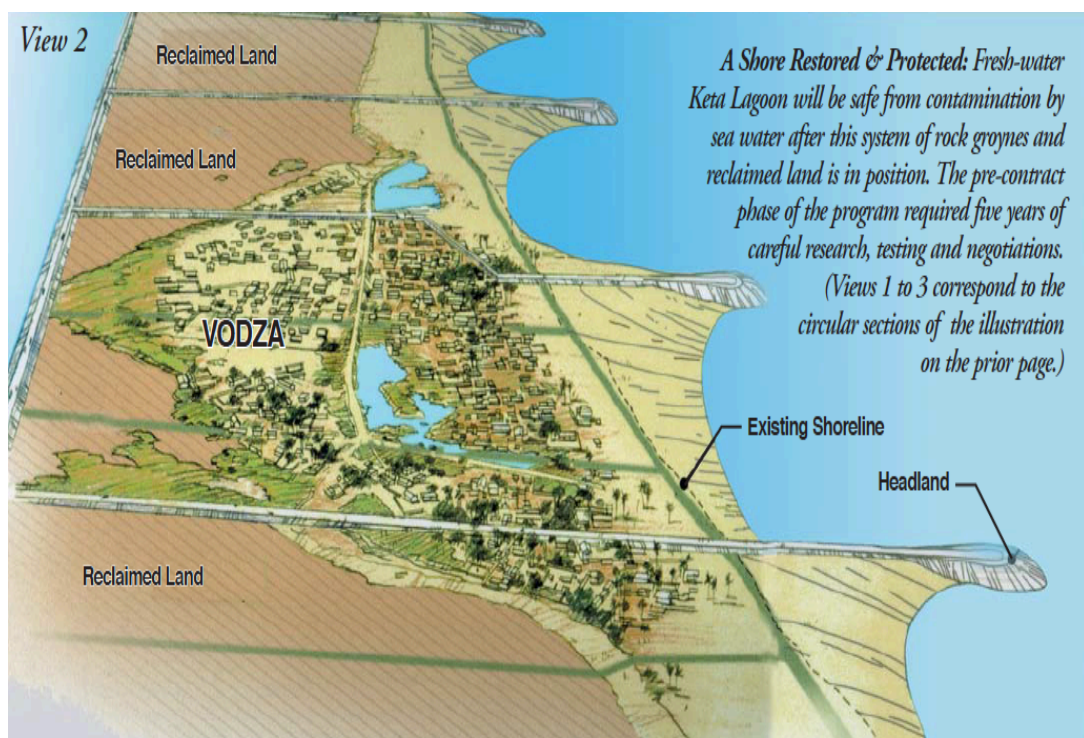
### **2.2.4 Design and Construction Components of the KSDP**

The KSDP has for designs and construction components. The project has in its design a construction of an 8.3-km road/causeway between Keta and Hlorve, re-establishing a link lost to erosion. This will reconnect the link between Keta and Hlorve. The project also has a sea defence works to limit further erosion by stabilizing the



shoreline with one offshore breakwater and seven headland groynes, a feeder beach and a beach nourishment placed between the groyne bays from Keta to Hlorve. The third component was a construction of a flood control source to provide inhabitants around the lagoon with relief from extreme flooding conditions. Finally, the KSDP has land reclamation components that will reclaim the land from the lagoon in the area of Keta, Vodza and Kedzi, providing areas where housing and businesses can be rebuilt (GLD&D, 2000). Figure 4 below show the design of the KSDP by GLDD.

**Figure 4 Design of the KSDP**



Source: GLDD 2000: 2

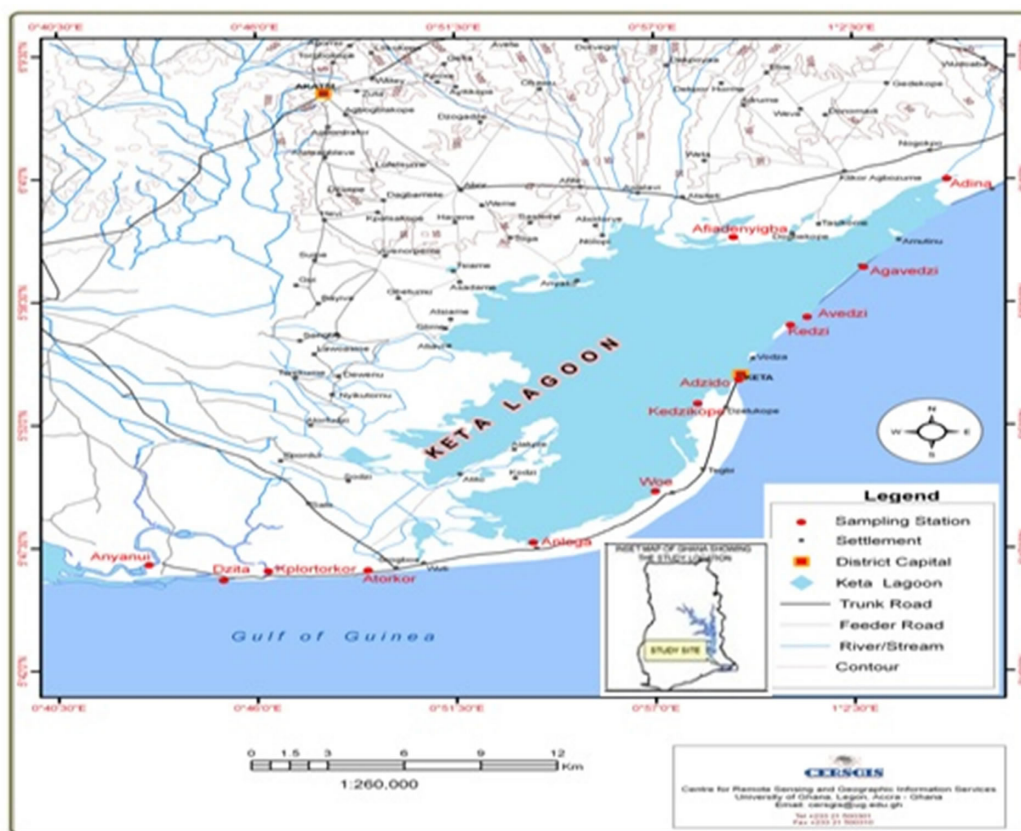
### 2.2.5 The Goals of the Project

According to GLDD the goals of the project were to defend against further wave-action erosion damage at Keta, Kedzi and Vodza, replace coastal road between Keta and Aflao, reclaim shallow areas in Keta Lagoon lost to flooding and to build a flood relief structure to release water and lower lagoon levels during rainy season.

### 2.2.5.1 Keta Lagoon Control

Flooding was one of the major problems that have affected the residence of Keta. Flooding has led to the lost of a greater proportion of the residential and public infrastructure and road linking Keta to its northern neighbours ("Keta Lagoon," August 9, 2010). Figure 5 below shows a map of Keta lagoon complex and its surrounding floodplains.

**Figure 5 Map of Ghana Showing the Keta Lagoon Complex and its Surrounding Floodplains (after CERSGIS, 2010)**



Source: (Lamptey, Ofori-Danson, Abbenney-Mickson, Breuning-Madsen, & Abekoe, 2013)

Flooding has also led to harmful changes in salinity and flow of the lagoon. Lagoon flood control was one of the interventions to reduce flooding and to reduce the losses incurred by farmers as well as increase their production. The project aimed to control the lagoon and the sea in such a way that the excess water from the lagoon when the

water level rises is channeled into other bodies to prevent flooding of farmlands (Garr, 2010)

#### **2.2.5.2 Land Reclamation**

According to Garr, land reclamation in Keta involve reclaiming 300 acres of land from the sea with the aim of developing the land into a well-planned resettlement communities with schools, electricity, water and sanitation as well as public infrastructure. The reclamation also aimed to provide areas where housing and businesses can be rebuilt. Agricultural activities were to be brought back on reclaimed lands for the purposes of increasing food production in the area. Location of businesses and fish processing industries were to help create employment opportunities for the rural people (2010).

#### **2.2.5.3 Resettlement of the Affected People**

About 800 housing units were to be built for the affected households. The idea was to compensate those who have been affected by the sea erosion. The houses were to be constructed in phases, ranging from 1 to 4 bedrooms (Garr, 2010).

#### **2.2.5.4 Construction of 8.3km Road From Keta Through the Affected Communities to Hlorve**

Construction of an 8.3km road / causeway between Keta and Hlorve was to establish a link lost to erosion. The causeway was to reopen the way for traffic to neighboring Togo and other cities along the coast of Ghana ("Keta Lagoon," August 9, 2010). The project also aimed to boost economic activities by creating market network for farmers, fishers and traders. The road also expected to boost tourism in the area (Garr, 2010).

### **2.3 Summary**

This chapter provides the reader with the profile and the background information of the study area. It provides broader information of the profile of Ghana and then narrowed it to the study area. The information provided here were the Geography of

the Keta Municipality, Topography and Drainage, Climatic Conditions and Vegetation in the area, the Demographic Environment, the Economic Activities in the area and the Rationale for choosing this area. The second section of the chapter presents the vulnerability context within which the people of Keta lived. It discusses the sea erosion, flooding and the interventions to curb the problem.

## **Chapter 3 IMPORTANCE OF THE IMPOVERISHMENT RISK AND RECONSTRUCTION MODEL AND LIVELIHOOD FRAMEWORK IN RESETTLEMENT AND LIVELIHOOD RECONSTRUCTION**

This chapter discusses the literature related to resettlement and livelihood focusing on the Impoverishment Risk and Reconstruction (IRR) model and the Department for International Development's (DfID) Sustainable Livelihood Framework (SLF). The IRR model gives an idea of what happened to people after resettlement. The shortcomings of the IRR model have been addressed by the SLF. The SLF set the stage for which the data was analyzed.

### **3.1 Introduction**

Resettlement projects have been undertaken in many countries in response to a disaster or in order to get more lands to undertake developmental projects. Resettlement has been used as an effective way to solve basic problems affecting displaced people (Rahmato, 2003). According to Rahmato, "relocation that takes place following natural disaster or man-made calamity must be considered involuntary resettlement since the settlers involved were either too powerless to refuse participation in the programme, too shocked to use their judgment properly or unaware of the prospect ahead" (Rahmato, 2003, p. 2). In this case, people might not like to move but they do not have any option or power to refuse the resettlement process. So not all resettlement that have full consent of the people are voluntary because it might be that the people were just too powerless to refuse it. Whichever way resettlement is defined or carried out, there will always be a loss of livelihood and other associated problems.

#### **Definitions of Key Concepts**

In discussing the theories related to resettlement and its effect on livelihood, it is important to look at some key concepts associated with resettlement.

## **Resettlement**

Resettlement is a situation whereby populations are displaced from their original habitat or from direct economic and social activities relocate to another area, which result in a change and reestablishment of their livelihood. The term according to the World Bank (2004) covers all direct and social losses resulting from land taking and restriction of access, together with the consequent compensatory and remedial measures but not restricted to physical relocation. It includes economic rehabilitation of displaced persons, to improve or restore income or living standards of the displaced person or affected people (WB, 2004, p. 5). The term resettlement also means moving people to new location or opening up or reclaiming land for utilization (Tadesse, 2009). The goal of every resettlement project is to improve the livelihood of the affected people whether or not the resettlement is voluntary or involuntary.

## **Voluntary Resettlement**

Voluntary resettlement is the type of relocation by which the people involved have full knowledge about the project, the implication of the project and have freely agreed to participate in the project. It “refers to any resettlement not attributed to eminent domain or other forms of land acquisition backed by powers of the state” (WB, 2004, p. 21). This means that the individual involved in the process is well informed or have a power of choice to agree or disagree with the consequent of the process.

## **Involuntary Resettlement**

Involuntary resettlement is a complete opposite of the voluntary resettlement. It is the type of dislocation of affected people without giving them prior information and power of choice. It is a situation in which the state needs new lands for development project, usually the lands in which the state has title but occupied or used by the affected people. In this case we can say, it is a process by which development project cause displacement of affected people which leads to loss of land, access to resources and other assets (World WB, 2004).

## **3.2 Theoretical Model of Resettlement**

In order to explain the effect of the resettlement on people's livelihood, one needs a theory which is capable of explaining how resettlement leads to social and economic impoverishment (Tadesse, 2009). In this regard, the thesis attempts to analyze post-livelihood reconstruction of people of Keta using the Impoverishment Risk and Reconstruction Model by Cernea to explain the effect the resettlement has on the people of Keta. According to De Wet, there are two views as to why things often go wrong in displacement and resettlement. These may be called 'inadequate inputs' and the 'inherent complexity' (De Wet, 2004, cited in Rahmato, 2003). Cernea focused on the inadequate input in his model IRR. In the early 1990s, Cernea came out with a new model, which attempts to explain the nature and content of displacement and resettlement by introducing two pivotal concepts: 'risks' and 'impoverishment'. This model is discussed in detail below.

### **3.2.1 Impoverishment Risk and Reconstruction Model**

When people were resettled in a new place, either forcefully or planned, they always encounter several challenges in adapting to the new area as well as reconstructing their livelihoods. They encounter ecological, social-economic and social problems which require different adaptive strategies (Tadesse, 2009). In adapting to the new environment, they encounter multiples of risks. "The most widespread effect of involuntary displacement is the impoverishment of considerable numbers of people" (Cernea & McDowell, 2000, p. 12). Cernea proposed the Impoverishment Risk and Reconstruction Model (IRR) to help predict and analyze the risk involved in displacement. The model comes out with impoverishment risks associated with forced displacement and the processes through which displaced people reconstruct their livelihoods (Cernea, 1996b, 2000b). The aim of the model is to explain what happens during massive forced displacements and to create a theoretical safeguarding tool capable of guiding policy, planning, and actual development programs to counteract these adverse effects (Cernea, 2000b). The model was initially developed to explain development-induced displacement but later adapted to explain other forms of displacements (Gebre, 2003). According to Cernea, the IRR model can provide a 'magnifying lens', able to reveal hidden or unknown causal mechanisms. It also

reveal trends, trade-offs, and development contradiction and focuses on actors, either as risk generators or as risk bearers and how they behave socially (Cernea, 2005, cited in Gebre, 2003)

### **3.2.1.1 Components of the IRR Model**

The IRR Model composed of eight interlinked potential risks common to displacement and it determine how people affected by a disaster reconstruct their livelihood. All the eight risks have factors have different potency in different contents (Cernea, 1999). The eight risk factors are defined below:

**Landlessness:** Land is the main foundation on which people's livelihoods are constructed. Loss and access to land by which people's productive systems, commercial activities and livelihood are constructed affect their way of life and their gain. This result in de-capitalization and pauperization that leaves displaced people in impoverishment.

**Joblessness:** Loss of wage employment affect people's income especially landless laborers, service workers, artisans, and small business owners. These leaves the families in poverty because creating a new job involve investment, which most affected people lack.

**Homelessness:** Loss of housing and shelter either permanently or temporary by the displaced people cause impoverishment. This result in alienation and status-deprivation and loss of group culture.

**Marginalization:** Loss of social standard, economic power, loss of human capital or rendered inactive or obsolete, drop in social status, loss of confidence in society and themselves, a feeling of social injustice, and deepened vulnerability.

**Food insecurity:** Lack of food and reduction in income available for food, which leads to undernourishment – calorie-protein intake levels below the minimum necessary for normal growth and work.

**Increased Morbidity and Mortality:** Deterioration in health, psychological traumas



and outbreak of diseases. The most affected were infants, children and the elderly.

**Loss of Access to Common Property and services:** loss of access to community properties that belong to the relocated community such as water bodies, forested land, grazing lands, burial grounds etc. this results in remarkable decline in income and livelihoods.

**Social Disarticulation:** disruption of structures of social organization, interpersonal ties, mutual help networks, kinships etc.

(Cernea, 1996a, 1998, 1999, 2000b; Cernea & McDowell, 2000; Robinson, 2003)

One important aspect of the IRR Model is the suggestion of risk reversal. The model suggested risk reversals to overcome the risks associated with resettlement. This can be made possible through strategies and adequate financing. Below are the strategies that must be adopted to overcome the risks:

- From landlessness to land-based resettlement
- From joblessness to reemployment
- From homelessness to house reconstruction
- From marginalization to social inclusion
- From increased morbidity to improved health care
- From food insecurity to adequate nutrition
- From loss of access to restoration of community assets and services
- From social disarticulation to networks and community rebuilding

(Cernea, 2000b, p. 20)

The models emphases on both the risk and how to overcome the risks makes it a useful guide of action to planners, government and decision makers, social researchers, project designers, the resettlers, implementation agencies and for policy formulation. The flexibility of the model allows it to be modified and also allow for integration to other models (Cernea, 2000a, 2000b).

### **3.2.2 Basic Functions of the IRR Model**

The IRR model performs four interlinked functions that help in addressing issues and complexities related to resettlement. These four basic functions are as follows:

A predictive function: the model help to predict the likely problems associated with the resettlement process. These predictions are early warnings foreseen long before the resettlement decision may take off. These early warnings formed the eight main risks of the model. Since the model predicted these risks, it gives prior notice to the management and planners about how to avoid and reduce the risk associated with displacement (Cernea, 1997, 2000a, 2000b).

The Diagnostic Function: also, the model performs diagnostic function. The model explains and assesses the projects specific situation and acts as a cognitive tool for guiding the assessment of fieldwork and the intensity of the risks in a given situation. Thus the model provides warning about the possible effects to be experience before the displacement takes place (Cernea, 1997, 2000a, 2000b)

The problem-Resolution Function: the IRR Model is oriented towards action. It is formulated with awareness of actors involved in the resettlement, their interaction, communication, and ability to contribute to resolution. To achieve problem resolution, the risk factors must be reversed (Cernea, 1997, 2000a, 2000b).

The research function: the model serves as a conceptual framework for hypothesis formation and also guide data collection and aggregation of research findings into the model's key elements (Cernea, 1997, 2000a, 2000b).

Cernea's IRR Model has influence contemporary research in resettlement studies and formed an essential basis for analyzing resettlement, discussions and debates surrounding resettlement.

### **3.2.3 Criticisms of the IRR Model**

Though the Cornea's IRR Model has been used widely in resettlement research. It has been criticized by various writers some of which suggested addition of some other risks. Muggah (2000) notes that by concentrating on the collective risks of impoverishment, the model fails to highlight both the vulnerabilities and capabilities of those displaced. To this effect, others have concluded that the model is an incomplete representation of the resettlement experience. Educational loss has been suggested by Mahapatra to be included as another major impoverishment risks. Also, Mohan Mathur (1998) recommends that loss of access to basic public services be added to the eight recurrent risks. De Wet (2001) concludes that the model's assumption that resettlement problems can be erased by improvements in planning is overly optimistic. He advocates recognizing the complexities inherent in the resettlement process (Muggah, 2000, Mathur 1998, De Wet, 2001, cited in McDonald-Wilmsen & Webber, 2010).

Due to these criticisms, it was necessary to combine the IRR model with other models for a better understanding of the livelihood of the people. I used the SLF to improve or strengthen the ideas around the IRR model taking into account some of the criticisms against the IRR model.

## **3.3 Sustainable Livelihood Approach to Resettlement**

This section focused on sustainable livelihood approach and its application to resettlement and livelihood after disaster. It examines the key principles and components of livelihood according to DFID. It also justifies the reasons for adoption of the sustainable livelihood framework in analysis of resettlement and livelihood reconstruction after the resettlement.

### **Livelihood**

A livelihood can be simply defined as a means to obtain a living (Chambers & Conway, 1992). "A livelihood comprises the capabilities, assets (stores, resource, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or

enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation: and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term” (Chambers & Conway, 1992, p. 6). UNDP understands livelihoods to denote the means, activities, entitlements and assets by which people make a living (Hussein, 2002). According to UNDP, a livelihood is sustainable if it is able to cope with and recover from shocks and stresses, economically effective, ecologically sound and socially equitable. UNDP includes technology as a means by which poor people escape poverty (Hussein, 2002). Livelihoods are ways by which people survive in a community, and it encompasses the resources in which the people survive or earn a living, such resources are land, livestock, networks, skills, credit, remittances, schools, roads, electricity etc.

### **3.3.1 The Emergence of a Sustainable Livelihood Approach**

The concept ‘sustainable livelihood approach’ first appeared in the research literature in the 1980s as a core fundamental strategy for pro-poor policy. It is an agenda towards poverty reduction and sustainable development that aims to reduce poverty and in a way increase well-being in a global scale (Solesbury, 2003).

The sustainable livelihood approach emerged through a series of events which forms part of the Overseas Development Institute’s Research and Policy (RAPID) programme, which aims to learn more about the link between development research, policy and practice (Solesbury, 2003). The Brundtland Commission on Environment and Development first introduced the approach in 1987, which addressed the issues of environmental and sustainable development. This commission has directed their attention towards the area of food security, the loss of species and genetic resources, human settlement, energy and industry. The focus was shifted from macroeconomic analysis to microeconomic analysis of environment and development. Sustainable development was seen as development that meets the demands of the current generation without compromising the ability of future generations to meet their needs (Burton, 1987). In 1988, the IIED published ‘The Greening of Aid: Sustainable Livelihood in Practice’. This report broke out the old paradigm of “normal professionalism” and put people and their livelihood first and contributed to the debate

on how the poorest of five billion people of this planet can remain safe and unthreatened and live a sustainable life (Conroy & Litvinoff, 2013).

In 1990, UNDP published the report on Human Development, which addresses the immediate concern of people. It sees people as the wealth of a nation and development as an enabling environment for people to enjoy healthy and creative lives. Income, to them is not the sum total of human life but rather, better nutrition and health service, security against health and physical violence, greater access to knowledge, more secure livelihoods, better working conditions, satisfying leisure hours etc. (UNDP, 1990)

Following the UNDP report was the UN Conference on Environment and Development and IDS publication on 'Sustainable Rural Livelihoods: Practical concepts for the 21st century (Chambers & Conway, 1992). The IDS publication is based on the ideas of capability, equity, and sustainability. These act as forerunner, or precursors to prioritize livelihood for policy and research. In 1993, Oxfam started to employ the Sustainable Livelihood (SL) approach in formulating overall aims, improving project strategies and also for training their staffs. Also, in 1994, CARE adopts household livelihood security as a programming in their relief and development works (Solesbury, 2003).

In 1995, UN World Summit for Social Development was held which set out the general commitment of governments to people-centered sustainable development. It put people at the forefront of development and then presents a list of the commitments for sustainable development. Among them is to create an economical, political, social, cultural and legal environment that will enable people to achieve social development, eradicate poverty, to promote social integration etc. (Angus, 1995).

In the same year, Employment and sustainable livelihood by the UNDP as of the priority areas in its human development mandate for poverty reduction. IISD publishes Adaptive Strategies and Sustainable Livelihoods the report of UNDP-funded programme and project on Sustainable Livelihoods and People's Everyday Economics was launched. In the year 1996, DFID invites proposals for major ESCOR research programme on sustainable Livelihood and also published Participatory

Research for Sustainable Livelihood (Rennie & Singh, 1996). The purpose of this guidebook is to identify, describe and understand the adaptive strategies in order to make policy recommendations to encourage enabling environment for people to live in. Since then the sustainable livelihood approach has been seen as an approach used by many development agencies across the world. Some of these include the World Bank (WB), Food and Agriculture Organization (FAO), the World Food Program (WFP), the New Zealand Agency for International Development (NAZI), the Swedish International Development Cooperation (SIDA) and other Non-Governmental organizations (NGOs) (Rennie & Singh, 1996).

### **3.3.2 DfID Sustainable Livelihood**

The term ‘sustainable livelihoods’ relates to the main factors that affect people’s livelihoods, and the relationship between these factors. It can be used in both planning new development activities and assessing the contribution to livelihood sustainability made by existing activities (DfID, 1999). Definition of livelihood relate to issues concerning the relationship between poverty and development. The definition of the term varied in the available literature. This led to some organizations to give their own definition of the term many of which sees livelihood as a means to obtain a living.

The Advisory Panel of the World Commission proposed a definition of the concept. Below is the proposed definition:

*“Livelihood is defined as adequate stocks and flows of food and cash to meet basic needs. Security refers to secure ownership of, or access to, resources and income-earning activities, including reserves and assets to offset risk, ease shocks and meet contingencies. Sustainable refers to the maintenance or enhancement of resource productivity on a long-term basis. A household may be enabled to gain sustainable livelihood security in many ways – through ownership of land, livestock or trees; rights to grazing, fishing, hunting or gathering; through stable employment with adequate remuneration; or through varied repertoires of activities” (WCED, 1987, pp. 2-5).*

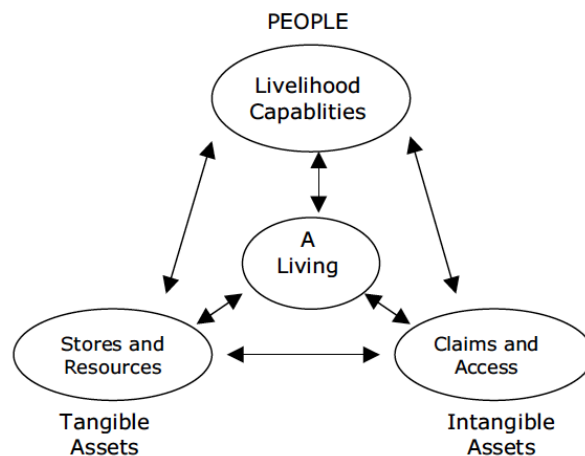
Security was an integral concept in the definition and a prerequisite for good husbandry and sustainable management (WCED, 1987). The WCED panel definition was revised and a working definition was proposed as follows:

*“A livelihood comprises the capabilities, assets (stores, resource, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation: and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term”*  
(Chambers & Conway, 1992, p. 6).

This definition was adopted by DFID with some minor changes (L. Krantz, 2001).

To understand the complexity of how people form their livelihoods, one must analyze the different aspects as well as the institutional processes that link the various aspects of livelihood together (Scoones, 1998). Livelihood portfolio of tangible and intangible was identified by Krantz as the most complex of assets out of which households construct their means of living (L. Krantz, 2001). Figure 6 below shows the components and flows in livelihood. This portfolio includes tangible assets such as stores (e.g., food, stocks, gold, jewellery, cash savings) and resources (e.g., land, water, trees, livestock, farm equipment), intangible assets such as claims (i.e., demand and appeals which can be made for material, moral or practical support) and access, which is the opportunity in practice to use a resource, store or service or to obtain information, material, technology, employment, food or income (Chambers & Conway, 1992).

**Figure 6 Components and flows in Livelihood**



Source: Chambers & Conway, 1992, p. 7

### **3.3.3 Core Concepts of Sustainable Livelihood**

The aim of DFID is the elimination of poverty in the poorer countries. The sustainable livelihood approaches are flexible and adaptable to fit many situations but not to undermine the core principles of the approach. In adopting sustainable livelihood, the following core principles must be taken into consideration (GLOPP, 2008).

Development activities should be:

**People-centered:** sustainable poverty elimination will be achieved only if external support focuses on what matters to people, understands the differences between groups of people and work with them in a way congruent with their current livelihood strategies, social environment and ability to adapt.

**Responsive and participatory:** poor people themselves must be kept actors in identifying and addressing livelihood properties. Outsiders need processes that enable them to listen and respond to the poor.

**Multi-level:** poverty elimination is an enormous challenge that will only be overcome by working at multiple levels, ensuring that macro-level activity informs the development of policy and effective enabling environment, and that macro-level structures and processes support people to build upon their own strengths.

**Conducted in partnership:** with both the public and private sector.



**Sustainable:** there are four key dimensions to sustainability – economic, institutional, social and environmental sustainability. All are important – a balance must be drawn between them.

**Dynamic:** external support must recognize nature of livelihood strategies, respond flexibility to changes in people’s situation, and develop longer-term commitments.

(Ashley & Carney, 1999, p. 7)

**Holistic:** reflecting the integrated nature of people’s lives and diverse strategies

**Building on strengths:** while addressing vulnerabilities as well as integration of right based approaches and gender issues.

(Hussein, 2002)

Any development activities must adhere to these principles.

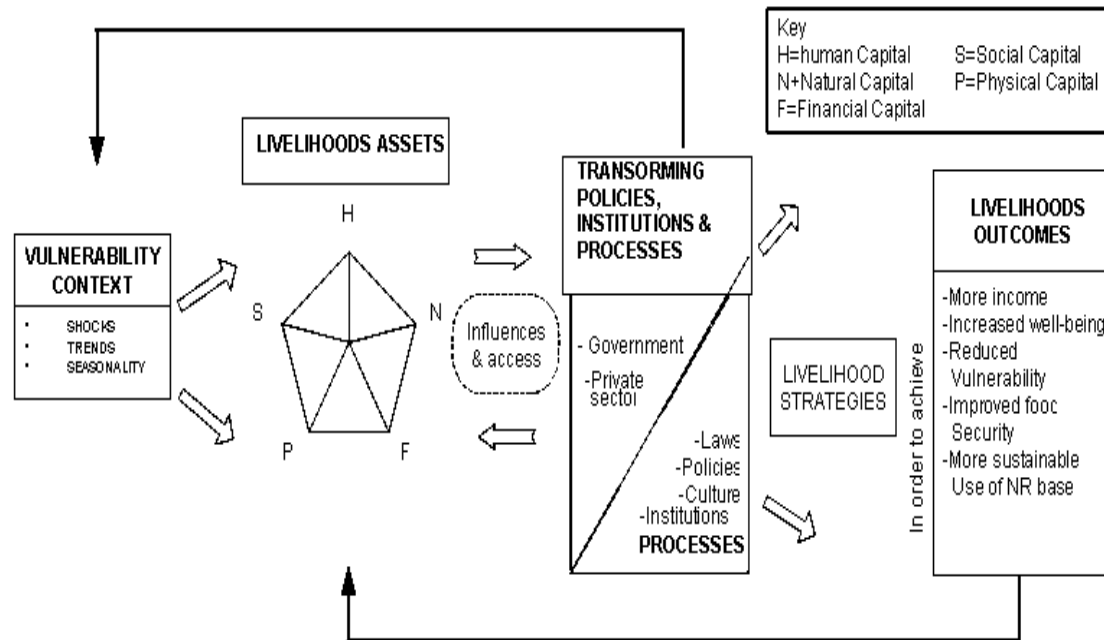
### **3.3.4 DFID Sustainable Livelihood Framework**

*“In its simplest form, the SLF views people operating in a context of vulnerability. Within this context they have access to various assets or poverty reducing factors, which gain their meaning and value through the prevailing social, institutional and organizational environment. Livelihood strategies—the ways in which people combine and use assets in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives — are also influenced by this environment. The viability and effectiveness of livelihood strategies is dependent upon the availability and accessibility of assets, services and opportunities which can be positively enhanced or adversely undermined by ecological factors, social structures or institutional processes. The SLF is able to handle the complexities of local realities, livelihood strategies and poverty outcomes, and the dynamic interrelations between them” (Majale, 2001, pp. 4-5)*

The sustainable livelihood framework has been developed to help understand and analyze the means by which poor people gain their livelihood as a result, help in effort to reducing poverty among the poor. The sustainable livelihood framework provides a way of thinking about livelihood. The framework brings a number of key

principal components of livelihood together that will help improve performance in poverty reduction (DfID, 1999).

**Figure 7 DFID Sustainable Livelihood Framework**



Source: DfID, 1991, Section 1.1

### 3.3.5 Components of the DfID's Sustainable Livelihood Framework

#### 3.3.5.1 Vulnerability Context

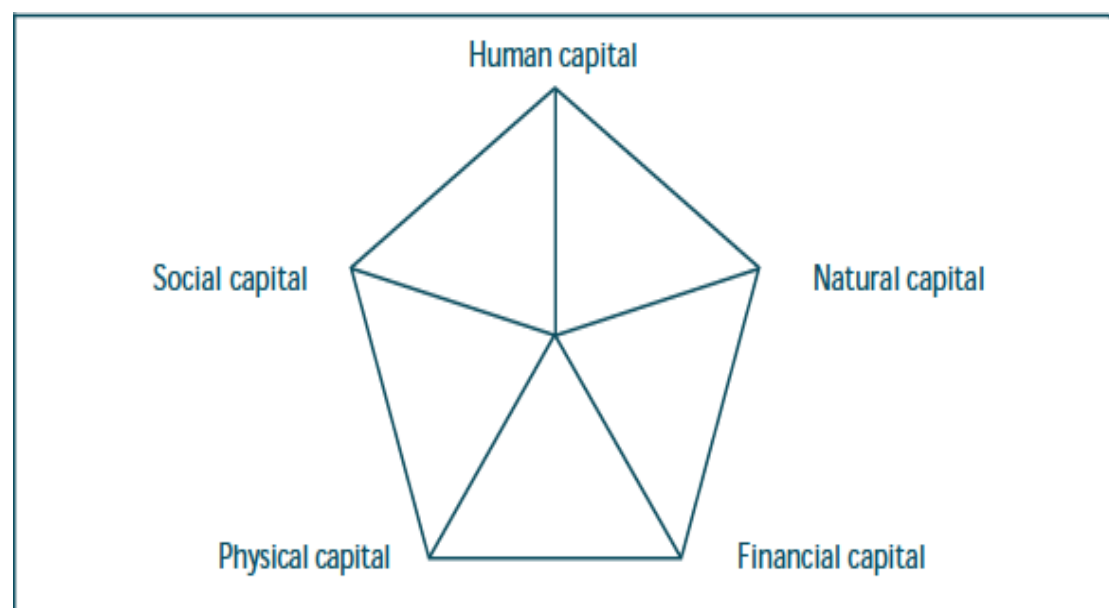
Figure 7 above shows the DFID SLF. The first component of the DFID sustainable livelihood framework is the vulnerability context. The vulnerability context depicts the external environment in which people exist. People's way of living are affected either positively and negatively by the trends, shocks as well as the seasonality. The trends include: population trends, resource trends, national or international economic trends, trends in governance and economic trends. The trends are more predictable but they influence the way people choose their livelihood and what they gain from what they do for a living. The vulnerability context also includes the shocks such as human health shocks, economic shocks, natural shocks, conflict, crop or livestock health shocks etc. shocks are very essential because they can destroys peoples assets and force people to abandon their existing livelihood for another at different place in order

to cope with the shocks. The third component of the vulnerability context is the seasonality, which includes shift in prices, employment opportunities, food production and availability and health of the people. The seasonality has direct effect on the lives of the poor especially in developing countries. Not all trends cause vulnerability, some can bring a positive change in the life of the poor (DfID, 1999).

### 3.3.5.2 Assets

The second component of the sustainable livelihood framework is the Livelihood Assets. Figure 8 below shows the livelihood Asset pentagon. Livelihood assets are one of the components of the livelihood framework. “Assets” is also called “capital” (Bebbington, 1999). Livelihood assets comprised of Human capital, Social capital, Political capital, Financial capital and Natural capital. These assets are required by people to achieve their self-defined goals. People in order to escape poverty combined different kinds of assets as their source of livelihood. The livelihood pentagon lies at the core of the livelihood framework. The livelihood pentagon help to visually present the information about peoples assets in order to show the relationship between the various assets (DfID, 1999).

**Figure 8 Assets Pentagon**



Source (DfID, 1999, Section 2.3)

### **Components of the Livelihood Asset**

**Human Capital:** Human capital as explained by DFID is the skills, knowledge, ability to labour and good health that together are available to the people in order to take on different strategies to achieve their livelihood objectives (DfID, 1999). Human capital is a building block and a means of achieving livelihood outcomes. Lack of education, poor health within a household can be a core dimension of poverty “As well as being of intrinsic value, human capital (knowledge and labour or the ability to command labour) is required in order to make use of any of the four other types of assets. It is therefore necessary, though not on its own sufficient, for the achievement of positive livelihood outcomes” (DfID, 1999). Human capital is defined by OECD as “the knowledge, skills, competencies and attributes embodied in individuals that facilitates the creation of personal, social and economic well-being” (Brian, 2007, p. 29). Human capital or labour is one of the factors of production, so the level of education and the health status of labour determine the level of economic growth

**Social Capital:** It is difficult to give a simple and concise definition of social capital to the satisfaction of everyone. Author Lyda Hanifan referred to social capital as “Those tangible assets [that] count for most in the daily lives of people: namely goodwill, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit” (Brian, 2007, p. 102). According to Brian (2007), social capital is defined as the links, shared values and understandings in society that enable individuals and groups to trust each other and so work together (p. 102). DFID used social capital to mean the social resources on which households draw their activities of livelihood objectives. Social capital is developed through Networks and connectedness, membership of more formalized groups and relationships of trust, reciprocity and exchange (DfID, 1999).

Social capital is important livelihood assets because it helps people to work together as a group and many advantages are derived from working as a group. Kinship as one of social connections helps people to develop trust among themselves. People’s income and rate of savings can improve when people maintain good social relation with each other. Social capital is also important in managing and maintenance of

common resources as a result it can make an important contribution to the well-being of being (DfID, 1999).

**Financial Capital:** Financial capital refers to the financial resources that people use to achieve their livelihood objectives. It encompasses flows as well as stocks and can contribute to consumption as well as production. The financial capital is derived from two main sources: Available stocks: cash, bank deposits, livestock and jewellery, Regular inflows of money: remittances, pensions and inflow from the state. Financial capital is very important in poverty reduction because it can be used directly to achieve livelihood outcomes and can also be used to influence political decisions (DfID, 1999).

**Physical Capital:** Physical capital is also essential in building livelihood of people. They refer to the necessary infrastructure and producer goods, which are vital or needed to support livelihood. It the changes in the environment and the necessary equipment that help people to meet there basic need and be more productive. The physical capital comprises: affordable transport, secure shelter and buildings, quality and adequate water supply and sanitation, affordable energy and access to information and communication systems (DfID, 1999).

### **3.3.5.3 Transforming Structures and Processes**

In all aspects of livelihood, there exist the institutions, organizations, policies and legislations that influence livelihood or the way people organize their activities to gain a living. These operate in all levels ranging from international to household level and this affect the access, terms of exchange between different types of capital and economic returns people gain from any livelihood strategy they chose. They determine whether the people are able to achieve a feeling of well-being (DfID, 1999). Understanding of these structures and processes and their social relationship and the power dynamics is important in explaining the livelihood of people because it directly or indirectly mediate the resources available for people to construct their livelihood and this affect the strategies they adopt and the outcomes they get (Scoones, 1998).

#### **3.3.5.4 Livelihood Strategies**

Livelihood strategies denote the range of activities or choices that are available for people to make a living. It includes productive activities, investment strategies and reproductive choices people make or undertake to achieve their livelihood goals. Livelihood strategies are diverse across geographical areas, sectors and within households over time (DfID, 1999). Livelihood strategies depend directly on asset status and policies, institutions and processes. The strategies adopted by a household might have a positive or negative impact on the strategies of another household (GLOPP, 2008). This brings about competition for jobs, for market, to secure better prices etc. (DfID, 1999). Scoones (1998) classified livelihood strategies into three main categories. These are: agricultural intensification and extensification, livelihood diversification and migration. According to Scoones, these livelihood options are open to the rural people. Either rural people intensify their agriculture by including livestock rearing, agriculture, forestry etc. or they extensify agriculture by cultivating more output per unit area through investment in capital or increasing labour input or rural people diversify to off-farm income earning activities or migrate temporarily or permanently elsewhere or they perform different kinds of activities (Ibid).

#### **3.3.5.5 Livelihood Outcomes**

Livelihood outcomes refer to the gains people make from livelihood activities they pursue. In other words, it is the achievement or outputs of livelihood strategies. Livelihood outcomes include more income, increased well-being, reduced vulnerability, improved food security, more sustainable use of natural resource base. Achievement of these outcomes did not depend solely on the people but a combination of factors that makes it possible. It is necessary to think about the aim of a particular group about how they understood these outcomes and how it has been achieved (DfID, 1999)

### **3.3.6 Rationale for the Choice of the Sustainable Livelihood Framework to Resettlement and Livelihood Reconstruction**

Sustainable livelihood has been used in many researches especially in researching the livelihood of the poor in many settings. It is a way to improve the understanding of

the poor because it explains the main factors that affect the way people gain their living and the relationship between these factors. The main concern of the livelihood approach is the people but not the resources they use thus the central focus of the framework is the people. “The value of the SL approach is that it encourages a broad systematic view of the factors that cause urban poverty – whether these are adverse trends or shocks, basic lack of assets, or poorly functioning policies and institutions – and to investigate the rationale between them” (Majale, 2001, p. 4).

The sustainable livelihood is important in this research because it focuses on being people centered and uses a combination of method such as qualitative and participatory research method that allowed people to be directly involved in the research involving the way they gain a living. It also stress the value of multidimensional analyses which help the researcher to gain an insightful understanding of impoverishment and development issues as well as helping to relate peoples asset to policy and institutional context. Also the livelihood framework help in addressing macro-micro level linkages in policy and livelihood issues (Hussein, 2002). Livelihood approaches have provided an important shift from top down approaches that have dominated development discourse to a more involving approach to poverty reduction.

The framework does not take a single sectoral view of impoverishment but it tries to bring together contribution of all aspect of livelihood from micro to macro level to building up stocks of assets relevant for people to gain their livelihood (DfID, 1999). Sustainable livelihood approach focuses on a variety of factors, at different levels that determine access to resources by people and thus it makes it possible for the ‘poorest of the poor’ to also be involved in active decision that shape their livelihood (Carney, 2003; L. Krantz, 2001; Scoones & Wolmer, 2003).

Sustainable livelihood approach “offers a more appropriate basis for evaluating the socio-economic impact of projects or programmes which has poverty alleviation as at least one of their overall objectives, since it provides a more realistic framework for assessing the direct and indirect effects on people’s living conditions than, for example, one-dimensional productivity or income criteria” (L. Krantz, 2001, p. 22).

The sustainable livelihood approach in research concerning the life of the poor as put across by many researchers, the adoption of the approach is common and widely used in development researchers. The DFID sustainable livelihood, has been seen as relevant in analyzing the livelihood of the poor in order to gain a full insight into the factors affecting their livelihood so as to propose an effective development assistance (DfID, 1999). The framework help in explaining the complex process and issues involving the KSDP and the resettlement process, creating new livelihood after the resettlement as well as integrating people into the new environment.

### **3.4 Summary**

This chapter provides the theoretical model and the analytical framework that guide the thesis. Cernea's Impoverishment Risk and Reconstruction Model and the DfID's Sustainable Livelihood Framework were discussed. The IRR model and the Livelihood framework helped to put the analysis into perspectives.



## **Chapter 4 METHODOLOGY**

### **4.1 Introduction**

This chapter encompasses the methodological choice I used and the impact the choice have on the result as well as the outcome of the research. The main stages involved in the choice of the methodology related to the research approach, the data requirements and subjects, as well as the techniques used to collect the data and how the data was analyzed and examined. The methodology chapter describes and explains the research design, data collection processes, sampling procedures and participants, sample size, data collection procedures, data collection instruments and the approach used to analyze the data.

### **4.2 Research Design**

Research design is the plan or structure or the procedures that the researcher will follow to conduct his or her research. Social research needs a clear guidelines and a clear structure prior to entering the research field. This must detail what to be achieved on the field and it makes easier for the collection of data when you have a clear guideline about what you want to do (Kazdin, 2003). The function of a research design is to ensure that the evidence obtained makes it possible for us to answer the research question in order to achieve the aim of the research. Having a work plan will help to capture necessary data needed to answer a research question or to test a theory or to evaluate a programme or to describe and explain some phenomenon accurately (Kazdin, 2003). Creswell identified some factors necessary for the choice or selection of a research design. Some of these factors are the research problem been studied, issue been addressed, the audience for the study and the researcher's personal experience (Creswell, 2009).

### **4.3 Settings**

Setting according to Bui describes the research sites where the research was carried out and it is similar to settings in a story, which may include a town, school, hospital etc. (Bui, 2009). This research took place in a community called Kedzi - Vodza along the coast of Keta in the Volta region of Ghana. About 90 percent of the households in the community get their food from the sea and the lagoon. The sea and the lagoon are their main sources of livelihood and they depend on them for a living. This community was eroded by the sea, which rendered almost every household in the community homeless. The government of Ghana intervened to construct the long planned project (Sea Defence) to prevent the sea from eroding the land. The sea defense wall was constructed and the people were subsequently resettled to a new area, which was then a lagoon that was reclaimed during the construction of the sea defense wall. The research took place in this area and the result will be discussed in the subsequent chapters.

### **4.4 Data Collection Process**

#### **4.4.1 Qualitative Methodology**

A Qualitative methodology was used to investigate my objectives. There are many definitions of a qualitative method. Many authors write about this approach and what kind of study it should be used for. Qualitative researchers are concerned about understanding the meaning people have formed, and how people present their world and the knowledge or skills they have in the world (Merriam, 2009). Van Maanen gives a more comprehensive definition of a qualitative method. He defined qualitative research as “an umbrella term covering an array of interpretative techniques which seeks to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world” (Van Maanen, 2011, p. 520). Digesting this definition means that the qualitative study does not deal with numbers or frequencies in mathematical terms, but rather the explanation of phenomena in the social world.

The Qualitative research helps to interpret the material practices that make the world visible and transform it. The world is represented by taking note in the field, interviewing people, taking photographs and recording whatever people say about the way they make sense of the social world (Denzin & Lincoln, 2005). This gives more emphases on the data generated or used and the procedures for collecting the data. This would differentiate whether the phenomena is quantitatively or qualitatively researched.

Qualitative Methods are best suited for this study because my main objective is to study the current assets of the people, livelihood strategies and how people organized their livelihoods after the construction of the Keta Sea Defence and the resettlement project. To achieve this aim, the Cernea's Impoverishment Risk and Reconstruction Model and the Sustainable Livelihood Framework (SLF) provide an analytical underpinning on which this research has been conducted. It is important to use qualitative techniques to systematically investigate people's way of life so as to gain a better understanding of their strategies and behavior (Henn, Weinstein, & Foard, 2006). Using qualitative research techniques makes it possible to understand the meaning of the people's world because it presents a powerful procedure, which reveal a deal with the research topic (Dan Brockington, 2003)

The qualitative approach is helpful because it helps to get an in-depth knowledge into the phenomena being studied and also, during the interview, as the respondents tried to express themselves or give insight into the question being asked, new idea emerge which are of interest to me.

#### **4.5 Sampling Methods**

Sampling is simply an acquisition of required information for part of a larger population. Simply selecting few from the whole population in order to make an inferential generalization about the larger group (Clifford, French, & Valentine, 2010). Sampling is necessary because the whole population in the study area cannot be interviewed. There is the need to select the representative of the population in order to generalize the findings.

The sampling methods that I used in this research were purposive sampling and convenience sampling. Purposive sampling is a non-probability sampling in the sense that the researcher does not seek to sample research participants or respondents randomly. The aim of this sampling method is to sample participants strategically in a way that those sampled are relevant to the study (Bryman, 2012). The purpose of this method is to “interview informants with a broad general knowledge of the topic or those who have undergone the experience and whose experience is considered typical” (Mores, 1991, cited in Coyne, 1997, p. 128). Purposive sampling was used in selecting the key informants for the interview. Using this method, there might be more people who are relevant to the study and have knowledge about the topic. To get a sample from this group, I used a second method which is convenience sampling. Convenience sampling is a method of collecting data by selecting respondents because of their availability or because they are easy to access or because they volunteer to participate in the study. I chose convenience sampling as my second method because of the time frame within which I have to conduct my research. This sampling method helps to get people who were available at the time of the research and who knows something about the data I want.

#### **4.5.1 Participants**

The population surveyed includes the resettled people, some of which were living in the new houses and others who did not get the house but construct their own temporary structures, the community heads, the retired educationist in the community, the retired worker at the Ministry of Works and Housing and a members of the Keta Municipal Assembly. I make sure that the people interviewed lived in the community for a very long time and have information about the developments in the community. This is to make sure that the person has some knowledge of the situation and the livelihood sources of the community before and after the disaster

#### **4.5.2 Sample Size**

A total of 25 households were interviewed. This includes 18 Male-headed households, 7 Female headed households. 1 retired educationist, Assemblyman in the community, 1 unit committee member, 1 retired worker from the ministry of works and housing, 1 person from the Keta Municipal Assembly.

#### **4.6 Data Collection Procedure**

It started by a visit to the research site to survey and familiarize myself to the area. A research assistant who happened to come from Keta but not from the research site specifically accompanied me. We went round the field, look at things and also have some informal conversation with some few people that we come to contact with. The next day, we were able to find the assemblyman in the area who received us very well because, to him, he knows everything about what I wanted to do. He assisted me by directing me to a man who is one of the unit committee member in the area in order to take me round during my interview so that people will be willing to grant me interview. Through the assistance of this man, I was able to get in touch with people who express interest in what I am doing and willing to grant me interview. Most of my interviews took place usually between 8am to 11am since most of the community members go to fishing after that time. My assistant help book appointment during the afternoon and the interviews were conducted in the morning. Data for this study came from three main sources, primary source, secondary sources.

##### **4.6.1 Primary Sources**

**Interview:** Interviewing is defined as “a set of techniques for generating data from individuals and / or groups utilizing structured, semi-structured, unstructured questioning formats” (Jackson, Drummond, & Camara, 2007, p. 25). The interview questions were open-ended. Every participant who took place in the study was interviewed in his or her free time. This was made possible by the help of a research assistant. With the help of the research assistant, I was able to get in touch with the Assemblyman in the area who then gave me a general overview of the problem. The research assistant informed me that before we can get people to talk to us without any

fear, we have to first see the Assemblyman because he is the community head. This was very necessary not to only show respect to the community head but also to gain trust and cooperation from the community members. After we have met the Assemblyman and everything set for the interview, the research assistant always book appointment with people we will talk to since he lived in the community before and he is familiar with the people. He always books the appointment in the late afternoon when people came back from work and the interviews conducted the next morning. This is because the time that I conduct the research (June - July) was a rainy season so most of the residences do not go to work early in the morning. They wait for the sun to appear before they go to fishing. Choosing early ours in the morning was efficient because we were able to meet the people their homes. Each interview conducted was tape-recorded for accuracy. I spent 25 to 40 minutes per interview. Few interviews were not tape-recorded, as the interviewees did not accept to be recorded. Semi-structured interview guide (See Appendix 1) was used in order to give room for flexibility and allowed room for new questions to be brought to bare during the interview.

One difficulty I encountered on the field was getting the officials in the Keta Municipal Assembly to be interviewed. I initially planned to interview the Municipal Chief Executive and the Planning officer but all attempts to interview them was not successful. This was due to their busy schedule which was the reason they gave. They directed me to read some literature on the resettlement. The official I interviewed in the Municipal Assembly did not give me deeper insight into the topic. This was because there was a change in government and all the officials involved in the project were no more in the Assembly. The official I interviewed in the Assembly only gave me insight into present developments in the community. However, he recommended some books for me to read.

**Field Walks and Observations:** Non-participant observation was used during the observation. I observed the activities going on in the community but did not participate in any of them. According to Gray (2004) observation enable the researcher to note the attitude and behavior of the people. I employed a passive way of observing activities in the community. I observed without participating in what they do. That is to say, I was a non-participant observer. I took the opportunity to go

round the community looking at how things are done. This was done daily after the interview section. I observed the structure of the houses, how they do their livelihood activities and works in progress in the community. I also observed the schools and roads and other structures that they have in the community. I recorded all the observations made in a field note for easy remembrance during the analysis of the data. In my observations, I appreciate some of the difficulties that some of the community members are going through in relation to the new houses. During windy days, the wind blew the sand into some of the houses which did not have fence wall around them. This is because the land is sandy and they did not have many trees to serve as protective cover for the soil. I also saw some houses whose sealing broke down because of substandard materials used by the contractors. I also visited some of the new houses which are under construction in the community. I observed that, within the two months I spent in the field, there was no progress. One thing I also observed was that, most of the households construct fence walls around their houses which was not part of the initial construction. Some of these observations were interrogated in the interview and was addressed in the subsequent chapters

#### **4.6.2 Secondary Sources**

Secondary data was conducted from published or unpublished literatures on the topic, policy documents, maps, thesis, articles and journals. Some of these resources or documents were available online while others were assessed in libraries. Secondary data often plays an important role in a research because it provides the background and the theoretical context of the research. The secondary data sources for this research looks at the theoretical background of resettlement and livelihood and what other people done in this field. To have a better understanding of the topic, it was necessary to look at some of these documents, review it and pick some of the necessary information relevant to the research topic.

#### **4.7 Research Instrument**

I used interview guide to collect data from a selected sample. The interview guide focused on the main themes of the research. These includes the background

information of the respondents, Livelihood before and after resettlement, Capabilities and Access to livelihood assets, Institutional mechanisms that affected the construction of the KSDP and the resettlement of the households, Strategies adopted by the affected people to achieve their livelihood outcome and well-being. The aid of the interview guide was to help me get interview questions in hand, which makes it easier for conducting the interview. I sometimes diverged from the question when I needed to probe further to get clarification from answers given by the interviewee during the course of the interview.

#### **4.8 Data Analysis**

**Analytical Unit:** The research was designed to capture data from household level. Household is considered as the primary unit of analysis. I defined household in this case as individuals living in a single housing unit in the resettlement area. Migrant members in the household were also considered as members in the household because they still contribute to the survival of the household and this is appropriate for rural livelihood analysis. The interviewees were mainly household heads or acting household head in case of absence of the main head.

**Presentation of the Data:** the first step in data analysis is the transcription of the data. In section 4.6.1, I indicated that the interviews were tape-recorded. To get the recorded data easy to work with, I transcribed all the interviews to get it in a text form. After the transcription of the data, I then organized the data according to the themes of the research.

Interpretative approach was used to analyze the data in order to get the meanings rather than quantifiable phenomena on the topic. Interpretative approach gives the reader an in-depth understanding of the situation. This approach is necessary because I did not have any predetermined categories or direction as the quantitative researchers may do. This help to give a detail and in-depth account of the topic.



## 4.9 Ethical Consideration

The researcher to undertake a good research, he/she must be careful not to inconvenience or harm, injure or disturb research participants. The data collected was securely kept to avoid any alteration from people (Bouma & Ling, 2004). One cannot undertake a successful research without putting into effect or taking some ethical issues into consideration. Collecting a social information through interviews involve conversation and interactions between the researcher, the researched, the institution and other people involved in the research. This conversation usually occurs in a social context, as such the issues of norms, individuals expectation and structures of power may influence the interaction (Dowling, 2000).

Ethic is broadly defined as ‘the conduct of a researchers and their responsibilities and obligation to those involved in the research including sponsors, the general public and most importantly, the subjects of the research’ (O’Connell, Davidson and Laydor 1994, P. 55, cited in Dowling, 2000). Complying with the ethical standards promote knowledge, truth, and avoidance of errors such as fabricating, falsifying, or misrepresenting the data from the research.

**Reflexivity:** reflexivity is one of the important ethical issues in qualitative research. “Reflexivity in research involves reflection on self, process, and representation, and critically examining power relations and politics in the research process, and researcher accountability in data collection and interpretation” (Sultana, 2007, p. 3). To achieve reflectivity on the field, I have a field diary in which I take note of what happened on the field for example when new ideas emerge which are not in my interview questions, when interviewees come of new ideas which I think are important and need to be interrogated later, and also my observations in the field were well noted. At every stage of the process, I take note of what happened.

**Confidentiality:** I was also mindful of the issues of confidentiality. Before I conducted any interview, I first introduced myself as a student, my background information, and the purpose of the research and presented to them the introduction letter from the department of geography. Some people feared to grant me interview upon all these because they cannot be sure of the confidentiality of the research. Some

participants allowed me to tape-record them while others agree on verbal communication without recording. In order to avoid power inequalities between the participants and myself, I was dedicated in carrying out all my interviews in a tactful, respected and well-behaved manner. There are several reasons why it is necessary to take these ethical norms into consideration. To promote the aim of the research, such as knowledge, truth, and avoidance of error such as fabricating, falsifying, or misrepresenting research data. Also, ethical standards promote values that are essential to collaborative work, such as trust, accountability, mutual respect, and fairness. Thirdly, it ensures that the researcher can be held accountable to the public for example conflict of interest, misconduct, subject protection etc. Lastly, it promotes other important moral and social values such as social responsibility, human rights, compliance with the law, etc. (David B, 1 May, 2011).

**Trustworthiness:** In qualitative research, data collection and analysis can present likely ethical problems. In using interviewing as a tool for data collection for example, the interviewee may feel that their privacy has been invaded. They may feel uncomfortable about some of the questions been asked or have fears that their answers will be make known to the public which may pose a serious problem for them. This fear of lack of trust may prevent the participants from expressing their mind about the issues being researched. An observation as one of the qualitative methodology also has some shortcomings. For example, the researchers involvement into the activities of the researched in order to observe may makes the participants feel shy or try to do things against their will just to impress the researcher. Some may feel embarrassed about giving certain information if they know that they have been observed. Also, the researchers interest may shift the activities towards his or her interest since the researcher is using a certain framework and need some kind of information.

To avoid these kinds of problems in the field, I let the interviewees understand what my interest is and explained informed consent and anonymity to them. I let them know that they can decide to opt out from the interview if they feel that their privacy is been invaded. I assured them that their views will be kept anonymous, that the view they express will not harm them.

#### **4.10 Fieldwork Experience and Limitations**

There were some limitations to the data collection on the field. Some of these will be discussed briefly as they might affect the result of my research.

First of all, the main problem I have encountered in the field was getting the officials involved in the research interviewed. This is because the resettlement took place for quite a long time and the organizations involved have left the field and were not available to be interviewed. But this will be overcome partially by reviewing the available documents to that effect.

Also, interviewing and getting the required information from the district assembly of the study area was not successful as I thought. This is because, there was a change of government after the resettlement and workers and district chief executive at the time of resettlement was not at post. So it was difficult to get people to give me the required situation on the ground at the time of the resettlement.

Most of the interviews conducted were by the people who have been affected but not the authorities in charge of the resettlement. As a result, the views expressed might not reflect the views of the authorities in charge but rather the affected people who were the major focus of my study.

#### **4.11 Summary**

This chapter explains in detail the method used to conduct this research starting from fieldwork preparation, data collection methods, sampling method and sample size, ethical considerations to the limitations of the study. The length of the data collection might be too short but this was made possible because of my knowledge about the field prior to data collection.



## **Chapter 5 INSTITUTIONAL ARRANGEMENT OF KETA SEA DEFENCE PROJECT AND EFFECT ON LIVELIHOOD**

This chapter presents the transforming structures and processes within which the Keta Sea Defence Project (KSDP) was constructed. The thesis explored the policy arrangement of the KSDP, the approaches employed to resettle the people, the processes involved in the allocation of the new houses to the affected households, participation of people in the decision-making process prior to the construction etc.

### **5.1 Introduction**

Transforming structures and processes denote institutions, organizations, policies and legislations that shape livelihoods (DfID, 1999). Institutions, organizations policies and legislations, operate at all levels within the household and international arena, and in all areas of life. They determine access to various types of capital, the terms of exchange between different types of capital and economic return to any given household (DfID, 1999). In this context, I discussed the governance structures and policies that provide the framework within which the KSDP was constructed and how it affects the various actors.

### **5.2 Policy Arrangement of Keta Resettlement Project**

Despite the fact that Ghana has experienced coastal erosion which has destroyed coastal infrastructures, there has not been any specific policy framework for infrastructure provision and policy on the coastal zone. A number of environmental policies are in existence but were not specific to infrastructure provision. These policies include: the National Environmental Policy, National Wetland Policy, Agricultural Policy, National Health Policy, Tourism Development Policy, Land Management Policy, Energy Policy, Mineral Policy and Wildlife Conservation Policy (Amlalo, 2006, p. 4). These policies were to some extent the basis of many infrastructure developmental projects in Ghana. These policies also formed the

framework for the construction of the sea defence project. Integrated Coastal Zone Management and Sustainable development was the key policy under which the KSDP was constructed (Amlalo, 2006). As indicated earlier, the ministry of Works and Housing was responsible for the project. The project was mainly an infrastructural one. According to Garr (2010), beyond the development of the physical infrastructure not much has been achieved in reducing poverty. “Stating in a project document that the project would reduce poverty is not enough to ensure that such redistribution objectives are met” (Garr, 2010, p. 81).

### **5.3 Governance Structure of Ghana**

The Governance structure in Ghana is necessary for a successful implementation of any infrastructure project. Ghana has two spheres of Government: Central and Local government. The Local Government has been instituted by the Local Government Act 1993. The local government has three assemblies: Metropolitan, municipal and district. There are also sub structures that the assemblies delegate their activities to. These are the sub-metropolitan, urban, town, zonal and area councils and unit committees. The legal basis for the local government is enshrined in the Article 241/3 of the constitution of Ghana (Commonwealth, 2013).

Ghana also has a chieftaincy act (Chieftaincy Act, 1971) which backed the chiefs as a traditional rulers in various communities in Ghana. Chieftaincy has a great amount of effects on the political economy of Ghana and also influences industrial development, agricultural production, and the construction industry (Odotei & Awedoba, 2006). The chiefs control 80 percent of land in Ghana. Therefore any successful infrastructure project must take into consideration the governance structure and their decision to influence the project. The involvement of local people has been explored and this is addressed in the following section.

### **5.4 Approaches to Resettlement**

Approaches adopted to resettlement after a disaster is complex and varied in terms of degree of control over the reconstruction process (Barenstein, 2012) “the inter

relatedness of a range of factors of different orders: cultural, social, environmental, economic, institutional and political – all of which are taking place in the context of imposed space change and of local level responses and initiatives” (De Wet, 2006). Governments throughout the world used different approaches, each of which has their merits and demerits. According to Barenstein (2012) the approaches employed should take into consideration (1) reconstruction cost; (2) Improvement in housing and community safety; (3) restoration of livelihoods; (4) political milieu; (5) cultural context; (6) people’s own goals for well-being, empowerment, and capacity. Choosing any approach requires a consultation with the affected people.

World Bank (2004) identified 5 approaches for resettlement. These are:

- ❖ The Cash Approach: unconditional financial assistance is given without technical support.
- ❖ Owner-Driven Reconstruction: conditional financial assistance is given, accompanied by regulations and technical support aimed at ensuring that houses are built back better.
- ❖ Community-Driven Reconstruction: Financial and or material assistance is channeled through community organizations that are actively involved in decision-making and in managing reconstructions.
- ❖ Agency-Driven Reconstruction in-Situ: refers to an approach in which a government or nongovernmental agency hires a construction company to replace damaged houses in their pre-disaster location.
- ❖ Agency-Driven reconstruction in Related Site: Refers to an approach in which governmental or nongovernmental agency hires a construction company to built new houses in a new site.

With these approaches, Owner-Driven reconstruction was proven to be the most empowering, defined, sustainable and cost effective reconstruction approach (Barenstein, 2012). This study was applied in Gujarat at the earthquake of 2001 (Barenstein, 2006). In Gujarat, about 73% of the affected people chose their option. This has led to overall satisfaction of 93.3%. The houses were of good quality and the cultural identity and the traditional character of the people were preserved (Danquah et al., 2014).

Resettlement in Keta employed partially the Agency-Driven Reconstruction. This approach generally gives little or no involvement by the affected community or homeowners. The government or the government in collaboration with the local community built the houses which may be allotted to the people using criteria defined by the community or the agency.

## **5.5 Key Decisions by Various Actors**

### **5.5.1 The role of the Government**

The government decided almost everything concerning the sea defence project including the resettlement component. This was done based on the damage and assessment of damages incurred during the construction of the Keta Sea Defence wall. The government undertook an assessment of the houses that were affected and a special number was given to the beneficiaries. The government also decides the project constructors and the project supervision procedures. The most important aspect is provision of funds to undertake the whole project. The Keta resettlement project was a top down approach – all decisions were made at the top with no community participation in decision-making process.

### **5.5.2 The role of National Disaster Management Organization**

National Disaster Management Organization was formed in 1996 by the act of government to manage disaster and emergencies in Ghana. It is under the ministry of interior and its role is to:

- 1) Rehabilitate services for victims of disaster
- 2) Mobilize of people at various levels of society to support governmental programmes.
- 3) Ensure the preparedness of the country in the management of disasters
- 4) Coordinate the activities of various governmental and non-governmental agencies in the management of disaster

NADMO has faced challenges in its operations to relief people affected by disasters in the country. NADMO was one of the main organizations involved in the relief of people affected by erosion during the resettlement period. Due to financial constraint,



NADMO was not able to perform its mandate efficiently to provide temporary structures for the affected people. Inability of NADMO to provide temporary structures for the people while the houses are being constructed led to the migration of the of some community members who did not get the houses to other regions.

### **5.5.3 Private Sector Participation**

As indicated earlier, private sector participation was minimal. The involvement of private sector was only the construction of the sea defence walls and the roads in the community. As in other development projects, when government capacity is limited, there is a need for private sector participation. Lack of private sector participation hinders the development of the project especially if the government did not have enough funds to complete the project. If the private sector has been allowed to participate in building the houses, more people would have been resettled.

### **5.5.4 Community participation and consultation**

In resettlement projects, the displaced people must be consulted and allowed to take part in the decision-making processes prior to the project. This is to enable them have a say in the technical and economic feasibility of the project. World Bank divided participation into two dimensions: Information exchange and decision-making. Decision-making comprises collaboration and direct extension of choice to the affected individuals, households, or communities. Participation includes four types of activities: Dissemination – one-way transfer of information, from project staff to the affected population. Consultation – two way transfer of information between project staff and the affected people. Collaboration – joint decision making through membership in committees, tribunals or other formal or informal bodies. Extension of choice – transfer of decision-making power to the affected people.

Participation plays an important role in resettlement because the success of resettlement depends on the responsiveness of the affected people. Participation removes fear and rumor. It also provides hidden information or details that authorities

cannot foresee since the affected people have greater knowledge and understanding of the community they live.

For example: “In India, the Upper Krishna Project (Loan [Ln] 3050; Credit [Cr] 2010) long failed to provide participatory forums for DPs. As a consequence, 96 percent of DPs had taken their cases to court by 1997. The courts generally doubled the compensation offered by the government. After 1997, participation and compensation increased, and the number of court cases decreased” (WB, 2004). This is how far lack of participation can affect any resettlement project. The approach adopted to resettle the affected people did not encourage community participation. Lack of participation prior to the project and during the allocation of the has created rumors in the community especially about the allocation process. People felt that the houses were given to the wrong people, some of whom they have not seen in the community before. Some people also expressed dissatisfaction about politics in allocating the houses. A situation where you have to know someone at the Assembly before you can get the house. Lack of participation can create this rumors that can lead to conflict in the community. The section below explains the local people’s knowledge about the project and the processes involved in allotting the houses to the beneficiaries.

#### **5.5.4.1 Local People’s Knowledge About the Project**

The thesis explored the local people’s knowledge about the procedures involved in the resettlement project. The views expressed here were from the respondent.

**News about the award of contract:** the resettlement and the sea defence construction has been a political game according to the resident. Various government officials visited the area during campaign periods and promised them of the construction, but no concrete results have been seen from those visits. In 2002, the community heard the news on the local radio that the KSDP will commence. But hearing the news alone did not assure them that the project would really take place.

*“We thought it was one of those political games. Following the news from radio, we heard that people from the Keta Municipal Assembly invited our chiefs to the Assembly to discuss how the project will take place. We heard the news but there is no formal meeting between us and the authorities for them to*

*hear our views, they have already made their plans and just came to inform us about the project. There was nothing we could do about it, we were having a problem and they wanted to help us, what should we do? Even if we did not have any input into the program, we thought they knew what was best for us so we were all happy”.*

**Surveying the site:** Not long after the news, surveying started. Contractors started moving their tools into the site for the work to commence. Most of the ground work was done long before the arrival of the contractors on the field.

*“When they started erecting the poles to mark the place, we couldn’t believe it. We thought it was the old political games. When we realized that something was actually happening was when they started bringing the machines and vehicle”.*

**Numbering the houses that will be affected by the project:** before the start of the project, people from the Ministry of Works and Housing numbered all the houses that will be destroyed to pave way for the construction. The problem about this numbering was that, they numbered only those houses that will be affected by the project. The houses that were destroyed before the commencement of the project were not included. This situation brought some misunderstanding between the people and the authorities.

*“Before the construction of the sea defence wall, there was numbering of houses, which were not been destroyed by the sea at that time. It means all the houses that have been destroyed before the start of the program were not included. The houses were numbered in the sense that when the new houses were built, they can share it according to how the numbers were given. According to them, the project will be in three faces, they numbered those who have the three to two bedroom house differently and also the big houses were numbered differently. Different numbers were also given to those who own storey buildings. This was necessary because the houses will be cleared to give way to the construction of the sea defence wall”.*

**The relief face (NADMO) -** Temporary structures for the affected people: in the aftermath of the numbering of houses, the affected population was resettled in to a

temporary structure made of thatch and alluminium zinc. The people who were relocated into these structures were the households that had been numbered. National Disaster Management Organization was responsible for this process. During this stage, there was a resistance from some of the household to move. They were not comfortable with the houses given to them because they were not sure their houses would be built for them. The authorities have to force them to move out of the place to the temporary structures built for them. It took the contractors to pump water from the lagoon to their houses just to force them to move.

**Construction of the houses:** After NADMO had constructed permanent structures for the people. The various contractors who had been awarded the contract started the construction of the houses. The houses were not finished on schedule due to so many reasons; some of these problems are political disruption (change of government), financial problems and some policy issues. Private sector involvement in infrastructure provision is very important for any successful infrastructure project. In view of this, the government of Ghana has consistently called for the participation of public sector in infrastructure projects. In the case of the Keta resettlement project, there is no provision for private sector participation. The private sector only involved in construction of the sea defence roads and the project contractors. This has put a great burden on the government in providing enough houses to meet the number of houses required.

**Allocation of the houses to the affected people:** one of the area that the policies failed, was the allocation of the houses to the affected people. They have expressed dissatisfaction about the way and manner the procedures were used in allocating the houses for the people. I stated earlier that, prior to the construction, the houses that were affected by the project were numbered in the sense that, during the allocation of the houses, those numbers and information would be followed for smooth allocation. The first setback about this process is that, it was only the houses that have been affected by the project that were numbered with the information of the owners. This means that, there was no provision for the houses that were destroyed before the start of the project. Most of the people interviewed complained that they had passed through some difficulties to be able to get the houses. The houses were not shared as outlined in the beginning of the project. Some people also complained about

allocation of the houses to people who they did not know in the community before the construction.

Due to these difficulties in allocating the houses, the community decided to form a 5-member committee made up of some influential people in the community which is in contact with the Municipal Assembly to oversee the sharing of the houses. Their duty was to make sure the procedures outlined for the allocation of houses are followed and the right people get the houses. This committee made the procedure more complex because some of the people (residents) bribed them in order to have their way through to get the house.

## **5.6 Advantages and disadvantages of approaches used by KSPD**

The approach was adopted given the fact that people could not build their own houses after the construction of the sea defence wall. Even if provided with the funds to build their own houses, the government was not sure whether it would materialize. Adopting this approach led to a more cost-effective way of resettlement since the affected people did not have to incur any additional cost for reconstructing their houses. It has reduced their financial burden. The approach has reduced vulnerability since the government makes an appropriate plan to reclaim the land and build the sea defence wall before the construction.

Despite these advantages of the approach, there were also some disadvantages. There was a delay in building the houses due to financial constraints. Lack of provision for private sector participation has worsened the situation. The resulting effect is homelessness which some of the affected people are experiencing. Lack of participation by the affected people has resulted in poor targeting and unequal distribution of the houses. The layout of the houses also contradicts the local building culture. The layout of the houses also undermines some privacy issues in the community. Most houses affected by the disaster have fence wall around them for security reasons, giving the fact that Ghanaian are outdoor people. When there is fence wall around the houses, people can sit outside and perform their day-to-day activities. The new houses did not make any provision for such kind of living. This

has led to many people modifying their houses by constructing a fence wall around it. The extent at which the fences were built is also a major concern in the community since there are no clear-cut boundaries or demarcation between the houses to ascertain the extent of one's land size. These situations arose as a result of lack of involvement of the local people in the design of the houses.

## **5.7 Management of Maintenance of the Houses**

Management and maintenance is one of the problems faced by the resettled people. The policies did not set out how the houses should be managed and maintained. The government was more concerned about building new houses than making sure that the existing houses were properly maintained. Visit to some of the houses shows that the houses were not properly managed because of the deteriorating nature of the houses. The households complained bitterly about the shoddy work done by the contractors. There was no proper monitoring during the construction phase. This has led to some contractors using sub standard materials to construct the house. Studies by Gunatilaka shows that the attention of the public sector is geared towards constructing new projects than maintaining new ones. This will give them something tangible to refer to as their achievement (Gunatilaka, 1999). This has been the case as parties always promised them with the number of houses they will construct when voted into power but not how they will maintain the existing ones.

## **5.8 Summary**

This chapter presents the analysis of objective one. It presents the transforming structures and processes within which the Keta Sea Defence Project (KSDP) and the resettlement was constructed and the effect on infrastructure and access to certain assets in the resettlement area. The role of government and government agency (NADMO) was discussed. The local peoples knowledge about the project and their effect on the decisions were also discussed.

## **Chapter 6 LIVELIHOOD ASSETS AVAILABLE FOR THE PEOPLE OF KETA**

This chapter explains and analyses the livelihood assets available for the community after the construction of the KSDP. The DFID's sustainable livelihood framework formed the basis for analysis of the results presented in this chapter. The chapter explains how people's asset endowment have been affected using the DFID livelihood assets – social, natural, human, financial and physical capital.

### **6.1 Introduction**

According to DFID, assets are fundamental to the sustainable livelihood. An asset is also considered as “Capital” (Bebbington, 1999). A livelihood asset comprises social, natural, human, financial and physical capital. People to achieve their desired goals combine these assets. Livelihood assets are very important to restoration and reconstruction of livelihoods. Assets are very important in resettlement situations because it formed the basis upon which their livelihoods are reconstructed or restored.

### **6.2 Natural Capital**

According to DFID, natural capital is the natural resource stock, e.g. nutrient recycling, erosion protection etc. from which resources and services useful for livelihood flow. Natural capital can be tangible and intangible goods used for production (DfID, 1999). In the case of Keta, Natural capital is important to livelihood restoration since most of their assets are based on the natural resource stock. A natural asset is not the only necessary asset that is essential to analyzing natural capital. Access to and quality of these natural resources are also essential in strengthening the natural resource base (Carney, 2003). What is important to build natural capital of the poor is to determine the way and manner, in which natural capital is used, (e.g. land allocation systems, rules governing extraction from fisheries), and the value derived from it (DfID, 1999). Analysis of natural capital

according to DFID includes: (i) which groups have access to which types of natural resources; (ii) The nature of access right; (iii) Conflict over the resources or security right; (iv) How productive is the resource; (v) how the resource is affected by the externalities etc. (Ibid).

### 6.2.1 Lagoon and the Sea

Findings from the research point out that the households studied depend on various

**Figure 9. Picture 1 shows the finishing net used in the sea. Picture 2 shows the company members dragging the net offshore**



Source: (Kraan, 2009, p. 15)

natural capitals for their survival of which the lagoon and the sea is one. Fisheries plays essential role in livelihood of rural dwellers through enhancement of food security and also provides access to income. Fishers at Keta have faced many challenges after the resettlement. In the past, drag nets were commonly used to fish in the sea. Other fishing methods used are bottles called in the local language ‘Atukpaxe’, hook and line, which are commonly used in the lagoon. Finding from the interviews suggest that drag net

are still being used to fish in the sea with some limitations. The household narrated that, the gravels used to protect the shore during the sea defence construction has made it difficult for them to use their drag net because the shore has become small for them, they don't have enough space to drag their nets offshore. Another problem that has hindered the use of drug net is the tree stamps and the concrete stamps left in the sea after the sea has destroyed their houses. Some of the houses and the tree stamps



are still standing in the sea that is making it difficult to use their drag net. This situation has reduced significantly the fish catch and has affected the life of fisherfolks in the region. One of the interviewees narrated:

*“Our houses and trees that has been destroyed are still standing in the sea as stamps, which makes it difficult for fishing. It makes the drag net completely useless hence the dependent on the (watsa), which we have to go far sea before we can get some catch. The second problem is the use of light by the fishing trawlers that drove the fishes away. Now catching fish in abundant have completely gone, it is not like how it was before the project. Fishing is no more a sustainable livelihood, but we do not have any alternative livelihood source, we are still doing it”*

Another type of fishing method that have been introduced after they have been facing difficulties in using the drag net is ‘Watsa’ which they said evolved from Togo and Benin. This fishing method require an outboard engine to be able to use because they have to go far sea before they can cast their net and get some catch. This has made it difficult for many households to engage in this type of fishing because it is capital intensive.

Findings from the research also indicate that fishing in the lagoon is no more a lucrative livelihood like before. The methods they used in the past can no more be use after the sea defence project. This is because, in the course of the construction, soil from the lagoon has been used to fill the land in order to resettle the people. This is because of lack of lands to resettle the affected people. This makes the lagoon too deep for them to use the previous methods. With this, one can conclude that the project have limit access this kind of natural resource.

### **6.2.2 Access to Productive Land**

To start with, access to productive land for the resettlers has been restricted after the resettlement. Before the resettlement, households has their own land for gathering rearing domestic animals such as poultry, ducks, turkey, goats, sheep, pigs etc. and some also used the land as collateral to obtain loan from financial institutions. The

resettlers can no more rear their animals because the houses they were living in are small and they do not have extra space to rear their animals. They do not also have grazing land for their goats and sheeps, as a result no household that I have spoken to is rearing animals. Land is very important and regarded as a source of wealth in many societies in Ghana. The more land you have, the richer you are. Many people's livelihood is based on land as a result, a loss of land will probably lead to resettlers impoverishment. As indicated by one of the interviewees in the community during the interview;

*'We do not have any land now as a family, we are landless. Some of us who had land before the construction, there was no compensation for us because it only the houses that were numbered. We lose our lands to the sea and for the construction of the sea defence wall. Even if they gave back our lands to us, its okay, we can build our own houses but this was not the case. Now it is whom you know and also who knows you. This situation is bringing misunderstanding in the community'.*

Not only the households did not have land to farm, but also, according to them even if government give them land, they cannot farm because the fertility of the land have been compromised. This is because, the sand from the lagoon is used to filled the sand. Since the lagoon is salty, it is not possible for any crop to grow in salty sand. According to Cernea (1998), land is the main foundation upon which people's productive systems, commercial activities and livelihoods are constructed. Landlessness leads to capitalization and pauperization of displaced rural people. Reconstruction and replacement with income-generating employment remove people form this impoverishment. Expropriation of land in the affected communities leads to impoverishment in the affected communities.

### **6.2.3 Salt Mining**

Salt mining as shown in figure 8 is one of the important economic activities in Keta. Many households in the community depend on salt mining as their source of livelihood. It is through salt mining that Keta is regarded as one of the major trading post in the 20<sup>th</sup> century ("Keta Salt," n.d). During the interview section with the

resettlers, they indicated that salt mining brings a lot of revenue to the people. According to them, mining salt in the lagoon is a season job so they do it during mining season usually November to February, which is the harmattan season in Ghana. During this period, the shallow areas of the lagoon get evaporated. After the water has evaporated, the salt crystals are left behind and grow bigger and are then mined by the people. According to them, there is a ready market for the salt because they export it to other neighbouring countries like Togo, Benin, etc. After the resettlement, things have changed and salt mining is no more a sustainable livelihood in Keta. This is as a result of taking sand from the lagoon to fill the land in order to resettle the people. This makes the shallow areas of the lagoon very deep and it is no more possible for the water to evaporate in order for them to mine salt. This situation is narrated by one of the respondents;

*“Salt mining was one of our livelihood source, we used to mine salt in a greater quantity in this lagoon. But now, I can’t because the water is too deep because. I can feed my family at the time I was mining salt, but now, things are difficult for us”.*

**Figure 10 Salt Mining at Keta**



Source: Modern Ghana.com

### **6.3 Physical Capital and Livelihood Restoration**

Physical capital is one of the essential assets needed to support well-being. Physical capital consists of basic infrastructure and producer goods that people need to support their livelihoods. Infrastructure refers to the changes to the physical environment that help people to provide basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively (DfID, 1999). To help explain the physical capital of the resettlers in Keta, the following components of physical capital was explored during the interview section: Shelter / housing, Transportation, Electricity supply, Sanitation and water supply, Communications, Health service. Infrastructure is very important, that lack of it or less access to it is considered to be one of the causes of poverty. Absence of water and energy can deteriorate as much time is spent in collection of water and fuel wood (Ibid).

#### **6.3.1 Shelter or Housing**

Shelter is one of the basic needs in life, as a result many people try to accomplish this need. The type of shelter people have affects their health status and vulnerability to disaster (Garr, 2010). Good housing in Ghanaian context also determine the status of the owner in the society. The bigger the house you have, the more respect people accord to you. Keta Sea Defence has provision for shelter for the affected people. This they promise will be in three faces, first the construction of the 1-bedroom houses, followed by the three and the four bedroom houses. As promised, the construction did not fully fulfill the housing component of the project. The houses constructed could not accommodate all the people who have been affected by the erosion.

**Figure 11 Newly Constructed House Verse the Illegally Constructed Thatch House**



Source: Field Survey (June – July, 2015)

The households that had not received the house lived in self-contracted thatch and iron sheet houses. These households were exposed to various kinds of disasters such as heavy rains and strong wind, which sometimes destroy their houses. They did not have any protective cover like tress that can hold the strong winds. They were also suffering from pest such as ants and mouse, which usually disturb them at night. Households living in the thatch house lamented that they would have being happy if the government gives them the land to built their own house. Even the land that they constructed the temporary structures on is for the government and the structures they have is illegal. Downing (1994) argued that, homelessness is also placelessness which leads to loss of group's cultural space and identity, or cultural impoverishment. This situation has increased poverty as well as vulnerability of some households in the resettlement community. According to Cernea (1998), loss of housing and shelter leads to a severe drop of living standards either temporary or long lasting. He argued for payment for demolished dwellings at replacement value to enable the affected families to set up their new houses. Demolishing with no compensation in Keta leads to impoverishment through homelessness.

### 6.3.2 Transportation

One of the determinants of people's well-being is reliable transport networks for transportation of goods and services to district centers and towns. Finding from the research indicates that road network in the community has improved compared to what they had before the resettlement. Majority of the household interviewed indicated that they are satisfied with the road network and the transport system they have in the community. They find it easier to commute in the new community than before. At the time of the study, the main means of transport is by commercial taxis and mini-buses popularly called 'trotro' in the local language.

The mere improvement in the transport system is not enough, what is important is whether this improvement has led to an improvement in the life of the households in the community. Interview with the households indicated that, despite the fact that the road network has improved, it does not affect the well-being of people. The reason given for this is that, they did not have any business that involve transport as before. The road is benefiting their neighbouring communities than them because they have business and its now easy for them to transport to the market. One of the interviewee narrated;

*"The road network we have now is good. Its better than before but it is not benefiting us that much because we do not have much to do in other communities in terms of transacting business that we can gain something from it".*

Another respondent recounted;

*"The road network we have now is very good, it is helping us in doing our day to day activities that involve transport but our neighbours are benefiting more than us because they can now transport their products to the market easily and make money".*

This indicates that, the improvement in the road network does not have much effect in the life of the resettlers.

### **6.3.3 Electricity supply**

Electricity supply is one of the means to improve people's livelihood. The resettlement project aimed to supply electricity for the community. All the new houses have electricity connection and the national grid run through the community. According to the households, despite the fact that they have electricity connection in all the houses, it has not been connected to the national grid. They slept in the darkness for year until the recent government provided them with a project called rural electrification, which provided free electricity meters for the households as well as connected them to the national grid.

The households were happy about this initiative because this was not the case before the resettlement. Through my observation, even the thatch houses in the community had electricity. Those who didn't get the electricity meters were able to connect the electricity from friends and relative on an agreement to share the bill every month.

One thing they were not satisfied with during the interview section with them is shortage of power or irregularity by which government supply the power. It takes 2 to 3 days sometimes to get electricity. The power outage has become a source of worry for them. This is what one of the interviewee has to say;

*“If I had electricity in my room and it takes 2 to 3 days for me to get light, then what is the essence of having it? But I will not say it a bad idea, my prayer is for the government to solve the problem so that we can get electricity 24 hours a day. This will help those who had money to operate cold stores and other shops because they can store their products to sell later”.*

### **6.3.4 Sanitation and Water Supply**

“Water is essential for life” (Report, 2005, p. 3).

According to the UN Report, millions of people around the world struggled daily to secure safe water for their daily needs. Millions of children die every year from water-borne diseases such as malaria, schistosomiasis etc. (2005). In most African societies, women are connected to the responsibility for water supply, sanitation and health at the household level. In most societies in Ghana, women are responsible for food



preparation, care for domestic animals, cleaning and washing – all these involve the use of water. Lack of it or less access to it affect the women the most because of the role they play in many households in Africa (Report, 2005). The Millennium Summit in 2000 set a specific target to reducing poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women by 2015. Ghana as one of the member states agreed to reduce half the proportion of people without access to safe drinking by 2015 the year set to mark the end of the *International Decade for Action: 'Water for Life'*. It is by achieving this target that the government of Ghana incorporated the provision of safe drinking water as part of the Keta Sea Defence project.

**Figure 12 Water and the MDGs**



Source: UN Report, 2005

Finding from the research indicated that, all the new houses have water supply and toiletries facilities. Most of them point out that, sanitation after the resettlement is better than before. The only difficulty they have now is irregular supply of water. According to them, despite the fact that they have indoor pipes and water closets, they sometimes go out to fetch water from public wells because the water provision is not regular. According to them, sometimes they get water once or twice a week which is



very bad. Though they have access to safe drinking water, there is more room for improvement. The part of the community that has not yet been provided with the new houses has become a major source of worry for the community. This is because they are trying to make sanitation in the community worse. They defecate along the coast and open spaces and sometimes on the gravels used to protect the shore. If nothing is done about that, the sanitation situation maybe worse in the community.

## **6.4 Human Capital and Livelihood**

### **6.4.1 Access to Education**

The MDG emphasizes the attainment of universal primary education. Education eliminates poverty and it is considered as a key to national development. It is the recognition of this that the universal compulsory education became an important political objective. Eliminating illiteracy has been the base of Ghanaian educational policies and authorities have acknowledged this. In 1996, the government of Ghana introduced the Free Compulsory Basic Education Programme (FCUBE) with the aim to provide opportunity for every school-age child in Ghana to receive quality basic education by the year 2005. ("Free Compulsory Basic Education programme (FCUBE),"). The government also introduced school feeding programme by which deprived schools are fed free. The government has also provided free school uniforms and textbook to some of the students.

Keta resettlement project has made provision for construction of schools in the resettlement community. When interviewed, the households were satisfied with the educational facilities they have. Though some of them who live far from the school express dissatisfaction about the accessibility of the school, they indicated that it was far better than before. This is what one of the interviewee told me;

*“I am very happy with the schools we have in the community now, though the school is a bit far from me, my kids did not have any problem going to school. If I had this opportunity at my time, I don’t think you will be interviewing me here today. I used to cross part of the lagoon to go to school when I was a kid because of flooding. The erosion has made it worse and I had to stop school.*”

*It's not because my parents can't afford at that time but just that the schools were destroyed".*

They don't have any senior high secondary school as at the time of the study but they had one technical training institute and the second one is under construction. They indicated that, after completion of Junior High School, their kids move to neighbouring towns to attend Senior High Schools. Education has significantly improved after the resettlement.

#### **6.4.2 Health Service**

It is obvious that a community affected by sea erosion and flooding will suffer from various kinds of diseases if good steps were not taken. Health care is important for poverty reduction. Without good health, ability to work, attain school etc. will be limited. It is for this reason that health care provision has become the major agenda or priority areas to past and recent governments in Ghana. The idea of the National Health Insurance Scheme in Ghana was implemented by the former president John Kuffour to replace the *cash and carry* system, which limit access to health care by the poor who cannot pay for health services. In 2003, the scheme was passed into law which licenses and monitors the operation of National Health Insurance Scheme in Ghana. Three types of health insurance were set up under the NHIS. They were:

- The District-Wide Mutual Health Insurance Scheme.
- The Private Mutual Health Insurance Scheme
- The Private Commercial Health Insurance Scheme

The District Mutual Health Insurance Scheme concept was supported by the government to ensure that;

- Opportunity is provided for all Ghanaian citizens to have equal access to the functional structures of health care
- Ghanaian citizens do not move from an unaffordable 'Cash and carry' regime to another unaffordable Health Insurance one.
- A sustainable Health Insurance option is made available to all Ghanaian citizens
- The quality of health care provision is not compromised under Health Insurance ("National Health Insurance (Ghana),").

The Keta Resettlement project makes provision for health care facilities to improve access to health in the community. A community clinic was built to take care of the health needs of the people. The improved transport networks makes it easier for people to also access the Keta District Hospital which is now a teaching hospital in Keta. Figure 13 shows the Kedzi health center.

**Figure 13 Kedzi Health Center**



Source: (Field Survey, June – July 2015)

Finding from the research indicated that the households did not have any problem accessing health care. They have better access to health care than before as a result of the accessibility of the new health facility and the easy access to the district hospital due to improved transport network. This agreed with a study by Garr (2010) which indicate that KSDP has increased access to health care in the affected communities.

When asked about the cost of accessing health care, they gave credit to the NHIS for providing affordable health delivery for them. Children below 18 year were registered free of charge under the NHIS while some political office holders used it as a

campaign strategy by registering people in the community for free in order to gain vote from them. Though they praised the NHIS for working well, they also lamented about shortage of drugs and some equipment in the clinic. One of the interviewee lamented:

*‘The NHIS is working well but the problem is sometimes you can go to the clinic and you will not get even a paracetamol, they will send you to a drug store to go and buy, its pathetic but we are alright’.*

## **6.5 Effect of the Resettlement on Financial Capital**

Financial capital can be defined as the financial resources that people use to achieve their livelihood objectives (DfID, 1999). The definition has been adopted to capture important building block, namely the availability of cash or equivalent, that enable people to adopt different livelihood strategies (Ibid). DfID (1999) identified two main sources of financial capital namely:

- Available stocks – savings in the form of cash, bank deposits, livestock and jewellery, loans from family and friends, financial institutions and banks. Compensation can also be a form of available stock.
- Regular inflows of money – pension, transfers from the state and remittances.

According to DfID, financial capital is the most versatile of the five categories of assets. First and foremost, it can be converted into other types of capital with varying degree depending on the Transforming Structures and Processes. Secondly, it can be used directly to achieve livelihood outcomes (e.g. food can be purchased to reduce food insecurity). Lastly, it can be transformed into political influence either wrongly or rightly and can allow for more active participation in organizations that formulate policy and legislation and govern access to resources. Financial capital is the most available asset to the poor (1999).

### **6.5.1 Earnings**

Various categories of earnings were identified in the resettlement area. Some of them were self-employment (e.g. informal trading, fishing, fish mongering etc.), Remittances from family and friends, Pension and local employment (e.g. labourers,

town council workers). All these sources of earning were not regular. Earning from the pension and local employment were the only regular earnings identified by the respondents. However, majority of the respondents did not have these sources of earning. The major source of earning in the community is those from self-employed sources. The rate and the size of remittance received by the households also depend on the relationship between the receiver and the sender.

### **6.5.2 Savings**

Savings are also one of the financial capitals and are usually the excess earning after all expenditure. Savings can take the form of bank deposits or liquid assets such as livestock and jewellery (DfID, 1999). Before the resettlement, resettled household kept their saving in the form of livestock, jewellery and rotating credit associations (susu), which were the case for many households interview. Only few households indicated that they had their savings in the form of bank deposits. For rotating credit, normally a number of people from about five to 15 people will form a group and decide on an amount to contribute either weekly, or sometimes monthly. One member will take the contribution of the group every week or month until all the members received their pay.

After the resettlement, many households could not save either in cash or kind because they lost everything to the sea erosion. Most women indicated that they lost their expensive jewellery, which were made with Gold. The households were not able to keep livestock because their compound is small and they do not have land for themselves to do so. This is an excerpt from the interview:

*“If you are working you can save, if you don’t you can’t save. Now we don’t have anything, we don’t have any proper work that can generate enough money to save. So we don’t have any means of saving, we live from hand to mouth. Even the small that you have, if you take it to banks and you want to take it back to do something, it is a problem. Sometimes network failure and long queues in banks are very annoying. Also the banks are far from here”.*

### **6.5.3 Loans from Families Friends and Relatives**

During the interviews most of the respondents indicated that, they used to borrow money from friends, family and relatives. After the resettlement the situation has changed because nobody is having money. Even the few that have were not able to give it out to people because they were not sure they would pay back. They indicated that, people have done it but those who borrowed have defaulted. They cannot pay because they did not have any proper job. Since the borrowers were families, the lenders cannot take any action against them. This has discouraged many people to giving loans to relatives and friends.

### **6.5.4 Credit Cooperation and Banks**

Findings from the research suggest that, the resettled household were no longer able to get loans from credit cooperation and banks. Before the resettlement, banks and other financial institution lended money to the fishermen and fish mongers especially women, which they pay back in a specified period. This fund has helped many women to transact their own business.

After the resettlement, the household was captive, they do not have any collateral or property to be able to take loans from banks in case they defaulted the payment, the collateral will be seized. One of the interviewee narrated these difficulties:

*“It is very difficult for us nowadays to borrow money from the banks. We used to take loans from banks at the time we have our own lands and houses that we use as collateral but now we don’t have anything that could serve as collateral to take loans from banks and other financial institutions. Now we loose interest in saving and loans companies because they are not reliable. US tilapia investment for instance has taken peoples money away. Even if you are able to get the loan, the works we are doing now is not viable to invest in it, there is no business in this community that you can do and get money to pay the loan”.*

This man express his frustration in savings and loans companies by giving an example by which an investment company duped them and took their money away. This

company promised them high interest on their money if they save with them. Later they were not able to fulfill their promises and they took peoples money away.

## **6.6 Social Capital upon Which People Pursue Their Livelihood Objectives**

It is hard to give a single definition of social capital to the satisfaction of everyone. For the sake of this thesis, social capital is seen as the links, shared values and understandings in society that enable individuals and groups to trust each other and work together (OECD, 2007). Social capital is very important in livelihood reconstruction because it serve as an avenue to gain access to other livelihood assets such as financial capital and human capital. To explain social capital, my interest is on how social groups help strengthen livelihood of the poor. The fishermen in Keta always work in groups so it is important to access these groups and how they help in livelihood reconstruction. The nature and the quality of the group and how they cooperate in working together for there own good.

### **6.6.1 Family and Kinship Networks**

In African societies, ties between nuclear family members (Parents and children) were stronger and more coherent than those between extended family members (mother, father, uncle, ant and cousin or members of the same clan). This has been the case in the household in the resettlement area. Interview with the households indicates that, they have strong and coherent ties between their immediate family and the extended family before the resettlement. They practiced extended family system which enable them to get assistance from other family members in times of need. Before the sea erosion and the resettlement, rural-urban kinship ties were minimal and not of important for support in terms of need because they did not have their family members abroad as the case today.

What has changed in this kind of mutual living is that, during the sea erosion, most members of households have travelled to other parts of the country because they

cannot withstand the hardship in the community. This has in a way affected the family life in the community.

One of the interviewee has expressed his dissatisfaction about the family life in the community;

*“We now lived in a community where everyone has to fight for himself. In the past, when you are in need, you can just go to your extended family and get assistance but this is not the situation now. We used to borrow money from family members but now who will do that for you. They don’t even have it. Now the extended family system is no more in existence in terms of need. They will claim they are your family, but when you approach them in times of need, they will not help you. Now it is the fittest that survive, you can only get help from your children”.*

The togetherness before the resettlement is not the case now, extended family is still in existence but not in time of needs. Some other interviewees did not blame their family members for not helping them but rather the hardship in the community.

### **6.6.2 Relationships of Trust, Reciprocity and Exchanges**

Cooperation between the households was one of the areas explored during the interview with the respondents. According to DfID (1999), mutual trust and reciprocity lower cost of working together. By sharing tasks and knowledge, financial capital can be improved. People in the Keta believed in working in groups. Fishing as their major livelihood is not a one-man job. The method they use in fishing is difficult as a result they form groups and companies to be able to undertake fishing.

Findings from the research indicated that, groups and companies were important and still exist in the resettlement community. To be able to have drag net in Keta involve a huge cost which most of the households cannot afford. The situation is worse because most of the households lost their fishing nets through flooding (especially those that they use in the lagoon) and they do not have any option than to joining group to work. They were able to cooperate with each other in the group and some of the groups do help the group members with money in terms of needs. Members can borrow from the



owner of the fishing net and pay later when they fish. According to one of the interviewee, he owe his company and he is in arrears because he borrowed more than what they got at the end of the fishing season but because he is still in the company, they allowed him to work next season to pay.

### **6.6.3 Networks and Connections**

The ability of the resettlers to maintain contact with their families and friend is very important as it shows their sense of connection and improve their ability access other social support and sense of belonging to the family. Finding from the research shows that, the connection between friends and families remain strong within and outside the community. Despite the fact that most of the families were not living together after the resettlement, mobile phones have bridge that physical distance between them. One of the resettlers during the interview said:

*'...now mobile phone has made it possible to contact our friends who has left the community. Mobile phones are very cheap now so we were able to be in contact with our friends and relatives'*

## **6.7 Summary**

The KSD and Resettlement Project have revealed that the sea defence construction has indeed weakened some of the assets while strengthened others. Interviews conducted indicated that the strength in those assets does not enhance their livelihood since their major means of survival has been ignored.



## **Chapter 7 PATHWAYS OUT OF POVERTY: HOUSEHOLD STRATEGIES AND DIVERSIFICATION OF LIVELIHOODS**

This chapter examines the strategies adopted by the affected people in order to cope with the shocks they have been experienced. The introduction section gives an overview of the livelihood before and after the resettlement. Since some of the livelihoods were interrupted and some were no more sustainable, households engaged in additional livelihood to supplement the existing livelihoods. The interviews from the affected Households were discussed and analyzed to give clear understanding of how households diversify their livelihood to survive.

### **7.1 Introduction**

As discussed in chapter 2, households in Keta engaged in various activities before the KSDP and the subsequent resettlement. These livelihood activities were fishing – both in the lagoon and the sea, salt mining, vegetable farming along the lagoon, small scale or petty trading, domestic livestock rearing, formal wage labour and craft. After the sea erosion, most of these livelihood activities were no more viable. Changes have occurred and some of the livelihood sources became completely useless and unsustainable. Currently the resettled community still engaged in the following livelihood activities with some modifications and a reduction in the number of people involved in it; fishing along the lagoon and the sea, small scale business, craft and wage employment.

Due to the shocks that hit their livelihood, it has become necessary for the household to engage in other livelihood strategies as well as diversify their activities in order to cope with the shocks. This is not to say they have completely left their current livelihoods but they adopt some addition strategies and activities to earn a living. These activities and strategies is discussed below.

## **7.2 Livelihood Strategies**

The pattern of individual or household opportunity determined the variety of assets and activities undertaken to derive livelihoods (Morris et al., 2003). According to DfID, livelihood strategies define “the range and combination of activities and choices that people make in order to achieve their livelihood goals. Livelihood strategies include: how people combine their income generating activities; the way in which they use their assets; which assets they chose to invest in; and how they manage to preserve existing assets and income. Livelihoods are diverse at every level, for example, members of a household may live and work in different places engaging in various activities, either temporarily or permanently. Individuals themselves may rely on a range of different income-generating activities at the same time” (DfID, 2001, cited in Warren, 2002, p. 2). Livelihood strategies are adaptive from time to time depending on the opportunities and changing constraints.

Scoones (1998) and Swift (1989) classified rural livelihood strategies into three main categories according to the nature of the activities undertaken. These are agricultural intensification and extensification, livelihoods diversification and migration.

## **7.3 Agricultural Extensification or Intensification, Livelihood Diversification and Migration**

### **7.3.1 Agricultural Intensification / Extensification**

Agriculture intensification or extensification is dependence on availability of land labour and inputs. To intensify and resources use households apply greater qualities of labour or capital for a given land area. Extensification means, cultivating more land in order to increase production. For households to extensify or intensify depend on the agro-ecological potential of the land and the quality of labour they have. To extensify agriculture, households need more land (Morris et al., 2002).

Agricultural intensification or extensification was not an option for the resettled community since the household becomes landless after the resettlement. The reasons for loss of land were discussed in chapter 6.

### **7.3.2 Livelihood Diversification**

Livelihood diversification refers to “attempts by individuals and households to find new ways to raise incomes and reduce environmental risk, which differs sharply by the degree of freedom of choice (to diversify or not), and the reversibility of the outcome” (Hussein & Nelson, 1998, p. 3). Diversity according to sustainable livelihood research means exploitation of multiple assets and sources of revenue. This form an important part of many livelihoods in developing societies (Warren, 2002). A diversified livelihood includes activities which are undertaken to generate additional income for the households. It includes activities such as agricultural activities, sale of waged labour, self-employment in small firms, migration, sale of assets and other activities undertaken to overcome the shocks in the society (Ibid). Livelihood diversification is an important strategy adopted by the rural people to achieve a sustainable livelihood. It is generally undertaken in addition to other strategies to achieve sustainable livelihoods (Ibid).

### **7.3.3 Migration**

Migration is one of the strategies adopted by the people affected people in order to sustain their families. Migration is a movement either across an international border or moving within a country. It includes all kinds of movement of people regardless of its length, composition and cause. It includes refugees’ movement, movement of displaced persons and economic migrants (Vearey & Nunez, 2010). Migration may be voluntary or involuntary. It is used as a means to secure off-farm employment. Migration will have an impact on the left behind through enhancing households asset base (Morris et al., 2002).

Following the construction of the sea defence project and the resettlement, many of the affected people could not continue their previous livelihood especially fishing in the sea and the lagoon. Migration of the people is caused by several push factors, some of which were indicated by the households. Some of these factors were; hard work with no return, unfavorable seashore for fishing, loss of assets etc.

Fishing is a hard work for them because they still use primitive methods, which involved labour and manual work. According to them, it takes more than 20 people in a group to be able to fish using their previous method. A net owner will not be able to go to fishing if he does not have people because these people help in pulling the net. Following the construction of the sea defence and the resettlement, fish catch has fallen tremendously in the community, as a result the income from the work they do is no more commensurate with their labour.

Where fish catch has fallen and the access to the seashore is limited, migration can supplement income and protect household's asset bases. Households migrate to other regions in the country and sometimes outside the neighbouring countries especially the lean season to provide income for the household. Randall and Randall (2005) made a distinction between the various types of migration in the West Africa region.

**Table 7. Synthesis of usual categorizations of fishing migrations in West Africa.**

Scale	Pattern	Description
Internal	Short-term	One to several weeks not necessarily set seasons. Usually just men.
	Seasonal	Generally following fish movements or production patterns. Fairly regular pattern each year. Some population's men only, others include women and possibly children.
	Long term circular migration	One or more years. Usually described as contracts with companies.
	Permanent migration	Often not intentional but an outcome of longer-term circular migration.
International	Seasonal	Generally follow fish movements or market opportunities. Some populations' men only, others include women and possibly children.
	Long-term	Contracts can be between one and eight years. Usually

	contractual migration	men alone or groups of men. Sometimes women go separately and join them in the destination area.
	Permanent migration	Not clear whether these were always intended to be permanent. History of long-term migrant communities in many countries. A lot of fishermen have been born there – unclear about when groups cease to be migrant.

Source. (Randall & Randall, 2005)

Migration of fishermen in Keta follows some of these distinctions. The most common type of migration identified in the area is the internal migration in the form of seasonal and short-term migration. Many households indicated that following the resettlement, their members had to migrate seasonally to other parts of the region to fish in order to sustain the family. This seasonal movement usually followed a production pattern, which they know and move accordingly. Most of them migrated to nearby places which they already knew. Very few households indicated that, some of their members have migrated international, especially to Togo, Benin, Cote D'Ivoire and Nigeria. High migration cost often prevents people from moving internationally, despite some of them have expressed interest to go if they have the means and proper documentations.

Fishermen were not the only migrants in the community but also educated young adult also migrate to other parts of the country, especially Accra to search for a paid job since they did not have any work in the community. They also remit to their families back home. Income from the remittances sent by these migrants often increased the human capital base of the household members left behind.

## **7.4 Other Means of Survival**

### **7.4.1 Handling Flexible Gender Roles**

One of the interesting revelations in the community is the flexibility in the roles as a woman and Man. In Ghanaian homes, gender plays a role in the work a man or a woman supposed to undertake. For example, in a typical Anlo house in Ghana, it is the duty of the man to go for fishing or farm in order to cater for the family. Women

mainly stayed behind to make sure that the man eat and the children go to school. When this task is performed, they also help their man in the farm in planting, weeding, harvesting and post productive tasks (Amanor, 2010). In the study, data from the field indicates that this kind of gender differentiation has phased out, there is no more preserved work for the woman and the man. According to Galab et al. (2002), Gender affects diversification options, including the choice of income-generating activities due to culturally defined roles, social mobility limitations and differential ownership of or access to assets. Some women I interviewed told me they are both women at the same time men in the house. This means that, they perform the duty of both the man and the woman. In order to generate income for the family, women involve themselves in various kinds of activities which was not their original source of livelihood before the resettlement. The commonest of this activity is fishing by hand in the shallow areas of the Keta lagoon. They also travel to the nearby coastal areas on a daily basis to buy fish on a small quantity that they send to market and sell to feed their families.

#### **7.4.2 Reproductive Choice**

The research findings show that, reduction in birth is one of the household strategies to reduce the burden in the family. Before the erosion, birth per person in the community was high – about 6 to 7 children per person. Larger household means more dependants on those who are working in the family. They indicated that, they had a lot of education from the community health workers about how to limit the number of children and the advantages for having small families. This strategy has helped many households, as they do not have larger families like they do before the incident. Due to small family sizes they have, the small income from other activities they do is able to provide food for the family.

#### **7.4.3 Receiving Remittances**

Remittances are also one means by which households were able to cope and feed their families. Remittances refer to money sent by relatives and friends who travelled outside the region. Households whose relatives travelled outside the region indicated that they received remittances from their relative. Although remittances contribute to



only a small part of household's average income, they are important in keeping the households activities. Remittance is very important in the households because it helps in educating the children left behind by the migrants.

#### **7.4.4 Consumption Adjustment**

One of the strategies adopted by the households is adjustment in their food consumption level. Interviews with the households indicated that, they used to take three square meals a day, i.e. Breakfast, Lunch and Supper. Currently, most of the households indicated that they were not able to afford the three square meals anymore since their income level has reduced significantly. They indicated that they now take only breakfast and supper. A change in their consumption pattern has helped the households to spent less money on food.

Some households also indicated that, to cut consumption of food, they sent their children to their relatives who migrated from the community and were successful. This strategy also helped them because it lessens the number of people in the household hence reduced food consumption.

#### **7.5 Livelihood Outcomes**

In this section, I focused on the determinants of the DfID's Sustainable Livelihood Outcomes. According to DfID (1999), livelihood outcomes are the achievement of outputs of sustainable livelihood. Livelihood outcomes are dependent on the assets that people have and also the strategies they chose to attain their livelihood goals. As indicated in chapter 3, determinants of livelihood outcome includes more income, increased wellbeing, reduced vulnerability, improved food security and more sustainable use of natural resources base. Table 8 below shows the various assets in the community and how the construction of the KSDP and the resettlement has strengthened or weakened the assets.

**Table 8. Vulnerability of livelihood assets, KSDP and resettlement and livelihood outcomes**

<b>Vulnerability</b>	<b>Outcome of shocks</b>	<b>Solution</b>	<b>Livelihood outcomes</b>
Natural Capital	Sea erosion, Flooding, Loss of land due to erosion but still hold ownership of the land, Reduction in vegetable production, Salt mining	<b>Keta Sea Defence Project and Resettlement</b>	Erosion Flooding has been prevented, Loss of land (Landlessness), No vegetable production (food insecurity), No more salt production
Physical capital	Loss of houses to erosion, poor transport network, less access to electricity, Poor sanitation		Better access to housing, better transportation networks, better access to electricity, good sanitation
Human Capital	Less access to education, Poor health delivery		Better access to education, better health delivery
Financial capital	Considerable earning from fishing, Access to credit, Considerable means of saving		Decreased income, less access to financial services, lack of saving
Social capital	High family and kinship ties, high relationship of trust and reciprocity		Decreased family and social ties, reduction in trust and reciprocity

From the table 8, it can be seen that the construction of the KSDP and the resettlement has improve some of the asset as well as weakened some of them. There were an improvement in human capital and an improvement in vulnerability of Natural capital

as well as physical capital but much has not been done to improve the social and financial capital, social capital and some aspect of natural capital base of the community.

The other aspect explored was whether the strategies adopted by the households has lead to its intended outcomes. In general, none of the households I interviewed have admitted that the strategy they adopted have led to its intended outcomes. However different households expressed different views about the outcomes of their chosen livelihood strategies. Households whose members are formal wage workers expressed more satisfaction about their wellbeing and have higher income than their counterpart in the informal sector. They admitted that the strategies adopted were just for coping and survival.

To summarize, I want to revisit the determinant of livelihood outcome as to whether there were an improvement or not.

- Has the construction of KSDP and the resettlement lead to more income? The answer is no. This is not to say nobody has benefited from the project but the greater number of people has indicated that the project did not improve their income level.
- Has the project increased the wellbeing of the household? The answer is no for majority of respondents interviewed.
- Has the project reduced vulnerability from erosion and flooding? The answer to this question is yes. All the people interviewed attested to the fact that the project have achieved this objective. They have not experience any form of flooding or erosion after the construction.
- Has the project improved food security? The answer to this question is also not encouraging since majority of the respondents express dissatisfaction about the fact that they no more do their small scale farming to get food. The money spent on food now would have been channeled to other areas of life if they were able to produce their own food as they used to do. However people also indicated that small-scale farming was not their primary livelihood so they had no problem about not farming.

- Has the construction led to an improvement in natural resource base of the community? Answer to this question was No. they express worry about the method people were using to fish nowadays in the lagoon and the sea. Light fishing and using small inch nets were some of their concerns. These methods they said were unsustainable and can lead to further drop in fish catch.

## **7.6 Summary**

This chapter discusses the alternative livelihood strategies adopted by the people of Keta to earn a living. These livelihoods were taken in addition to their existing livelihoods. Findings show that, these alternative livelihoods that they engaged in, did not yield its intended outcomes by serves as a means for survival in the community.

## **Chapter 8 CONCLUSION AND RECOMMENDATION**

This chapter presents a conclusion and summary of the findings of this research and brings out some recommendations for improving the future projects of this kind.

### **8.1 Conclusion**

This research investigates the livelihood recovery after resettlement of people of Keta due to sea erosion and flooding that hit the area over the years. The research has focused on three key objectives in order to unravel the effect of the sea erosion, flooding and the construction of the sea defence wall. See chapter 1 for the objectives.

The study employs qualitative methods in gathering the necessary data. The researcher has focused mainly on the household that has been affected by the sea erosion and the flooding. The research has focused on the institutions, policies and processes involved in the KSDP and how it affects the livelihood of the community. Also, the assets in the new community have been analyzed in relation to what they had before the KSDP and the resettlement project. In order to recover from the shocks they experience, some households adopted some additional livelihood strategies to earn a living. These strategies have been explored in the study.

Cernea's IRR Model and DfID's livelihood framework serve as an analytical framework within which the objectives have been explored. The SL approach was useful in assessing the factors that characterize rural life. The various components of the SLF allowed for broader and more holistic approach to livelihood analysis.

The research has come out with some findings:

Objective 1. How do the governance and institutional mechanisms affect the resettlement and how people's livelihoods are organized? Findings show that there is no clear-cut policy for infrastructure development along the coast of Ghana, however some sectorial policies exist which form the basis of most infrastructure projects in Ghana. The study also shows that the project has adopted a top-down approach thus there was little involvement of local government and the people in the decision-

making process to have a say about what is good for them. The study also shows that there was a disruption in the processes laid down for the allocation of the houses to the affected people. The procedures were manipulated and some of the houses have gone into the hands of the wrong people some whom the original residents did not know in the community before the incident. Findings also show that the government did not have proper measures to inspect and monitor the project during the construction phase to enable the contractor follow the standards. As a result, most of the houses are substandard. Some of the constructors used fake materials to build the houses which led to the deterioration of some of the houses. The other issue is the maintenance of the houses. The government did not institute any proper measures for maintenance of the structures. Not only but also the project lacks private sector participation. Private sector participation is limited to construction of the sea defence wall and the roads in the community. The most important that involves the livelihood of the affected people did not see any private sector participation, thus the construction of the houses. Lastly, there is an issue of political manipulations in providing the houses as some households complained bitterly about new government interruption of the project and corruption on the part of officials allocating the houses.

Objective 2. How do the Keta Sea Defence and resettlement process strengthened weakened the local capabilities and access to livelihood assets? The resettler's faced many problems in using some of their assets to gain a living. Despite the fact that there was an improvement in general infrastructure in the community, there is more room for improvement. The project failed to create job for the people as expected and this led to low levels of income in the community. Access to land is limited as the government has become the owner of the reclaimed land in the community. So what will happen to those whose houses were destroyed before the project? Since they were not included in the process, they became landless. The resettlers can no more rear their domestic animals as they now have small lands. Salt mining, which was one of the major economic activities in the community, is no more in existence due to dredging of the Keta lagoon. The project also failed to provide houses for some of the affected people. Many families who have been affected by the project were left homeless since the government could not raise fund to complete the remaining housing units. There is an improvement in roads, educational facilities, water provision and electricity in the community. The only problem that arises in the case of

water and electricity was the issues of regularity in the supply. Health conditions in the community have improved due to the construction of a community health center and the introduction of the NHIS which provides free health care for the people. Peoples earning in the community has reduced, the people no more save because they do not have enough money to save. It has become difficult for the affected people to access credit in banks and credit cooperations since they do not have any collateral security that will back them to take loans. Findings also show that the communal living in the community has phased out. The families are more individualistic than before the resettlement. The extended family system is gradually changing since people do not have the means to help their extended families.

Objective 3. How do the affected people develop their livelihood strategies to achieve their livelihood outcomes? In an attempt to overcome the shocks experienced by the affected people, some households engaged in some alternative livelihood strategies to be able to feed their families. Seasonal migration to neighbouring communities and to other neighbouring countries was some of the strategies adopted by some fishermen to earn a living. The families have become smaller as people were educated about having fewer children and its consequents on livelihood. Some households also sold their asset to be able to survive. Finding also shows that the livelihood asset did not help the resettlers to achieve their livelihood goals. The strategies adopted did not yield their intended outcomes but at least they were able to survive with them.

## **8.2 Recommendation**

Based on the findings from the study, I recommend the following;

- ❖ Construction of more houses to accommodate the rest of the affected people: the government of Ghana must prioritize providing more houses to accommodate the remaining households. The government must source fund from donor agencies and also encourage private sector to support the housing project.

- ❖ Commercial salt mining: Keta lagoon has a great potential for salt mining. To create job for the people in the community, the government must develop the salt industry. This can be done through the collaboration of private sector. Revenue from the salt industry can be used to develop the community.
- ❖ Establishment of fishing harbour: the KSDP makes provision for the establishment of a fishing harbour, but this component of the project has not been fulfilled. The construction of the fishing harbour will create job in the community since most of the people in the community depend on fishing as their livelihood. Also, the government of Ghana must strengthen the maritime laws to prevent pair-trawlers from fishing in the shallow waters of Keta.
- ❖ Tourism development: Keta has a great tourism potentials which when developed, can provide job for the people. The beach can be developed into attractive sites for tourists to visit. Bird watching is one of the tourism potentials since Keta has islands in the lagoon which harbour different kinds of birds.
- ❖ Participation: any future project of this kind must involve beneficiaries in the decisions that affect them. Their involvement will help understand what they want and how it must be carried out to the satisfaction of them.
- ❖ Allocation of land to households: the government must allocate lands to households which have the means to construct their own houses. Findings from the study indicate that, some households have the means to construct their own houses but they did not have land. Allocating land to people who have the means to construct their houses will help reduce the burden in the government.
- ❖ Politics and development projects: the thesis recommend that the projects of this nature must be devoid of politics to allow for free fare and transparent process. Any project of this nature must continue even if there is a change in government.



- ❖ Finally, the government must institute a management body to manage the houses as well as develop plans for completion of the remaining houses.



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# APPENDIXES

## Appendix 1

### INTERVIEW GUIDE

**Introduction:** General Background of the respondent (Respondent Name, Age, Number of years spent in the community, Position in the household), Can you tell me a brief history about the sea erosion? How it started, what happened to you, what were the interventions and why are you here today? Has the sea defence project prevented the flooding and erosion in the community?

**Livelihoods:** Can you describe your livelihood before and after the resettlement? What were your main sources of livelihood? What can you say about sustainability of your livelihood before and after the KSDP and the resettlement? What were the effects of the resettlement and KSDP on your livelihood? Have the sea defence project and the resettlement project improve your livelihood sources?

#### Assets

##### Physical Capital:

Adequacy of housing

Condition of housing before resettlement

Assessment of the new houses

Access to roads, electricity and water supply before and after the project

Adequacy of the physical capital to support livelihood

Have the to access physical capital improved livelihood

Satisfaction with the new houses

Impact of the project on physical capital.

##### Natural Capital

Land holding size and ownership

Access to land before and after the resettlement

Land conflict

Is it necessary to pay someone to gain access to land

Access to the lake and the sea after the project

Laws regarding property right (Customary, government laws, Resettlement policy)

**Human Capital**

Access to schools before and after the resettlement

Health facilities in the resettlement area or nearby

Challenges in accessing the health facilities

Perception towards large family size

People's health status and ability to work

**Financial Capital**

Mode of saving before and after the project

Credit facilities before and after the project (government, private credit institutions, banks and family members)

Difference in access to financial services

Impact of resettlement on saving

**Social Capital**

Relationship in the household

Weaknesses and strengths of the new community

Support from neighbours, friends, family and relatives

Kinds of support

Family and kinship networks and connections

Changes in networks and connections

Relationship of trust and reciprocity

**Livelihood Strategies and alternative livelihood sources**

Current livelihood activities and reasons for choosing them

Main income source before and after resettlement

Employment availability before and after the resettlement

Alternative livelihood sources

**Livelihood Outcomes**

Livelihood goals resettled people aspire

Has the project help improve the various assets

Has the project help the resettled people to improved access to more income, education employment, and health care.

Has the project lead to more income, reduced vulnerability, improved food security, more sustainable use of natural resource base

**Transforming structures and processes**

Resettlement processes

Participation of the community in the process

Knowledge about the resettlement policy

Institutions and organizations that influence the project

Effect of participation on the outcome of the project

## Appendix 2: Introduction Letter from the Department of Geography – NTNU

NTNU  
Norwegian University of  
Science and Technology

Faculty of Social Science  
and Technology Management  
Department of Geography

To whom it may concern

Our consultant: Anette Knutsen  
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E-mail: anette.knutsen@vgt.ntnu.no

Dated: 9<sup>th</sup> May 2014      Our ref.:      Your letter dated:      Your ref.:

**Letter of introduction**

We hereby confirm that Samuel Yao Dogbey is a student on the programme *Master of Philosophy in Development Studies, specialising in Geography* at the Department of Geography, Norwegian University of Science and Technology.

He will undertake his fieldwork and data collection during June to August of 2014 in Keta - Ghana, on the topic:

*"Analyzing Post Coastal Erosion Livelihood Recovery after Resettlement of the Coastal Dwellers in Keta - Ghana"*

We would be grateful for any assistance given to him during this process. This includes granting interviews, assisting him in making appointments, handing out materials and making information accessible to him.

Yours sincerely,

*R. Lund*  
Ragnhild Lund  
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