

**UNIVERSITY OF GHANA**

**DEPARTMENT OF GEOGRAPHY AND RESOURCE DEVELOPMENT**

**THE EFFECTS OF ADRA'S MANGO PROJECT ON LIVELIHOODS IN THE YILO  
KROBO DISTRICT**



**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN  
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPhil  
GEOGRAPHY AND RESOURCE DEVELOPMENT DEGREE**

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## DECLARATION

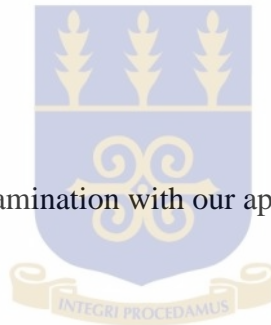
I, Hannah Somma Sono, hereby declare that with the exception of my reference to other people's work which have been duly acknowledged, the work contained in this thesis, "The effects of ADRA's mango project on livelihoods in the Yilo Krobo District" is the result of my effort and work carried out in the Department of Geography and Resource Development, University of Ghana, from August 2011 to July 2013. I also declare that this thesis has not been presented either in whole or in part for any other degree in this university or elsewhere.

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## ABSTRACT

Although recent statistics reveal a decline in poverty in Ghana, many people still live below the poverty line. Rural small-holder food crop farmers are the most vulnerable groups affected by poverty. This is due to their limited access to micro-credits. The Adventist Development and Relief Agency (ADRA) is a Non Governmental Organization in Ghana and has been working with small-holder farmers in the Yilo Krobo District with the aim of improving rural income and improving the well-being of the rural poor. However the effects of ADRA's interventions on livelihoods of farmers are not adequately explored. The purpose of this research was to evaluate the effects of ADRA's mango project on income levels and the general welfare of small-holder farmers in the district. To achieve these objectives, a mixed methodology approach combined with secondary data, and literature was applied in this research. Data was collected from 95 ADRA assisted farmers and 55 non beneficiaries in the district. Majority of the farmers reported that ADRA's intervention has positively contributed to increased farm sizes, rising mango output, higher incomes and improved livelihoods. On the other hand, the project has made some farmers poorer, as they were unable to repay loans they accessed because of very low production which was explained by poor soil quality in their localities. Limited access to international markets is another problem reported by the farmers. Based on the findings of the study, it was recommended that the government of Ghana and other development organisations should adopt and replicate ADRA's project in different localities since there is a possibility of spill over effect on the livelihood of the rural poor. However, soil quality assessments must be carried out whenever similar agricultural projects are being designed. It was also recommended that the government must work with ADRA to link mango producers with international markets.

## DEDICATION

I dedicate this thesis to the glory of God for his unmerited favour, guidance, provisions and mercies that has seen me through to this moment. I also dedicate it to my parents, Mr Paul Sono and Mrs. Esther Ofosua Sono whose prayers and support have seen me through the whole period of my education.



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## LIST OF ABBREVIATIONS

ADRA –	Adventist Development and Relief Agency
ATT –	Average Treatment Effect for the Treated
ATU –	Average Treatment Effect for the Untreated
ATE –	Average Treatment Effect
EARO –	Ethiopian Agricultural Research Organization
FAO –	Food and Agriculture Organization
HYVs –	High Yielding Varieties
ISSER –	Institute of Statistical, Social and Economic Research
LDCs –	Least Developed Countries
MoFA –	Ministry of Food and Agriculture
PSM –	Propensity Score Matching

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

Extreme poverty remains a serious problem in the world's developing regions (Bhose, 2003; World Bank, 2012), despite the fact that some progress has been made in reducing the number of poor people (Ravallion, 2003). Available evidence worldwide suggests that, nearly 1.3 billion people remain below the extreme poverty line with an income of \$1.25 or less a day (World Bank, 2012). While poverty is a global problem, it finds much expression in sub-Saharan Africa, where economic shocks, food shortages and environmental degradation threaten to undermine the progress made in reducing poverty (MEA, 2005). The causes of poverty include the poor's lack of resources, unequal income distribution, conflict and hunger. Poverty in the rural areas is advancing and the gap between the rich and the poor is widening (Bhose, 2003).

The neglect of the rural areas, notwithstanding their potential for development, is reflected in the diminishing proportion of public investment going into rural development and the gap between those who can access opportunities and those who cannot (Bentil, 2008). For this reason, many donors and governments endorsed Integrated Rural Development (IRD) projects. IRD projects tend to focus simultaneously on increasing agricultural production and improving health, education, sanitation and a variety of other social services especially in rural areas. By 1980, many donors had retreated from IRD projects or had redesigned these projects to place greater emphasis on agricultural production (Food and Agricultural Organisation, 1994). Ghana's rural development plan dates back from 1919 (Boateng, 1987). Since the country gained independence, various governments have had policies to develop the rural part of the country.

Beside government's efforts to reduce extreme poverty in the countryside, NGOs have also made significant contributions (Edwards & Hulme, 1992). Many donors favoured working through NGOs because they believed NGOs have better grassroots connections with the local populations and that they are more efficient (Staatz & Eicher, 1998). A prominent NGO that has contributed to finding solutions to rural underdevelopment in Ghana is the Adventist Development and Relief Agency (ADRA) Ghana. ADRA Ghana's pre-occupation was providing food supplements to communities that were hard-hit by the effects of the 1983 drought in Ghana. Issues about development in general were later co-opted into the organisation's modus operandi. ADRA, under the Development Assistance Program funded by USAID, has supported the course of development in a number of communities in Ghana. In a report published in 2007, the agency noted that it has helped to improve food security among 30,000 farming households in Ghana. ADRA Ghana's operations has also increased access of some rural dwellers to health and nutrition, education, sanitation facilities and year round adequate and safe water in 9 out of 10 regions in Ghana as well as 52 districts and 968 communities (ADRA, 2007).

In the Yilo Krobo district, the study area, ADRA has supported the course of development through a mango project. The agency's support to various communities in the district dates back to 1996 when it supported the farmers through: community mobilization, sensitization, and the creation of farmer groups; training and promotion of improved agricultural and natural resource management (NRM) practices; supplying of agro-inputs (improved seeds, seedlings, fertilizers); provision of agricultural extension services; and linking of farmers to markets. This research aims to examine the effects of these interventions on the livelihoods of the mango farmers in the Yilo Krobo District.

## 1.2 Problem Statement

Agriculture is the backbone of the economy of Ghana (ISSER, 2005). Lele and Agarwal (1989) have noted that, the majority of the rural poor are engaged in agriculture or agricultural-related activities for their livelihoods. Unfortunately, farmers constitute a significant proportion of the poor in Ghana. This is due to the fact that small-scale farmers usually do not have access to credit facilities to expand their farms. Their efforts are further hindered by other setbacks which include inability to adopt modern techniques in farming, low yields, crop failures, erratic rainfall patterns and difficulty in controlling pests and diseases and market access (Republic of Ghana, 2005; Asamoah, 2010). In this regard, the government through its policies such as the Ghana Poverty Reduction strategy (GPRS) framework has supported the cultivation of cash crops as a way of breaking the cycle of poverty. The GPRS is a national policy targeted at poverty reduction.

According to Bhaskar et al. (2001 p 53), the goal of poverty reduction programmes would be better achieved through collaboration with Non-governmental Organisations (NGO's). As hinted already, the Adventist Development and Relief Agency (ADRA) is one of the NGOs working with farmers in the Yilo Krobo area. Its focus in this area is to create rural employment and improve livelihood situations through agriculture. ADRA's intervention has been the provision of alternative agricultural activity for farmers who are into subsistence farming and therefore earn meagre incomes (ADRA, 2012). This was aimed at improving their livelihoods. Since livelihood comprises the capabilities, assets and activities required for a means of living (Anderson and Feder, 2007; Waddington *et. al.*, 2010), it appears that the program intends not only to increase productivity and income, but also to improve rural life. While a number of

researchers have examined rural farmers' response to various interventions in other parts of Ghana (Boateng, 2008; Bentil, 2008; Tetteh, 2010; Asamoah, 2010), the impacts of ADRA's interventions on the welfare of farmers are neither adequately explored nor understood. Although ADRA has operated in the Yilo Krobo area for over sixteen years, there has not been any major study to evaluate the effects of their interventions on the livelihoods of the farmers and development of their communities. The questions that baffle the minds of many development thinkers are: What is the impact of ADRA's intervention on farmers' income and mango production? What are the challenges that the farmers faced in using the financial facility provided by ADRA? To answer these questions, this study employs the Sustainable Livelihoods Framework to examine ADRA's intervention on the livelihoods of mango farmers. It is hoped that the findings of this study will go a long way to help improve the design of similar projects to enhance agricultural productivity and improve livelihoods of farmers.

### **1.3 Objectives of the study**

The general objective of the study is to examine the effects of ADRA's Mango project on mango production and livelihoods of farmers in selected rural communities in the Yilo Krobo District of Ghana.

Specifically the study seeks to:

1. Outline the profile of mango farmers and describe mango production in the Yilo Krobo District.
2. Examine the effects of ADRA's financial intervention on livelihoods of mango farmers in the Yilo Krobo District.
3. Examine the challenges that the farmers faced in using ADRA's loan facility.

4. Make suggestions to improve the design of loan facilities for mango farmers.

#### **1.4 Propositions**

The study is based on the following propositions:

1. ADRA's mango project has contributed positively to improved livelihood situations of farmers in the Yilo Krobo area.
2. Loan repayment is the most serious challenge that farmers faced in using ADRA's loan facility.

#### **1.5 Significance of the Study**

While official project reports of ADRA suggest that the institution is contributing towards agricultural productivity and farmer's wellbeing in Ghana, few studies have examined the experiences of farmers with the use of such loan facilities. The findings of this study will therefore help to get the views of farmers on ADRA's mango project. It is also hoped that the outcomes of the study will inform NGOs on measures to use to ensure a successful outcome in their program interventions. The research outcome will also inform the Ministry of Food and Agriculture about the complementary role that NGOs play to increase agricultural productivity in Ghana. The study will also contribute to existing literature.

#### **1.6 Organisation of the Thesis**

This thesis is structured into six chapters. Chapter One introduces the study and states the research problem under investigation. The chapter also outlines the research objectives, states proposition, and justifies the importance of the study (i.e. rational). Chapter Two provides a review of the literature on issues considered to be relevant to the study, while Chapter Three

discusses the study area and methodology employed in this study. Specifically, the methodology section presents and justifies the methods of data collection and data analysis. Chapter Four and Chapter five present the main findings of the study. In chapter four, the background characteristics of the farmers are presented. The chapter also discusses the activities of Mango farmers. Chapter five, on the other hand, examines the contributions of ADRA's mango project to livelihoods of farmers. The last chapter (Chapter Six) covers the summary, conclusions and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature on Non Governmental Organisations (NGOs) and rural development. In view of this, the concepts of development, rural development, NGOs and their operations and farmer adoption of project interventions are examined. It also reviews literature on the operations of NGOs and their effects on rural livelihood.

#### **2.2 Conceptualising development**

Researchers have been interested in development for centuries. Philosophers from ancient Greece to the modern era have given much attention to understanding change and progress. Goulet (1992) argues that, development is both an ambiguous term and practice and the word is used descriptively or normatively to depict a present condition or to project a desirable alternative. He sees development as the vision of a better life; a life materially richer, institutionally more modern and technologically more efficient and an array of means to achieve that vision. Stiglitz (1999) views development as a transformation of society, a movement from traditional relations or traditional ways of thinking and traditional methods of production to more modern ways. Development does not mean the same thing in different countries or in developed and developing countries. Jussawalla (1992) supports the discussion of the different meanings of development as he states that there is a difference in the meaning of development between developed and developing countries; that in developed countries, the provision of telecommunications or information leads to increased economic activity and innovation, while in developing countries a lack of the telecommunications and information hampers economic

development and innovation. Mansell & Wehn (1998) also supports the view that development means different things in different countries and states that development in more developed countries (MDCs) and less developed countries (LDCs) does not mean the same thing, and that development has been understood since the second World war to involve economic growth, increases in per capita income, and attainment of a standard of living equivalent to that of industrialized countries. Development should be viewed as a multi-dimensional process involving major changes in social structures, popular attitudes and a national condition of life from unsatisfactory to satisfactory (Servaes 1999). In this regard Servaes (1999), argues that satisfactory means materially well to do and spiritually happy or content with what one or a country has got. From the above definitions of development, there is the implication that development brings about improvement in the lives of people for the better.

### **2.3 Models and approaches to development**

Mintzberg (2003) suggests three models or approaches to development. The first one is the forced or planned development as it is basically driven by the state. This approach is also called the top-down model. With the fall of communism, planned development has become unpopular. State intervention in matters of development has not been seen to bring balanced development, hence the need for another approach to development called international or global development or the outside in approach. With the global approach foreign corporations descend on the host economy with money, capital and expertise. With the liberalization of most of the world economies many business concerns from outside the boundaries of a country come as investors and purport to develop or help to develop the host country sometimes engaging in businesses that could render the local competitors in same or similar industries out of business as they cannot

compete with the amount of capital they come along with. Stiglitz (1999) argues that globalisation ideology or approach to development is flawed and not working in many of the places in greatest need of development. Mintzberg (2003) also does not believe that globalisation can bring about development and points out that there is nothing in globalisation that responds to most countries needs except cosmetic modifications to the products and the ideology for local consumption. The third model is known as indigenous development, “Bottom-up” or Alternative development. According to him, this approach holds the key to a healthy development of the economic, social and the political systems. This is also called the inside-up approach or model to development. It is called the inside-up approach to development because domestic enterprises grow out of personal enterprises. An example is the United States of America (U.S.A) that does not depend on an imposed ideology or outside expert for its development and it is on the contrary developed significantly through the efforts of its own people and in their own way. Likewise indigenous development played a key role in developing Japan, Germany, South Korea and Great Britain.

## **2.4 Rural development**

Rural development denotes the actions and initiatives taken to improve the standard of living in non-urban neighbourhoods, countryside and remote villages and the actions of rural development mostly aim at the social and economic development of the areas and these program are usually top-down from the local or regional authorities, regional development agencies, NGOs, national governments or international development organisations. In common parlance, rural development is generally defined as the process of improving the quality of life and economic wellbeing of people living in relatively isolated and sparsely populated areas. From the above, it

can be observed that rural development entails the improvement in the standard of living in deprived areas to uplift the economic and social circumstances of the people living there. According to Whitaker (1982), "rural" was first used by the U.S. Bureau of the Census in 1874 when it was defined as indicating the population of a county exclusive of any cities or towns with 8,000 or more inhabitants. The Department of Housing and Urban Development, the Social and Rehabilitative Services, and several agencies under the U.S. Department of Agriculture define rural as areas outside Metropolitan Statistical Area (Pressler & Swenson, 1984). According to Blakely (1984), rural is increasingly defined by examining numerous broad categories of information. Horn (1985) looks at values, socio-economic factors, political structure, locus of control, and priorities for schools. Deavers and Brown (1985) have developed seven categories of rural areas based on social, demographic, and economic information.

Economic categories include agriculture, manufacturing, mining, and government; social dimensions include persistent poverty and growth of retirement population; proportion of land in federal ownership comprises the final category. Croft (1984) suggests that an ecological approach to the concept of 'rural' is comprised of cultural values, number of people and an ambiance that can be used to work toward a definition of rural. Whitaker (1982) also supports the complex and multidimensional definitions of 'rural' and cites 10 category based on 15 indicators, which include number of year-round residents, persons per household, degree to which jobs are concentrated on a few industries, percentage of resident workers in farming or fishing, monthly fluctuations in employment and percentage of housing built before 1940.

Rural areas are home to up to 80 per cent of the population of the developing countries and about 75 per cent of the people living in absolute poverty and the majority are women. The living

conditions of these people are characterized by low income (or none at all), malnutrition, low levels of education, inadequate economic opportunities, inadequate social services, and exclusion from political decision-making processes (De Haas, 2001). The objective of rural development is to improve the living conditions of men, women and children in the rural areas and towns in a way that is sustainable in the long term (De Haas, 2001). It is further argued that the increasing challenge of rural development is evident when one considers the fact that up to 80% of people in the poorest countries still live in rural areas and are dependent directly or indirectly on agriculture and that by the year 2050 the worldwide demand for food will have more or less doubled, even though the land area available to agriculture is limited and water resources are likely to diminish. Narasaiah (2003) notes that rural development is seen as a major strategy for economic development in India because 70% of the population is in rural areas, several strategies to improve the living conditions of the rural poor are an integral part of the planning process in India.

## **2.5 Rural poverty**

Ashley & Carney (1999) have examined the concept of poverty and its evolution over the decade as that, before 1970 poverty was defined economically as the lack of income or gross national product per capital. In the 1970s, the poverty definition was expanded to include lack of basic need. Basic needs included access to certain consumer goods as well as to collective goods (such as education and health services), and broader element of well being. In the 1980s the basic needs approach was partially abandoned and more general interpretation of well being gained ground. People's ability to perform various functions and to develop and deploy their capabilities was considered to be a critical dimension of poverty. New thinking emerged both entitlements to

resources and vulnerability of poor people to change in their ecological, economic and political environment. It was recognized that poverty is a relative concept that is intimately connected with political, moral and cultural values in a given society and the condition of social exclusion relate to all these. In the 1990s poverty and the processes that lead to poverty are conceived as multi - dimensional (economic, political, social, ecological, cultural) and highly context specific. Sharp et al (1990) also looked at poverty as an association between minimum food budget and the cost of the food budget. This definition links poverty to the minimum amount of money that families need to purchase nutritional adequate diet, assuming they use one – third of their income on food (cost of basic needs (CBN) definition of poverty). To understand poverty, it is important to examine the economic and social context, including institutions of the state, markets, communities, and households (families). Poverty differences cut across gender, ethnicity, age, residence (rural versus urban), and income source.

Generally, poverty cannot be reduced if economic growth does not occur. Ravallion & Datt (1999) affirm that persistent poverty of a substantial portion of the population could dampen the prospects for economic growth. Also, the initial distribution of income and wealth, they said, can greatly affect the prospects for growth and alleviation of mass poverty. Khan (2000) noted that there is substantial evidence that a very uneven distribution of income is not favourable to either economic growth or poverty reduction. Current experience of economic growth has shown that if countries put in place motivation structures and complementary investments to ensure that better health and education lead to higher incomes, the poor will benefit doubly through increased current consumption and higher future incomes. The pattern and stability of economic growth also matter. On the one hand, traditional capital-intensive, import-sustainability, and urban-

biased growth-induced by government policies on pricing, trade, and public expenditure-has generally not been good for alleviating poverty. On the other hand, agricultural growth where there is low concentration of land ownership and labour-intensive technologies are used have helped to alleviate poverty (Gaiha, 1993; Datt & Ravallion, 1998). Finally, they also said that sharp drops in growth resulting from shocks and adjustments may increase the incidence of poverty and even when growth resumes, its incidence may not decrease if inequality has been increased by the crisis.

Khan (2000) asserted that rural poverty accounts for nearly 63% of poverty worldwide, reaching 90% in China and Bangladesh and between 65 and 90 % in Sub-Saharan Africa. (Exceptions to this pattern are seen in several Latin American countries in which poverty is concentrated in urban areas). In almost all countries, he said, the conditions in terms of personal consumption and access to education, health care, potable water and sanitation, housing, transport, and communications faced by the rural poor are far worse than those faced by the urban poor. It is further noted that the rural poor depend largely on agriculture, fishing and forestry, and related small-scale industries and services. To understand how poverty affects these individuals and households and to delineate the policy options for poverty reduction, one needs to know first who the rural poor are. They are not a homogenous group. He said that one important criterion for classifying the rural poor into groups is their access to agricultural land. Cultivators have access to land as small landowners and tenants, and non-cultivators are landless, unskilled workers. There is, however, much functional overlap between these groups, reflecting the poverty-mitigating strategies of the poor in response to changes in the economy and society. He explained that cultivators, who form the bulk of the rural poor in developing countries, are

directly engaged in producing and managing crops and livestock. Since these households cannot sustain themselves on the small parcels of land they own or cultivate, they provide labour to others for both farm and nonfarm activities inside and outside their villages. Some members of these households migrate to towns or cities on either a rotational or a long-term basis. In many countries, both small landowners and tenants are under increasing pressure to get out of the agriculture sector altogether. Underlying this process are market forces and policies affecting landholdings, rents, prices, credit, inputs and public investment in the social and physical infrastructure.

### **2.5.1 Causes of Rural Poverty**

Numerous characteristics of a country's economy and society, as well as some external influences, create and perpetuate rural poverty (Jazairy *et al*, 1992; Gaiha, 1993). These include; political instability and civil strife; systematic discrimination on the basis of gender, race, ethnicity, religion, or caste, ill-defined poverty rights or unfair enforcement of rights to agricultural land and other natural resources; High concentration of land ownership and asymmetrical tenancy arrangements. Corrupt politicians and rent-seeking public bureaucracies; Economic policies that discriminate against or exclude the rural poor from the development process and accentuate the effects of their poverty-creating process; Largely and rapidly growing families with high dependence ratios; Market imperfections owing to the high concentration of land and other assets and external shock stemming from natural causes (for example, climate changes) and changes in the international economy.

### **2.5.2 Policies for Reducing Rural Poverty**

Boosting agricultural growth by applying new technologies is one of the most important ways to reduce rural poverty (Nelson, 2000). However, the impact of such efforts on the rural poor depends on initial conditions, the structure of relevant institutions, and incentives. It is known that agricultural stagnation has harmed the rural poor in Sub-Saharan Africa by creating their ability to buy food and find work. Conversely, experience with the Green Revolution showed that rapid agricultural progress made a big difference in reducing rural poverty in parts of South Asia (Khan 2000). Datt & Ravallion (1998) reported that higher crop yields reduce both the number of rural poor and the severity of rural poverty. But these effects are strong only if certain conditions are met. Since the rural poor are quite varied, we need to understand how macroeconomic changes and policies can affect them.

The three major ways in which policies affect the rural poor are through markets, infrastructure (including public services), and transfer of products (Behrman, 1993). Behrman(1993) further noted that the markets, in which the rural poor participate are those for products, inputs (labour and non-labour), and finance (from formal and informal sources). Several important features of these markets can affect conditions in the rural areas. The infrastructure that directly affects the rural sector's productivity and the rural poor's quality of life includes the economic (transport, communications, extension services, irrigation) and the social (education, health care, water, and sanitation). Given that most elements of a community's infrastructure are provided through public funding, the level of spending, cost effectiveness, quality of service, and access of the rural poor to infrastructure and public services have important impacts on human capital and productivity in rural areas. Behrman (1993) said that transfer of products, which are both private

and public, provide some insurance against anticipated and unanticipated shocks. Most of the rural poor depend on private transfers among households, extended families, and other kinship groups. Public transfers can take the form of redistribution of assets like land, employment on public works projects, and targeted subsidies for inputs and some consumer products. These transfers, he said, supplement or displace private transfers, depending on the policy instrument and how it is used. An important point is that these channels-markets, infrastructure and transfers-do not work in the same way for all of the rural poor because each group has quite different links to the economy. Behrman (1993) asserts that policy focus should be on four major groups of the poor: small landowners, who cultivate their land; landless tenants who cultivate other people's land; landless labourers who depend on casual or long-term employment in the farm and non-farm sectors and women, who could also be part of any of the three preceding groups.

All the groups mentioned above will benefit from good macro-economic management which helps keep inflation in check and maintains unsubsidized prices because it facilitates sustained economic growth through private investment and competitive markets. Needless to say, unfair laws or poor enforcement of existing laws, exclusion of the poor from decision-making, and pervasive corruption in the public sector are no less detrimental to the well being of the poor than they are to the country's overall economic growth. Lipton (1998) has identified several policy components for national strategies involving the government, the private (for-profit) sector, and civil society to reduce rural poverty. They include; the right to adequate land and water which is the key importance in reducing rural poverty in many developing countries. A broad-based land reform programme including land titling, land redistribution, and fair and enforceable tenancy

contracts. This can make small (marginal) landowners and tenants more efficient producers and raise their standard of living. The rural poor also need to build and strengthen their human capital so they can get out of poverty and contribute more to the economy and society. In addition, basic health care (immunization, provision of clean water, and family planning and education (literacy, schooling, and technical training)- particularly for women and children- are essential building blocks and should be accessible at reasonable cost. The rural poor cannot, however, make the best use of their resources, including human capital, if either the quantity or the quality of some of the key parts of the country's physical infrastructure (irrigation, transport, and communications) and support services (research and extension) is inadequate. The social and physical infrastructure and services can be funded and maintained best-that is, they will be cost-effective and of reasonable quality if the target groups are involved in designing, implementing, and monitoring them, as well as in ensuring accountability of the government officials responsible for them. In addition, informal and formal sources of credit often are too costly for, or unavailable to, the rural poor.

Targeted public sector rural credit programmes, especially if they are subsidized, benefit the non-poor far more than the poor. The poor want credit that is available on accepted terms and when they need it. Recent experiments with community-based credit programmes, in which the poor actively participate in the making of lending decisions and that are subject to peer accountability, have been successful in reaching target groups at reasonable cost. To add to the above, a large and increasing proportion of the rural poor depend on wage labour, because they have either no asset other than raw labour or very few assets and limited quantities of land and domestic animals. A flexible public work program can greatly help the near landless and the

landless to smooth out household consumption and avoid transient poverty. If used on a sustained basis, such a program can also strengthen the bargaining power of the poor in rural areas. Some of the rural poor, both individuals and households, suffer from inadequate nutrition most of the time. They need different kinds of support, depending on their circumstances. These may include food supplement programmes, food assistance provided through schools, health care clinics, community centers and cash transfers. However, decentralized and targeted programmes seem to work best.

## **2.6 Non Governmental Organization**

The term Non-Governmental Organization (NGO) in common parlance refers to organizations or institutions that are usually not for profit but rather seek the welfare of people. The World Bank (1998) gives the definition of NGOs as Private Organizations that assume activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services or undertake community development. NGOs can also be referred to as autonomous, non-membership, relatively permanent or institutionalized, non-profit intermediate organizations staffed by professionals or the educated elite, who work with grassroots organizations in supportive capacity (Desai & Potter, 2000). Desai and Potter (2000) further explained that grassroots organizations are issue-based, often ephemeral, membership organizations; they may coalesce around particular goals and interests, and dissipate once their immediate concerns have been addressed. In Ghana, NGOs became popular after the Structural Adjustment Programmes (SAP) and the disasters of the early 1980s when many problems could not be solved by the central government alone. Apart from the NGOs, often alternative terms used are independent

sector, voluntary sector, civil society, grassroots organizations, private voluntary organizations, self help organization and Non-State Actors (NSAs).

### **2.6.1 Types of Non-Governmental Organisations (NGOs)**

According to Adongo (2007) of the department of social welfare, Ghana, the World Bank divides NGOs into two main types: Operational NGOs and Advocacy NGOs. Operational NGOs design and implement development-related projects. These can further be divided into Relief-Oriented or development oriented. They can also be classified according to whether they stress service delivery or participation and whether they are religious or secular. Operational NGOs can further be classified to be community-based, national or international-based. Adongo (2007) adds that Advocacy NGOs on the other hand, are those that exist to defend a specific cause. They raise awareness, acceptance and knowledge by lobbying, media work and activism. One of such NGOs is International Needs Ghana (ING) in the Volta Region that is advocating for the liberation of women in Trokosi. The 31st December Movement, for example, plays the roles of both operational and advocacy NGO because, apart from working for capacity building through projects in micro-finance of women, it also advocates for women emancipation. NGOs in general exist for variety of reasons, usually to further the political or social goals of their founders. For example, improving the natural environment; encouraging observance of human rights; improving the welfare of the disadvantaged; gender equality and other political and philosophical positions. Other forms of NGOs include INGO (International NGO), BINGO (Business-oriented International NGO), ENGO (Environmental NGO), GONGOs (Governmental Operated NGOs) and QUANGO (Quasi-autonomous NGOs)

### **2.6.2 The role of NGOs in Socio-Economic Development**

Development activity was for a long time virtually the monopoly of the state. However, globalization of the economies and the trend of most countries embracing capitalism have created a great gap in humanitarian, social and environmental needs of the people (Chandhoke, 1995). The tendency is that, development today is seen in the economic context of global capitalism. The assertion is that globalization, since the 20th century, has given rise to a large extent the importance of NGOs. Many problems could not be solved within the nation-system. International agreements or treaties and international organizations are perceived as being too centred on interests of capitalist enterprises. In an attempt to counterbalance this trend, NGOs have emerged to emphasize the humanitarian aid and sustainable development (Desai & Potter, 2000). The growth in numbers of NGOs in both the North and South (Developed and Developing countries) has been rapid. Across all countries, there were about 28,900 international NGOs existing by 1993 (Edwards & Hulme, 1997). It was observed that the northern NGOs were better placed in terms of resources to undertake development projects. The expansion in partnership between the northern and the southern NGOs originated in the changing attitudes in the north in the 1960s and the 1970s when NGOs in the north transferred funds and tools to those in the south. Southern NGOs, therefore, have the basic responsibility for leading development processes in the third world countries and the enterprise to do so (Desai & Potter, 2000). This means that the relationship between northern and southern NGOs must be based on an equal partnership incorporating transparency, mutual accountability and risk-bearing. In developing countries, such as Ghana, states or governments now tend to play a coordinating role in the developmental process. This means that the state has specific roles by setting up a set of economic policies favourable to capital accumulation, provide infrastructural base and effect

private-sector resource allocation through monetary and fiscal policies. These restricted roles also mean that the utilization of resources in the provision of goods and services to satisfy human needs is mainly done through the price mechanism. Public goods and essential services would not normally be provided through this system and since the state, which is faced with limited resources will not be able to provide these goods and services, the vulnerable and the disadvantage in society are those who will suffer the most. NGOs are therefore important to fill in this gap by mobilizing resources, getting to the grassroots and provide relief or developmental services; advocate for the minority who are vulnerable all in the attempt to ensure that there is a more balanced development in society. According to Desai & Potter (2000), since the 1950s, NGOs have come to play an increasingly important role in the formulation and implementation of the development policy, becoming key actors in the political economy of development. There has been increased collaboration both with government and aid agencies based on a growing belief that the promotion of NGOs could offer an alternative model of development and play a key role in the processes of democratization.

### **2.6.3 Characteristics of NGOs**

Desai & Potter (2000) explain that NGOs are popular because they demonstrate unique characteristics and capabilities. They are perceived to be flexible, open to innovation and able to reach the poor through work at the grassroots level. The authors also maintain that NGOs play two main roles, either service delivery or policy advocacy. As service delivery agents, NGOs provide welfare, technical, legal and financial services to the poor or work with community organizations in basic service and infrastructural provision. This is explained to be frequently a matter of filling the gaps left by the partial service delivery of governments. This is because it is

seen that governments do not have sufficient resources to provide the services or do not have the expertise to be effective. In the policy advocacy capacity, NGOs seek social changes by influencing attitudes, policies and practice, seeking to reform state services through lobbying and other media for policy and attitude changes. The two roles need not exclude the other. Korten (1990) suggests a process whereby an NGO established to fill a gap in service delivery can recognize the need to look outward to the wider context in which the need arises and find itself drawn, possibly through involvement in NGO networks, into national or global policy advocacy. Zaman (1996) estimated that the big NGOs reach only 10 to 20% of the poorest households. According to Yeboah (2007), the extent of poverty and the importance of contribution of the rural sector to the economy make it necessary for project interventions. In this regard, some NGOs provide credit facilities to rural households.

According to Gugerty (2007), NGOs play an increasingly important role in public service provision and policy making in Sub-Saharan Africa giving rise to needs for new forms of regulatory oversight of such entities. Many NGOs are undertaking a number of activities in agriculture, health, education, science and technology, research and most importantly women's development. In some deprived rural areas in Ghana, the very common names known to the dwellers is either 31st December Women's movement (DWM), World Vision, Action Aid, Catholic Relief Services (CRS), Adventist Development and Relief Agency because it was the NGO that provided them with clean drinking water, the clinic in the village centre, the tree crop project, credit facilities, school building or extension services (Bob-Milliar, 2005). The activities of some of the local and foreign NGOs operating in Ghana have transformed whole communities and have been beneficial to a lot of the rural dwellers. Some NGOs by virtue of their activities

have replaced perpetual misery with some smiles to those poverty-stricken and almost forgotten groups of rural dwellers. Had it not been for that health post in the village many women might have died through child bearing; and for the numerous boreholes in many rural areas a lot of rural dwellers would still be suffering from preventable guinea worm disease (Bob-Milliar, 2005). NGOs have the capacity to experiment and learn from experience, linking processes to outcomes and are also able to enlist the energies and commitment of intended beneficiaries. According to Littlefield et al (2003), few recent innovations have held so much hope for reducing poverty in developing countries as provision of credit facilities to poor households has become one of the crucial driving mechanisms towards achieving the Millennium Development Goals (MDGs).

#### **2.6.4 Challenges Facing NGOs in Ghana**

There are some limitations confronting the operations of some NGOs and in this regard Henderson (1997) argues that some NGOs in the south are not carefully structured in organizational terms and have the features of social or political movements. “Donor fatigue” and the fact that much of the previous aid was politically motivated, has led NGOs to begin to question the value of their existing work and to consider how they might do more to promote peace and long-term reconstruction and development (Barakat, 1994). Other challenges NGOs face according to Twigg (2004), include the lack of clear dialogue and communication between different organizations (including governments, NGOs and the UN) and a culture of competitiveness and professional jealousy often fuelled by competition for donor funds. In the view of Bob-Milliar (2005), the benefits that communities are deriving from NGOs cannot be said to be a general phenomenon regarding all NGOs operating in the country and further argues

that some NGOs have lost focus on their main objectives being the desire to help. Some NGOs focus on making money out of the Ghanaian poor. They are being turned into money making organisations with profit making being their main objective. Besides the profit making NGOs, the other prominent category of NGOs emerging are the political NGOs. These NGOs are either directly or indirectly linked to some political parties in Ghana (Bob-Milliar, 2005). As noted by Molomo et al (1999), a key weakness of NGOs in Africa is the inappropriate organisational structures which impact upon NGOs carrying out their core business. Most if not all NGOs depend on voluntary staffs to run their activities and programmes. Lack of well trained and experienced human resources affects the extent to which NGOs manage their daily affairs and capacity to effectively plan, appraise, implement and monitor their projects and programs (Lekorwe, 1999). There has also been criticism on the use of the funding and other monies that NGOs have received or raised. Criticisms range from pointing out that only small percentages go to people in need and some are even used to pay very high salaries to the staff (Rieff, 1999).

According to Lewis & Wallace (2000), NGOs are inadvertently doing more harm than good and cited instances where many food aid groups in non-emergency situations having in their stock food delivered from rich countries for either free or virtually free and may end up under-cutting local producers and hence have a negative effect on local farmers and the economy. NGOs have limited capacities for agricultural technology development and on how to create effective demand-pull on government services (Shah, 2005). The difficulties of managing NGOs with operations in several countries also raised concerns. The difficulties came from the inability to define proper lines of autonomy on policy issues (Biddle, et al 1984). Governments and international organisations at times find NGOs a nuisance or even threatening to their interests

but officials nonetheless look to NGOs for innovative ideas and information. Officials also grudgingly recognize that consultation with and support from NGOs gives their public decisions more credibility (Bob-Milliar, 2005). According to Schiampo-Campo (2001), some NGOs do not have the time and expertise to manage all of the funded programs, or even to ensure full involvement by all of the communities as is normally claimed. In some cases, where there are many departments trying to deal with the NGOs, the problems may be created by the governments themselves. Also, staff at the local level may not be familiar with government policies and this affects efficiency of the NGOs because of tensions which may arise. In view of this there is a need for a thorough review and establishment of criteria for NGOs to secure required standards of management skills and quality in their project implementation. NGOs that do not meet the agreed standards should not receive funds for emergency, rehabilitation and development work (Barakat et al, 1994).

There is the need to empower NGOs' ability to source funds and help them realize their goals. Alternative sources of funding will assist particularly small NGOs which are not well established but work closely with the needy such as the poor, orphans, children and the marginalized (Lekorwe, 1999). Training and development in areas of organizational, project and financial management as well as capacity building are some of the measures to improve NGO management (Lekorwe, 1999). Lekorwe further suggests that NGOs should also play their role in practicing good governance through transparency, equity and timely reporting regarding their achievements and areas where they need assistance. In the opinion of Bob-Milliar (2005) a regulatory body is needed to monitor the activities of all NGOs both local and foreign operating

in the country. He also called for annual auditing of the accounts of all NGOs operating in Ghana.

### **2.6.5 NGOs' Role in Empowering People in the Grassroots**

The majorities of NGOs are small and horizontally structured with short lines of communication and are therefore capable of responding flexibly and rapidly to clients' needs and to changing circumstances. They are also characterized by a work ethic conducive to generating sustainable processes and impacts. NGOs' concern with the rural poor means they often maintain a field presence in remote locations, where it is difficult to keep government staff in post. One of NGOs' main concerns has been to identify the needs of the rural poor in sustainable agricultural development. They have therefore pioneered a wide range of participatory methods for diagnosis and in some contexts, have developed and introduced systems approaches for testing new technology, for example in Chile (Sotomayor, 1991). In some cases, these approaches have extended beyond farming systems into processing and marketing, as with soya in Bangladesh (Buckland et al, 1990), sesame in the Gambia (Gilbert, 1990), and cocoa in Bolivia (Trujillo, 1991). NGOs' rapport with farmers has allowed them to draw on local knowledge systems in the design of technology options and to strengthen such systems by ensuring that the technologies developed are reintegrated into them (Chaguma & Gumbo, 1993).

NGOs have also developed innovative dissemination methods, relying on farmer-to-farmer contact, whether on a group or individual basis (Sollows et al, 1993). In some cases, NGOs have developed new technologies such as soya production in Bangladesh (Buckland et al, 1990) or management practices such as the sloping agricultural land technology in the Philippines

(Watson et al, 1993), but more often they have sought to adapt existing technologies, such as PRADAN's efforts in India to scale down technologies developed by government for mushroom and raw silk production and so make them accessible to small-scale farmers (Vasimalai, 1993). Undoubtedly, one of the main strengths of NGOs has been their work in group formation. This has been in response to perceived needs at several levels thus to meet the technical requirements of certain types of innovation. An example is the World Solidarity in India which worked with grass-roots organizations to achieve simultaneous action in an integrated pest management program (Satish et al, 1993). In the Gambia and Ethiopia for example, NGOs helped farmers to organize local informal seed production in ways to avoid undesirable cross-pollination (Henderson et al, 1990). Many examples exist of formal and informal associations, often supported by NGOs, which manage irrigation water. In other cases, NGOs have supported group efforts in soil and water conservation, whether on private land or on a micro-watershed basis involving both private and common land (Fernandez, 1993). They have also helped in managing common grazing and forest land in a sustainable fashion in relation both to technology and the creation of a capacity to make demands on government over, for example, access issues (Fernandez, 1993).

#### **2.6.6 Sustainability of NGOs Programs**

Sustainability of NGOs refers to their ability to position themselves to continue to exist to achieve their corporate goals. Edwards and Hulme (1995) have identified that, planning is instrumental in NGO sustainability programs. That is, planning is a rational and strategic process of judicious use of resources to achieve stated goals. The future is uncertain and also, resources are limited. There is therefore the need of NGOs to be proactive and use innovative strategies to

be able to continue to exist to operate and achieve stated goals. Good planning must also be accompanied by proper implementation and evaluation of programs. It is also important to determine the human capital needs of the NGO. Well trained and qualified personnel are needed to be able to efficiently deliver program meant to alleviate one problem or the other. Training of personnel and succession planning are important strategies NGOs can adopt to ensure that they always have efficient human resource to work with. Effective Local Participation in Programs can also ensure sustainability of NGO programs. The local people for whom NGOs intervention programs are meant for should be involved in the initial planning, design, implementation and evaluation of projects. This will mean that proper needs assessment should be conducted in order to implement projects that will actually solve the problems of the people. This will also ensure that projects are demand driven. Accountability and transparency are also important measures to adopt to ensure sustainability. NGOs should be more transparent and accountable by practising what they preach. NGOs receive Public or government funding directly or indirectly; they rely on tax deductible donations and probably have easier access to the media and government than others in society. NGOs must not succumb to the perception that they are vulnerable to fraud. They should be committed to both their development partners and all stakeholders in order to continue to receive funding. Good Financial Management entails planning, organising, controlling and monitoring the financial resources of an organization to achieve objectives. This enables managers to make effective and efficient use of resources, fulfil commitment to stakeholders and also be accountable to them. Financial management makes NGOs to gain respect and confidence of funding agencies. It allows them to gain competitive advantage over others in accessing funding and prepares the NGOs for long-term financial sustainability (Terry, 2006). There is also the need for networking.

NGOs must also enter into alliances with other NGOs, governments, development partners and all stakeholders when the need be to solve problems of the people arises. Networking can increase institutional capacities. It will also come up with new techniques to support community projects to make them more efficient and beneficial to the people. NGOs are non-profit making organizations, but however they can in income generating activities. The proceeds from these activities are used as source of funding to their mainstream activities. This may also ensure that NGOs have self-generated and reliable source of funding. All NGOs must have an effective governing board to which the NGO will first be accountable. This board will formulate the policies and come out with strategies to monitor implementation of projects and evaluate their performances. Effective Board can also facilitate the task of fundraising of the NGO since it can come out with fundraising strategies, get on board the efforts and can pull strings to make the fundraising successful.

## **2.7 Meaning of program evaluation and monitoring**

Evaluation and monitoring are important terms that go hand-in-hand with each other in assessing programs or projects. This is because when evaluating, one is necessarily monitoring and when monitoring, one equally evaluates also. Program evaluation refers to an attempt to assess the worth or value of some innovation, intervention, service or approach. The purpose of it is to assess the effects and effectiveness of something, typically some innovation, intervention, policy, practice or service and this is normally referred to as program evaluation (Robson, 2002). Specifically, in a particular program, the aims of evaluation include the following: finding out if clients needs are met, to improve the program, to assess the outcome of the program to find out how the program is operating; to assess the efficiency of the program; and to understand why a

program works or does not work. Kelly (2004) observes that evaluation is carried out in the social sciences and it has to do with appraising human activities in a formal systematic way. He posits that programme evaluation is applied to intervention program that are primarily meant to address social problems in a population or in a community. Evaluation also refers to the use of research procedures to systematically investigate the effectiveness of social intervention program that are adapted to their organizational environments and designed to inform social action in ways that improve social conditions (Rossi et al, 2004).

Evaluation serves different purposes at different stages of a program. Rossi et al (2004) think that evaluation is the systematic application of social research procedures for assessing the conceptualization, design, implementation, and utility of social intervention programs. That is, it involves the use of social science methodologies to judge and improve the ways in which human services, policies and programs are conducted, from the earliest stage of defining and designing the programs through development and implementation. It is also observed by Patton (1982) cited in Robson (2002) that evaluation involves the systematic collection of information about activities, characteristics and outcomes of programs, personnel and products for use by specific people to reduce uncertainties, improve effectiveness and make decisions with regards to what those programs, personnel or products are doing and affecting.

On his part, Swetnam (2004) explains that evaluation deals principally with social policy and is an activity which seeks to find out whether: stated plans and policies are being carried out, what is being done is worth doing, success criteria are being attained, achievement can be classified and categorized and there is a gap between intention and implementation. Program monitoring which is closely related to evaluation involves systematic and continuous surveillance of a series

of events. It concentrates on examining the procedures and processes involved in the delivery of a program. Information is collected on a regular basis to provide feedback on level of performance and it is an integral part of implementation of a program (Clarke, 1999). According to Rossi & Freeman (1993), monitoring is a process of assessing the extent to which a program is undertaken consistent with its design and implementation plan and directed at appropriate target population. They explain that monitoring ensures proper management of resources; proper accountability; effectiveness of program and helps to identify and address implementation problems. Monitoring is essentially part of the evaluation process. Monitoring is usually taken to be the routine activities undertaken by program management or staff to keep track of the way in which it is working. This should normally be a central requirement in an organization and often reported in a standardized format (Robson, 2000). There is high tendency for positive convergence between monitoring and process evaluation. This is because both activities form part of formative evaluation (Rossi & Freeman, 1993). They further observe that monitoring provides information necessary for program diffusion. This will give the opportunity for the essential features of a program or project to be reproduced elsewhere. Also, monitoring serves as a means of providing evidence for effective accountability to sponsors and funders as well as to project management.

### **2.7.1 Types of Evaluation**

Evaluation can be formative or summative and it can be used in the fields of education, clinical practice, market research and also in all applied non-laboratory work that has evaluative dimensions. According to Robson (2002) formative evaluation is intended to help the development of the program, innovation or whatever is the focus of the evaluation while

summative evaluation concentrates on assessing the effect and effectiveness of the program. Robson (2002) prefers developmental evaluation instead of formative because it is part of the process of developing goals and implementation strategies. Clarke (1999) also maintains that formative evaluation is done to provide feedback for the primary objective of improvement. It therefore emphasizes the strengths and weaknesses of the program or intervention. On the other hand, summative evaluation principally aims to determine the overall effectiveness or impact of a program or project with a view to recommending whether or not it should continue to run (Clarke, 1999). Robson (2000) points out that summative evaluation is intended to provide an 'end-of term report' indicating what the program has achieved and it focuses on outcome of the program. Formative and summative evaluations are referred to as process evaluation and outcome evaluation respectively (Robson, 2002 p.208; Clarke, 1999 p.10). Robson (2000) identifies that there are various other types of evaluation and these include evaluation of needs; evaluation of process; evaluation of outcomes and evaluation of efficiency. Evaluation of needs is sometimes used to plan new programs or project interventions and it is also called need analysis or needs-based evaluation. Evaluation of process is an analysis of what happens when the program is actually working. That is, it answers the questions of how the program is being implemented, whether it operates as planned and expected and those who are taking part in it. There is the need to evaluate outcomes if it appears the program is being implemented as planned, then the reasonable thing to do is to find out what effect or impact the program has had on those taking part. There is also the need to evaluate efficiency: If there is evidence that the program is having a beneficial effect on participants, then it is appropriate to proceed to consider how these benefits compare with the costs incurred in running the program. The type of evaluation conducted by the researcher can be described as evaluation of outcome. This is

because the study was trying to find out if there is any change in the social and economic life of farmers after the intervention project.

### **2.7.2 Stakeholders and Collaborators**

It is impossible to do good evaluation without the collaboration from other people. Kelly (2004) and Robson (2002) explain that the co-operation with important stakeholders contribute to the success of conducting evaluation. This ensures that a good working relationship that is mutually beneficial is built up. For example, meeting with community leaders, beneficiaries, District Chief Executives and, NGO management and staff will help the evaluation process. Kelly and Robson (2002) therefore, identify the following stakeholders as key players in a particular evaluation research. They include policy makers who take decision about the setting up, continuation, closure and expansion of program, project or service. Sponsors are also organizations, groups or individuals responsible for setting up and/or funding programs/project or services and their evaluation. Another key player is the management. They are those responsible for managing of the program and services. In addition, there are also Staff/practitioners who are persons responsible for program/project delivery and evaluation. Stakeholders also involve clients/participants. They are persons targeted by or taking part in the program/project or service; Evaluators: They are those responsible for design and/or conduct of evaluation.

### **2.8 Intervention**

The Cambridge international Dictionary of English (1995) gives the meaning of the verb form 'intervene' as to become involved, intentionally, in difficult situation in order to improve it or prevent it from getting worse. Rossi & Freeman (1993) refer to intervention as any program or other planned effort designed to produce changes in a target population. Intervention program

can be national in nature; initiated as Government policies or locally by District Assemblies and it can also be initiated by non-governmental actors such as NGOs. In the NGO world, intervention means any social or economic program designed and implemented to bring about change or improvement in the life of a group of people who have been identified as living with one kind of life difficulty or the other. The purpose of any intervention is essentially to bring relief to the people. In the particular case under the study, the group of people is the landless farmers who, due to lack of sufficient land for crop production, had to be reinforced with other activities to improve upon their economic and social life.

## **2.9 Review of studies on determinants of adoption of a project intervention**

One principal determinant of adoption of agricultural technologies in Least Developed Countries (LDCs) found in existing literature is social learning from neighbours (Foster, 2010). Foster & Rosenzweig (1995) investigated the adoption of high-yielding varieties (HYVs) in India and found out that, there was a positive effect of neighbours' experience. They concluded that this was a typical evidence of learning from neighbours. For example, Conley & Udry (2000) modelled the adoption of pineapple production practices in Ghana and found that social learning is important in the spread of the new technologies. A study by Makokha et al (1999), confirmed that farmers' characteristics such as participation in field days and demonstration, attendance at workshops and seminars contact with extension and leadership position have significant influence on perception and hence adoption decision of farmers. The authors also again discovered that technological attributes such as supply (availability), economic and yield benefit and convenience had significant influence on adoption decision. Feder et al (1993) reviewed factors that affected technology adoption, and they highlighted farm size, land tenure system,

risk, labour availability, human capital and access to credit as key determinants of adoption of most agricultural innovations. The results in a work by Simtowe et al (2006) on the impact of access to credit on the adoption of hybrid maize in Malawi indicated that although credit access increased the likelihood of adoption, it did not influence the extent of hybrid maize area cultivated. Some of the interactive characteristics proven to positively influence adoption and use intensity of maize seed, rice technology and farming systems were access to information and credit, farm size, membership to farmer organization and fertilizer use in addition to sex, age, education, farming experience, and household size (Nkonya et al, 1997) Gamba et al(2002) in a research on wheat farmers' seed management and varietal adoption in Kenya also ascertained these factors have a strong effect on the adoption of agricultural technology. Farmers with high levels of education are better adopters of improved farm practices than those with lower levels of education (EARO, 1999). Studies of Hassen et al. (1998) identified that farmers' education had positive and significant influence on adoption. A study by Cramb (2003) inferred that a number of household factors are typically associated with adoption of a project. They include age, education, size, location and tenure status of the farm, availability of cash or credit for farm investment and access to markets for farm produce. From Cramb's (2003) study, determinants of project adoption encompassed characteristics of the project, features of the farming system, market and policy environments as well as socio-economic characteristics of the decision-making unit (farmer).

The study conducted by Million et al (2004) indicated that age had a weak and at the same time negative association with adoption. In contrast, Omiti et al (1997) investigated positive relationship between age and adoption behaviour of farmers. Several factors, some of which

relate to the characteristics of the technology and others that relate to the environment do influence the speed of dissemination and adoption of technologies. The driving force or incentive among these factors is the demonstrated value of such technologies especially in areas of the marketability and profitability of their products. Other factors such as the ease of application, access to support services and how the technology fits in the knowledge base of the production system also do significantly influence adoption (National Agricultural Research Organization, 2004). Legesse et al. (2004) in a study on duration analysis of project adoption in Ethiopian agriculture reveals that economic incentives are the most important determinants of the time farmers wait before adopting new projects. The authors further stated that other agricultural inputs (area of farm land, labour, credit), extension services and farmers' personal characteristics (education, gender, age ) appear to have had little effect on adoption behaviour. Legesse (1992) also revealed that extension contact, poor distribution of inputs and technical assistance, socio psychological variables such as farmers' ability, belief, habit and customs, and expectations affect project adoption. In addition to documenting the uptake and diffusion of the Ghana Grain Development Project (GGDP)-generated maize technologies, the Ghana case study provided important insights into the factors that affect the adoption of agricultural innovations. The survey showed that the adoption had been influenced by three sets of factors. The first factor is the characteristics of the technology, that is, the rate and extent of adoption of any new project are conditioned by the nature of the project itself. Important characteristics that could encourage or discourage adoption included the complexity of the technology, its profitability, riskiness, compatibility with other technologies or practices, and divisibility. The second is the characteristics of the farming environment, though a project may be simple, profitable, relatively secure, compatible with farmers' current practices, and divisible does not necessarily mean it will

be adopted. Part of the adoption decision is based on the characteristics of the project, but they depend also on the environment in which farmers operate. Important characteristics of the farming environment that can affect project adoption include agro-climatic conditions, the nature of prevailing cropping systems, the degree of commercialization of the cropping enterprise, factor availabilities, farmers' knowledge and access to technical information, and the availability of physical inputs. The third however is the characteristics of the farmer, for example, two farmers under the same project and operating in the exactly same farming environment can end up making very different adoption decisions. A third group of factors that can influence project adoption relates to farmers' personal circumstances, including ethnicity and culture, wealth, education, gender, and security of access to land (GGDP, 1999). Adoption studies in agriculture often try to establish factors that influence the adoption of a project in a specific locality. It is nonetheless recognized that attributes influencing the adoption of agricultural projects are inherent in the farmer and farm, in the technology itself, and the farmer's objectives (Adesina et al, 1992). Various studies on adoption of different technologies carried out by different researchers considered explanatory variables such as personal, socioeconomic, technological and institutional factors as major characteristics that influence the adoption decision of the farmer. Variables that are significant in some studies are not necessarily significant in others, due to the difference between personal, socio-economic and socio cultural factors of the society. The study of Ehui et al (2003) also revealed the difficulties of developing a universal model of the process of project adoption with defined determinants and hypothesis that hold true everywhere. This is because people and conditions are dynamic and keep changing over time. This study therefore considers important explanatory variables of previous studies and analytical tools used by

different researchers to identify conditions and people's influence on the adoption of the mango project.

### **2.10 Meaning of effect**

According to the Oxford Advance Learners' Dictionary of Current English (1989) 4th edition, 'effect' means a change produced by an action or cause. It refers to the result or outcome of an activity either deliberate or accidental. The Oxford Thesaurus (1991) gives the meaning of 'effect' as the result, consequence, outcome, conclusion, upshot, aftermath or impact. The Cambridge international Dictionary of English (1995) also gives the meaning of 'effect' as the result of a particular influence. In this study, the effect here indicates the outcome or results of ADRA's intervention project among beneficiaries within the communities under study. It refers to any change that might have occurred in the social and economic circumstances of the beneficiaries as a result of ADRA's intervention or project.

### **2.11 Sustainable rural livelihood**

A livelihood comprises the capabilities, assets including both material and social resources and activities for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining the natural resource base (Chambers and Conway, 1992). Three insights into poverty underpin this new approach: Poverty-reduction requires more than economic growth. It also depends on the capabilities of the poor to take advantage of expanding economic opportunities. That poverty is a multi-dimensional. The poor must be involved in the design of policies and project intended to better their lot. Sustainable Livelihood (SL) framework provides a simple but well-developed

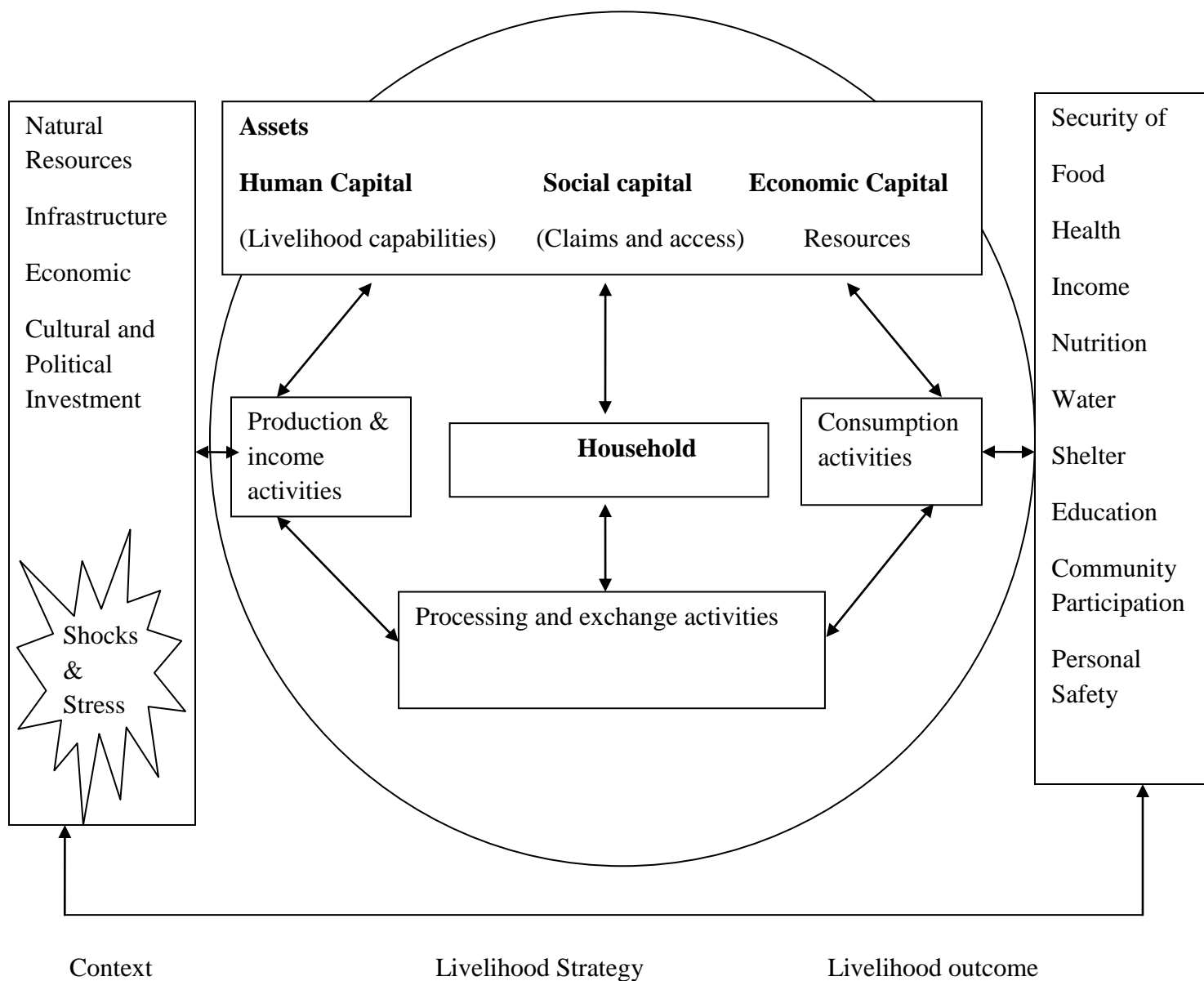
way of thinking about a complex issue. It is also attractive because it can be applied at various levels of detail as a broad conceptual framework or as a practical tool for designing programs and evaluation strategies. Different types of livelihood frameworks have been developed. These include that by DFID, UNDP, CARE International, Oxfam, FAO etc. They stress the multiple ways in which individuals and households make a living. There are three basic features which most approaches have in common. The approach focuses on the livelihoods of the poor, since poverty reduction is at its core. The approach also rejects the usual sectoral and instead begins with an analysis of people's current livelihood systems to identify an appropriate intervention. The third feature is its emphasis on involving people in the identification and implementation of activities where appropriate. At the centre of the livelihoods approaches are a set of principles that underpin best practice in any development intervention, that is, it is people-centered, responsive and participatory, multi-level, conducted in partnership, sustainable and dynamic livelihoods approaches are based on a conceptual framework to aid analysis of the factors affecting peoples' livelihoods. This includes, the priorities that people define as their desired livelihood outcomes, their access to social, human, physical, financial and natural capital or assets, and their ability to put these to productive use, the different strategies they adopt (and how they use their assets) in pursuit of their priorities, the policies, institutions and processes that shape their access to assets and opportunities, the context in which they live, and factors affecting vulnerability to shocks and stresses.

CARE is an international NGO and its organizational mandate is to focus its program on helping the poorest and most vulnerable, either through regular development program or through relief work. Since 1994 CARE has adopted Household Livelihood Security (HLS) as a framework for

program analysis, design, monitoring, and evaluation. The concept of HLS derives from the classic definition of livelihoods developed by Chambers & Conway (1992), which embodies three fundamental attributes: the possession of human capabilities (such as education, skills, health, psychological orientation); access to tangible and intangible assets; and the existence of economic activities. The interaction between these three attributes defines what livelihood strategy a household will pursue. CARE's definition of household livelihood security emphasizes a capacity-building approach to development, and even relief activities, treating people more as active beings in constructing their own livelihoods than as passive recipients of external help. It has grown out of three major shifts in the internal development of the organization. Shift of concern from regional and national food security to a concern with the food security and nutritional status of the household and the individual. Shift from a 'food first' perspective to a livelihood perspective, which focuses not only on the production of food, but also on the ability of households and individuals to procure the additional food they require for an adequate diet. A shift from a materialist perspective focused on food production to a social perspective which focuses on the enhancement of people's capabilities to secure their own livelihoods. These entitlements are based on the endowments that a household has and its position in the legal, political and social fabric of society. Household livelihood security has been defined as adequate and sustainable access to income and resources to meet basic needs (including adequate access to food, potable water, health facilities, educational opportunities, housing and time for community participation and social integration).

Livelihoods can be made up of a range of on-farm and off-farm activities that together provide a variety of procurement strategies for food and cash. Each household can have several possible

sources of entitlement, which constitute its livelihood. The risk of livelihood failure determines the level of vulnerability of a household to income, food, health and nutritional insecurity. The greater the share of resources devoted to food and health service acquisition, the higher the vulnerability of a household to food and nutritional insecurity. Therefore, livelihoods are secure when households have secure ownership of or access to resources (both tangible and intangible) and income-earning activities, including reserves and assets, to offset risks, ease shocks and meet contingencies. Households have secure livelihoods when they are able to acquire, protect, develop, utilize, exchange and benefit from assets and resources. The idea of household livelihood security as defined above embodies three fundamental attributes. The possession of human capabilities which includes education, skills, health, psychological orientation and access to other tangible and intangible assets as social, natural and economic capital and the existence of economic activities. The interaction among these attributes defines what livelihood strategy a household pursues and is thus central to CARE's household livelihood security model. In its simplest form, livelihood security is the ability of a household to meet its basic needs (or realize its basic rights). These needs include adequate food, health, shelter, income, basic education and community participation. If any of these basic needs is not met, CARE considers that household to be living in absolute poverty. However, simply satisfying people's basic need is not adequate to ensure that those people can rise above and stay above absolute poverty. For CARE, sustaining livelihoods security depends on a number of enabling conditions being in place. These include human rights recognition, civil participation/action, risk management, an enabling policy environment, gender equity and environmental stewardship. By contributing to the establishment of this enabling environment, CARE hopes to assist people in meeting their basic needs on a sustained basis.

**FIGURE 2.1: CONCEPTUAL FRAMEWORK FOR SUSTAINABLE LIVELIHOODS**

Source: CARE, 1999

The livelihoods approach is based on evolving thinking about poverty reduction, the way the poor and vulnerable live their lives and the importance of structural and institutional issues. They suggest development activities that are people centred, responsive and participatory, multilateral,

conducted in partnership with both the public and private sectors, dynamic and sustainable. The livelihoods approach helps to organize the factors that constrain or enhance livelihood opportunities and shows how they relate to one another. It aims to build on strengths and it is more than analytical framework. The conceptual framework used in the study is the sustainable livelihood framework. According to the Department for International Development (DFID, 2001) as a tool for improving our understanding of rural livelihoods helps in understanding the livelihood of individual when evaluating the impact of a program. The model is suitable for this work, because it presents the main factors that affect people's livelihood, and the typical relationships between the factors that influence people's livelihood. It could be used in planning new development activities and assessing the contribution to livelihood sustainability made by existing activities (DFID, 2001). The main components of the framework are the vulnerability context, livelihood assets, structures/processes, livelihood strategies and livelihood outcomes. These factors interact with one another to produce positive or negative outcomes.

The livelihood approach is concerned foremost with people. It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how these assets convert into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes however, no single category of assets on its own is sufficient to yield the livelihood outcomes that people seek. This is particularly true for poor people whose access to any given category of assets tends to be very limited. As a result, they have to seek ways of nurturing and combining what assets they have in innovative ways to ensure survival. The relationship between the major livelihood actors as depicted by the framework is shown in Figure 2.1

The livelihood framework identifies five core assets (categories of capital) upon which livelihoods are built. These are human, social, natural, physical and financial capital. The human capital assets include the skills, aptitudes, knowledge, experience, ability to labour and good health. It also includes capacity to work and capacity to adapt. Natural capital includes land and produce, water and aquatic resources, trees and forest products, wildlife and biodiversity as well as the services derived in them. Financial capital includes remittances from NGOs, pensions, wages, savings, credit remittances and pensions. The physical capital includes the infrastructure, transport - roads, vehicles, etc. It also includes secure shelter & buildings, water supply & sanitation, energy, communications, tools and technology, tools and equipment for production, seeds, fertiliser, pesticide, traditional technology. The term social capital is taken to mean the social resources (such as farmers' cooperative societies that supply input at reduced prices) upon which people draw in pursuit of their livelihood objectives. These are developed through social cohesiveness and networks that increase people's trust and ability to work together and expand their access to wider institutions. It also includes networks and connections, patronage, neighbourhoods, kinship, relations of trust and mutual support, formal and informal groups, common rules and sanctions, collective representation, mechanisms for participation in decision-making, shared values and access to institutions. Vulnerability context is the external environment in which the people exist. The vulnerability context encompasses shocks such as illness, disasters, conflict, floods, droughts, storms and crops/livestock pest and diseases. Stress such as long term trends that undermine livelihood potential and population, declining natural resource base, climate change, economic downturns, inflation, currency devaluation, structural unemployment and poor governance. Vulnerability is characterized as insecurity in the well being of individuals, households and communities in the face of changes in the external

environment. Vulnerability has two faces. An external side of risks, shocks and stresses and an internal side of defencelessness caused by lack of ability and a means to cope with damaging losses. The sustainable livelihoods framework recognizes that negative impacts can be buffered by an improvement in people's livelihood assets. When events are predictable, such as seasonality, institutions and policies can be put in place to improve people's ability to cope and recover. A study by Hannah et al (2011) on vulnerability in Kenya for the traditional fuel suppliers showed that vulnerability was dictated by a number of factors. They were that, traditional fuels (charcoal and firewood) were sold from informal spaces mainly road reserves. In cases where space is rented, rents were high and some did not operate with business permits. There are also cases of bribery to stay in business. It was also noted that storage facilities were always inadequate and suppliers were not reliable and met many police road blocks. Credit facilities were also not available and fluctuations in prices were mostly influenced by the rainy and dry seasons. It was also noticed in the study that charcoal supply was usually low during rainy season and occasionally, there was harassment by local authorities or councils. These factors constrained potential livelihood outcomes for traditional fuel suppliers in Kenya.

Within this framework, the relationship between natural capital and the vulnerability context is particularly close. Many of the shocks that devastate the livelihood of the poor could themselves be natural processes that destroy natural capital (e.g. fires that destroy forests, pests, diseases, floods and earthquakes that destroy agricultural land) and seasonality is largely due to changes in the value or productivity of natural capital over the year. Within the livelihood framework are also the institutions and organisations (generally termed as structures and processes) that formulate policies and legislation that shape livelihood strategies. They operate at all levels, from the household to the international arena. They effectively determine access (to various types of

capital, to livelihood strategies and to decision-making bodies and sources of influence); the terms of exchange between different types of capital and returns (economic and otherwise) to any given livelihood strategy. In addition, institutions and organisations have a direct impact upon whether people are able to achieve a feeling of inclusion and well-being. Livelihood strategies and outcomes are not just dependent on capital assets or constrained by the vulnerability context, they are the public and private sector organizations that set and implement policy and legislation, deliver services and purchase, trade and perform all manner of other functions that affect livelihoods.

Processes embrace the laws, regulations, policies, operational arrangements, agreements, societal norms and practices that, in turn determine the way in which structures operate. Policies include that of the government of NGOs and of international bodies. The institutions may include political, legislative & representative bodies, executive agencies, judicial bodies, civil society & membership organisations, NGOs, law, money, political parties, commercial enterprises & corporations. The processes are the rules. They include the decision-making processes, social norms & customs. The livelihood framework seeks to promote choice, opportunity and diversity. Livelihood strategy is an overarching term used to denote the range and combination of activities and choices that people make in order to achieve their livelihood goals. Rural livelihood strategies are aimed at improving well-being, reducing vulnerability, ensuring food security and increasing income. Livelihood strategies aim to achieve livelihood outcomes. Decision on livelihood strategies may invoke natural resource based activities. Non natural resource based and off-farm activities, migration and remittances, pensions and grants, intensification versus diversification, short term versus long term outcomes. Potential livelihood outcomes can include,

improved food security, higher income, reduced vulnerability, increased well being and protected rights of access, recovered human dignity. Livelihood outcomes on the other hand refer to the achievements or outputs of livelihood strategies. The livelihood outcomes that appear in the generic framework are effectively introduced to make the section of the framework manageable as each one may not be relevant in any given situation. The livelihood outcomes are therefore the effects of the livelihood assets. Combining the assets, the poor can access opportunities. Taking account of the vulnerability context the poor can be supported or obstructed by policies, institutions and processes. However, a fragile or unbalanced set of livelihood assets may lead to negative outcome.

The poor may be unable to sustain to shocks, changes or trends, may not be supported or may be actively obstructed by policies, institutions and processes that do not allow assets to be used. On the other hand, a balanced set of livelihood assets may lead to positive outcomes. Positive outcomes may include security of food, health, income, nutrition, water, shelter, education, community participation and personal safety. ADRA, as an international development partner in the Yilo Krobo District has been providing resources in the form of capital assets to the most vulnerable population to enable them achieve their livelihood outcomes. ADRA's intervention programme for small-holder farmers in the District was aimed at providing the people with the necessary skills and financial support to enable them adopt positive livelihood strategies to improve their socio-economic conditions and sustainable use of the natural resources.

## CHAPTER THREE

### STUDY AREA AND METHODOLOGY

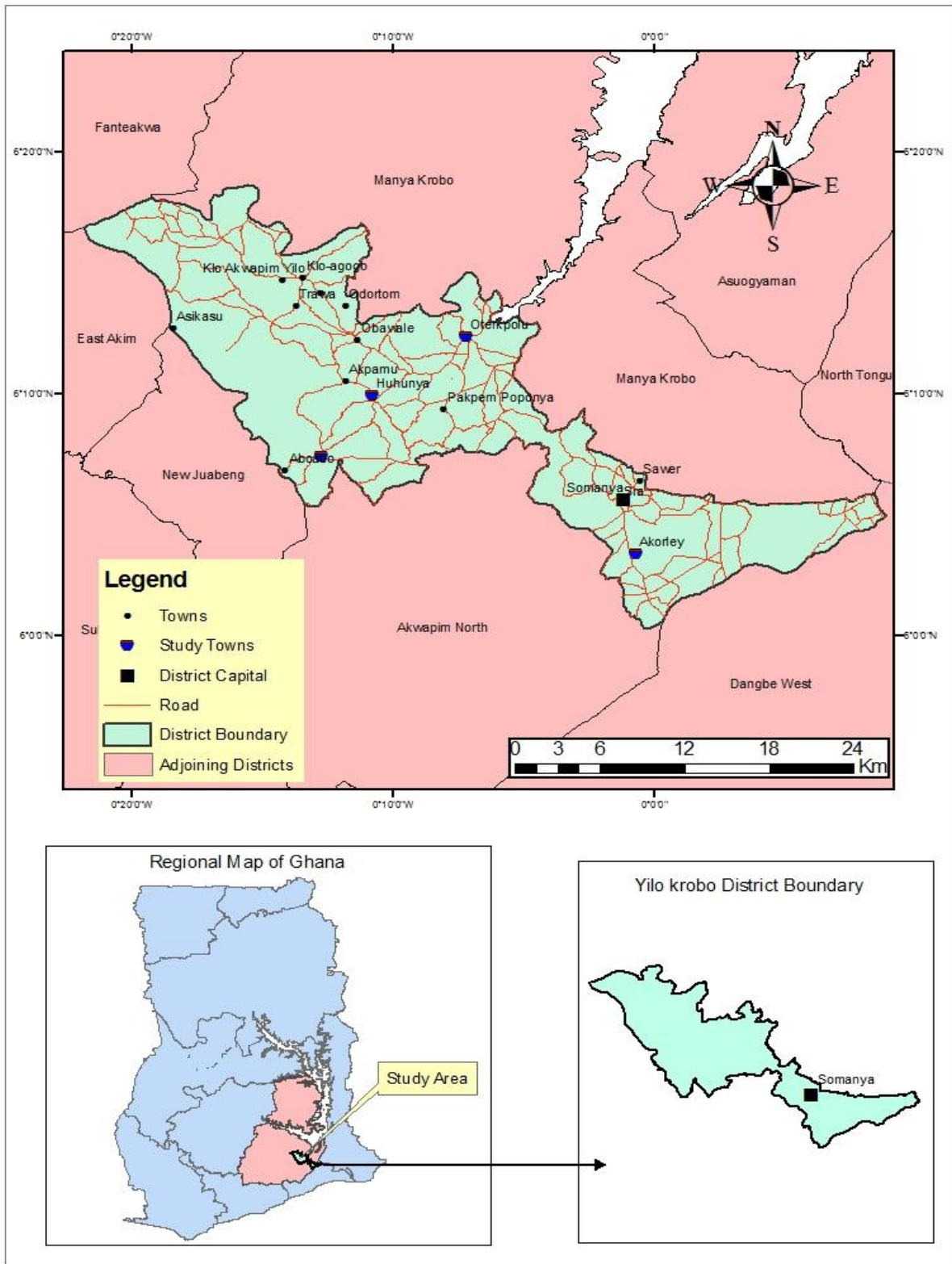
#### 3.1 Introduction

This chapter presents the physical and socio-economic features of the study area, which is the Yilo Krobo District. The chapter also presents the research design and justifies the methods used in the collection and analysis of data. The first section deals with the background of the study area and the subsequent sections deal with the methodology. This section however gives the general background of the study area, in terms of its physical characteristics, the types of soil and their suitability for agriculture and major crops grown in the district

#### 3.2 Characteristics of the study area

The Yilo Krobo District was chosen for the study. The study communities considered are Akorley, Huhunya and Oterkpolu.. The district capital of Yilo Krobo is Somanya. The district falls approximately within latitudes  $6^{\circ}00'N - 0^{\circ}30'N$  and longitudes  $0^{\circ}30'E - 1^{\circ}00'W$  (see Figure 3.1). The land area covers an estimated area of 805sq.km, constituting 4.2 percent of the total area of the Eastern Region. The district is bordered on the north and east by Manya Krobo District, on the south by Akwapim North and Dangme West Districts and on the west by New Juaben, East Akim and Fanteakwa Districts. The district has about two hundred and thirty seven settlements and it is divided into seven area councils namely, Somanya, Oterkpolu, Boti, Nkurakan, Nsutapong, Klo-Agogo and Obawale as shown in figure 3.1

**Figure 3.1: Map of the Yilo Krobo District showing study communities**



The Yilo Krobo District lies within the dry equatorial climatic zone which experiences substantial amount of rainfall. It is characterized by a bi-modal rainy season, which reaches its maximum during the two peak periods of May – June and September – October. The annual rainfall is between 750mm in the Lower Yilo and 1600mm on the slopes of the ranges in the Upper Yilo. Temperature ranges between a minimum of 24.9<sup>0</sup> C and a maximum of 29.9<sup>0</sup> C in the district. A relative humidity of 60 – 93 percent is also a characteristic of the district. The vegetation of the district is characterized by a semi-deciduous rain forest and savanna grassland. The semi-deciduous rain forest stretches across a wider part of the district and occupies about 85 percent of the estimated area. This is mostly found in Upper Yilo. The vegetation of Lower Yilo is savannah grassland with scattered tree species like Neem, Cassia, and Mango. It occupies about 15 percent of the estimated area and forms part of the Accra plains. The district is 80 percent mountainous. The Akwapim Range stretches into the district from southwest to northeast across the district. It also has numerous valleys which provide an undulating landscape. The low lands are the south eastern part of the district (Lower Yilo). The rocks forming the ranges are called the Togo series, which include quartzites, phyllites, sandstones, phyllonites and sandy-shales. On the average, the height of the highlands in the district ranges between 300 and 500 meters above sea level. There is a scarp rising up to 600 meters, which forms the boundary with the New Juaben District. On the south eastern part of the district is the Krobo Mountains from where it is believed the Yilo people migrated to the present area. There are two main watersheds forming three river basins in the district. One of the watersheds is located on the Akwapim Range where streams flow in an eastward direction on the lowlands of Lower Yilo into the Volta River. On the west of the range, the streams flow into the Ponpong river and it empties into the Volta Lake.

### 3.2.1 Soils and their Suitability for Agriculture

The predominant soil in the district can be divided into four major groups. These are, soils developed over sand stone (Yaya-Pimpimso-bejua Association), soils developed over Buem (Dewasi-Wayo Association), soils developed over Togo rocks (Menfe-Fete-Salom complex and the Oyarifa-Krobo-Memfe-Nyire complex).

**Table 3.1 Soil types and Crop Suitability**

Soil Type	Characteristics	Soil Suitability	Location
Dewasi-wayo Association	Poorly drained and less fertile	Maize and cassava	Oterkpolu and Okrakwadwo areas
Menfe-fete-salom complex	Moderately drained	Maize, cassava and oil palm	Obenyemi areas
Oyarifa-Krobo-Menfe complex	Water-logged and periodic flooding	Maize, okra, mango, pepper and garden eggs	Somanya Zone, Akorley area
Yaya-Pimpimso-Bejua Association	Well drained	Oil palm, yam, maize plantain, cassava and pepper	Huhunya, Akpo, Boti and Apersua

**Source: MOFA, 2000**

### 3.2.2 Economic features of the district

The main economic activity in the Yilo Krobo District is farming, small-scale enterprises and services. A household survey conducted in 2002 indicated that 58% of the population were engaged in the agricultural sector. Crop farming is the principal agricultural activity in the district. The main crops grown in the district are maize, cassava, yam, cocoyam and plantain. A

wide range of vegetables like tomatoes, garden eggs, pepper and okra are also grown. All these crops are cultivated largely on small-scale. Yilo Krobo has however, seen the emergence of medium to large scale farms within the last few years. Large scale plantation crop like mango has become a very important income generating activity as a result of interventions made by MOFA in collaboration with ADRA, TIPCEE, EMQAP, MIDA, KROBODAN, Hunger Project etc. There are also three dominant farming activities in the district. These are Food crop cultivation, livestock rearing and establishment of mango plantations. Of these three, the most practiced is food crop farming. The main farming areas in the district are Okwenya, Ogome, Akorley, Azza, Huhunya, Oterkpolu, Akpamu, Agogo Ahinkwa, Nsutapong, Obawale, Opersika, Perpetifi and Samlesi. The district has estimated total road network coverage of 240 km. This includes 80km of first class roads linking up the district capital to Accra, Tema, Koforidua, Ho and Assesewa and Akosombo. There are also about 160kms of feeder roads linking up the market centres and major settlements.

### **3.2.3 The major crops grown in the district**

Five staple crops: maize, cassava, yam, cocoyam and plantain are grown in almost all parts of the district. Yam and cocoyam are limited to Upper Yilo because the soils of Lower Yilo are not suitable for their cultivation. Mango is the major tree crop cultivated in Lower Yilo. It has both ecological and economic potential. A wide range of vegetables like tomato, garden eggs, pepper and okra are also grown. All these crops are cultivated largely on small-scale. The exportable commodities amongst them are pepper, okra, garden eggs and mango.

**Table 3.2 Crops and growing areas**

<b>Crop</b>	<b>Main Area of Cultivation</b>
Oil palm	Akpo, Akpamu, Huhunya, Apersua, Obenyemi
Tomatoes	Akpo, Akpamu, Boti, Huhunya
Garden eggs	Akpo, Akpamu, Boti, Huhunya, Agogo
Pepper	Oterkpolu, Huhunya, Sikabeng, Agogo, Akpo, Akpamu
Maize	Throughout the District
Plantain	Ahinkwa, Nsutapong, Agogo mainly & around homesteads in all communities
Yam	Akpo, Akpamu, Boti, Perpetifi
Cassava	Throughout the whole District
Mango	Perchiri, Okwenya, Akorley & currently throughout the District
Okro	Somanya mainly, & Upper Yilo to some extent
Cocoyam	Huhunya Akpo, Akpamu, Agogo, Ahinkwa, Nsutapong (Upper Yilo in general)

**Source: MOFA, 2010**

### **3.3 Research methodology**

Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. In this section, the research design will be presented and justified. The section also discusses the methods of data collection and data analysis.

#### **3.3.1 Research Design**

The research design adopted for the study is the cross sectional study design. This design is chosen because it is suited for the study which is aimed at finding out the effects of ADRA's mango project on livelihood in rural areas by taking a cross section of farmer population in the Yilo Krobo district. This design is also adopted because it is useful in obtaining an overall picture of a situation as it stands at the time of study. In addition a cross section study design allows for the decision on what to find out, the study population to be identified, selection of sample size and also the contact of respondents to find the required information. The research is to evaluate the effect of the mango project initiated by ADRA in Akorley, Oterkpolu and Huhunya communities. Program evaluation is applied to intervention projects primarily carried out to address social problems in a community setting (Kelly, 2004). This study involves the collection of data from the target population in order to answer questions as to whether the project by ADRA yielded the expected outcomes. The study made use of both quantitative and qualitative techniques for data collection and analysis. Such a triangulation of methods was deemed important because by combining multiple observers, theories, methods, and empirical materials, researchers can hope to overcome the weakness or intrinsic biases and the problems that come from single-method, single-observer, and single-theory studies. Often the purpose of

triangulation in specific contexts is to obtain confirmation of findings through convergence of different perspectives (Jakob, 2001).

### 3.4 Population of the Study

Population refers to the target group or all cases from which the sample of respondents is drawn (Robson, 2002). The population that was used for this project included both ADRA's mango project beneficiaries and non-beneficiary mango farmers in three rural communities in the Yilo Krobo District. Table 3.3 indicates that 64.7% of both beneficiary mango farmers and non-beneficiary mango farmers were selected from Akorley, 16.7% were selected in Huhunya and 18.7% were selected in Oterkpolu.

**Table 3.3 Sample population**

Name of Village	Frequency	Percent
Akorley	97	64.6
Huhunya	25	16.7
Oterkpolu	28	18.7
Total	150	100.0

Source: Field data, 2012

### 3.5 Sources of data

Primary and Secondary sources of data were used for the study. Data on the mango project was obtained from ADRA country office and the chairman of the project. Primary cross sectional data was collected from the beneficiary household through questionnaire administered at the household level. The same set of questionnaire was administered to those households who have participated in the project under ADRA's support and those who have participated but without ADRA's support. The main instrument used to collect data from the sample was questionnaires. As observed by Clarke (1999), questionnaire is one of the most frequently used methods of data collection in evaluation research and it is capable of producing large quantities of highly structured, standardized data. The items in the questionnaires are made up of closed and open ended items. According to Denscombe (2007), closed-ended items allow respondents to select answers from categories that have been established in advance by the researcher. It has the advantage of providing answers that are of uniformed length and lends itself nicely to be quantified and compared. The answers provide pre-coded data that can be easily analyzed. He adds that open-ended questions, on the other hand, allow respondents to give their own objective responses in their own words. This has the advantage of respondents giving responses that are more likely to reflect the full richness and complexity of the views held by respondents. Answers to open-ended questions are categorized and coded to determine a trend, and also to be easily analyzed. A letter of introduction was collected from the Department of Geography and Resource Development of University of Ghana. This helped the researcher to introduce herself to the management of ADRA and the farmers who took part in the research. Three research assistants were trained to help in the administration of the instruments. Meetings were held with the farmers in order for the researcher to explain the intentions and the importance of the study to

them. Data was collected with the use of questionnaires and interview guide. Three assistants were trained to help the researcher to interview farmers on the agreed dates.

### **3.5.1 Questionnaire survey**

According to Taylor-Powell & Hermann (2000) a questionnaire survey is a means of gathering information about a particular population by sampling some of its members, usually through a system of standardized questions. Surveys can be conducted by mail, telephone, personal interview, or internet. They can be administered either to individuals or groups. The primary purpose of a survey is to elicit information. Questions may be related to behaviors, beliefs, attitudes, and/or characteristics of those who are surveyed. The respondents for the study included both ADRA clientele farmers and non-beneficiaries of the mango project. A list of ADRA's clientele farmers was obtained from the chairman of ADRA's mango project in all three communities. Based on the list, a simple random sampling was used to select 95 farmers out of 400 that were supported in the district. A list was obtained from the chairman of mango farmers and simple random was used to select 55 non-beneficiaries of ADRA's mango project from Akorley. This method of sampling gave an equal and independent chance for each of the farmers to be selected. Questionnaires were distributed to each farmer. The questions were read and translated into the local language of farmers with the help of research assistants.

### **3.5.2 In-depth interviews**

The study also employed the use of in-depth interviews for the project director and some key informants. In-depth interviews are qualitative method of data collection, which proceeds as a confidential and secure conversation between the interviewer and respondent. According to Lofland (1995) this method of obtaining data is appropriate if subjects under study are in the

nature of something controversial, sensitive or tabooed. An advantage of the in-depth interview is that there is time for the respondent, in peace, to further develop and give reasons for his or her individual point of views-without being influenced by the opinions of the other respondent. For this study, purposive sampling technique was used to select 7 farmers who had obtained loans from ADRA for the mango production. The primary consideration in purposive sampling according to Kumar (2005:179) is the judgement of the researcher as to who can provide the best information to achieve the objectives of the study.

### **3.6 Method of data Analysis**

The quantitative data collected in the field was entered in the SPSS package. The secondary data collected from ADRA Ghana served as baseline data and was coded and entered in computer. Likewise, the primary data collected was edited and computer entered. Analysis was conducted for simple descriptive for the variables by communities, household groups, income groups etc. Quantitative data analysis takes the form of using figures, tables, graphs and other visual images to analyze the data collected (Denscombe, 2007). The change in livelihood situations after more than sixteen years of ADRA's mango project participation by farmers was examined by using the baseline and recent cross sectional data through questionnaire survey. The statistical package for social sciences (SPSS) was used to analyse quantitative data. In addition to the analysis, the Propensity Score Matching (PSM) was used to estimate the effects of ADRA's intervention on farmers' income and farm sizes. Propensity score matching creates a statistical comparison group by matching every individual observation of beneficiary with an observation with similar characteristics from the group of non-beneficiary. In essence, matching models create the conditions of an experiment in which beneficiary and non-beneficiary are randomly assigned, allowing for the identification of individual contributing factor(s) between accessing the project

and outcome variables. The contributing factor(s) should be one that all available information or evidence identifies as influencing the change in observable outcome. In the propensity score matching, each beneficiary is matched to a non-beneficiary with similar propensity score values based on the covariates, in order to estimate the Average Treatment Effect for Treated farmers (ATT) described as the beneficiaries. The difference in ATT and the Average Treatment Effect for Untreated individuals (ATU) described as the non-beneficiaries is the Average Treatment Effect (ATE) which is the overall effect of the adoption process on income of both beneficiaries and non beneficiaries (see table 3.4 for illustration). For this study, the ATT is the object of interest. The analysis involved interactive process among theory, hypotheses and concepts.

**Table 3.4: Illustration of Propensity Score Matching Using Hypothetical farm sizes and Income (GH¢) Data.**

i	D	Farm size(acre)	Annual Income	Match	Y1	Y0	Diff
1	1	1	869	6	869	769	100
2	1	3	2607		2607	2307	300
3	1	2	1738		1738	1538	200
4	1	8	6952	7	6952	6152	800
5	0	4	3476		-	-	-
6	0	10	8690		-	-	-
7	0	8	6952		-	-	-
8	0	5	4345		-	-	-

Quaye, 2012

$i$  = Farmer

$D$  = Treatment status (1 if beneficiary; 0 otherwise)

ATT = Average Treatment Effect =  $(100+300+200+800+400+1000+800+500)/8 = 512.5$

The average of the total difference between the incomes of the beneficiaries ( $Y_1$ ) and that of the counterfactuals or perfect match non-beneficiaries ( $Y_0$ ) gives the average treatment effect of the treated. The value of the ATTs are compared at a given probability level to determine its significance. There is no strict decision rule, however if:

ATT > 0 implies that beneficiaries earn more than non- beneficiaries

ATT < 0 implies that non- beneficiaries earn more than beneficiaries

ATT = 0 implies that there is no difference between earnings of beneficiaries and non-beneficiaries

### **3.7 Limitations of the Study**

The following limitations militated against the conduct of the study. The limitations include the constraints of time, material and finance which did not allow the researcher to cover all mango farmers in the district. The second limitation was the ability and trustworthiness of respondents to give accurate and honest answers to questions. The third was the non-cooperation of opinion leaders of the communities that were used in the study area.

## **CHAPTER FOUR**

### **PROFILE OF MANGO FARMERS AND MANGO PRODUCTION IN THE YILO KROBO DISTRICT**

#### **4.1 Introduction**

This chapter presents the profile of the mango farmers and discusses mango production in the Yilo Krobo district. The first part discusses the socio demographic characteristics of the farmers selected, while the second section discusses mango production in the district.

#### **4.2 Socio-demographic characteristics of farmers**

According to Myers (1996), socio-demographic characteristics are expected to influence farmers' access to land and agricultural practices. In this study therefore, data was obtained on the socio-economic characteristics of the farmers. The socio-demographic characteristics that were addressed in the questionnaire included gender, age, education level attained, family household size and years of mango farming.

##### **4.2.1 Gender and Age distribution of farmers**

There is no doubt that gender is an important variable in agricultural studies (Hafkin, 2002). Traditionally, the roles of men and women in farming differ in Africa. Men clear the land and women undertake most of the remaining farming activities, particularly weeding and processing. Since the colonial period, men have been most active in cash crop production, while women have been mainly concerned with food and horticultural crops, small livestock and agro processing. In sub-Saharan Africa women contribute between 60 and 80% of the labour for food production, both for household consumption and for sale (FAO, 1994). Moreover, agriculture is becoming a predominantly female-dominated sector as a consequence of faster male out-

migration (FAO, 1998). Women now constitute the majority of smallholder farmers, providing most of the labour and managing a large part of the farming activities on a daily basis (Saito et al, 1994). The distribution of gender was important in this research as males and females can have varying gender roles in the district, which may affect their access to a project intervention as well as their perception of it. The study, revealed that there was unequal distribution between male and female farmers with 61.7% of farmers being male and 31.3% female (see Table 4.1). The dominance of males in the sample is not surprising because as a result of patriarchal norms, men are considered as the owners of commercial farms even though the farms may belong to the entire household. The unequal distribution of male and female mango farmers offered greater potential to assess other variables that may influence famers' access to a project intervention.

**Table 4.1: Gender and age distribution of mango farmers**

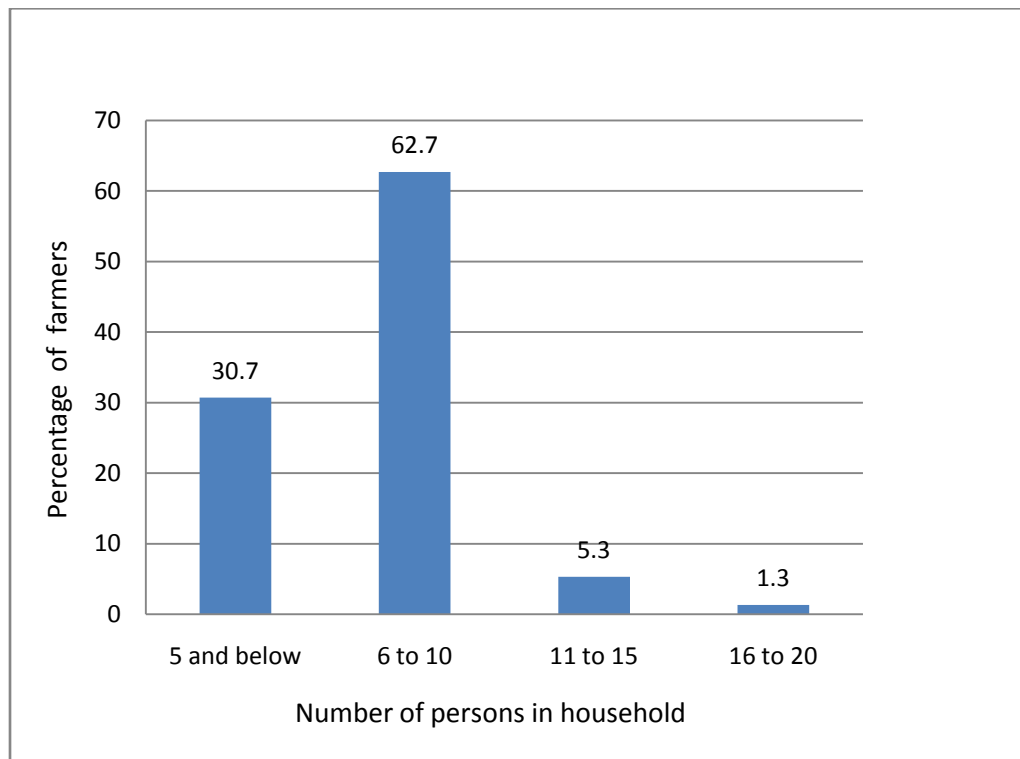
Variable	Category	Frequency	Percent
Gender	Male	103	68.7
	Female	47	31.3
Total		150	100
Age (Years)	20 and below	1	0.7
	21-30	7	4.6
	31-40	34	22.7
	41-50	47	31.3
	51 and above	61	40.7
Total		150	100

Source: Field data, 2012

As shown in Table 4.1, of the 150 farmer samples, (0.7% ) of farmers were twenty years old or less, 4.6% were between 21 to 30 years, 22.7% were between 31 to 40 years, 31.3% of the farmers were between 41 to 50 years, 40.7% of total farmers interviewed were aged 51 years and above. This means the majority of farmers were old, an unsurprising statistic since the district has an old population (GLSS 2008). The national Youth Policy of Ghana and the African Youth Charter (2010) defines youth as persons between the ages of 18 to 35 years. The age composition of the farmers clearly indicates that the youth are not interested in farming or that majority of the youth might have migrated to the urban centres to seek alternative employment. It could also be that the youth did not patronize farming because of lack of availability of adequate land and credits. According to the 2000 Housing and Population Census, the youth of Ghana constitute 33% of a heterogeneous segment of Ghana's population with a growth rate of 2.7%. This is a group that constitutes the most important human resource potential that can contribute significantly to the overall development of a nation.

#### **4.2.2 Household size**

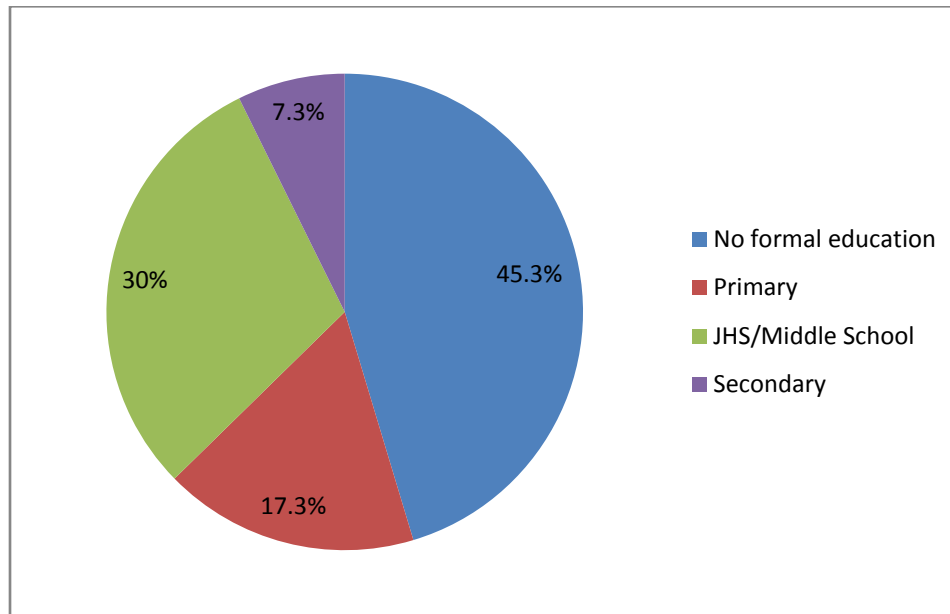
Generally, the household size of farmers has implications on their consumption activities. Attanasio et al (1999) in the demographic model stated that household size and composition change deterministically over the life cycle and affect consumption or savings choices in a unitary household model. Figure 4.1 shows that 30.7% of farmers had five or less people in their households and 62.7% of farmers had between six and 10 people in their households. It also indicates that 5.3% of farmers had between 11 to 15 people and 1.3% of farmers had between 16 and 20 people in their households. The result indicates that greater percentage (62.7%) of farmers had large family sizes and this could put drains on the limited resources of the farmers.

**Figure 4.1: Household size of farmers**

Source: Field data, 2012

### 4.2.3 Level of education

The study further sought to explore the educational level of farmers. Though it is possible to find adults with varying education levels in any given community, it is more common to find people with less than a junior high school education in low-income communities. This trend presented itself in the educational levels of farmers in the three communities of the study (Figure 4.2).

**Figure 4.2: Educational levels of farmers in the study communities**

Source: Field data, 2012

Growth and poverty reduction cannot occur anywhere in the world without good education. As shown in Figure 4.2, about 45.3% of farmers had no formal education, 17.3% had primary education, 30% had gone to JHS/Middle school and 7.3% farmers had secondary education. None of the farmers who participated in the project had tertiary education. It can be concluded from results of the study that most of the farmers (45.3%) interviewed had no formal education and this meant that the level of education of farmers did not play a vital role in their selection to be supported by ADRA. This probably suggests that through local knowledge and experience, the farmers are able to determine the benefits of ADRA's intervention.

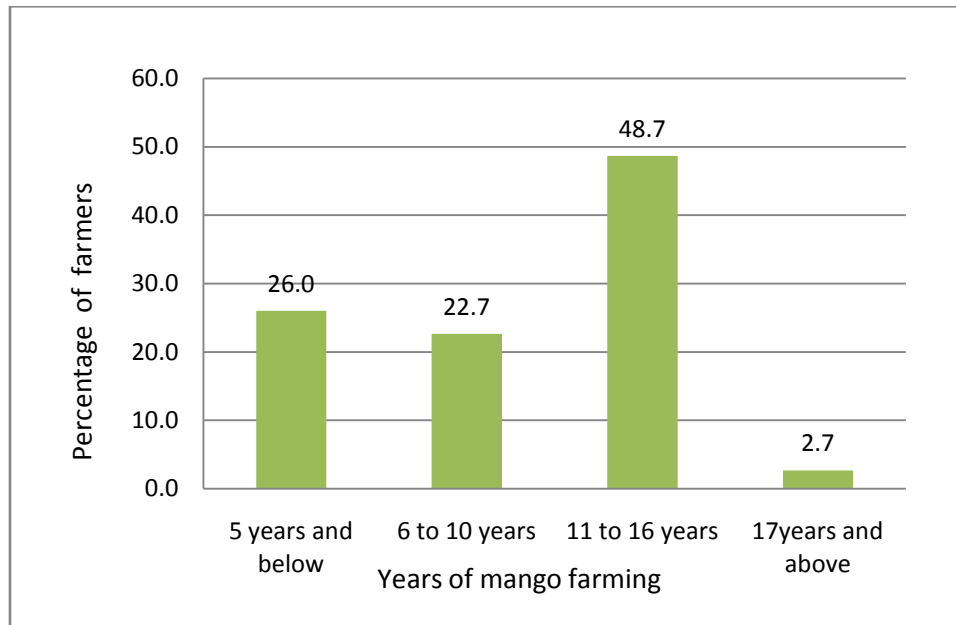
This finding is therefore in contrast with the findings of EARO (1999) which show that farmers with high levels of education are better adopters of improved farm practices than those with lower levels of education. Another reason for the low level of education among these farmers is

the fact that in Ghana the farming profession is mainly dominated by people with little education. Again, low level of education among the farmers sampled is consistent with general low level of education in the study area. A survey by Ministry of local government and rural development (2006) in the district indicated that only 10.3% of the people in this district have had any secondary level education. The tertiary level rate was very low (1.2%).

#### **4.2.4 Years of farming**

The years of mango farming by farmers was also taken into consideration. As shown in Figure 4.3, about 48.7% of the farmers had been farming for between 11 to 16 years. However, only 2.7% farmers had been involved in mango farming for over 17 years. As noted by an ADRA (2012) report on mango production, mango was introduced in the year 1996 in the district and the results from the study clearly show that most farmers were not into the mango business prior to ADRA's intervention. It was realised that more farmers have subsequently taken part in the mango business as the years went on. This was illustrated in the comments of a male farmer in Akorley:

“I did not know about these foreign mangoes until ADRA introduced it in 1996. We used to grow the local mangoes for domestic consumption. The mango business has been very helpful and many of my friends who were not around during the time of introduction have now engaged in the business”. (Ananor, 12 November, 2012)

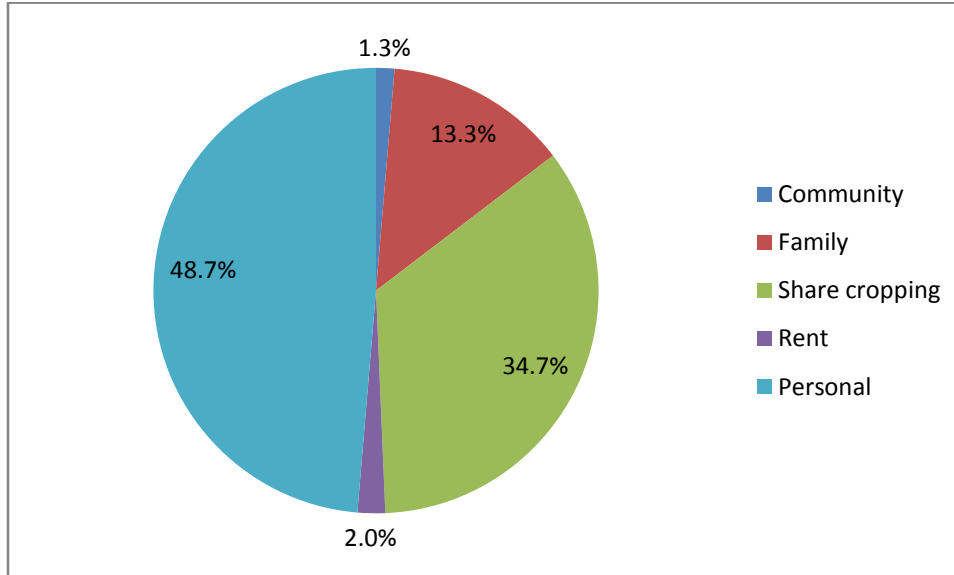
**Figure 4.3: Years of mango farming**

Source: Field data, 2012

### 4.3 Land acquisition by Mango Farmers

Several decades ago, land was in abundance in Ghana and those seeking land had free access. With subsistence agriculture, not much economic value was put on land, which had an opportunity cost of virtually zero (Kasanga et al 2001). In recent decades, however, land has been the most fundamental asset in Ghana as in many other societies. It is a very important economic asset that carries serious religious and political connotations (Kuntu-Mensah, 1997). Unfortunately, the administration of land has been saddled with so many problems, that Ghana as a whole, has been unable to benefit fully from the land beyond its physical existence. It turns out to be the source of many human conflicts that ultimately impede the progress of many developing countries, like Ghana. This is because a majority of land holding is informal and ownership rights to these lands are not adequately documented, creating problems of litigation.

There are four categories of land ownership detailed in the 1992 Constitution of Ghana, namely public/state, stool/skin, clan/family, and private lands. State or public lands include lands that belong to the state and all other levels of government - local, urban, municipal and city councils, departments, and state co-operations. In general, the Republic of Ghana does not own land, except such land as are acquired (by lawful proclamations, ordinances, statutory procedures or International Treaty) and held by the state in trust for the people of Ghana. Stool or skin lands are community lands vested in the traditional chief or other community leaders on behalf of the tribe. These lands include all lands that are at the disposal of any local community. They constitute about 80% of total landholding in the country which is mainly customary. Family or clan lands are owned and controlled by families, where in this case a family includes a group of persons all related exclusively through either a patrilineal or matrilineal line. Private lands are lands that individuals have purchased or otherwise acquired or inherited, and are at their personal disposal and not subject to any family sanctions. Following customary and statutory laws, all land ownership and tenure can be acquired by any citizen or a person under one of the four categories. Though land ownership acquisitions are being transacted, the majority of the land market is largely informal (especially in rural areas) giving rise to ownership insecurities and other problems (Kasanga et al 2001). The farmers that were involved in this study were asked to indicate how they acquired their lands, since an unlawful access to the lands could be a threat to their mango production. The farmers were also asked to indicate the amount of acres they farmed. As shown in Figure 4.4, five forms of ownership of land were identified. They include lands owned by the community, rented lands, family lands, sharecropping and farms owned by private individuals.

**Figure 4.4 Farmers' land ownership**

Source: Field data, 2012

Of the different forms of ownership of land, private ownership of lands had the most respondents, comprising (48.7%) of the total. Rented and community lands were few as farmers complained of their expensive nature. Share cropping was also quite common in the area as those who could not purchase or rent lands shared produce with farm owners. A farmer who engaged in share crop in Akorley lamented:

The land here in Akorley is very expensive. People outside this community are interested in the mango farming and have purchased most of our lands. I cannot afford an acre of land and I had to engage in share crop. I don't earn much but I still share my produce with the owner of the land on which I farm (Bosso, 12 November, 2012)

If farmers have difficulty in purchasing land for farming it can constrain their livelihood opportunities which may lead to negative outcome. The reason farmers are unable to purchase

lands for farming may be from a lack of financial capital. The findings indicate that only quite rich farmers are able to purchase land. Deninger et al (1998) have also demonstrated that relatively egalitarian land distribution patterns have tended to generate higher rates of economic growth than highly concentrated ones. The basic reason for this is that broad based agricultural growth tends to generate second-round expenditures in support of local non-tradable goods and services in rural areas and towns. These multiplier effects tend to be much weaker when the source of agricultural growth is concentrated in relatively few hands. Thus the rate of growth is likely to be affected by the distribution of assets in the agricultural sector, particularly land. However, evidence is emerging that not only does the initial distribution of assets affect the rate of economic growth, but it also affects the poverty reducing effects of the growth that does occur. For example, Ravallion et al (2002) found that the initial percentage of landless households significantly affected the elasticity of poverty to non-farm output in India. In a sample of 69 countries, Gugerty et al (1999) found that, in countries with an initial “good” distribution of assets, both agricultural and non-agricultural growth benefited the poorest households slightly more in percentage terms. In countries with a “bad” distribution of assets, however, economic growth was skewed toward wealthier households, causing the gap between rich and poor to widen. It is especially noteworthy that in this latter group of countries, agricultural growth was associated with greater increases in inequality than was non-agricultural growth. This reverses what has been considered the more typical pattern, wherein agricultural growth is seen to contribute more to poverty reduction than growth outside the agricultural sector. These findings reinforce the idea that where access to land is highly concentrated and where a sizable part of the rural population lack sufficient land to earn a livelihood, then special measures may be necessary to tackle the problem of persistent poverty (Ravallion 1997).

#### **4.3.1. Gender and land acquisition**

Land is an important factor in agriculture activities. While men and women generally face the same external constraints, they have an unequal access to human-controlled factors. They have different endowments, such as land rights and education, and different access to technologies, labour, capital, support services and credit. This disparity results in differentials in productivity to the detriment of women (Udry, 1996). In Ghana, concerns are often raised about issues regarding the ownership of land. The Constitution of Ghana recognizes the concept of trusteeship in landholding by emphasizing that those with responsibility for managing land must act in the wider interests of their communities. Article 36(8) of the 1992 Constitution states:

The state shall recognize that ownership and possession of land carry a social obligation to serve the larger community and, in particular, the state shall recognize that the managers of public, stool, skin and family lands are fiduciaries charged with the obligation to discharge their functions for the benefit respectively of the people of Ghana of the stool, skin or family concerned and are accountable as fiduciaries in this regard.

Gender gaps are manifested in various facets of life. In agriculture, these include access to and control of tangible and intangible resources, as well as division of labour at the household level and farming activities (Adumua, 2010). Gender issues in agricultural production have become an important subject of investigation. It was emphasized during the creation of the Millennium Development Goals (MDG's) in 2000, that although women are largely engaged in many sectors of the economy, a major concern is the fact that there are a fewer of them when it comes to productive jobs even under condition of freedom and equity (Danso et al, 2004). Women's

control over land can be a source of empowerment, helping them consolidate their decision of controlling household expenditure that will often favour children. Hasna (1998) reported that women do not own land either in their marital or natal ancestral home and implied that women are not able to cultivate as much as men because they do not own the land.

The results of this study support the above assertions that women are always marginalised when it comes to land ownership. As shown in Table 4.2, only 17% of all female farmers interviewed reported that they have an acre of land. The remaining 83% of female farmers were able to negotiate for lands by rent, share cropping and by family lands to farm on. Wilbers (2003) observed that traditions of patrilineal inheritance also limit women's access to acquire land to live and do farming. In the Krobo area where this study has been conducted, the patrilineal inheritance system prevents women from inheriting landed property from their fathers. Consequently, women can only own a parcel of land if they have money to buy land. In relation to the sustainable livelihoods framework, it can be argued that the patrilineal system is an institution which negatively affects the economic activities of female farmers.

Gender differences also exist between women heads of households and men heads of households. Female farmers in female headed households also tend to limit their labour input in farm activities because of heavy commitment to reproductive roles such as nurturing and caring for children and attending to elderly members of the household (Kamara et al 1993). It turns out that in many cases, women use their land primarily for subsistence crops to feed their families while men cultivate cash crops and keep the income. The study also indicated that men dominate rural farming in the district as a result of the arduous nature of the farming tasks especially land

preparation which is mainly manual and the fact that mango production requires more activities. Whereas men could supplement their effort by providing paid labour, half of independent women cultivators mainly depend on male labourers (paid labour) to carry out land clearing and preparation. Women with limited financial resources cultivate relatively small plots that can easily be managed. They cultivate on small lands to avoid the burden of going in for hired labour which comes with cost and demands much of their income. This is illustrated in the following comments made by a female farmer who had been cultivating in Akorley for 9 years:

Talking about land clearing and preparation, forking of beds, spraying of chemicals etc., it takes much determination to continue cultivating. I mostly use men hired labour for land clearing and preparation. When I have not got enough money to hire labour, I do the land preparation myself but then I'm able to cultivate only part of my plot (Awonye Linda, 13 November, 2012)

This confirms the reason for more male participation in the mango project than females. ADRA baseline survey (2002) also indicated that farmers' major production problems include declining access to farm lands. They added that environmental crisis also leads to chieftaincy disputes and litigations over the ownership of lands suitable for farming.

**Table 4.2. Gender and acquisition of land**

Gender	Form of ownership of land				Total
	Family	Share cropping	Rent	Personal	
Male	24	15	4	60	103
Female	28	5	6	8	47
Total	52	20	10	68	150

Source: Field data, 2012

#### 4.4 Mango Production in the study area

Mango (*Mangifera Indica*) is a fruit tree native to the tropical and sub tropical India and South East Asian countries including the Philippines. Many hundreds of cultivated mango varieties as well as wild types of mango grow naturally in this region. Mango has spread over several hundreds of years from this area to over 90 countries in the tropics and sub-tropics in Africa, South America, Central America, Caribbean, United States and Australia. The Persians are said to have carried it to East Africa about 10<sup>th</sup> century A.D and mango is reported to have been found growing in Somalia in the 13<sup>th</sup> Century. The Portuguese are reported to have introduced it to West Africa early in the 16<sup>th</sup> Century and also into Brazil. After becoming established in Brazil, mango was carried to the West Indies, being first planted in Barbados about 1742 and later in the Dominican Republic. It reached Jamaica about 1782 and early in the 19<sup>th</sup> century, reached Mexico from the Philippines and West Indies. Chandler (1958) stated that the mango fruit almost certainly spread from southern Asia-probably India- where it has been in cultivation for over 400 years. Mango however is not indigenous to Ghana.

The introduction of mango in Gold Coast (now Ghana) is credited to the Portuguese who reportedly introduced it from Asia in the 16<sup>th</sup> Century. Mango however, unlike cocoa did not become a commercial tree crop until about a decade ago. The local mango was regarded as a backyard fruit tree which was enjoyed in season. Mango now is a popular horticultural tree crop which thrives well throughout Ghana but occurs mostly in the forest savanna transitional zone in the Ejura, Wenchi and Kintampo districts and the coastal savanna areas of Accra and Somanya. The mangoes are often grown in plantations. The trees grow on fallow land and on sites of previous habitations or have been planted deliberately especially on agricultural stations. Fruits from the forest savanna transitional and coastal savanna zones are quantitatively and qualitatively better than those in the forest zone, even for the same cultivar (Godfrey-Sam-Aggrey & Abutiata, 1973). The fruits are mostly eaten fresh but in recent years some are processed into mango juice by the Cannery companies. Trading in local mangoes has gone on for many years. Market women travel to areas of abundance in the transition zone and Northern Region to buy fruits cheaply for sale in towns and cities from farmers and individuals who collect or harvest the fruits from trees on their farms, in back yards and open communal lands. In recent times, several attempts have been made by government through ministry of agriculture to improve and commercialize mango cultivation through the introduction of the improved and higher yielding varieties. In the 1920s more than 12 varieties were introduced by the department of agriculture to increase the number of varieties grown and to find out those that would be more productive under our conditions. The ministry of Agriculture introduced new varieties in the 1960s in Ejura and Somanya areas.

The Kwame Nkrumah University of Science and Technology (KNUST) and University of Ghana research station in Kade also established mango museums and different varieties for academic and research purposes. In 1967 efforts were made to classify the different mango varieties in the Ejura district and the KNUST plantation of the faculty of agriculture, to eliminate confusion in their identification and naming. By 1973, 21 cultivars had been identified, characterized and published. Of these 21 varieties, 12 were fibrous and 9 fibreless. Some varieties that were recognized were Julie, Jaffna and Rupee. Later in the 1970s, more than 12 varieties were brought in from Florida and India (Kent, Kheit, Tommy Atkins, Zill, etc) to expand the stock available in the country. The most common varieties produced in the study district are Keitt, Haden, Kent and Palmer. It was identified in the study that apart from ADRA who gave farmers seedlings, nursery operators were also trained to produce grafted mango seedlings for sale to farmers.

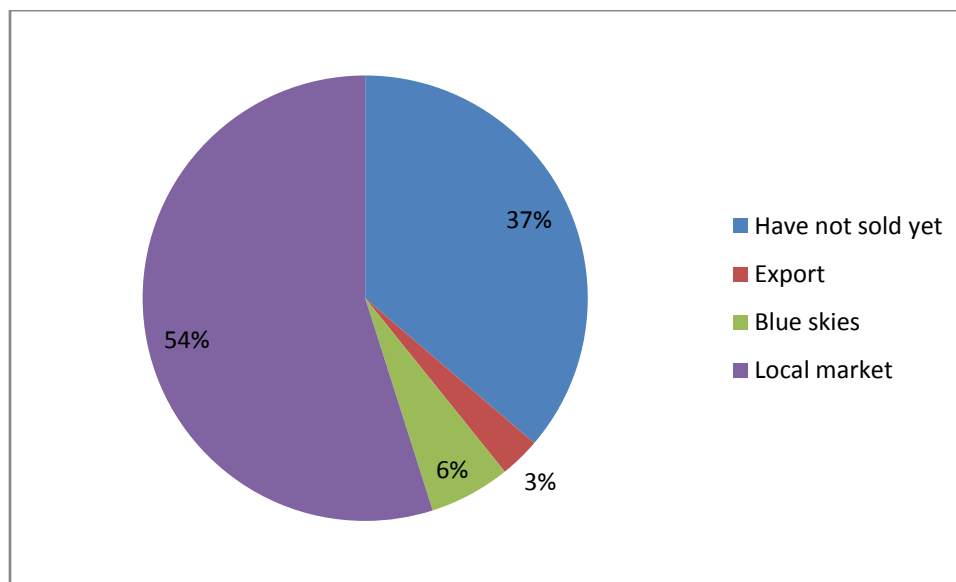
#### **4.5 Marketing of mango**

Low farm productivity of many developing countries is often due to factors such as inefficient methods of irrigation, lack of mechanization in farming, inadequate supplies of fertilizer and natural disasters. But one fundamental problem that is not recognized is lack of a marketing system. Development specialists such as Owens & Shaw (1994) rightly pointed out that agricultural development is more a human problem than a technical problem. If all farmers can be provided with production inputs, the financial system, the market and the agricultural knowledge they can improve the agriculture. Most of the farmers lack access to market system and thus lack both resources and incentives to modernize their production. Development of rural market system is of fundamental urgency in bringing about the necessary agricultural revolution. Proper incentives should exist for a subsistence farmer to produce more.

The most basic incentives are farmers' access to the national and international markets. Institutional access to the national marketing system could be accomplished as an independent task or as part of a major social developmental action. The marketing system could be a part of community centre which offers a variety of social services, economic and educational to its residents. In the past a variety of community development schemes were introduced in developing countries. But a community centre differs from a community development program in two respects, which includes the fiscal responsibility and management by the community. The concept of a community centre is not new. Its design and development needs a variety of interdisciplinary skills, one of which is marketing. Marketing technology markets can help define the economic, financial service and management components of the community centre. The study sought to identify the market opportunities for the sale of what the farmers produced. It is argued that market opportunities for farmers enhance their ability to sell off what they produce and therefore earn substantial income. Out of the 150 farmers interviewed, 80% indicated that men and women have equal access to market information concerning the demand for their produce. Prevailing market prices circulate through farmers' associations (which comprise of both male and female farmers). Women play a major role in marketing of farm produce. This gives them the chance to attend to their domestic activities and at the same time serve as a source of income generation for their households. The mangoes are produced entirely for sale and marketing is done mostly at the farm gate by females. Male farmers do not engage themselves in direct marketing to consumers. Previous studies on marketing of vegetables conducted in Accra presented similar findings (Armar-Klemesu, 1998; Flynn-Dapaah, 2001; Obuobie et al 2004). Several reasons have been assigned to the above assertion. These include the arduousness of farm work, especially land clearing, land preparation, carrying spraying cans for spraying and

general lack of interest in farming, cultural definitions of gender roles (i.e. men do the farming and women do the selling and the general perception that marketing is more profitable and less risky than farming. Interestingly, some male farmers attempted to retail their own produce on the market to make more profit. However, most of them were held back by the prevailing norms and cultural values defined by the society that men do not retail fruits. In coastal West Africa, women handle 60-90% of domestic farm produce from point of origin to consumption (Mawudem, 2001). Women pursue marketing activities as their primary means of obtaining cash income for household expenditures. They are usually better at bargaining to obtain better prices. The study therefore sought the views of farmers on how they market their produce. The farmers' responses were that, they sold to the local markets and exported the fruits if they met the standards to be exported. Figure 4.2 below indicates the forms of marketing activities by farmers.

**Figure 4.5: Farmers' response on sale of mangoes**



Source: Field data, 2012

With regard to how farmers sell their mangoes, Figure 4.5 shows that, 54% sell the mangoes to the local markets only, whereas 3% exported. A total of 6% of farmers sold their mangoes to

Blue Skies Fruit Company and the remaining 37% had not yet sold any fruits. This suggests that most of the farmers did not have link with the international markets or their fruits did not meet international standards and therefore they could not export their fruits. The study revealed that pest and diseases are factors that affect the sale of the mangoes. This is because poor quality fruits resulting from disease and pest infestation do not look attractive in appearance and therefore destroy their market opportunities. This therefore reduces expected yield and income for producers. The study indicated that most of the farmers could not export because they could not afford to buy pesticides to spray the trees and to prevent them from getting infested with pests and disease. This situation was illustrated in the comments of a mango farmer who had worked in Akorley for over 12 years:

The fruits are attacked by pest and diseases and I do not have money to buy agro chemicals to control the pests. I therefore sell the fruits at very cheap prices to the market women and I incur losses. I wish the Government would assist mango farmers with agro chemicals as it does cocoa farmers. (Cephas, 12, November, 2012)

As part of the project intervention, ADRA has also contributed in linking farmers to buyers. ADRA in their impact assessment report (2012) indicated that they linked the farmers to potential buyers, fruit canning industries like the Blue Skies Company and the like. Although currently only 3% of the world production of mango is traded globally, this represents a noticeable increase over the quantities traded 20 years ago. The North American market is supplied by major producers such as Mexico, Brazil, Peru, and Haiti. The European Union countries and Eastern Europe, mainly buy mangoes from South America, Brazil, Equador, Peru,

and Asian countries (India, Pakistan, Philippines, Indonesia) and African countries such as South Africa, Burkina Faso and Niger. The Middle Eastern and West Asian Market are supplied by India, Pakistan, Egypt, Kenya and South Africa. South East Asian market is supplied by the Philippines, and Thailand. In 2005, world exports of mangoes reached 912853 metric tons, totaling USD \$543.10 million (FAOSTAT, 2007). India replaced Mexico as the largest producer of mangoes in 2005. The most popular export varieties continue to be Kent, Tommy Atkins, Haden and Keitt though other varieties such as Alphonso, Julie and Zill are also popular in certain markets. Green cultivars such as Ataulfo and Amelie are only now being widely accepted on the international market. New Asian cultivars coming from India and Pakistan are also gaining wide acceptance in the Asian and Middle Eastern Markets. Processed mango fruits market is also increasing. A survey by ADRA in collaboration with Export Development and Agricultural Development Fund (2013) indicated that Ghana's export of mango has averaged only 394.2mt over the last ten years while annual global demand for mangoes has been increasing steadily. From 2005 to 2009, Ghana's export to the European Union averaged 541mt (see Table 4.3). The largest volume exported was in 2008 when 857,571kg (857mt) valued at USD \$521,826 was exported. Ghana's mango export is only about 0.57% of Europe's annual mango import of 150,000mt valued at USD \$250 million.

**Table 4.3: Ghana's mango exports from 2005 to 2009**

Year	Quantity(Kg)	Value(USD)
2009	434,873	234,950
2008	857,571	521,826
2007	823,726	998,155
2006	182,464	83,207
2005	407,231	134,559

Source: ADRA, 2013

The Government of Ghana (GoG) has engaged the World Bank and USAID in supporting agricultural development project with the principal objective of improving investment for agribusiness and developing Private-Public Partnerships (PPPs) and smallholder linkages. This is aimed at increasing on-farm productivity and value addition. In 2012, the Millennium Development Authority (MiDA) constructed a pack house for the mango producers in the district. The pack house is meant to assist mango farmers to store their mangoes when they are harvested. Farmers who usually export their products send their fruits to the pack house. Plate 1 below shows the process from harvesting of the mango fruits to the pack house. When the fruits are harvested from the tress, they are put in boxes as shown in Plate 1 below. They are carried by trucks to the pack house where they are carefully washed and packed into boxes. The boxes are arranged in a refrigerator and finally taken out for sale to the companies or for export to other countries.

**Plate 1: Preparing mango for export (from harvest to Pack house)**



Source: Field data, 2012

ADRA introduced commercial mango farming into the Eastern Region in 1996/97 through USAID/ADRA food security project. ADRA then extended mango cultivation into Brong Ahafo in 2003 and into Northern, Upper East and Upper West regions in 2004. A total of over 3000 farmers were supported with inputs on credit to establish about 5000 acres of mango farms. ADRA trained nursery operators to produce grafted mango seedlings for sale to farmers. In 2006 ADRA worked with TIPCEE-USAID project to undertake GPS mapping of all existing mango farms supported by ADRA/USAID project. The project linked the mango farmers to Blue Skies Company for marketing of their fruits. In 2005, the National Best Mango Farmer, Eastern Regional Best Farmer, Yilo Krobo, were all ADRA clients who had been introduced to mango cultivation and supported in USAID/ADRA project. The farmers interviewed in Huhunya however complained of lack of proximity to the markets due to poor roads. It was added by one male farmer that:

The fruits are bulky in nature and I do not have the resources to transport them to the market. The market women also find it difficult to come to the farms to buy the fruits and this is as a result of the poor nature of our roads. I really harvest lots of mangoes, but they all get rotten on the farm. (Nartey, 18 November, 2012)

In order for farmers to get market access, they are required to produce standard or quality mangoes for sale. The quality requirements for mangoes are the following; The mangoes must be intact, firm and fresh in appearance. Produce affected by rot or deterioration such as to make it unfit for human consumption is excluded clean, practically free from any visible foreign matter free from black stains or trails which extend under the skin free from pests and practically from

damage caused by pests free from damage caused by low temperature free to any abnormal external moisture free of any foreign smell and taste. The mango fruits from Ghana are graded and packaged in 5kg telescopic cartons, in counts of 6-12 per box with each fruit in a compartment. It has a shelf-life of between 10-21 days depending on the variety.

**Table 4.4 Size of mangoes**

Size (determined by the weight)	Weight in grams	Size difference in grams
A	200-350	75
B	351-550	100
C	551-800	125

Source: Field data: 2012

Mango exports into the countries of European Community have increased significantly in recent years. This applies not only to the traditional importers of mangoes, namely the United Kingdom, France, and the Netherlands, but also especially to Germany, where this fruit was still relatively unknown at the beginning of the 1980s. There is every indication that the growth trends in these markets will continue during the next decade as a result of the health consciousness of consumers. Three principal limiting factors for sales of mangoes in these markets are the prices of mangoes their seasonal fluctuations and pest infestation. The future developments of sales will depend on the extent to which it proves possible to achieve an optimum price/quality relationship and maintain it all year round. Countries that supply fresh mangoes during the winter months have good prospects, since they can at least partially fill in the gap created by lack of domestically grown fruit in Europe during that time of the year. The prerequisite for successful long term sales, however, is the ability to supply top quality fruit. Highest priority must therefore be attached to quality control at all phases to the supply chain.

The U.K. is the largest market for mangoes in Europe with France, Germany and Netherlands emerging as important markets. The emerging trend is that the percentage of mangoes going to the supermarkets is on the increase. An important feature of the fruits supplied to the supermarkets is value addition, in response to rapid unwillingness or loss of interest of the average English housewife to prepare meals, using unprocessed or raw agricultural produce. Processed mango fruit as fresh cut and cubed mango in fruit salads (as produced by Blue Skies in Ghana), mango juice, mango puree, pickled mango, dried mango chips is on the increase. The study indicated however, that farmers in the Yilo Krobo district are unable to process the fruits from the primary or fresh state to a secondary commodity. This is different in the case of India, Pakistan and Brazil who are the largest exporters of mango products. (ADRA, 2013). One farmer lamented:

I do not have adequate resources to process the fruits. I only sell the fresh fruits to the local market. I will process when I get the financial support to purchase inputs for processing (Naakwor, 12 November, 2012)

The preferred choice is sliced mangoes as against whole raw ones. Another emerging feature of the U.K market is the increasing preference for smaller fruit sizes, even for those who will purchase unsliced fruits. The U.K government has initiated a policy of supplying fruits to pupils in schools as a means of discouraging the consumption of sweets and sugary pastries. This has increased the demand for smaller mangoes, which do not need to be sliced into pieces for distribution. Currently, small sized mangoes and bananas are supplied mainly from South America. This means that Ghana's local mangoes which are small in size could also be exported

to meet the growing demand for small fruits. On the other hand, demand for bigger fruits is on the increase in the local markets. Ghana's mangoes get to our main markets and consumers by air to the shops or wholesale of importer or distributors and export companies export direct to some retail shops for sale to consumers. A market brief report by the Ghana Export and Promotion Council (2005) indicated that the United Kingdom is the highest importer of the mangoes and it applies 0% tariff on mangoes. Ghana is also a member of the ACP Nations Group and therefore enjoys 0% tariff on the U.K market. Mangoes are traded on FOB or CIF basis subject to agreement between the parties. Payment is usually cash against document by letter of credit (L/C) both confirmed and irrevocable is used with certain origins. The MNS of the ITC collects information from a network of correspondents worldwide in order to provide timely and detailed price and market information on various products including mangoes. Ghana's mangoes are promoted through participation in major international trade fairs such as Fruit Logistica in Germany, SIAL in France, Anuga in Germany and AGF TOTAL in the Netherlands. The Ghana Export Promotion Council normally coordinates Ghanaian exporters to these fairs where fresh mangoes from the various varieties (Keitt, Kent, Palmer, Haden etc) are displayed together with their brochures at Ghana's stand. (Market Brief, 2005)

#### **4.6 Chapter Summary**

Based on interviews and responses to the mango project, more males seemed to have participated in the mango project than females. Access to land for farming was seen as a major problem in the area as farmers seemed to have financial difficulty in purchasing lands for mango production. Also, the mango production involved a lot of active work and this seemed to have deterred many women from engaging in it. It was also noticed that only a few farmers have private ownership

of lands and these few ones have not been able to expand their mango farms beyond 5 acres. In the interviews, farmers commented on the inadequate income they earn from the mango production as they share whatever they produce with land owners. Some other farmers also lamented that rent charges were high and therefore had to resort to family lands which results in family conflicts. This constrains positive livelihood outcomes because inadequate access to land (natural capital) which is the basic asset for agriculture is not easily accessed by farmers. It was also noted from the study that some popular varieties of mango that are produced currently in the country include Keitt, Kent, Haden and Palmer. The Keith is bigger in size and it was interesting to identify that, Keith was the most sold in local markets as consumers preferred bigger mangoes. Those that were exported to especially the UK were comparatively small as the UK government has initiated a policy of supplying fruits to pupils in schools as a means of discouraging the consumption of sweets and sugary pastries. This has therefore increased the demand for smaller mangoes. Of all the stages in the mango production process, farmers were most concerned with marketing of the produce. It was noted from the study that majority of the farmers sold to the local markets and only a few exported. This was largely because the fruits could not meet international market standards due to their poor quality. It also appeared that selling of fruits to the local market by some farmers was a problem as fruits were affected by pests and disease. Market opportunities were limited in the case of Huhunya community as roads leading to the farms in the area are very bad.

## **CHAPTER FIVE**

### **EFFECTS OF ADRA’S PROJECT ON PRODUCTION AND FARMERS’ LIVELIHOOD**

#### **5.1 Introduction**

This chapter examines the effects of ADRA’s mango production project on livelihoods of farmers. The section starts with an examination of the features of the ADRA loan scheme. The final section deals with the challenges faced by farmers in adoption of the project.

#### **5.2 Features of ADRA’s loan scheme**

Banks and other lending institutions think about loans as being either for personal or for business purposes. Personal loans include a home mortgage or loans for a car or truck or other personal purchases. Business or commercial loans may be used for buying real estate, equipment, working capital, or a line of credit for a business. In today’s world, it is unusual for a lender to make a first loan to a person looking to buy a farm (Kaupilla, 2000). More likely, a first loan might be used for livestock or equipment, but probably not for a brand new herd/flock or these may be too risky. ADRA introduced commercial farming in 1996/97. ADRA provided credits to farmers in the form of seedlings. The micro-credit provided by ADRA was a means to improve the living and working conditions of small-holder farmers in the district. The financial assistance given was not a grant to the farmers but “soft loans” to enable them increase their productive capabilities. Beneficiary farmers were expected to pay back the loan with a minimal interest rate of about 15% within the farming year. The interest rate, when compared with what pertains in formal financial institutions such as the banks and registered borrowing agencies was considered low in that, some rural banks charged as much as 40% interest rate while some private money lender in the district charged as much as 100% over a farming period. (ADRA, 2012). Again, compared

with others, ADRA's credit facility was devoid of cumbersome administrative procedures and the timely release of the fund ensured that the fund was effectively channelled into the purpose for which the loan was acquired. The credit was provided timely at the beginning of each farming season within the project years. The credit was provided to groups of mango farmers that use joint-liability (peer pressure) to enforce loan repayment. The peer group lending, ensured that groups of borrowers guarantee each others' loans so there was the pressure for borrowers to pay back on time. Again, ADRA ensured that the process of loan application, approval and disbursement were simplified to ensure timely disbursement. The conditions created by ADRA in its loan disbursement scheme possibly affected the effective utilisation of the loans and ensured high economic returns, hence the high repayment rate. The field survey revealed that over 60% of the beneficiary farmers were able to make full payment within the farming year that the loans were collected. A little over 30% of farmers were found to have defaulted in payment at the time of the survey. Asked about why they had not been able to pay the full amount, a majority of the farmers cited climate conditions as the main cause. The farmers especially in Oterkpolu further explained that the soil could not support the production of mangoes and therefore they could not harvest the mangoes to use the income to repay the loans. They however promised to pay back the outstanding amount to enable them qualify for further assistance from ADRA in other projects. The high repayment rate could also be explained by the fact that there was a strong collaboration between ADRA field staff and the beneficiary farmers. The result obtained from the field survey could be compared with a similar project conducted by Asamoah (2009) in Sekyere West District on a project by IFAD which administered micro-credit facilities to the rural poor to enhance their productive capabilities. Since the facility was disbursed on "soft" terms, (i.e. no interest rate charged on the loans but only handling charges

were charged), beneficiaries were able to repay the loans within the specified time period. The prompt payment of the loans ensured the sustainability of the scheme. Comparing the IFADs and that of ADRAs project in the Yilo Krobo District, it became apparent that the IFAD project did not select the beneficiary farmers through vigorous assessments procedure, the beneficiaries of the ADRAs micro-credit facility were however selected by criteria. With that of IFAD's selection, interested small-holder farmers were asked to constitute themselves into groups so that group members could guarantee the loans for one another. No baseline survey was conducted on the beneficiary farmers to ascertain their eligibilities to the project. Due to the way the beneficiary farmers were chosen, most of the farmers in the hard core poverty group in the district who needed assistance were left out of the project. This affected the project objective of assisting the most vulnerable farmers in the District. Notwithstanding the few flaws of the program such as the difficulty in identifying needy farmers, the assistance given to the small-holder farmers in the district has contributed immensely to increase economic activities (farm and non-farm), increased employment, raised farm income and reduced the incidence of poverty in the area. The performance and effects of the intervention have demonstrated that the intervention could be used as a model for reducing rural poverty in Ghana and Africa in general.

### **5.2.1 Mode of operation of the scheme**

In order to ensure sustainable livelihood approach to poverty reduction, Carney et al (1999) use some principle on sustainability of livelihood programs. It includes the need to operationalize livelihood approach through a dynamic and interactive programming process which includes identifying potential geographic areas using secondary data to find where poverty is concentrated, identify vulnerable groups and the livelihood constraints that they face, collect

analytical data (guided by a livelihood model), taking note of trends over time and identifying the indicators that will be monitored and select the set of communities for program interventions. ADRA's selection included communities that were conflict-free and had a history of implementing a successful project by any donor. The mode of selection of farmers was that farmers must be smallholders and must be food insecure (this was determined by a baseline survey on months of food shortage in various households). Farmers must also own an acre of land or must be able to negotiate for leasehold. The farmers must also be willing to belong to a group of 20 to 25 farmers. They must be willing to abide by rules and regulations in the group and the project. The farmers are also expected to be willing to learn and practice technologies through the project.

ADRA supported the farmers through community mobilization, sensitization, and the creation of farmer groups, training and promotion of improved agricultural and natural resource management (NRM) practices, supply of agro-inputs (improved mango seedlings, fertilizers). The agro-inputs were however given to them in the form of loans. Farmers were also supported to grow food items like maize, cassava and vegetables (okro, pepper, tomatoes) to ensure food security in various households. They were also to sell the surplus to pay for the loans they received and to use some to supplement income from the mango during off-mango season period. The farmers were also provided with agricultural extension services, collaboration with relevant public and private institutions and linked to markets. The main objective of the project was to develop mango into an export crop to provide employment and income to farmers and mango value chain actors and consequently foreign exchange earnings to the country. It was

hoped that the success of the project would contribute to poverty reduction and improve the living standards of beneficiaries.

### **5.3 Effects of ADRA's intervention on economic activities of farmers**

It is believed that levels of economic activities normally improve when conditions needed for such improvement are created. Farmers were therefore interviewed on performance of their economic activities prior to ADRA's intervention and after the intervention to find out whether the intervention has been beneficial to them. Over 80% of the farmers said they had engaged in farming, well over five years prior to ADRA's intervention but did not register any significant improvement in their farming activities due to lack of productive resources such as micro-credit, extension services and market outlets. With the introduction of ADRA's intervention however, over 70% of the respondents felt the level of their economic activities have been encouraging and have improved considerably and that, they were able to meet the basic needs of their household mainly through the proceeds from the mango business. A widowed mother of three commented:

I am very pleased with ADRA's intervention , the mango business has been good. I have decided to invest all the income I earn from the mango business in my children's education. I hope to take care of them with the money I earn till they complete school.  
(Awonye Comfort, 12 November 2012)

About 30% of the farmers felt there had not been any significant change in their output as well as income levels. They contended that they have not been able to meet the basic needs of their

respective households through the intervention. Ill-health, weather failure and inadequate access to markets were identified as the reasons why some beneficiary farmers could not register any positive change in their output and income levels as well as their ability to support their family needs.

#### **5.4 Impact of project on mango production and livelihoods**

As the livelihood framework posited, the livelihoods approach looks at development in a way that is people-centred. By analyzing people's existing assets, it builds on strengths, seeks to understand people's own needs and priorities, and addresses the complex issues and relationships that affect their livelihoods. The approach is dynamic, analyzing change over time so that lessons can be learned and negative patterns mitigated. At the same time, it recognizes that vulnerability to external shocks and trends is an inevitable livelihood issue (CARE, 1999). To see if this was the case in the study communities, questionnaire responses about impact on livelihood were analyzed. By drawing attention to the multiplicity of assets that people make use of when constructing their livelihoods, the sustainable livelihood approach produces a more holistic view on what resources, or combination of resources, are important to the poor, including not only physical and natural resources, but also their social and human capital. The approach also facilitates an understanding of the underlying causes of poverty by focusing on the variety of factors at different levels that directly or indirectly determine or constrain poor people's access to resources/assets of different kinds, and thus their livelihoods. Finally, 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. In the discussion that follows, the effects of the project on livelihoods are discussed.

#### 5.4.1 Positive impact of ADRA's project on livelihood of farmers

It is noted that the positive impact of ADRA's activities is in accord with the World Bank (1995) definition of NGOs as private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services and undertake community development. To see if this was the case in respect to this study, farmers were asked to give the positive impact they have had from ADRA's mango project. Over the multiple responses given, farmers were asked to indicate the greatest impact they have had from the project. The responses are shown in table 5.1 below.

**Table 5.1 Positive impact of ADRA's support on livelihoods of mango farmers**

Impact	Frequency	Percent
Good farm practices	24	25.30%
Farm expansion	13	13.70%
Improved incomes	10	10.50%
No Impact	48	50.50%
Total	95	100.00%

Source: Field data, 2012

#### 5.4.2 ADRA's Training and Extension Services on Crop Production

Agriculture provides a livelihood for more than 60 % of developing country populations, and in many countries, farm families make up 80 % or more of the population (World Bank, 1990). Agriculture has already reached the limits of land and water, thus future increases in food production must exploit biological yields on existing land (World Bank, 1997). In the face of this technological challenge, agriculture faces a crisis in many parts of the developing world. In the

industrialized world, opposition to high input agriculture is mounting in response to such issues as animal rights, fears of genetically engineered products, soil and water pollution. In Asia, the growth rate fostered by the green revolution has slowed. In Africa, per capita food production has declined in most years since 1970 and is reflected in recurrent famine. Several approaches have been tested, and adopted by countries in Africa to improve the technology dissemination process. There are common characteristics which all extension approaches share. They all function through non-formal education, all have content related to agriculture, they all use communication techniques and aid and finally they all seek to improve the capabilities of rural people. The public sector agricultural extension services in Ghana has been characterised by a scattered system with various departments of the Ministry of Food and Agriculture (MoFA) providing their own form of training to farmers. The system was found to be ineffective and therefore led to the unified extension system, under the National Agricultural Extension Project. ADRA in collaboration with MoFA has been providing extension services to farmers in the District since the beginning of the project. Services rendered include teaching farmers how to plant in rows, appropriate planting densities of crops, regular weeding and application of organic fertilizers and agro-chemicals to control pests and diseases. Early harvesting of cereals is also encouraged to reduce insect infestation on the field. Treatment of cereals with chemicals to reduce post-harvest losses was also encouraged. Improved varieties of crops, land preparation and post-harvest management were part of the various strategies promoted by the extension officers. In some areas, new crop varieties were promoted and encouraged. Information gathered through the study indicated that yields of food crops in general were perceived to have gone up considerably since the introduction of the extension services under ADRA's project. Over 95% of the respondents admitted that, the extension officers provided timely advice in all aspects of

their farming activities including management, production, marketing, conservation techniques, new technology, financing, fertilizer application, disease and pest control, agro-processing and storage techniques. In addition to the provision of extension services to the small-holder farmers, the extension officers were also involved in educating and training the farmers in simple book keeping, to enable them keep track of all transactions in their farming activities. Again the officers encouraged farmers to open bank accounts with nearby banks in order to facilitate financial transactions with the banks. Findings from the study shows, that 25.3% of the farmers indicated that the training they received from ADRA helped them to manage their farms. A 44 year old farmer commented on how he has been able to manage and maintain his annual crops alongside the mango production. According to him:

The series of training and on-farm demonstrations in the use of locally available poultry manure as well as improved timing of various activities in farming have increased my yield by about 35% in the last harvesting season. For the first time I earned a net of about GH¢480 from selling to an exporter of mangoes. (Emmanuel, 12 November 2012)

Another family head of five said:

I was just planting my crops without any measure. In all these years I used to harvest just a few bags of maize and vegetables. I am grateful to ADRA for their intervention. Their training on methods of farming helped me to manage my farms and now I am able to harvest more than what I used to produce. (Tetteh Abbam, 12 November, 2012)

From the interview with these farmers, it was evident that the provision of technical training by ADRA has helped the farmers to manage their farms and they have been able to expand their farms due to the training they were given.

### **5.4.3 Food Security**

The result from the study indicated that, ADRA's intervention improved food security situations in farmer households. As indicated by Nanor (2008), one of the most important issues of reducing poverty among the poor, is helping poor households get access to food to reduce malnutrition. ADRA provided farmers with credit to grow in addition to the mangoes, annual crops in addition to mangoes as a way of providing food for the household. Providing credit and support to small-holder farmers who do not have collateral security to access credit from formal financial institutions have been the key element of ADRA's project in the Yilo Krobo District. Credit disbursement and recovery procedures of formal banking institutions are unsuitable for the small-holder producers hence the need to find alternative ways of providing micro-credit to the small-holder farmers. ADRA has invested considerable amounts of its resources in helping its member countries and partner institutions to develop a range of financial services for the rural poor. About 75% of ADRA projects provide financial services to the rural poor. ADRA works with the rural poor to develop sustainable, innovative and diversified rural finance systems. ADRA arranges for convenient repayment schemes such as monthly installment payments that ensure effective loan recovery. Micro-credit provision is seen as one way of increasing the productive capability of small-holder farmers. Agriculture requires a vast amount of capital for a successful operation. Capital is needed for procuring vital inputs and services that will enable farmers to produce output that meets both the needs of the farmers' household and the nation as a whole. The provision of this facility has helped boost food crop production in the District

considerably. From information gathered through interviews and focus group discussions, some selected farmers in the communities agreed that food crops production in the district has increased. This has therefore improved food situations in farmer households. A similar study by Asamoah (2009) in the Sekyere West District indicated that the increased production levels coupled with good marketing strategy adopted by IFAD, enabled the beneficiary farmers to increase their food situations considerably. Another study by Tetteh (2010) on effects of cash crops on food access revealed that about 60% of respondents indicated availability of food and good nutrition in families after project intervention by KROBODAN. To see if this was the case in the study communities, beneficiaries were asked to give response on their food situations after the program intervention. About 80% of farmers indicated their food situations had improved. However farmers were asked to indicate the greatest impact from the mango project and it was confirmed by 7.4% of farmers that the greatest impact from ADRA's support was improvement in food situations in their households. The farmers explained that they are able to feed their families from the grains and vegetables they grow. They further indicated that they sell the surplus food to gain some more income. A 58 year old family head of six commented:

The project is good. I grow maize and some other vegetables as tomatoes, pepper and okra. I use some of the maize I grow to prepare kenkey and sell in the off mango season period. The support on production of annual crops alongside the mango has helped me to feed my family. I also use the income to take care of my family. (Awotse Theo, 12 November, 2012)

It has also been noted that poverty reduction and achieving food security have moved to the centre stage of the global development agenda (Rosegrant, 2003). They are the greatest challenges facing the world today and are indispensable requirements for sustainable development particularly for developing countries (WSSD, 2002). World leaders pledged their commitment to eliminate hunger, malnutrition and also halt global poverty by 2015. At the world summit on sustainable development held in Johannesburg in 2002, the international community reaffirmed its commitment to develop national and local programs for sustainable development, poverty eradication and achieve food security. Despite these commitments, the last decade has witnessed an increased poverty level, especially developing and transition countries including Ghana. Clearly, poverty continues to be pervasive, intractable and inexcusable in the developing world, especially in sub-Saharan Africa (Boon, 2004). Poverty and hunger are inseparable and are the most common triggers of the aggravation of poverty. Poverty is a major cause as well as the effect of food insecurity. Sustainable progress in poverty eradication is however critical for improving access to food (FAO, 2006).

#### **5.4.4 Expansion of farm sizes by communities.**

The study sought to identify the impact of ADRA's support on the expansion of mango farms of farmers in the three study communities. Farmers were asked to indicate the number of acres of land they have been able to cultivate after they had been supported by ADRA to produce one acre of mangoes. Significant differences were however observed in the three study communities with respect to the number of acres the farmers in the three communities have cultivated after they had been supported to cultivate an acre each. The results are presented in Figure 5.1 below.

**Table 5.2 Impacts on mean farm sizes of communities**

Community	Size of land				Total
	1 - 5 acres	6 - 10 acres	16 - 20 acres	17 and above	
Akorley	37.6	9.5	2.4	0	49.5
Huhunya	29.5	0	0	0	29.5
Oterkpolu	21	0	0	0	21
Total	88.1	9.5	2.4	0	100

Source: Field data, 2012

In Table 5.2, findings indicate that 37.6% of beneficiaries in Akorley had expanded their farms from between one acre of land to about five acres, 9.5% of farmers had expanded between 6 acres to 10 acres and 2.4% of farmers had expanded their farm sizes between 16 acres to 20 acres. In Huhunya and Oterkpolu, none of the farmers interviewed had expanded their farm sizes beyond five acres of land. In Huhunya, one farmer had lamented:

It was not necessary to expand our farms when we had no market for the mangoes. Customers complained that our roads are bad and had difficulties coming to our farms to buy mangoes. I regret taking part in this project. (Manye Dora, 18 November, 2012)

In Oterkpolu, results indicated that the environmental conditions and nature of the soil could not support the mango production. Literature from the mango production reveals that mango does better on tropical lowlands 300m to 600 m (900ft-1800ft) above sea level. It does not survive on highlands or mountain tops. Mango is also adapted to areas with distinct dry season, usually between 3-4 months continuous dry weather for good floral initiation. Excessive rains during flowering reduce fruit set. The study reveals that the geographical location of Oterkpolu made production of the mangoes unsuccessful. This is because the community is located at the wetter

northwest part of the district and it falls within the semi-deciduous forest zone in Ghana, where humidity is high and this affects fruit set. In addition, high wind speed that leads to poor pollination, flower/fruit drop and fewer fruits. One farmer in Oterkpolu lamented:

About 20 people started but the soil was not favourable for the project so we stopped and cut down all our trees because they had only seized our lands. ADRA was supposed to have tested the soil before engaging us into planting the mangoes. (Amartey, 18 November, 2012)

As the CARE livelihood framework (1999) denotes, the vulnerability context encompasses the shocks such as illness, disasters, conflict, floods, droughts, poor weather, climate change, storms and crops/livestock pest and disease. The external environment which people exist however can constrain livelihood outcomes.

#### **5.4.5 Impact of support on farm sizes and income of beneficiaries**

The mango project was intended to increase farmers' productivity and income. It was also intended to reduce their vulnerability to adverse poverty. The study therefore sought to find the impact of the intervention on farm expansion and income levels from the mango production. In view of this, responses to the number of acres of mango farms the farmers have been able to cultivate given support to produce one acre of mangoes was analysed.

**Table 5.3: Impact of support on farm sizes of individual farmers**

Farm size(hectare)	N	Mean	Mean difference	t	Df	Sig. (2-tailed)
Start	95	0.4048	-0.6438	-4.719	94	.000
Current	95	1.0486				

Source: Field data, 2012

Table 5.3 indicates the average farm size of farmers at the start of the project and their current mean farm size. Results from the study indicate that given an acre support of mango production by ADRA, farmers have been able to expand their farm sizes to at least 1.0486 hectares (2.59 acres). As shown in Table 5.2, the average acre at the start of the project for each farmer was 0.4048 acres, and the average acre at the time of study was 1.0486 acres. The mean difference was 0.6438. A statistical test value of 0.00 indicated that there is significant impact of support on farm expansion. That is, the support by ADRA on seedlings to grow an acre of mangoes was significant in expanding farmers' farms. It can further be explained that farmers had used the income from the one acre of mango they were supported to cultivate to expand their farm sizes to an average of about two acres. One possible explanation for expansion of farm sizes can be inferred from an interview with a male farmer who commented:

I negotiated for an acre of land when ADRA introduced the mango project in Akorley. I got support for seedlings from them to start the mango business. The seedlings were however given to me on credit. ADRA also supported me to grow maize, pepper and Okro. I used income from the maize and vegetables to pay for part of the loan. After five years when the mango matured, I used some income to pay for the rest of the credit I

have obtained from ADRA. I also used some income to purchase additional land to expand the mango production. With the income from the mango, I have been able to expand to six acres of mango farms, I own four out of the six acres and the remaining two acres of land, I share crop with the land owner. (Ananor, 13 November, 2012)

#### **5.4.6: Impact of support on income levels and poverty reduction**

One way to assess the contribution of agriculture to poverty reduction is to look at its share of the total household income. The results from the study indicated that the main sources of household income derived from the sale of mangoes and farm food crops. Non-farm income was made up of incomes accruing from any activity apart from agriculture. These sources included old-age pension, remittances, or revenue from family business such as rent from family properties. The non-farm sources had very minimal contribution to household income. From Table 5.1 a total of 10.5% of farmers indicated that the greatest impact from mango project was that the project had improved their incomes. The data indicates that income from small-holder farming plays a key role in total household expenditure and a key element in the livelihood activities of farmers. Intervention such as that of ADRA aimed at improving farm income in the district has played an important role in solving rural poverty in the study communities. The data also suggests that majority of the people in the rural areas depend on agriculture for their livelihood and that any government policy that may be detrimental to agricultural development with specific reference to small-holder farming in the country could have adverse effect on rural people. The data further suggests that helping small-holder farmers improve upon their production levels can be an effective way of putting more farm income into the pockets of farmers. This could be an

effective way of reducing poverty among rural farmers since farm income form the major source of the farmers' household income. In conformity with the conceptual framework outlined in chapter two, given the needed support to small-holder farmers in the form of livelihood assets (human, social, physical, natural as well as financial) and putting appropriate structures and legislature in place (structures and processes), small-holder farmers could improve upon their economic activities and raise the levels of economic returns from it. This process could in the long run reduce farmers' vulnerabilities to adverse shocks and improve their well-being. Farmers could also purchase more productive assets and better manage and utilise the natural environment for posterity.

The income differences of beneficiaries and non-beneficiaries were analyzed and the results presented in Table 5.3. Significant differences were observed in farmers' income. Technological progress is the ultimate source of long-term economic growth (Romer, 1990), and the difference in the technology level can account for most of the difference in income per capita (Caselli, 2005). In the case of less developed countries (LDCs) where agriculture is the dominant sector, productivity growth in agriculture through adoption of new technologies plays a major role in income growth (Todo et al, 2011). Income is widely used as a welfare measure because it is strongly correlated with the capacity to acquire many things that are associated with an improved standard of living, such as food, clothing, shelter, health care, education, and recreation. Income gains are a valid indicator of agricultural development project impacts because the productivity gains attributable to access the mango project logically should be reflected in income gains both directly and indirectly.

**Table 5.4: Impact of support on income levels**

Variable	Sample	Beneficiaries	Non- beneficiaries	Diff	S.E	t-stat	Sig. (2- tailed)
Income/ha	Unmatched	2250.25	2265.05	14.8019	434.706	-0.032	0.757
(GH¢)	ATT  (Beneficiaries)	2250.25	1963.55	286.7	145.163	3.090	0.003

Source: Field data, 2012

The second objective of the study was to find the impact of ADRA's support on farmers' livelihoods. The livelihoods framework states that security of food, health, income, nutrition water, shelter, education, community participation and personal safety as components of a successful livelihood outcome. To see if incomes had improved after ADRA's intervention, responses on income levels were analysed. The study revealed that access to loans played a fundamental role in increasing farmers' income. This is because the modes of access to these loans and the rules and conditions of access, as policy instruments, had the potential of increasing agricultural output and aggregate income growth, helping to reduce poverty and inequality and improving environmental sustainability (de Janvry et al, 2005). Findings from the study as shown in Table 4.6 indicate that beneficiary farmers had an average annual income of GH¢2250.25 per hectare of mango farm. The non beneficiaries had an average of GH¢2265.05 per hectare of mango farm. The effect of the mango project on farmers (beneficiaries and non-beneficiaries) is the Average Treatment Effect (ATE). It is the average of the impact across all the individuals in the sample. The untreated group is the non-beneficiaries, therefore, the difference in income of a non beneficiary and his/her counterfactual (income if he/she had adopted) is the Average Treatment Effect of the untreated farmers (ATU). For this study, the

interest was the Average Treatment Effect of the Treated individuals (ATT), which is impact of the intervention (mango project) on those farmers who participated. The difference in average annual income per hectare of mango farms of beneficiaries who found matches was GH¢14.8019, which is the ATT with a test statistic value of 3.090 from the matching method. The results from matching the two groups according to their farm sizes indicates that, beneficiary farmers would have earned GH¢1963.55 per hectare of mango if they had not joined the project. This means that they earn an income difference of GH¢ 286.7 per hectare more from joining the project. The significant difference at 5% probability level ( $p < 0.05$ ) in income per hectare of mango indicated that the support for the mango production significantly increased the income of farmers who accessed the project. This confirms what de Janvry et al (2005) stated that access to credits has the potential of increasing aggregate incomes. In sum, it can be inferred from the study that when farmers are offered loans, they have the potential of increasing productivity and thereby reducing poverty rates in their communities.

### **5.5 Challenges faced by farmers in using the ADRA loan facility**

As depicted in the conceptual framework in Chapter Two, there is a relationship between all the livelihood actors, (Livelihood Assets, Institutions/Structures, Livelihood Strategies and Livelihood Outcomes). Lack of one actor may negatively affect the entire structure. For instance, lack of livelihood assets in the form of human, social, financial, physical or natural capital may have a negative effect on livelihood strategies as well as livelihood outcomes. The third objective of this work was to identify some challenges farmers faced in taking part of the project. Farmers were however asked to identify the problems they faced by taking part in the project. Major challenges identified by farmers in the communities are presented in Table 5.4 below.

**Table 5.5: Farmers' response on major challenge in accessing the mango project**

Challenge	Frequency	Percent
Challenge of repaying loans	19	20%
No physical cash as promised	13	13.70%
Inadequate access to markets	35	36.80%
Climate conditions not supportive	28	29.50%
Total	95	100.00%

Source: Field data: 2012

### 5.5.1: Loan repayment

ADRA supported the farmers with agro inputs and some were given cash to use to hire labour on their farms. Financial capital denotes the financial resources that people use to achieve their livelihood objectives. Financial capital is probably the most versatile of the five categories of assets since it can be converted with ease into other types of capital. Ironically, this asset tends to be unavailable to the poor. In the study area, access to financial capital, is a major challenge to the small-holder farmers. None of the sustainable livelihood approaches really deal with the issue of how to identify the poor that you are trying to assist. Also, the way resources and other livelihood opportunities are distributed locally are often influenced by informal structures of social dominance and power within the communities themselves.

Gender is an aspect of social relations and to the extent that relations between men and women are characterized by marked inequality and social domination, they obviously form part of the problem. The basic idea of the SL approach is to start with a broad and open-ended analysis, but this requires a highly flexible planning situation which rarely exists. The best hope is to ensure

that already identified sector development initiatives fit with people's livelihood strategies and make them better at responding to the constraints and opportunities affecting the poor. The findings indicate that ADRA supported the farmers with seedlings in the form of loans and farmers were expected to pay back in instalments. Access to credit facilities is expected to enable the poor increase their household incomes, build assets, and reduce their vulnerability to crisis. According to Littlefield et al (2003) these advantages should enable the poor invest in education, health, overcome vulnerability and meet a variety of other cash requirements. The study further reports that this should translate into better nutrition, and improved health outcomes, reduction in illiteracy rates and in greater empowerment. In the rural communities, providing productive credit facilities to the poor, usually small-scale farmers is perceived as a means of increasing food production and raising incomes and permitting greater consumption and savings, culminating in further investment (Meyer, 2001). El-Solh (1999), however, argues that credit facilities cannot by itself generate income but should be perceived as an important input in the process of developing micro-enterprises. The state, according to Singh (1986) is bound by the constitution to provide improvements in the quality of life in rural areas but have not being able to do so very well in many developing countries and NGOs and other non state actors are those who are on the ground in these unattractive areas promoting bottom-up development. Similarly, Milliar (2005) wrote that activities of some local and foreign NGOs in Ghana have transformed whole communities and have been beneficial and helpful to a lot of rural dwellers contradicting what Lewis & Wallace (2000) who stated that NGOs are inadvertently doing more harm than good. The result indicates that although each beneficiary received loans in the form of seedlings and agro inputs to start the mango business, 20% of farmers indicated that they had challenges in repaying the loans. ADRA-Ghana's Baseline

Survey (2002) indicates that farmers' major production problems include declining land productivity and insufficient fertile land for farming. A farmer lamented:

Our soil was not supportive and so the trees did not flower. The agreement between ADRA and us was that, we repay loans in instalment after we sell the mangoes by the end of the project. However the trees did not do well here so we incurred losses and therefore could not repay. ADRA was always on me to repay the loan and I have vowed not to take part in any project ever. (Nuettey, 18 November, 2012)

The soil and climate condition in the place was not favourable to producing the mangoes. This suggest that, ADRA should have tested the soil or could have designed the project with the farmers to know which tree crop does well in the area. An alternative tree crop project other than mango production would have been successful in those areas where mangoes do not do well.

In addition, Table 5.4 also shows that 13.7% of supported farmers stated that they did not benefit because they were not given physical cash as ADRA promised. Also, 36.8% of farmers indicated that they could not trade off their produce due to inadequate markets, while 29.5% farmers indicated that the soil and climate conditions were not favourable for the production of the fruits.

### **5.5.2 Challenge of marketing of mangoes**

Marketing of products could serve as a great incentive or disincentive to virtually all productive ventures. According to Hedge (1990), the importance of tree crop production to farmers depend among others on assured demand for the produce and ready market outlets, minimum support price, at which tree growing is profitable and generation of cash surplus as the most powerful

incentive for most farmers. The important role of markets in tree growing is further highlighted by an observation of a participant in a farm forestry project in Gujarat, India and quoted by FAO (1989):

Having invested heavily in planting and maintaining the trees we waited patiently for four years. Now it is the end of 1986 and we have not been able to sell the trees. There are no buyers. The Lokhariti workers are hiding away from us and the Forest Department Official who used to visit us has been transferred to another place, so we have nobody to turn to. We see this business of farm forestry as a disaster for our people.

The scenario above depicts the frustrations farmers go through if they cannot market their products: it underscores the risk aversion tendencies of farmers in adopting tree planting practices. It is only with a co-ordinated effort to market the agricultural produce at a good price that tree crop projects can be implemented successfully with the active participation of the rural people (Hedge, 1990). In addition, small-holder farmers often face difficulties in accessing markets for their produce. Low population densities in rural areas, remoteness of most settlements and high transport costs are barriers in accessing markets. The farmers are further constrained by lack of information about markets, business skills, and collective organization that could give them the power to improve upon returns on their hard work.

ADRA worked towards solving the problem of marketing by focusing on two broad areas. The first one was to assist the mango producers to develop marketing skills and organisational abilities through the formation of co-operative marketing societies. More than five farmer marketing societies have been formed in the district since the inception of the project to collectively bargain for better prices. The second one was to link farmers to international markets. As part of the marketing strategy and to curb post harvest losses, farmers were

encouraged to make use of the few existing storage facilities built by the Millennium Development Authority. All these strategies were done with the view of improving the farm income of the mango farmers in the District. In addition to the storage facility, ADRA also trained a number of farmers in the district in agro-processing to curtail spoilage of mangoes.

Many of the staple food crops grown in the country require some form of processing to enhance the marketability, preservation and value addition. Shelling, drying, milling, and simple extraction are the major food processing techniques in the rural areas. ADRA provided training in agro- processing to farmers. About 80% of the farmers interviewed have been provided with simple, traditional, labour-intensive, small-scale agro-processing training to enhance food preservation. About 60% of the farmers interviewed said, with the introduction of the marketing arrangement as part of the ADRA's intervention, they were able to sell their farm produce at higher prices especially in the minor seasons. The estimated average net annual income per acre of mango was about GH¢1963.55. During the project period, the average net annual income grew in a progressive manner with an average annual income of GH¢2250.25 as at time of the study. Farm income was the main source of household income for over 90% of the farmers interviewed. The result thus confirming the proposition that ADRA's marketing strategy has had a positive impact on farmers' income. This was however not the case for some beneficiaries. A total of 36.8% of farmers indicated that the project had not improved their economic situations. This is because they could not sell off the mangoes after they harvest. This is due to inadequate access to market facilities. One woman in Huhunya lamented:

I put in all effort to produce the mangoes but our roads are bad and due to the bulky and perishable nature of the fruits, market women are unwilling to come to the farm and buy the fruits. (Paddikie, 18 November, 2012)

A rural poverty report by IFAD (2011) suggests that strong links to markets for poor rural producers are essential to increasing agricultural production, generating economic growth in rural areas and reducing hunger and poverty. Improving these links creates a vicious cycle by boosting productivity, increasing incomes and strengthening food security. Better access by small producers to domestic and international markets means that they can reliably sell more produce at higher prices. This in turn encourages farmers to invest in their own businesses and increase the quantity, quality and diversity of the goods they produce. There are many pieces to the puzzle, however, safe storage facilities, affordable transportation are basic needs. In addition to infrastructure there is information knowing in real time about market prices and demand is vital for participation in modern value chains. Being an active member of an effective farmers' organization also brings many essential benefits. Markets are of fundamental importance in the livelihood strategy of most rural households, rich and poor alike. Markets are where, as producers, they buy their inputs and sell their products and where, as consumers, they spend their income from the sale of crops or from their non-agricultural activities, to buy their food requirements and other consumption goods. Because of this, rural poor people in many parts of the world often indicate that one reason they cannot improve their living standards is that they face serious difficulties in accessing markets.

The low population densities in rural areas, the remote location and high transport cost present real physical difficulties in accessing markets. The rural poor are also often constrained by their lack of understanding of the markets, their limited business and negotiating skills, and their lack of an organization that could give them the bargaining power they require to interact on equal terms with other, larger and stronger market intermediaries. Furthermore, rural producers from developing countries face significant impediments in accessing rich countries' markets. To help

the rural poor access efficient and more equitable markets, ADRA suggests three types of interventions: field operations, development and sharing of knowledge, and policy advocacy. In field operations, ADRA seeks to reduce the transaction costs between poor rural producers and private-sector intermediaries. This includes supporting the establishment of commercially oriented producer organizations (groups, associations, corporatives), helping and training producers to identify new markets, linking farmers with traders and processors, constructing and improving rural roads, building market information systems etc. Developing the fund's knowledge in the area of market linkages requires improving the process of learning from its own projects. It also requires establishing effective monitoring and evaluation systems, working closely with cooperating institutions to improve impact assessment and supervision, and strengthening partnerships with a range of different players. There should also be a global policy environment that increases market access for the rural poor. The crucial role of market linkages for rural poverty reduction has only recently received the attention it deserves in the development arena. More needs to be done, especially on the implementation side. ADRA is committed to the objective of improving the rural poor's access to markets, and in this context, is seeking ways to effectively increase the market share of the rural poor and improve the terms in which they participate in markets, achieve greater market access and market development for the rural poor; and effectively improve at national, regional and international levels the rules of trade in favour of the rural poor.

## **5.6 Overall impact of the project on livelihoods**

The conceptual framework used in the study is the sustainable livelihood framework, adopted from CARE (1999) as a tool for improving our understanding of rural livelihoods. The model is suitable for this work, because it presents the main factors that affect people's livelihood, and the

typical relationships between the factors that influence people's livelihood. It could be used in planning new development activities and assessing the contribution to livelihood sustainability made by existing activities (CARE, 1999). The main components of the framework are the livelihood assets, structures/processes, livelihood strategies, vulnerability context and livelihood outcomes. These factors interact with one another to produce positive or negative outcomes.

The livelihood approach is concerned foremost with people. It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how these assets convert into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes. However, no single category of assets on its own is sufficient to yield the livelihood outcomes that people seek. This is particularly true for poor people whose access to any given category of assets tends to be very limited. As a result, they have to seek ways of nurturing and combining what assets they have in innovative ways to ensure survival.

The vulnerability context frames the external environment in which people exist. People's livelihood and availability of assets are fundamentally affected by external factors such as critical trends, shocks and seasonality, over which people have limited or no control. The vulnerability factors are important because they have a direct impact on people's asset status and the options available to them in the pursuit of beneficial livelihood outcomes. Shocks can destroy assets directly (in the case of floods, storms, or civil conflict). They can also force people to abandon their homes and dispose of assets (such as land) prematurely as part of coping strategies. A study by Asamoah (2009) on small-holder farmers in Sekyere West District indicated that the farmers were vulnerable to seasonal price changes for their produce, crop

failure since they practice rainfed agriculture, prone to natural hazards such as floods and bushfires and inappropriate government policies that affect their livelihood outcomes. This was similar in the case of this study which also indicated farmers' vulnerability to access to markets, crop failure and policies that affect potential livelihood outcomes.

The livelihood framework identifies five core assets (categories of capital) upon which livelihoods are built. These are human, social, natural, physical and financial capital. Human capital represents the skills, knowledge, desire and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. Human capital appears in the framework as a livelihood asset, that is, as a building block or means of achieving livelihood outcomes. Human capital 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. The term social capital is taken to mean the social resources (such as farmers cooperative societies that supply input at reduced prices) upon which people draw in pursuit of their livelihood objectives. These are developed through social cohesiveness and networks that increase people's trust and ability to work together and expand their access to wider institutions whilst natural capital refers to the natural resource stocks from which resource flows and services useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible resources such as the atmosphere and micro-organisms to tangible assets used directly for production (trees, land, etc.). Within this framework, the relationship between natural capital and the vulnerability context is particularly close. Many of the shocks that devastate the livelihood of the poor could themselves be natural processes that destroy natural capital (e.g. fires that destroy forests, floods and earthquakes that

destroy agricultural land) and seasonality is largely due to changes in the value or productivity of natural capital over the year. Natural capital in the Yilo Krobo District is favourable for economic activities such as farming. Land, which is the major natural capital for agricultural production, is abundant in the study area but access to it is often difficult. Channels of access to land in the District include the family, marriage, share-cropping, lease and outright purchase. Share cropping is the major feature of land tenure in most parts of the district with family heads and chiefs as the custodians of land. Although some individual ownership does occur, it constitutes a small fraction of the District's landmass. About 55.8% of the farmers sampled owned the land they cultivate. The major natural mishaps that frequently disrupts farming activities in the district are pests and diseases.

Physical capital comprises the basic infrastructure and producer goods needed to support livelihood activities. Infrastructure consists of changes to the physical environment that help people to be more productive and to meet their basic needs. Producer goods are the tools and equipment that people use to function more productively (DFID, 2001). The District is served with relatively good feeder roads and waterways linking the producing centres to major marketing centres within and outside the District. Limited accessibility in some parts of the district especially in Huhunya increases the vulnerability of the small-holder farmers, since much of the farm produce rots at the farm gate before getting to the marketing centres. Financial capital denotes the financial resources that people use to achieve their livelihood objectives. Financial capital is probably the most versatile of the five categories of assets since it can be converted with ease into other types of capital. Ironically, this asset tends to be unavailable to the poor. In the study area, access to financial capital is a major challenge to the small-holder

farmers. Despite the existence of many financial institutions such as the Ghana Commercial Bank and private lending financial institutions in the District, small-holder farmers cannot access micro-finance due to the inability to provide collateral securities. Within the livelihood framework are also the institutions and organisations (generally termed as structures and processes) that formulate policies and legislation that shape livelihood strategies. They operate at all levels, from the household to the international arena. They effectively determine: access (to various types of capital, to livelihood strategies and to decision-making bodies and sources of influence); the terms of exchange between different types of capital; and returns (economic and otherwise) to any given livelihood strategy. In addition, institutions and organisations have a direct impact upon whether people are able to achieve a feeling of inclusion and well-being. CARE's livelihood model seeks to promote choice, opportunity and diversity.

Livelihood strategy is an overarching term used to denote the range and combination of activities and choices that people make in order to achieve their livelihood goals. Rural livelihood strategies are aimed at improving well-being, reducing vulnerability, ensuring food security and increasing income. Livelihood outcomes on the other hand refer to the achievements or outputs of livelihood strategies. The livelihood outcomes that appear in the generic framework are effectively introduced to make the section of the framework manageable as each one may not be relevant in any given situation. ADRA, as an international development partner in the Yilo Krobo district has been providing resources in the form of capital assets to the most vulnerable population to enable them achieve their livelihood outcomes. ADRA's intervention program for small-holder farmers in the district was aimed at providing the people with the necessary skills

and financial support to enable them adopt positive livelihood strategies to improve their socio-economic conditions and sustainable use of the natural resources.

### **5.7 Chapter summary**

This chapter has been an attempt to evaluate the effects on ADRA's intervention on the livelihoods of beneficiary farmers in the study communities. Based on interviews and responses, results portrayed that the production levels of food crops such as cassava, maize and vegetables increased dramatically over the project period. Again, it was observed that the income levels of the farmers also increased considerably over the project period. Farmers indicated that production levels of mangoes increased dramatically over the project period. It was also observed that farmers in Huhunya and Oterkpolu were not able to expand their farms beyond 5 acres of mango farms. This was because they did not have adequate access to markets to sell their produce and also the soil and weather conditions were not supportive of the mango production in particularly Oterkpolu. This therefore reduced loan repayment rate because they could not sell what they produced to pay for the loans. Though the rate at which loans were recovered was found to be discouraging, farmers were willing to repay loans when offered market opportunities for their produce. The results however indicated that the overall impact of the project was positive.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Introduction

This study investigated the contributions of ADRA to small-holder farming in Yilo Krobo District. The study relied on the sustainable livelihoods framework and using data collected on a sample of 150 farmers. The study specifically examined the effects of ADRA's loan scheme on mango production and livelihoods of beneficiary farmers and their households. This chapter presents a summary of the main findings of the study and recommendations.

#### 6.2 Summary of findings

The study revealed that a greater percentage of beneficiaries of the ADRA loan package were males (61.7%). Most of the farmers (45.3%) had no formal education and this meant that the level of education of farmers did not play any vital role in their selection to be supported by ADRA. Nearly 48% of the farmers were farming on their lands. Share cropping was also common in the area as those who could not purchase or rent lands shared produce with land owners. Female farmers were more unlikely to have personal ownership to lands than male farmers. This was explained by the patrilineal inheritance system, which limited women's access to land. The study showed that majority of the farmers interviewed depended on farm income as their main source of subsistence. The provision of micro-credit was seen as the most important factor influencing mango production in the district. The farmers had very low level of appropriate technical training before the project. Their skills and knowledge level, however, increased significantly after the project due to training organized by ADRA for these farmers.

The study also revealed that the micro-credit facility provided by ADRA encouraged many beneficiary farmers to expand their farms and subsequently increased their output levels. The findings confirmed the proposition stated earlier that, ADRA's mango project has contributed positively to improved livelihood situations of farmers in the Yilo Krobo area. The results also indicated that farmers earned more income from their farming activities which enabled them meet the needs of their households. With increased income, farmers were able to acquire more factors of production to expand their business. The average income of the beneficiary farmers increased considerably over the project period. Even though the intervention brought about improved standard of living for many of the beneficiary farmers, its effects on the communities in general was not significant because only a small fraction of the farmers in the district benefited from the program. For the beneficiary farmers however, parameters such as ability to support household members to access education and health facilities as well as acquisition of household and productive assets that were considered as indicators of improved standard of living.

Despite these positive gains, the problem design was criticised by some of the farmers. Farmers in Oterkpolu, for instance, reported that they were not involved in the design, implementation, monitoring and evaluation of the project. Some of the farmers also reported that while they were given loans for the production of mango, their soils were not tested for its quality. This led to serious crop failure which made them worse off. The farmers in especially Oterkpolu could not repay loans because the mango project failed in the area. Also, marketing of mangoes was seen as a challenge. This was especially the case for farmers in Huhunya who could not market their mangoes because of lack of proximity to the markets.

### **6.3 Conclusions**

Based on the key findings presented, the following conclusions are drawn. It could be deduced that projects such as ADRA's, which is designed to empower local people to deal with their own economic challenges, need the collaboration of all stakeholders since the task may be too big for one organization to undertake. It could also be concluded that the project gave the farmers employment opportunities and greater hope in their future activities. The project had significant effects in improving skills and knowledge of selected farmers in their farming activities. It can also be concluded that the impacts of these activities are positive in the sense that seedlings granted to the beneficiaries in the form of loans enabled them to start and expand the mango businesses and therefore increased their incomes, the training was also helpful and food security was improved. The livelihoods concept identifies the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically and socially sustainable manner. The sustainable livelihood concept offers a more coherent and integrated approach to poverty related issues. It can therefore be concluded that ADRA's mango project has contributed positively to improved livelihood situations of farmers in the Yilo Krobo area as proposed in Chapter One of the study.

### **6.4 Policy implication of findings and Recommendations**

The objective of ADRA's intervention was to bring about improvement in the living standards of small-holder farmers in the district. The following recommendations are made to the government, stake holders, ADRA, farmers and traditional authorities of Akorley, Huhunya and Oterkpolu communities to enable the effective promotion of rural development activities.

It is recommended that ADRA should increase its collaboration with members of the community to win the full thrust of the farmers. The organisation should also review periodically the needs of the farmers in especially Oterkpolu through social science research to ascertain what their contemporary needs are. The project should also be expanded by ADRA to include more people in the communities since it is a potential project for reducing rural poverty. ADRA should strengthen her collaboration with the District Assembly, the Food and Agricultural Ministry, other Non-Governmental Organizations and development partners to replicate the project in more communities in the district.

It is also recommended that policy makers should legislate that a substantial portion of the District Poverty Alleviation Fund be set aside as “seed money” to start such a scheme in all the districts in Ghana. Such a scheme would go a long way to enhance the productive capabilities of small-holder farmers as well as other vulnerable groups in society to improve upon their productive capabilities. In addition, extension officers and veterinary officers from the Food and Agricultural Ministry should be involved in the project, especially, in the areas of control and management of crop, pests and diseases. In addition, the Feeder Roads Department and the District Assembly should come to the aid of the communities such as Huhunya to rehabilitate their roads and make these areas easily accessible. This will open up the communities and make marketing of their products quite easier. These communities should also be connected to the national electricity grid. These will make more youth stay in the communities and take up the mango farming business.

The government should review its Poverty Reduction Strategy to make the application of funds geared towards projects similar to that of ADRA’s which has the potential of actually reducing

rural poverty as well as increasing productivity in the communities. In order to assess how NGO activities could be used to reduce poverty in the District, further research should be conducted throughout the district. This should explore what potentials exist to plan a larger farming program for farmers who are faced with limited access to loans and agro-inputs. It is however recommended to traditional authorities to educate farmers in rural communities on how to plan their families to enable them have smaller family sizes so that drains would not be put on limited resources by large families. Farmers must also be educated to develop the habits of savings and also to invest their own resources (however small) into their own farming activities. Farmers should be well organized and educated so that they can access more credits from other facilities such as poverty reduction funds, micro-finance schemes, venture capital fund and from the Banks. Limited access to micro-credit was identified as the greatest challenge to small-holder farming in the Yilo Krobo District, just like the case of many districts in Ghana.

Provision of micro-credit to small-holder farmers could be a major tool for addressing rural poverty. Certain factors that could inhibit the easy implementation of such poverty alleviation programs should however, be considered and appropriate remedial strategies incorporated into the programs. Among the factors that need to be considered is that, selection procedure in most cases becomes difficult to identify the actual target group whom the project intends to assist. Many a time, the poor and the vulnerable that need assistance are left out of such a scheme, rather the assistance goes to the few influential people in the society. To overcome this problem however, it is recommended that policy makers should call for a policy framework that should clearly target and identify the poor. The socio-economic status of prospective beneficiaries of such projects must be critically assessed to determine who qualifies for the assistance. Also,

regional characteristics should be taken into consideration when implementing any poverty alleviation program, since each region has its own challenges and prospects.

The purpose of “direct targeting” is to focus the assistance on specific segments of the population. To effectively identify the poor, it is necessary to understand the specific causes of poverty, or the constraints that keep the poor from advancing. Furthermore, services provided through rural development projects and programs must be designed and implemented in such a way as to effectively respond to the target population's needs, based on the principles of demand-driven and participatory in approach. Again, since majority of the rural poor are engaged in agriculture, efforts to improve incomes in rural areas should focus both on increasing agricultural productivity especially small-holder farming as well as improving other non-agricultural small scale industries undertaken by the rural population as part time ventures.

Literacy is the medium through which people gain knowledge, skill and values that enable them to become effective. It allows people to learn new methods and maintain proper record of their economic ventures. The illiteracy rate at Yilo Krobo District, just like some other districts in Ghana is high. To promote literacy among the poor, the government should strengthen the informal education program under the Ministry of Education and encourage people to patronise the program. More educational facilities should be provided in the rural areas to cater for the children of the poor. This would go a long way to improve the capability of the poor to accept new innovation. Often times, rural poverty alleviation projects and programs are planned, designed and implemented using the “Top-down” development approach, where the beneficiaries have no say in the planning and the execution of the project. Projects without the active involvement of people at the grass root normally fail, since such projects are seen as alien

and imposition on the people. It is therefore, recommended that even if the rural poor are not “properly organised” as many bureaucrats tend to believe, they know better than anyone else what their needs and aspirations are and they must therefore be involved in all aspects of the project which includes planning, design and implementation.

## REFERENCES

- Adongo, S (2007). *Government Control over NGOs*. (Master's Thesis). University of Cape Coast, Cape Coast.
- ADRA Ghana Development Assistance Project (DAP) funded by the USAID (2007).  
<http://www.adraghana.org>
- Agarwal, A & Clark C (1999). Enhancement and Disenhancement: The role of Community in Natural Resource Conservation. *World Development*, Vol. 27 No.4, 1999.
- Anderson, J. R. & Feder, G (2007). "Agricultural Extension". *Handbook of Agricultural Economics*, vol.3. pp. 2344 – 2367.
- Asamoah, C (2010). "An Evaluation of Farmer Field School Induced Changes in Ghanaian Cocoa Production". *International Institute of Tropical Agriculture*, Vol.17, No. 3
- Ashley, C. & Carney, D (1999). *Sustainable livelihood: Lessons from early experience*. DFID London, UK
- Bardhan, P. & Udry, C (1999) "*Development Microeconomics*". Oxford: Oxford University Press. *Handbook of Development Economics*. Amsterdam: Elsevier
- Barakat, S. & Strand, A. (1994). *NGOs and peace-building in Afghanistan*. York: University of York.
- Behrman, J.R. (1993). *Macroeconomic policies and rural poverty: issues and research strategies*

- in rural Poverty in Asia ed. M.G. Quibria (Hong Kong). Oxford University Press.
- Bentil, D. (2008). *The role of non-governmental organizations in rural development: the case of Christian rural aid network*. Cape Coast.
- Boateng, F (1987). *A Poverty profile for Ghana, 1987-88. Part 1*. Vol.25 (4): pp.427-439
- Bhose, K (2003) “NGOs and Rural Development: Theory and Practice”, *why at All NGOs in Rural Development*. ISBN 81-7022-732-1.pp 3
- Bob-Milliar, G. (2005). “NGOs in Ghana-profit making organisations” GNA, April 28, pp. 2
- Bratton, M. (1989). “The politics of government–NGO Relations in Africa”, *World development Report*. Vol. (17). Pp 69 – 87.
- Cambridge University (1995). *Cambridge International Dictionary of English*. Cambridge: Cambridge University Press.
- Carney, D (1998). *Sustainable rural livelihoods. What contribution can we make?* Department of International Development. Russell Press Ltd, Nottingham
- Carney, D. (1999) *Formal Farmers’ Organisations in the Agricultural Technology System: Current Roles and Future Challenges*. Natural Resources Perspective, No.4; ODI, London
- Caselli, F. (2005). *Accounting for Cross-Country Income Differences*. Amsterdam: North Holland.
- Chambers, R & Conway G. R (1992). “Sustainable rural livelihoods”, *Practical concept for the 21<sup>st</sup> century IDS*”, No. 296

- Chambers, R (1995). *Poverty and livelihoods: whose reality counts?* ID discussion paper 347, Brighton: IDS
- Chambers, R (2008). *Revolution in development inquiry*. London: Earthscan.
- Chandoke, N. (1995). *State and Civil Society: Explanation in Political Theory*. New Delhi: Sage Publications
- Clarke, A. (1999). *Evaluation Research: An Introduction to Principles, Methods and Practice*. London: SAGE Publications
- Clark, J. (1991a). *Democratizing Development: The Role of Voluntary Organizations*. London: Kumarian.
- Clark, J. (1995b). "The State, Popular Participation in the Voluntary Sector". *World Development*, V.( 4) pp. 23.
- Coleman, B.E. (2001). "Measuring impact of microfinance programs" *Finance for the Poor, Asian Development Bank*, Vol.2 no.4, pp.5-7
- Croft, D (1984). *The Concept and Attributes of Rural*. Las Cruces, NM: New Mexico State Univeristy.
- Danso, G. (2003). *Gender and urban agriculture*. International water management institute. West Africa Sub Regional Office, Accra.
- Datt, G. & Ravillion, M. (1998). "Farm productivity and rural poverty in India," *Journal of Development Studies*, vol. 34, no. 4, pp. 62-85.
- De Haas, H (2003). *Migration and development in southern Morocco*. Todgha Oasis Valley, University of Nijmegen.
- Delgado, C.L. (1998): "Sources of Growth in Smallholder Agriculture in Sub-Saharan Africa;" *International Association of Agricultural Economists*. Vol. 7 pp1-14

- Denscombe, M. (2007). *The Good Research Guide for Small-Scale Social Science Research Projects*. Berkshire: The Open University
- Desai, V. & Potter, R. B. (2000). *The Companion to Development Studies*. New York: Oxford University Press.
- Deavers, L. & David, L (1985). *Natural Resources Dependence, rural development and Rural poverty*. U.S. Department of Agriculture, Washington, DC
- Edwards, M., & Hulme, D (1992a). *Making a Difference: NGOs and development in a Changing World*. London: Earthscan
- Edwards, M., & Hulme, D (1995b). *Beyond the Magic Bullet: NGO Performance and Accountability in the Post-Cold War World*. London: Macmillan
- Edwards, M. & Hulme, D. (1997c). *Beyond the Magic Bullet: NGO Performance and Accountability in the Post-Cold War World*. London: Earthscan
- Enyioko, N.C (2012) *Role of Non-Governmental Organizations (NGOs) in Rural Development: Study of the Six Listed NGOs in Rivers State, Nigeria*. Medonice Consulting and Research Institute
- Food and Agriculture Organization, (2004): “Socio-Economic Analysis and Policy Implications of the Roles of Agriculture in Developing Countries”. Summary report. FAO, Rome, Italy.p1-12
- Fernandez, A. P (1993a). *NGOs and government: A love-hate relationship. Rethinking roles in sustainable agricultural development*. London: Routledge.

- Fernandez, A. P.(1993b). *The Myrada experience: The interventions of a voluntary agency in the emergence and growth of people's institutions for sustained and equitable management of micro-watersheds*. Bangalore, India: Myrada.
- Fernandez, A. P & Mascarenhas, J (1993). *NGOs and the state in Asia: Rethinking roles in sustainable agricultural development*. London: Routledge.
- Flynn-Dapaah K (2001). "Land Negotiations and Tenure Relationships: Accessing land for Urban and Periurban Agriculture in Sub-Saharan Africa". *Cities Feeding Report*. No. 36.
- Food and Agriculture Organization, (2004): "Socio-Economic Analysis and Policy Implications of the Roles of Agriculture in Developing Countries". *Summary Report*. pp 1-12
- Gaiha, R (1993). "Design of poverty alleviation strategy in rural area". *Food and Agriculture Organization (FAO) Economic and Social Development Paper*. pp 234
- Goulet D. (1992a)" Ethics and Development: A Development Ethicist At Work",*National Geographic Research & Exploration*, Vol.8(2), pp 138-147.
- Gugerty, M. K. (2007). *Models of NGO self-regulation: Theory and evidence from Africa*: Washington: University of Washington Press.
- Hasna, M. K.(1998). "NGO Gender Capacity in Urban agriculture: Case studies from Harare, Kampala and Accra". *Cities feeding people series*. Report 21
- Henderson, P. A & Singh, R (1990). "NGO-government links in seed production: Case studies from the Gambia and Ethiopia". *Agricultural Research and Extension Network*. Vol 14.
- Henderson, K. M. (1997). *Alternatives to imposed administrative reform: The NGOs*. London: MCB UP Ltd.

- Hollis, A & Sweetman, A (1998), “Microcredit: What Can We Learn from the Past?”, *World Development*, Vol. 26 (10), pp.1875-1891
- IFAD (2011). Access to markets. Making value chains work for poor rural people. IFAD
- ISSER, (2005): *The State of Ghanaian Economy*. University of Ghana, Accra, Ghana.
- Jussawalla, M (1992). *The Economics of Intellectual Property in a World without Frontiers: A Study of Computer Software*. New York: Greenwood Press.
- Kamara, S (1993). *Gender in development. Freedom publications*. Accra Ghana. pp 35.
- Kasi E (2009). *Role of NGOs in the development of Sugalis. A case study of a settlement in Andhra Pradesh*.
- Kelly, M. J (2004). *Qualitative Evaluation Research*. London: SAGE Publications.
- Khan, M.H., (2000), Rural Poverty in Development countries. Finance and Development: A quarterly magazine of IMF, December 2000, 11 Volume 37, November 4.
- Korten, D. (1990). *Getting to the 21st Century: Voluntary Action and the Global Agenda*. West Hartford: Kumarian Press
- Lambrou, Y. (1997). “The Changing role of NGOs in rural Chile after democracy”, *Bulletin of Latin American Research*, pp107–116.
- Lekorwe, M. (1999). *Local government, interest groups and civil society in public administration and policy in Botswana*. Cape Town: Juta & Co. Ltd.
- Lele, U. & Agarwal, M. (1989): “Smallholder and Large Scale Agriculture in Africa”.  
Are there Tradeoffs between Growth and Equity? World Bank, Washington, D.C. pp24
- Lele, U. (1989). “Sources of Growth in East African Agriculture”, *World Bank Economic Review*. Vol 3. pp. 119-144
- Linares, D. (2003): *Structure of Agricultural Holdings in the EU*. Luxembourg, EUROSTAT.

- Lipton, M. & Ravallion, M. 1995. "Poverty and Policy", in Handbook of Development Economics, Vol. IIIB (eds) Jere R. Behrman and T.N. Srinivasan (Amsterdam: Elsevier)
- Littlefield, E (2003). *Is Microfinance an effective strategy to reach the millenniumdevelopment goal?*  ", *A Guide to Best Practices*, London. *Focus Note*. Vol. No. 24 .
- Lipsey R.G.; Courant P.N., Ragan, C.T.S (1999). *Economics*. London: Pergamon Press.
- Lewis & Wallace (2000). *New roles and relevance: development NGOs and the challenge of change*.
- Mansell, R & U. Wehn (1998). *Knowledge Societies: Information Technology for Sustainable Development*. New York: Oxford University Press.
- Millennium Ecosystem Assessment (2005). *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC.
- Ministry of Food and Agriculture. (2005). *District Profile*. Somanya: District Agricultural Development Unit.
- Mintzberg, H. (2009). *Tracking strategies: Toward a general theory of strategy formation*. New York, NY: Oxford University Press.
- Molomo, M & Somolekae, P. (1999). *Making a difference: NGOs, good governance and service delivery in public administration and policy in Botswana*. Cape Town: Juta & Co. Ltd.
- Morduch J. & Haley B (2002). *Analysis of the effects of microfinance on Poverty Reduction*. New York University: NYU Wagner working paper No. 1014.
- Nelson, P. J. (2000). Heroism and Ambiguity: NGO Advocacy in International Policy, *Development in Practice*. 10. Pp 478-490.

Oxford University (1989). *Oxford Advanced Learner's Dictionary of Current English*. Oxford: Oxford University Press.

Narasaiah, M.L (2003), *The Role of Micro Credit And NGOs In Economic Development*.

Preparatory meeting for 2005 ECOSOC HIGH-LEVEL SEGMENT: 16-17 march 2005, chair:

H.E. Mr. Munir Akram, President of ECOSOC lead organizers: FAO, WFP and IFAD

moderator: Mr. Hartwig de Haen, assistant-director-general, FAO.

Pressler, L & Diane, S (1984). *Rural and Small-City Elderly*. Washington, DC.

Quaye, C. (2012). *The Effect Of Adoption Of Improved Plantain Cultivars On Income Of Plantain Farmers In The Eastern Region Of Ghana* . (Masters thesis). University of Ghana, Legon.

Ravallion, M (1997) "Can high-inequality developing countries escape absolute poverty?"

Economics Letters, Vol. 56 (1997): pp.51-57

Republic of Ghana (2005). *Growth and Poverty Reduction Strategy II (2006-2010)*. Accra: National Development Planning Commission

Robson, C. (2000a). *Small-Scale Evaluation*. London: SAGE.

Robson, C. (2002b). *Real World Research: A Resource for Social Scientists and Practitioner Researchers*. Oxford: Blackwell.

Romer P. M. (1990). "Endogenous Technological Change". *Journal of Political Economy*, V (5), pp. 71-102.

Rossi, P.H & Freeman, H. E (1993a). *Evaluation: A systematic Approach*. California: SAGE

Rossi, P.H (2004b). *Evaluation: A systematic Approach*. Thousand Oaks, CA: Sage

Servaes, J (1999) *Communication for Development: One World, Multiple Cultures*. Creskill: Hampton Press

- Sahn, D. E (1997). *Structural adjustment reconsidered, economic policy and poverty in Africa*. Cambridge: Cambridge University Press.
- Schiampo-Campo, S & Sundaram, P (2001). *To serve and to preserve: Improving public administration in a competitive world*. Manila: Asian Development Bank.
- Singh, N & Gilman, J (2002). “Making Livelihoods more Sustainable”. *International Social Science Journal*. Vol. 51, pp 539-545.
- Silliman, G. S & Noble, L G (1998). Citizen Movement and Philippine Democracy: pp91
- Staatz, J.M., & Eicher, C K (1998). *Agricultural Development Ideas in Historical Perspective*. Johns Hopkins University Press.
- Stiglitz J & Weiss A. (1981). “Credit Rationing in Markets with Imperfect Information”. *The American Economic Review*. Vol 71- 3, pp 393-410.
- Terry L. (2006). “Practical Financial Management for NGOs”. Oxford Mango. Pp1-5
- Todo Y. et al (2011). “Effects of Geography and Social Networks on Diffusion and Adoption of Agricultural Technology: Evidence from Rural Ethiopia”. *Ethiopian Institute of Agricultural Research*. pp: 2-13.
- Twigg, J. (2004). *Good practice review: Disaster risk reduction, Mitigation and preparedness in development and emergency programming and humanitarian*. London: Overseas Development Institute.
- Udry, C. (1990). Credit Markets in Northern Nigeria: Credit as Insurance in a Rural Economy, *World Bank Economic Review*, Vol.4, pp. 251-69.
- Udry, C.& Conley, T. G (2004), “Social Networks in Ghana”, *Yale University Economic Growth Center Working Paper*. Series, 888.
- Waddington, H., Snilstveit, H. W & Anderson. J (2010). The Impact of Agricultural

- Extension Services. International Initiative for Impact Evaluation. 3ie Synthetic Review Protocol, SR009 protocol.
- Washington H (2013). *Human Dependence on Nature: How to Help Solve the Environmental Crisis*. Pp35
- Whitaker L (1982). The spread of the western harvest mouse into Illinois is chronicled Pp 304-5
- Wilbers, J. (2003). 'Urban Agriculture and Gender: Some key Issues'. Vol.1.pp15.
- World Bank. (1996). *Sustainable banking with the poor: A worldwide inventory of microfinance institutions*. Washington, D.C.
- World Bank (1998). *World Development Report*. New York
- World Bank (2001) *World Development Report 2000/2001: Attacking Poverty*, New York: Oxford University Press.
- World Bank (2004). *Country Assistance Strategy for Ghana 2004-2007*. Accra: World Bank.
- World Bank. (2012) *World Hunger and Poverty Facts and Statistics*.
- Yeboah, H. (2007). *Graduate Research Conference on Social Sciences and Management*. University of Bradford, UK.
- Zaman, H. (1996). *Micro-credit program: Who participates and to what extent?* Dhaka: University Press Ltd.

## APPENDIX I

### QUESTIONNAIRE

**NAME: HANNAH SOMMA SONO**

**RESEARCH TOPIC: THE EFFECTS OF ADRA'S MANGO PROJECT ON LIVELIHOOD IN THE YILO KROBO DISTRICT**

The questionnaire forms part of a survey being conducted to seek information on contributions of ADRA to rural livelihood in the Yilo Krobo District. You are assured that your responses are for research purposes only and will be treated confidentially. Thank you.

### SECTION A

#### PERSONAL DATA

1. Name of Town/village: .....

2. Age of respondent.....

3. Gender

(1)Male [ ] (2) female [ ]

4. Marital status

(1) Married [ ] (2)Single [ ] (3)Divorced [ ] (4)Widow [ ] (5)Widower[ ]

5. Number of people in household.....

## 6. Educational status

(1) No formal education [ ]

(2) Primary [ ]

(3) JHS/Middle School [ ]

(4) Secondary [ ]

(5) Tertiary [ ]

**SECTION B****INFORMATION ON MANGO PRODUCTION**

7. How long have you been involved in mango production?.....

8. How did you acquire the land on which you farm?

(1) Community [ ] (2) Family [ ] (3) Share cropping [ ] (4) Rent [ ] (5) Personal [ ]

9. What is the size of your farm (in acres).....

10. Where did you get your seedlings apart from ADRA?

(1) Certified seed growers [ ]

(2) Commercial farmers [ ]

(3) Others (specify).....

11. (a) Which of these varieties do you cultivate most?

(1) Kate [ ] (2) Kent [ ] (3) Jefner [ ] (4) Palmer [ ]

(b) Give reason(s) for selecting the variety .....

.....

12. On the average how much income do you gain annually from an acre of mango farm?.....

13. To whom do you sell your produce?  
.....

14. (a) If you produce more than one variety, which of them sells faster?

(1)Kate [ ] (2) Kent [ ] (3) Jefner [ ] (4)Palmer [ ]

(b)Give reason(s) for your answer.....

### **SECTION C**

#### **SUPPORT FROM ADRA**

15. How did you contact ADRA?  
.....  
.....

16. Have you received support from ADRA?

(1) Yes [ ] (2) No [ ]

If no, go to question 24

17. State all the years in which you got support  
.....  
.....

18. Do you still get support from them?

(1) Yes [ ] (2) No [ ]

19. In what form have you received support? (Tick as many as possible)

(1) Finance [ ] (2) Seedlings [ ] (3) Training [ ] (4) Marketing [ ] (5) Information [ ]

20. Was the support free or you had to repay?

.....

21. If it was to be repaid, how did you repay?

.....

.....

22. How did the support improve your production?

.....

## **SECTION D**

### **IMPACT OF ADRA'S ACTIVITIES ON LIVELIHOOD OF FARMERS**

23. Have you ploughed back some of your mango income to expand your agricultural production? (1) Yes [ ] (2) No [ ]

Give reason(s) .....

.....

24. Have you invested some of the money earned from this project into any other business?

(1) Yes [ ] (2) No [ ]

Give reason (s) .....

25. What economic activities do you undertake during off-season mango period?

.....

26. Besides ADRA, what support do you receive from other organizations?.....

.....  
.....

27. Do you want to continue with your mango project? (1)Yes [ ] (2)No [ ]

Give reason (s) .....

Give your general opinion about the mango project.....

.....  
.....

**CHALLENGES**

Please tick as many as apply

28. In your view what are some of the problems you faced by taking part in the mango project? (1)Land acquisition [ ] (2) Refusal to pay loans [ ] (3) Little collaboration with the people of the town [ ]

29. Kindly suggest some solutions to the problems you faced by taking part in the project

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

Thank you for responding to these questions.

## **APPENDIX II**

### **INTERVIEW GUIDE**

**NAME: HANNAH SOMMA SONO**

**RESEARCH TOPIC: THE EFFECTS OF ADRA'S MANGO PROJECT ON LIVELIHOOD IN THE YILO KROBO DISTRICT**

**The interview forms part of a survey being conducted to seek information on contributions of ADRA to rural livelihood in the Yilo Krobo District. You are assured that your responses are for research purposes only and will be treated confidentially. Thank you.**

1. Since when have you been involved in the mango business?
2. Who assists you in your farming practices?
3. Can you think of a past season/year when you had a successful outcome that you were truly satisfied with?
4. Why were you successful that season?
5. Can you think of a past season/year when you had an outcome you were not satisfied with?
6. Why were you not successful that season?
7. Kindly suggest some solutions to the problems you faced by taking part in the project.

Thank you for responding to these questions