UNIVERSITY FOR DEVELOPMENT STUDIES

EFFECT OF THE CREDIT WITH EDUCATION (CWE) SCHEME ON BENEFICIARY HOUSEHOLD LIVELIHOOD AND FOOD SECURITY: A CASE STUDY OF NAARA RURAL BANK LIMITED

BY

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DECLARATION

Student

I, Stanley Pwabajonga Kambilige hereby declare that this dissertation/thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere:

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Supervisor

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ABSTRACT

This study assessed the effect of the Credit with Education scheme on beneficiary household livelihood and food security in the Kassena – Nankana Districts. Primary data was collected by means of administrating semi-structured questionnaires to a sample of fifty beneficiaries. Secondary data was collected from District and Regional Assemblies, MoFA offices, libraries and through the Internet. The results indicates that the CwE scheme has improved beneficiaries household livelihood as 82.2% of the beneficiaries households live above the national poverty line and only 17.8% of the beneficiaries do live below the national poverty line based on the PPI of Ghana as shown in appendix vi. Despite trading being the main occupation of the beneficiaries, they are engaged in various livelihood activities which they carried out as risk management strategy. The CwE scheme beneficiaries households are food secured as all five communities of the beneficiaries have their households food security rates above 100%. The CwE scheme has a great potential of sustainability as the study results indicated a 100% recovery. Timeliness, credit adequacy and high interest rate pose serious challenges for the beneficiaries.

DEDICATION

I dedicate this work to my entire family members, most especially to my grandmother and loved one.

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LIST OF ABBREVIATIONS AND ACRONYMS

CSA	Credit and Savings Association
CwE scheme	Credit with Education scheme
FAO	Food and Agriculture Organization
FS	Financial Service
GLSS	Ghana Living Statistical Survey
Go	Governmental Organization
IFAD	International Fund for Agriculture Development
KND	Kassena – Nankana District
LDCs	Lesser Developed Countries
MFIs	Micro – financial Institutions
MoFA	Ministry of Food and Agriculture
NGOs	Non Governmental Organizations
NRBL	Naara Rural Bank Limited
PPI Score	Progress out of Poverty Index Score
PRA	Participatory Rural Appraisal
SG	Solidarity Group
SL	Sustainable Livelihood
UNICEF	United Nations Children's fund
UN	United Nations
UNU	United Nations Union
USAID	United State Aid for International Development
SPSS	Statistical Package for Social Science
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Since the 1980's, alleviating poverty has been the top most priority of international development agenda. One particular strategy of tackling poverty that has caught the attention of many donors is the provision of Financial Services (FS) of the forms of small loans through micro-crediting / financing, savings, insurance, and investment programmes (Patrick Develtere and An Huybrechts, 2005).

Financial Services (FS) is globally the most accepted and promising developmental policy of choice. It is seen as the most promising tool for poverty alleviation, employment creation, empowering and sustaining development (World Bank, 2002).

Appreciated factors in developing countries militating socio-economic development are enormous in nature, they are well understood and managed by the people in the natural form by diversifying their livelihood activities to achieve some levels of economic balance. However, the provision of FS in developing economics with higher levels of poverty and food insecurity conditions among other developmental challenges has the ability of energizing the poor and vulnerable to progress out of poverty and thrive in tremendous improvement of living standards like never before (UNICEF, World Bank, 2000 - 2001).

Poverty is the root cause of household food insecurity, malnutrition and poor health of children and women in Northern Ghana (Upper East, Upper West and Northern regions in particular). An overwhelming majority of about 90% of the households in the Upper East Region are poor followed by nearly 88% in Upper West Region and approximately 70% in Northern Region (GLSS – 4 as cited by UNICEF Ghana, 2000 as cited by Bhandari S, 2002).

The establishment of Financial Institutions is seen as means of providing FS for the people (poor, women and vulnerable) to help augment their livelihood activities. (Ghana Government, 2000 - 2004). Lack of access to credit is generally viewed as a major contributing factor why many people in developing countries remain poor. Commercial Banks forms a greater percentage of formal lenders in Ghana and access to them are restricted to a small proportion of the population who can meet their stringent requirements such as high minimum balance for account opening, onerous collateral requirement for loans and long and costly bureaucratic processes. These banks are furthermore mainly urban based, thereby adding the burden of transport costs to mostly the rural poor populate who wish to use bank facilities. The cost of screening, monitoring and enforcing their contract are considered by these classes of banks to be high in lending to this group profitable.

The inability of commercial banks to help the poor out of poverty saw the new thinking of microfinance by economist. A unique feature of microfinance programme is that the end users of the services are by definition the productive poor beneficiaries. At the break of the 1980s the poor in developing economics have continually gain access to small loans with the help of so-called microfinance programmes. For example like the Grameen Bank in Bangladish, Banco Sol in Bolivia and Bank of Rakyat in Indonesia have recorded the success story of microfinance as one of the important financial resources for the poor people to conduct household economic and income generating activities, which reduces their vulnerability, and allow them to accumulate capital and own valuable assets. It is also seen as a means of helping micro-enterpreneurs to expand their businesses to a point of becoming viable ones and therefore eligible for credit from commercial banks. In most recent times microfinance has been more advance in order to challenge the needs of millions of the poor for financial services. The Grameen Bank system of group lending (established in 1976 by Mohammed Yunus, a Bengal Banker and economist) in particular has been widely replicated in most other developing countries.

In recent public debates, microfinance has been mentioned as an instrument for combating extreme poverty. To support this view the United Nations (UN) declared 2005 to be the international year of microcredit. According the UN, microfinance can contribute significantly to the achievement of the United Nations Millennium Development Goals, as agreed upon by world leaders at the UN Millennium Summit in September, 2000 and which aims at halving extreme poverty by 2015.

In Ghana, Rural and Community Banks form part of the most practitioners of this microfinance programmes. The Naara Rural Bank Limited (NRBL) being the first rural bank in the Northern sector established on the 9th July, 1981, has so far implemented a number of financial service schemes including the Credit with education (CwE) scheme.

This study examines the effect of Credit with Education scheme on beneficiary household livelihood and food security.

1.2 Problem statement

The poor and their livelihood activities are persistent global concern with poverty and food insecurity situations being a key and major challenge of global developmental policies that exists with continuous concern throughout the world (IFAD, 2005)

For this reason various efforts have been made and continuously researched into by Governmental and Non – Governmental Organizations (Go and NGO's), with various agencies running different programmes all geared towards poverty alleviation and improvement of living standards.

Under the global economic view, a widely held performing strategy is the provision of FS to the poor to help curb the problem of the poor and their livelihood activities living in poverty and food insecurity situations (Robinson, M., 2001).

The high microfinance performance programmes are notably with some considerable challenges worldwide, despite the impressive successes. At the client level, there has been a notable worry over the high interest rate charge, strict or rigid policies (for example compulsory repayments and meetings schedules) and threats of not benefiting next cycles by default clients. The challenge of high delinquency rates and inadequate innovations striking most microfinance practitioners as result of programme clients being the poor with no collaterals and their associated risk nature, intensive field based work microfinance programmes requirement (microfinance demands close and regular monitoring and provision of other essential non-financial services) increase cost of operations. The need for any MFI to manage simultaneously the problems of outreach (reaching the poor both in terms of numbers and in depth of poverty), financial sustainability (meeting operating and financial costs over the long term), and impact (having discernible effect upon clients' quality of life) are the most critical challenges in the world of microfinance.

In Northern Ghana, there exist a number of these developmental programmes that are being run; among other Financial Services include microfinance (Credit with Education) for beneficiaries by the Naara Rural Bank Ltd. It is therefore important to assess the effect of the Credit with Education (CwE) scheme on the beneficiary household livelihood and food security.

1.3 Research Questions

The main research question of the study is: what is the effect of Credit with Education (CwE) scheme on beneficiary household livelihood and food security?

The specific research questions include:

1. Does the Credit with Education (CwE) scheme have any effect on household livelihood and food security?
2. Is the Credit with Education (CwE) scheme readily available and accessible?
3. How do beneficiaries use the Credit with Education (CwE) scheme?
4. How sustainable is the Credit with Education (CwE) scheme?

1.4 Research Objectives

The main objective of this study is to assess the effect of Credit with Education (CwE) scheme on beneficiary household livelihood and food security.

The specific objectives include:

1. To assess Credit with Education (CwE) scheme beneficiaries' household livelihood and food security before the introduction of the scheme.

2. To assess the effect of Credit with Education (CwE) scheme on household livelihood and food security.
3. To assess the availability and accessibility of the Credit with Education (CwE) scheme.
4. To ascertain the beneficiary use of the Credit with Education (CwE) scheme.
5. To ascertain the sustainability of the Credit with Education (CwE) scheme.
6. To make recommendations based on the results of the study as well as to draw and add knowledge to the field of study for total development.

1.5 Justification of the study

The provision of subsidized credits in the 1950s and the known performance of Aid and Grant Approach (they do not have to be repaid, as they are basically free and typically need based. Most grants are made to fund a specific project and require some level of compliance and reporting) by programmes undertaken to address rural poor livelihood and food security in Ghana are currently unpopular in the era of self sustainability. The establishment of the Agricultural Development Bank in 1965 specifically to address the financial needs of the fisheries and agricultural sector formed part of the Agricultural Development Approach during the Green Revolution which took place from the 1960s to the 1980s. This approach recorded improvement in food production and had some serious unintended environmental consequences. The International Fund for Agriculture Development (IFAD) 2003 programme had methodological challenges and Government sector interference which limited the programme output. The Establishment of RCBs and the introduction of regulations such as commercial banks being required to set aside 20% of total portfolio to promote lending to agriculture and small scale industries in the 1970s and 1980s did not underscore immerse success as unfortunately poor people in most rural areas in Ghana had virtually no access to formal financial services due to the commercial banks' rigorous requirements, costly bureaucratic processes, mostly urban centered operations and the considerable notion of the poor being non bankable accounts for the unpopularity of this regulatory approach. Their informal alternatives such as family loans, savings clubs, or moneylenders are usually limited by amount, rigidly administered, or available only at exorbitant interest rates. This reduces their effort in addressing the poor livelihood and food security conditions.

Following the initial total aid and grant approaches lost in popularity and strength in improving livelihood and food security beyond emergencies, and the above mentioned shortfalls and direct credit approaches have limited recommendations in tackling livelihood and food insecurity challenges in current times. The sustainable livelihood approach is one that has set the tune for refined programmes outlay after the 1980s poverty and food insecurity situation. The core Sustainable Livelihood (SL) principle of interdisciplinary and partnership underlie the approach. The shifting from a restrictive financial sector to a liberalized regime in 1986 saw the promulgation of PNDC law 328 in 1991 to allow the establishment of different categories of non – bank financial institution, including savings and loans companies, and credit unions to help the already established RCBs (one of the leading microfinance practitioner in Ghana) to deepen the roll out of microfinance programmes.

The Global acceptance of Financial Services performance and role as a major tool with ability of energizing the poor and vulnerable to progress out poverty can neither be overstated nor undermine under the SL approach. Microfinance commendable performances on productive poor household livelihood and food security over the current changing trends in approaching the fight against poverty and improving living standards had gain impressive recognition and achieved great success worldwide. The practice of this powerful tool comes in similar forms of operation by many practitioners. The most recognized and performing version of this achieving tool is the Grameen model (CwE scheme) which is being adopted by most developing countries. Naara Rural Bank Limited is the first rural bank to be established in the Northern sector and implementing a number of FS schemes most notably CwE scheme. However the operations of the CwE scheme by the NRBL since the year 2007 have had limited study aimed at analyzing the effect of the Scheme on beneficiary household livelihood and food security, this gives premium to the Bank of choice and need of the study since the previous approaches had lost influence and microfinance is imaginably considered by many as offering recommendable solutions to rural poor livelihood and food security. More so, considering the poverty prevalence level within the area of study, the presence of vibrant economic activities and the existing FS (CwE scheme) gives choice to the study preference.

This justifies the need for the assessment of the effect of Credit with Education scheme on beneficiary household livelihood and food security. The study is also meant to partial fulfill the requirements for the award of Master of Art Degree in Business Planning and Microfinance Management, and drawing and adding knowledge to the field of study for continuous development.

1.6 Scope of the study

This study is concerned with the effect of the Credit with Education (CwE) scheme on beneficiary household livelihood and food security. The study focuses on microfinance (CwE scheme) intervention by the Naara Rural Bank Limited (NRBL) in the Kassena – Nankana Districts in the Upper East Region of Ghana. It involves assessing CwE scheme beneficiaries' livelihood and food security before and after the introduction of the scheme. Data obtained from staff and documents of the NRBL are to serve as basis for comparison with information collected from beneficiaries and / or to understand certain aspects of the intervention process.

The emphasis on contextuality constitutes the strength of this study but this can be a limitation with respect to generalizability of the results. The results of this study can only be generalizable to the geographical area studied. Some inferences can be made to neighboring areas that share a context similar to that of the study area because most of the microfinance interventions in Ghana have adopted versions of the Grameen model and therefore have similar modes of operation.

1.7 Organization of the study

This study is organized in five chapters. Chapter one gives an “introduction” in the form of background of the study, problem statement, research questions, research objectives, justification, scope, organization and Limitations of the study. Chapter two contains “literature review”. Chapter three is about “study methodology” containing the study area, type of study and proposed approach, population and sampling procedure, data collection (types and sources of data) and methods of data analysis. The results and discussion of the study makes up the Chapter four. Chapter five embodies and provides major findings, conclusion, suggestions and recommendations of the study.

1.8 Limitations of the study

Generalization and longitudinal effects can be considered as the most important limitations of the study. Among these and others include:

A. Because of limitation of time, the study is limited.

B. Resources constraints are also limitation of the study.

C. Generalization made based on the findings of the study may not be directly applicable to other areas and need to be sustained with other studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Poor and Microfinance

The poor and vulnerable are those with minimal chances of empowerment which results in the social perception of inability, having little economic importance, are of no use, and cannot do anything, turns to be seen as social burden in the Ghanaian public setting.

The poor and vulnerable are those who live averagely below 1.25 US dollar ($1.25) a day (GLSS, 2005). They are in a way challenged by their conditions, locations, resources but are economically productive and needs empowerment which is provided by micro-finance.

The poor have many capabilities, they have intelligence, are resourceful, they have a strong sense of community, just like all other human beings, they have dignity and they are very motivated to feed their families and improve their living conditions. However, they are constrained by inadequate assets, collateral, access to credit, and the experience in handling finance and running a business.

Microfinance is the term that has come to refer generally to such informal and formal arrangements offering financial services to the poor. Today there are thousands of MFIs providing financial services to an estimated 100 - 200 million of the world's poor (Christen et al., (1995)). What began as a grass-roots "movement" motivated largely by a development paradigm is evolving into a global industry informed increasingly by a commercial/finance paradigm (Brau and Woller, 2004).

The rise of the microfinance industry represents a remarkable accomplishment taken within historical context. It has overturned established ideas of the poor as consumers of financial services, shattered stereotypes of the poor as not bankable, spawned a variety of lending methodologies demonstrating that it is possible to provide cost-effective financial services to the poor, and mobilized millions of dollars of "social investment" for the poor (Mutua, et al. (1996)). The basic products offered by microfinance institutions (MFIs) namely investing (savings), lending (credit services), and insurance (risk management) are all well-established topics of mainstream finance research.

2.2 Meaning of Microfinance

Consultative Group to Assist the Poor (2003), defines microfinance as 'the supply of loans, savings, and other basic financial services to the poor'. Microcredit, a central theme of microfinance (Greene and Gangemi, 2006), is broadly recognised as 'the practice of offering small, collateral-free loans to members of cooperatives who otherwise would not have access to the capital necessary to begin small businesses (Hossain, 2002).

Microfinance is the provision of financial and non-financial services for a targeted group within a defined location over a given period of time in achieving defined objectives. The financial services include; small loans, repetitive loans, short-term and opportunity to mobilize savings whilst the non-financial comprises of education / information which include; health and nutrition, better business development, micro enterprise development, credit association management. The target group of microfinance is the productive poor population. Microfinance provision is to address the issue of accessibility by means of making it possibly available and accessible through either by individuals or groups.

2.3 Meaning of Credit

A credit is a legal contract where one party receives resource or wealth from another party and promises to repay him on a future date along with interest. Frequently, credit refers to the terms and conditions associated with a deferred payment arrangement. Credit also denotes the borrowing capability of an organization or person. Credit also denotes the time, which is granted for detained payments, for instance a 30-day credit. With the issuance of a credit, a debt is formed. Credit depends on the creditworthiness of the debtor or receiver of credit. Various types of credit play the role of mediums of exchange. The party, which offers the credit, is defined as the creditor or the lender whilst the party, which obtains the credit, is defined as the debtor or the borrower.

Credit is the trust which allows one party to provide resources to another party where that second party does not reimburse the first party immediately (thereby generating a debt), but instead arranges either to repay or return those resources (or other materials of equal value) at a later date. The resources provided may be financial (e.g. granting a loan), or they may consist of goods or services (e.g. consumer credit). Credit encompasses any form of deferred payment (Sullivan, Arthur; Steven M. Sheffrin, 2003). Credit does not necessarily require money. The credit concept can be applied in barter economies as well, based on the direct exchange of goods and services (Ingham 2004 p.12-19). Credit is a financial facility which enables a person or business to borrow money to purchase (i.e take immediate possession of) products, raw materials and components, etc. and to pay for them over an extended time period (Christopher Pass and Bryan Lowes, 1993).

2.4 Types, Forms and Sources of Credit

According to Finlay, 2009, Malcolm, 2003 and Siler, 2003 there are three (3) major types of credit – consumer, commercial, and investment credit.

According to Finlay (2009), Consumer credit is short-term loans made to enable people to purchase goods or services primarily for personal, family, or household purposes. They are short and intermediate term loans used to finance the purchase of commodities or services for personal consumption. Consumer credit transactions can be classified into several different areas. *Installment credit* involves credit that is repaid by the borrower in several periodic payments; loans repaid in one lump sum are classified as *noninstallment credit*. The loans may be supplied by lenders in the form of cash loans or by sellers in the form of sales credit. Consumer credit is basically the amount of credit used by consumers to purchase non-investment goods or services that are consumed and whose value depreciates quickly. This includes automobiles, recreational vehicles (RVs), education, boat and trailer loans but excludes debts taken out to purchase real estate or margin on investment accounts. For example, a mortgage for purchasing a house is not consumer credit. However, the 52 inch television you put on your credit card is (Finlay, 2009).

According to Malcolm Tatum (2003), Commercial credit sometimes referred to as business credit or commercial lending is often used by companies to help fund new business opportunities or to pay for unexpected charges. It is commonly used to fund common day-to-day operations and is often paid back once funds become available. The judicious use of commercial credit ensures that a corporation has resources to call upon when a temporary downturn in sales takes place, or when an opportunity to expand operations in order to take advantage of market changes takes place (Malcolm Tatum, 2003).

An investment credit is a tax credit that a business can use to offset some of the capital expenditures that it makes in a project. This credit is used as an incentive to encourage companies to spend money upfront on investments that may not pay off immediately. Tax incentive that permits companies or individuals to deduct a specified percentage of certain investment costs from their tax liability in addition to the normal allowances for depreciation. Investment credits are similar to investment allowances, which permit investors or businesses to deduct a specified percentage of certain capital costs from taxable income. Both investment credits and investment allowances differ from accelerated depreciation by offering a percentage deduction at the time an asset is purchased. In effect, the credits are subsidies for investment (Siler, 2003).

Christopher Pass and Bryan Lowes (1984) stated that credit facilities comes in a variety of forms, including Bank Loans and overdrafts, installment credit, credit cards and Trade credit.

Malex A. Alebikiya (2002) indicated that there are different types of micro-credit, they differ in objective, character, nomenclature and method. They include: Revolving Loan Funds, Rotating loan funds, Group Savings and Credit (Susu), Seed money Group loans / credit. The administering of these may be by beneficiaries themselves (Susu), Credit Unions, NGOS, Rural or Community banks and Credit Cooperatives.

Sadhu and Singh (1995) explained that agricultural credit is supplied by several agencies.

These agencies are varied in their character and are broadly grouped into two categories as:

1. Institution sources: Also referred to as formal sources which comprise commercial banks, Cooperatives banks/societies, Government, Non-Governmental Organizations, etc.
2. Private sources: Also referred to as Non-institutional sources under which fall such agencies as money lenders, commission agents, landlords, relatives, etc.

2.5 Importance of Microfinance and Micro-Credit

Micro-credit increases the decision-making capacity, awareness to health care, sanitation saving capacity and empowerment of women which contribute greatly to the household livelihood development (Bhandari, 2002 as in Asian Development Bank, 2000).

Importance of micro-credit to beneficiaries is often expressed through increase in income, production and an improvement in the general livelihood standards.

Micro-credit is needed for starting, expanding and operating business enterprises to enhance productivity as it provided capital to fill gaps in the running cost of enterprises resulting from price fluctuations.

Micro-credit provide the funds for increasing investment by acquiring moderate equipments, bulk purchase of materials for improving production capacity which results in higher incomes. These higher incomes enable beneficiaries to attain self-sufficiency, efficiency, and being sustainable which enable them to satisfy most of their basic necessities of life.

However, the success of microfinance has been contradicted by intense criticism in the current literature, particularly regarding loan repayment, high interest rates, exploitation of women borrowers, ineffective microfinance provision to target groups, unchanging levels of poverty and failure to cater effectively to the target groups (Holt, 1994; Dignard and Havet, 1995; Christen, 1997; Mallick, 2002; Brau and Woller, 2004).

2.6 Sustainable Credit Scheme

A sustainable credit scheme has high level of operating performance that is being enabled to maintain its status and have concern for its participating client for a very long period of time (Mahajan and Ramola 1996.). Buss Terry (1999) indicated that most observers believe that for micro-credit to be successful, they must be self- sustaining, rather than subsidized by government or donor organizations, at least until they mature. If not self- sustaining, they become like other social programs.

A current central concern is to reconcile how micro-financial institutions can continue to lend, without recourse to subsidized funds (that is be sustainable – increasing or maintaining outreach) to more poor people. This concern is largely due to the high cost of operating financial institutions and declining subsidized funds (World Bank, 1996).

Financial sustainability is regarded as a means of increasing outreach since sustainability today is outreach tomorrow (Gonzalez – Vega et al, 1997). Robinson (2001) stated that large scale sustainable microfinance can be achieved only with the financial systems approach which advocates commercial microfinance for the economically active poor. Effective management training, adequacy and timely of loan provision to borrowers goes a long way to help in financial sustainability.

2.7 The Self-Sufficiency and Sustainability of MFIs

(Morduch (2000), Woller et al.(1999a)) asserted that an MFI should be able to cover its operating and financing costs with program revenues if self-sufficiency and sustainability is to be achieved.

The primary cause of the institutional failure is linked to be the "lack of institutional viability" (Gonzalez-Vega (1994)). This diagnoses led logically to two principal conclusions:

(1) Institutional sustainability is key to successful provision of financial services to the poor, and

(2) Financial self-sufficiency was a necessary condition for institutional sustainability.

2.8 Microfinance Institution Products and Services

MFIs provide similar products and services to their customers as formal sector financial institutions. The scale and method of delivery differ, but the fundamental services of savings, loans, and insurance are the same. Notwithstanding, to date most efforts to formalize microfinance have focused on enterprise lending (loans for enterprise formation and development) which remain by far today the dominant product offered by MFIs (Nourse (2001), Woller (2002a)). This, however, has slowly begun to change. Increasingly today MFIs have begun to offer additional products, such as savings, consumption or emergency loans, insurance, business education, and including offering a mix of financial products tailored to the varied needs and wants of poor consumers.

Under joint liability each group member is made responsible for the loans of other group members. If one member defaults, the other group members are required to cover the loan from their own resources, and if they do not, they lose access to future loans. It is thus in each member's interest to ensure that the other members pay (Wenner, 1995).

Within the lending function of microfinance, it is useful to divide loans into enterprise loans and consumption/emergency loans. As mentioned above, the loan programs typical of MFIs almost entirely consist of enterprise loans. Nonetheless, significant unfulfilled market demand also exists for consumption and emergency loans (Woller (2002a)).

Characteristic of poor households is extreme vulnerability to risk and external shocks.

Traditionally, poor households have managed risk and coped with external shocks through a combination of informal social support networks, savings, and borrowing from informal moneylenders. Participation in microfinance programs offers another set of risk management and coping options for poor households. Participation in formal micro insurance schemes offers yet another option. Just as a large demand for formal savings and loans exist among the poor, there is also believed to exist a large demand for formal insurance (Churchill (2002)).

Smith (2002) integrative approaches in microfinance (integrating non-financial services (usually education) with financial services to microfinance) had it those clients in integrated programs experienced improved family health, while those in minimalist programs did not.

2.9.0 What is Credit with Education (CwE)?

Freedom from Hunger (2011), Credit with Education (CwE) is an approach to combat chronic hunger and poverty with integrated financial and educational services. This product of microfinance provides financial and non-financial services for a targeted group within a defined location over a given period of time in achieving defined objectives. The financial services include; small loans, repetitive loans, short-term and opportunity to mobilize savings whilst the non-financial comprises of education / information which include; health and nutrition, better business development, micro enterprise development, credit association management and many more others. The programme services of CwE are based on the village banking methodology – "under trees banking" delivered at the doorsteps of programme clients. Savings mobilization and group meetings are necessary components of the programme. The CwE targets poor families through women in groups, the group members appraise and approve their loans and are held responsible for the payment of the group loan.

Freedom from Hunger (2011) indicated that the Main objective of *Credit with Education (CwE)* is to address the problems of chronic hunger and poverty because access to financial services (loans and savings) offers poor households a flexible and potentially sustainable means for enhancing their livelihood strategies and reducing their vulnerability.

2.9.1 How the Credit with Education work

Freedom from Hunger (2011), Women who are interested in the programme are assisted to form solidarity groups of twenty (20) to thirty (30) women made up of four (4) to Seven (7) solidarity groups, each solidarity group having four (4) to seven (7) members. The newly formed group is taken through once a week 6-meetings training where savings are made and thereafter, group members elect their leaders at the Solidarity Group (SG) and Credit and Savings Association (CSA) levels who are charged with the management of the group and its activities. When it is time for credit, the group discusses and approves each member's loan request at the SG and CSA levels before submitting their group request to the financial institution, when an approval is given the field officer disburses the individual request through the CSA leaders who then gives the money to the SG leaders and finally the actual beneficiary receives the loan facility from the immediate SG leaders at their usual meeting point. The day of disbursement savings are made as usual, repayment of the facility follows the same arrangements where as the guarantee of the facility is at the two levels of the group. The loan duration typically ranges from 4 to 6 months. Members repay the loans in regular installments with interest and also make savings deposits at meetings. Attendance of these meetings is compulsory and can occur on a weekly, bi-monthly, or monthly basis. The educational sessions of the programme are facilitated during the schedule meetings by trained programme staff at scheduled periods. When the first loan is repaid, a well-organized Credit Association is eligible for a second loan and additional loans as each is repaid (Ibid).

2.9.2 Factors for a successful Credit with Education (CwE)

Freedom from hunger (2011), Group formation and meetings are the heart of the program and a strong relationship between the lender, borrower and community is necessary for programme success. A simplified loan application procedure and quick disbursement of facilities would enhance the product services convenience and timely delivery to ensure greater success, and where clients have capacity to use bigger loans, loans sizes should not stagnate in order to deepen the programme effect. An effective and immediate loan delinquency management strategy is a pillar for maintaining higher programme performance.

2.9.3 Outcomes of a performing CwE

Naara Rural Bank Limited (2011), Credit with Education (CwE) when delivered as expected the following outcomes are reached:

1. 100% recovery of loans on time.
2. High savings mobilization.
3. Loyalty of clients assured.
4. Competitors will take note of your presence in the market.
5. Good corporate image in your operational area.
6. Improvement in the liquidity of the bank since loans recovery starts immediately after disbursement, and it contributes significantly to overall profit of the institution.

2.10 Best Practices in Microfinance Institution Management

The term *best* practice is used in a general framework, realizing, as Dunford (2000) argues, that best practices vary and change constantly as the microfinance fields matures. Due to the nature of MFI clientele and the disparate environments in which MFIs operate, best practices must be adaptable to the specific area in which the institution operates. Bhatt and Tang (2001c) discuss MFI vehicles, technologies, and performance assessments and conclude that the future success of microfinance will depend on MFI design tailored to specific clients. Bhatt and Tang's assertion highlights the importance of research to develop sound practices of MFI design and management.

Conning (1999) finds that sustainable MFIs that target poorer borrowers must charge higher interest rates, have higher staff costs, and are less leveraged than those targeting less poor borrowers. MFIs often rely on social collateral within loan groups to secure their loans (Woolcock (2001)). Gomez and Santor (2001), report that group lending and the presence of neighbours have a positive correlation with self-employment earnings.

Woolcock (1999) also addresses the issue of group-lending design, that group performance depends on MFI lending policies, cost structures, nature and extent of social relations among group members, and MFI staff.

Although group loans make up the bulk of microloans worldwide, individual lending is significant in some areas and is growing in popularity. Armendariz de Aghion and Morduch (2000) consider microfinance beyond group lending, they describe the mechanisms that allow MFIs to successfully penetrate new segments of credit markets. These features include direct monitoring, regular repayment schedules, and the use of non-refinancing threats.

2.11.0 Client Targeting

There are two primary issues in client targeting: first, gender targeting (lending to women versus lending to men) and second, poverty targeting (lending to the very poor and poor versus lending to the marginally poor and non-poor).

2.11.1 Gender Targeting

Kevane and Wydick (2001) asserted that male borrowers produce more economic growth than women and that woman facilitate more poverty alleviation.

According to Freedom from Hunger (2011), most women repay loans better than men and also women are often engaged in activities with short gestation periods that require less capital investment than activities of men, thus giving women a preferable position for most microfinance programmes.

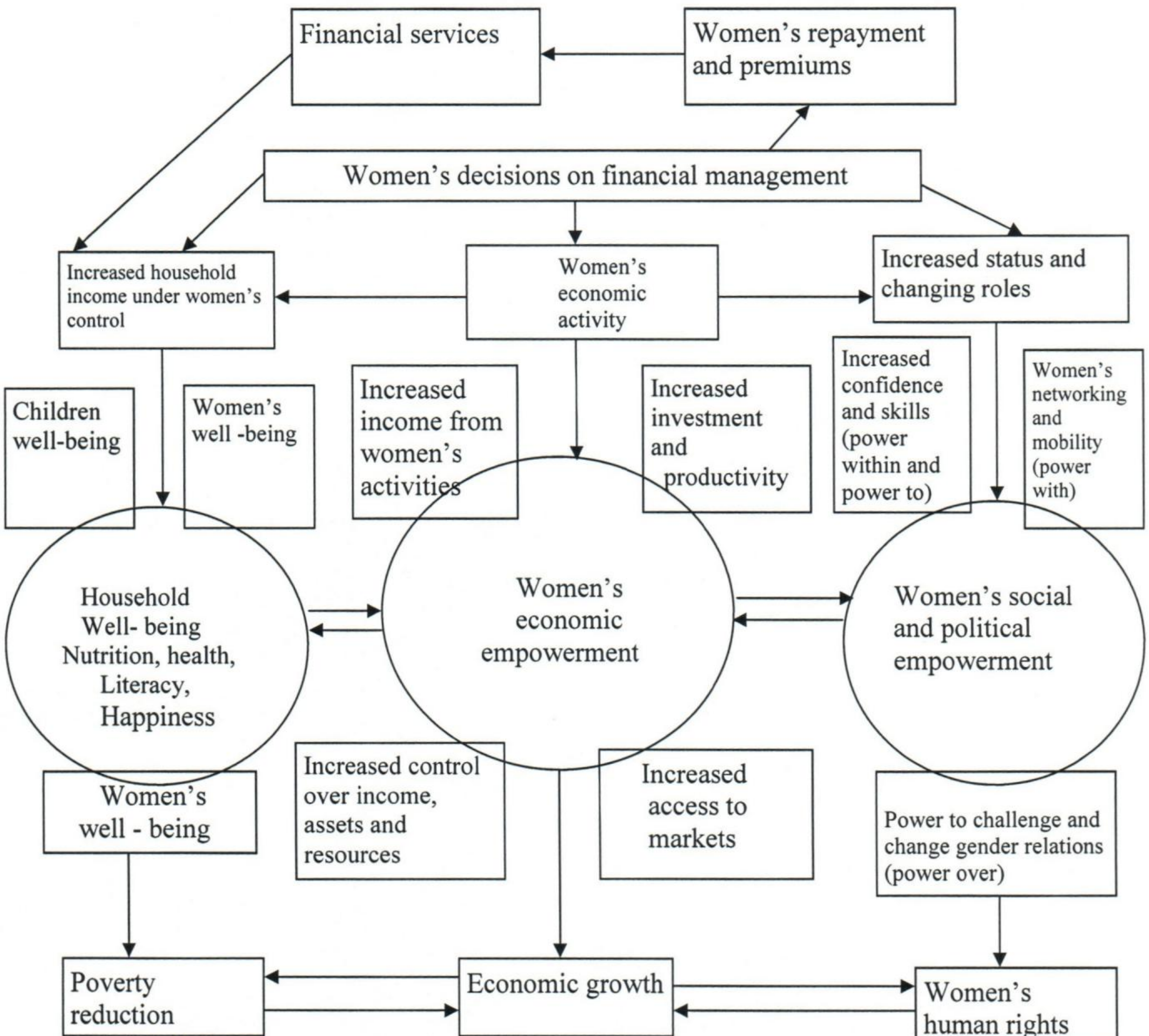
2.11.2 Very-Poor versus Marginally-Poor Targeting

Navajas et al. (2000) find that urban poorest were more likely borrowers, but that rural borrowers were among the poorest of all borrowers. Servon (1997) MFIs serve those at the margin of the mainstream economy being described as economically active / productive poor but not the very poor under chronic poverty that needs aid and donations for survival.

2.12 Microfinance and women's empowerment: virtuous spirals

The expansion of microfinance since the 1990s has significantly increased women's access to facilities for small loans and savings. Some of the dimensions of and inter linkages among the various virtuous impact spirals identified in the literature are shown in the figure 2.1 below.

Figure 2.1: Microfinance and women's empowerment virtuous spirals (Mayoux and Hartl, 2009)



Source: IFAD, 2009

First, increasing women's access to microfinance services can lead to their economic empowerment by accessing significant amounts of money that will enable them start their own economic activities and acquire assets (the linkages in the centre of the figure 2.1).

Second, increasing women's access to microfinance can increase household wellbeing by channelling credit or savings options to households *through women* may enable them to play a more active role in intra-household decision-making, decrease their own and household vulnerability, and increase investment in family welfare. It is likely to benefit men due to increased household income (the linkages on the left in the figure 2.1).

Third, a combination of women's increased economic activity and increased decision-making in the household can lead to wider social and political empowerment (the linkages on the right in the figure 2.1). Women, themselves, often value the opportunity to make a greater contribution to household well-being – giving them greater confidence and sense of self-worth.

Finally, women's economic empowerment at the individual level (the linkages across the bottom of the figure 2.1) can make potentially significant contributions at the macro level through increasing women's visibility as agents of economic growth and their voices as economic actors in policy decisions. This, together with their greater ability to meet the needs of household wellbeing, in turn increases their effectiveness as agents of poverty reduction.

Moreover, these three dimensions of economic empowerment, well-being and social and political empowerment are potentially mutually reinforcing 'virtuous spirals', both for individual women and at the household, community and macro level.

2.13.0 Livelihood

A livelihood is a means of making a living. It encompasses people's capabilities, assets, income and activities required to secure the necessities of life. A livelihood is sustainable when it enables people to cope with and recover from shocks and stresses (such as natural disasters and economic or social upheavals) and enhance their well-being and that of future generations without undermining the natural environment or resource base (International Federation of Red Cross and Red Crescent Societies (IFRC), 2010).

According to James R. Held (1996) Livelihood is:

- A set of economic activities, involving self-employment and/or wage-employment
- by using one's endowments (human and material)
- to generate adequate resources (cash and non-cash)
- for meeting the requirements of self and the household,
- usually carried out repeatedly and as such become a way of life.

Ideally,

- a livelihood should keep a person meaningfully occupied,
- in a sustainable manner,
- with dignity

Livelihoods therefore, go far beyond generating income. A livelihood is much more than an employment (Ibid).

Livelihood interventions are conscious efforts by an agency or an organization to promote and support livelihood opportunities for a large number of people (other than those directly or indirectly employed by them). (Vijay Mohajan and Tom Dichter, 1990).

2.13.1 Sustainable Livelihood

Sustainable livelihood (SL) is a systemic and adaptive approach that links issues of poverty reduction, sustainability and empowerment processes (e.g., participation, gender empowerment, and good governance). The attractiveness of SL lies in its applicability to different contexts, situations of uncertainty and in its capacity as a consultative and participatory process for the cross-fertilization of ideas and strategies between various stakeholders. The SL approach has the flexibility to tap into such kinds of adaptive responses and utilize them as entry points for policy making (Bennett, 2010).

Drawing on Chambers and Conway (1992) among others, livelihood comprises the capabilities, assets (including both material and social resources) and activities required 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. It covers the following:

i) Creation of working days – This relates to the ability of a particular combination of livelihood strategies to create gainful employment for a certain portion of the year (Carney, D. 1998). This may be on or off-farm, part of a wage labour system or subsistence production. Notes three aspects of employment – income (a wage for the employed), production (employment providing a consumable output) and recognition (where employment provides recognition for being engaged in something worthwhile). In terms of the income/production aspects, various target levels have been suggested, but 200 days a year appears to be widely used as a minimum level to create a livelihood (Lipton, 1993). Overall, the number of livelihoods created will be dependent on the proportion of the population available for work.

ii) Poverty reduction – The poverty level is a key criterion in the assessment of livelihoods. Various measures can be used to develop an absolute 'poverty line' measure based on income or consumption levels (Baulch 1996). Alternatively, relative poverty and inequality can be assessed using Gini coefficient measures, such quantitative assessments of poverty can be used in combination with more qualitative indicators of livelihoods (Schaffer 1996).

iii) Livelihood adaptation, vulnerability and resilience – The ability of a livelihood to be able to cope with and recover from stresses and shocks is central to the definition of sustainable livelihoods. Such resilience in the face of stresses and shocks is key to both livelihood adaptation and coping (Davies 1996). Those who are unable to cope (temporary adjustments in the face of change) or adapt (longer term shifts in livelihood strategies) are inevitably vulnerable and unlikely to achieve sustainable livelihoods. Assessing resilience and the ability to positively adapt or successfully cope requires an analysis of a range of factors, including an evaluation of historical experiences of responses to various shocks and stresses. Different types of shock or stress, in turn, may result in different responses, including avoidance, repartitioning, resistance or tolerance mechanisms (Scoones 1998).

Sustainable livelihoods are derived from people's capacity to make a living by surviving shocks and stress and improve their material condition without jeopardizing the livelihood options of other people's, either now or in the future. This requires reliance on both capabilities and assets (i.e., stores, resources, claims and accesses) for a means of living. A livelihood is sustainable if it can cope with, recover from and adapt to stresses and shocks, maintain and enhance its capabilities and assets, and enhance opportunities for the next generation and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term. (Chambers and Conway 1992; Bennett N., 2010).

coping and adaptive strategies (Coping strategies are often a short-term response to a specific shock whilst adaptive strategies entail a long-term change in behaviour patterns as a result of a shock or stress) pursued by individuals and communities as a response to external shocks and stresses is one of the ways of understanding SL systems (Singh, Naresh, 2009).

2.13.2 Household Food Security

The conceptualized application of food security to the household level will be central under this study. Thus household food security is measured in terms of the average household food availability and apparent consumption of staple foods, and the intake of the required calories.

World Bank (1981) clearly indicated that National food security, in terms of self-sufficiency, should not be confused with household food security. Household food security is an access to food, adequate both in quantity and quality to fulfill the needs of all household members at all times for a healthy and active life (World Bank, 1986). Similarly, it has been defined as a year-round access to an adequate supply of nutritious and safe food to meet the nutritional needs of all household members (men and women, boys and girls) (FAO, 2006).

The USAID (2009) defined food security as the availability of food for all people at all time with physical and economic access to sufficient food to meet their dietary needs for a productive and healthy live, and household food security as the physical and economic access to sufficient food for productive and healthy lives (USAID,1995).

Latham M.C (1997) said food security is often defined as access by all people at all times to sufficient food required for a healthy and active life. Achieving food security includes ensuring:

- A nutritionally adequate and safe food supply at both the national and household levels,
- A reasonable degree of stability in the supply of food during the year and in all years,
- Access by each household to sufficient food to meet the needs of all.

For all households to be food secure, each must have physical and economic access to adequate food, each household must always have the ability, the knowledge and the resources to produce or procure the foods that it needs.

Hubbard (1995) indicated that household food security is seen as access by household to sufficient food to provide all members with good health and active life.

Latham M.C (1997) did define household food security as the ability of the household to secure enough food to provide for all the requirements of all members of the household. According to Malex A. Alebikiya (2002) household food security is defined as the access by all household members to adequate food both in quantity and quality at all times for a healthy and active life. He stated that three main strategies are usually employed to achieve household food security, these include:

- Increase household production: quantity, quality, and variety.
- Increase the purchasing power of households.
- Increasing all year round availability: quantity, quality, and variety, through storage (inventory credit).

2.13.3 Dimensions of food security

There are four main dimensions of food security; food availability, food access, food utilization and stability. Food availability refers to the physical existence of food, be it from own production or on the market. At the national level, food availability is a combination of domestic food production, commercial food imports, food aid and domestic food stocks. The use of term "food availability "is often confusing, since it can refer to food supplies available at both the household level and at a more aggregate level (regional and national level). However, the term is applied most commonly reference to food supplies at the regional and national level. Food access is ensured when all households and all individuals within those households have sufficient resources to obtain appropriate foods for a nutritious diet (Riely et al 1995).

Food access depends on the level of household resources (capital, labour, and knowledge) and food price. It also relates to intra-household food distribution and consumption to that every household member meets his/her individual needs in order to be active and healthy. It is worth noting that adequate food access can be achieved without households being necessarily self-sufficient in food production. More importantly, is the ability of households to generate sufficient income which together with own food production, can be used to meet food needs. Food access is also a function of the physical, social and political environments which determine how effectively household are able to utilize their resources to meet their food security objectives. For instance, drastic changes in these conditions, (such as during periods of drought or social conflict) may seriously disrupt food production strategies and threaten the food access of affected households.

Use of food refers to the socio-economic aspects of household food security. For instance, if sufficient and nutritious food is both available and accessible, the household has to make decisions concerning what food is to be purchased, prepared and consumed and how the food is to be allocated within the household.

Stability or sustainability refers to the temporal dimension of food security. Hence to be food secure, a population, household or an individual must have access to adequate food at all times. They should not be at risk of losing access to food as a consequence of a shock (example; an economic or climatic crisis) or cyclical / seasonal food insecurity such as the "lean / hungry season. The concept of food stability can therefore refer to both the availability and access dimensions of food security.

It is important to note that four dimensions of food security have to be present before it can be said that an individual or household is food secure. Food security at the household level is a balance between availability of and access to sufficient food (Rukuni, 2002)

However, food insecurity exists when people do not have adequate physical, social or economic access to food. Food insecurity is also defined as the consumption of less than 80% of the required calorie intake for a moderately active adult life. (FAO/WHO/UNU, 1995)

The poor face the most severe difficulties in relation to the production of food for home consumption and to access marketed food, which make them the most vulnerable to food insecurity. (Maxwell, 2000).

2.14.0 Theoretical Framework

2.14.1 Food Security Rate was calculated as

$$\text{Household food Security rate} = \frac{\text{Bags of food consumed}}{\text{Bags of food required}} \times 100$$

This is achieved by converting all household members to consumer units and all food produced and consumed by household members into bags of food (of 100 Kg). Details can be seen at Appendix IV and V.

Measurement of food security is typically indirect and based on food balance sheets and national income distribution and consumer expenditure data. However, household food security is also measured in terms of the average household food availability and apparent consumption of staple foods.

2.14.2 Livelihood Effect Determination

The poverty level is a key criterion in the assessment of livelihoods. Livelihood Effect was determined based on the Progress out of Poverty Index ™ for Ghana - March, 2010. See appendix VI for details.

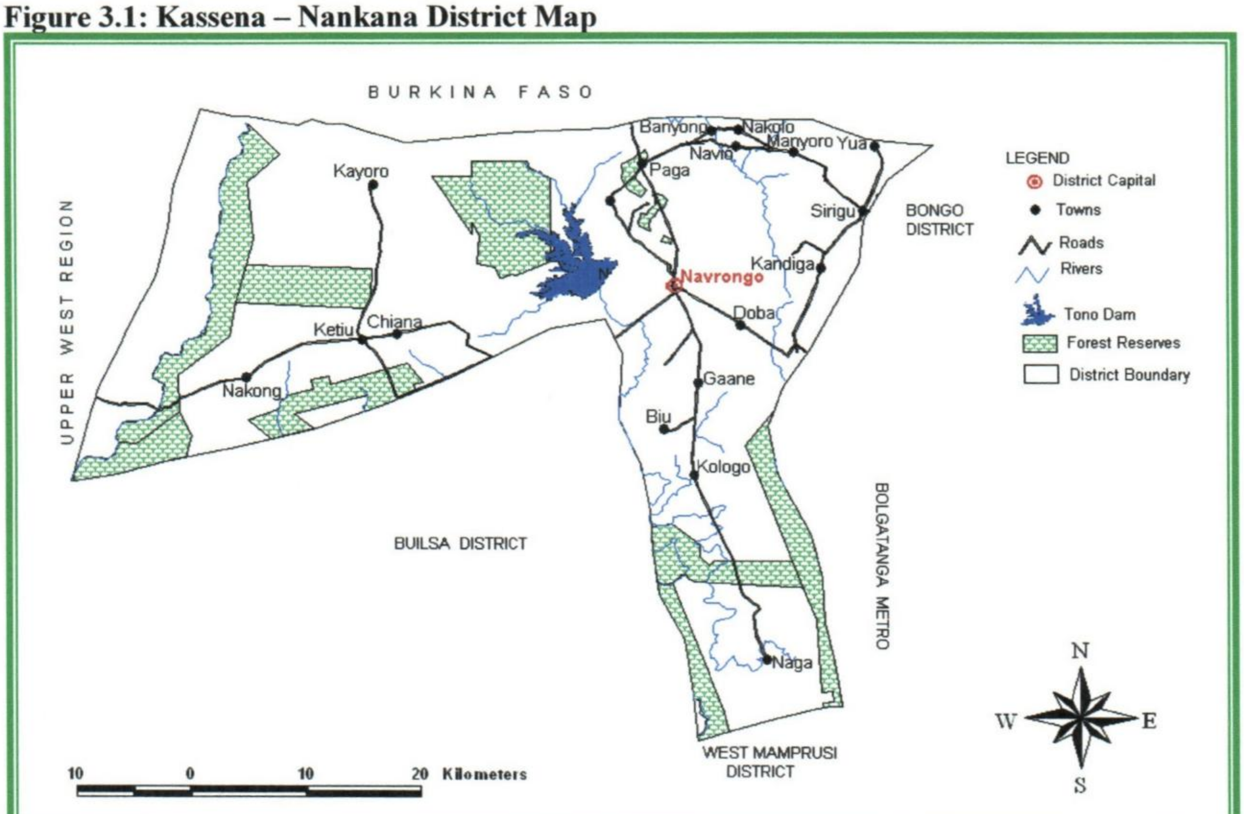
CHAPTER THREE

METHODOLOGY

3.1 The study Area

The Kassena – Nankana District (KND) falls approximately between longitude $10^{0}1'$West and latitude $11^{0}10'$ and 10^{0} 3' North. The District is boarded by Burkina Faso to the North, Bongo and Bolgatanga District to the East, Builsa District and Sissala District (in the Upper West region) to the West and West Mamprusi District (in the Northern region), to the South. The land area of the District is about 1,674 Km^2 and stretches about 55 km North – South and 53 km East – West with total communities of 216 (KND draft medium term development plan, 2006 – 2009)

Figure 3.1: Kassena – Nankana District Map



Source: Kassena – Nankana District Assembly, 2006 - 2009

Ecologically the study area is located in the Guinea Savannah woodlands with the experience of the tropical maritime air mass between May and October that brings average rainfall to 950mm per annum. The day temperatures are high recording 42^0 Celsius (especially February and March) and night temperatures are as low as 18^0 Celsius on average. Two main types of soil are present within the District namely the Savannah Ochrosols and groundwater laterite. The Northern and Eastern parts of the district are covered by the Savannah Ochrosols, while the rest of the District has groundwater laterite.

The population of the District from the 2000 Population and housing census is estimated to be 149,491. It indicates that female forms a little over one-half of the total population of the District. The female population is estimated to be 77,575 representing 51.9 percent while the male recorded 71,916 representing 48.1 percent of the population (KND Draft medium term development plan, 2006 – 2009).

The mainstay of the economy is agriculture, which accounts for about 68.7 percent of the employment population while Public servants, traders, food processors and small – scale artisans constitute the remaining 31.3 percent. The District has virtually no sizeable manufacturing industries. The average household size is seven (7). The extended family system accounts for the large household size, which is relatively higher that the national average of five (5) persons. Such large household sizes have socio – economic implications (Ibids).

3.2 Type of study and proposed approach

A survey was conducted were interpretative approach had been applied. The survey employed help to obtain data about practices, situations or views at one point in time through questionnaires and interviews in real world environment. Interpretative quantitative / statistical analytical techniques were then used to draw inference from the data regarding existing relationship.

3.3 Population and Sampling Procedure

Five (5) out of thirteen (13) beneficiaries' communities sections of Credit and Savings Associations (CSAs) from two communities were purposively sampled from a total number of thirty – two (32) CSAs in all seven communities under the scheme. These five CSAs were the oldest under the scheme and deemed appropriate for the study. Simple random sampling was then conducted to obtain five (5) Solidarity Groups (SGs) from a total average of thirty-six (36) SGs per each CSA. Two (2) members again were randomly selected from an average membership of five (5) from each of the five (5) SGs per each CSA for interview. Thus two (2) members each from five (5) SGs from one CSA per each of the five (5) beneficiary communities sections gave a total of fifty (50) respondents for the entire study.

Table 3.1: Communities (sections) and number of beneficiaries interviewed.

Communities	Number of people interviewed
1. Wuru - Janfasenia	10
2. Wuru - Bayania	10
3. Gia – Kwosongo	10
4. Gia – Nagwa	10
5. Gia – Bangnia	10
Total	**50**

Source: Field Survey, 2011

3.4 Data collection [Type and sources of Data]

Qualitative data was collected from both primary and secondary sources by applying Participatory rural Appraisal (PRA) tools such as observation, key informants and group discussion.

Quantitative data such as respondent's personal data, loan amount, savings and interest rates, repayment amounts, livelihood activities, food security rates with CwE and loan usage was collected by means of semi-structured questionnaire from both primary and secondary data sources.

Main source of data was from the communities, where primary data was collected from the respondents from the communities in the districts, whilst secondary data was collected from the regional offices, Governmental and Non-Governmental, the financial institution, libraries and other research works.

3.5 Methods of data analysis

The data collected was analyzed based on the following criteria:

1. Livelihood conditions (poverty rates) before and after CwE scheme.
2. Food security rate before and after Credit with Education (CwE) scheme.
3. The availability and accessibility of Credit with Education (CwE) scheme.
4. The use of Credit with Education (CwE) scheme.
5. Sustainability of Credit with Education (CwE) scheme.

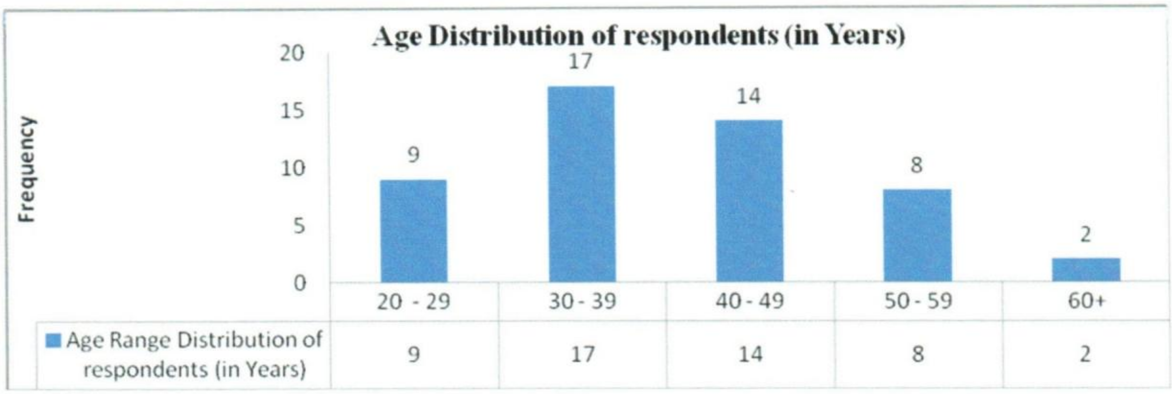
SPSS and Microsoft Excel were used in running the analysis. Descriptive statistical tools such as distribution tables, percentages, frequencies, pie, bar and line charts were used to present the results of the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Age and Sex of beneficiaries

Figure 4.1: Age Distribution of Respondents



Source: Field Survey, 2011

Table 4.1: Sex of respondents

Sex of respondents	**Frequency**	**Percentage (%)**
Male	0	0
Female	50	100
Total	**50**	**100%**

Source: Field Survey, 2011

The results from the survey as indicated above have it that respondent's age range from 20 to 60+ with all beneficiaries being women. The majority of beneficiaries' age falls within 20 to 59 years representing 96%. The beneficiaries could be considered to fall within the economically active group since it is known that the compulsory retirement age in Ghana is 60 years. None of the beneficiaries aged below eighteen years, this confirms that the NRBL credit policy is being operated within the mandate of the law as credit is given to beneficiaries aged eighteen and above. It can also be established that the credit scheme target group is women which gives a good indication of tackling poverty as women access to credit is a measure towards poverty reduction (Linda Mayoux , and Maria Hertl,2009).

4.2 Household Size of Respondents

Table 4.2: Household Size of Respondents

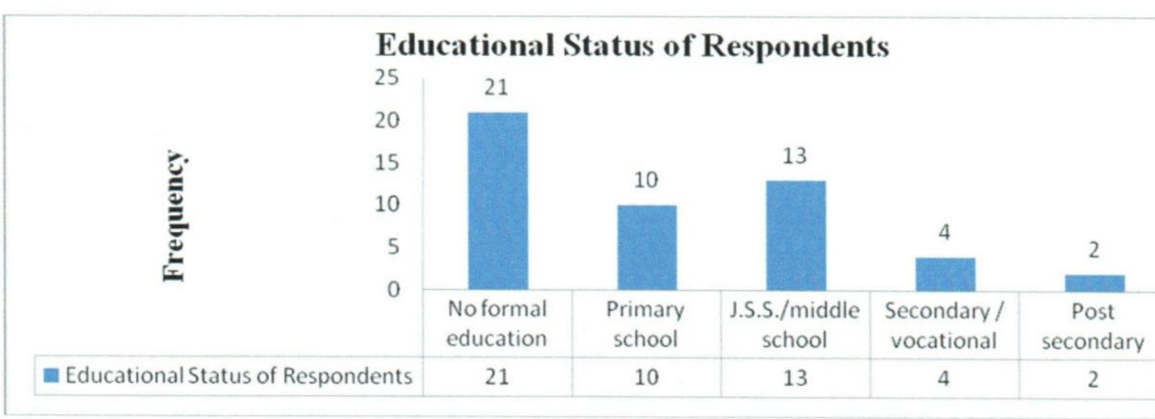
Household Size	1	2	3	4	5	6	7 and above	Total
Frequency	0	0	3	9	22	11	5	50
Percentage (%)	0	0	6	18	44	22	10	100
Average Household Size of Respondents is Five								

Source: Field Survey, 2011

The average household size of beneficiaries is five as shown in table 4.2 above. Though this falls little above the Ghana national mean household size of four, it conforms to the Upper East regional household size mean of 5.3 as established by GLSS - 5, 2006 (GSS, 2010).

4.3 Educational Status of Respondents

Figure 4.2: Educational Status of Respondents



Source: Field survey, 2011

It is well established that the distribution of personal incomes in society is strongly related to the amount of education people have had, a more educated society may translate into higher rate of innovations, higher overall productivity and faster introduction of new technology (Lazear, 2003).

From the study, twenty – one respondents representing 42% had no formal education whilst twenty – nine respondents constituting majority of 58% had some formal education. Among the educated, thirteen, ten, four and two respondents attained J.S.S/middle, Primary, secondary/vocational and post secondary representing 26%, 20%, 8% and 4% respectively. This status of the beneficiaries gives good signals and increase chances of better understanding for the practice of the credit scheme to release its full potential and derive optimum benefits of cognitive skill creation, accountability, individual earnings, productivity and economic growth.

4.4 Occupation and livelihood activities of Respondents

Table 4.3: Occupation and livelihood activities of Respondents

Occupation of respondents	Frequency	Percentage (%)
Trading	50	100
Farming as a common activity	50	100
Engaged in one Livelihood activity	Yes: 0	0
	No: 50	100

Source: Field Survey, 2011

The main occupation of beneficiaries of the CwE Scheme is trading as all fifty respondents representing 100% indicated trading as their main occupation with farming as a common activity. It is also evident that beneficiaries of the CwE Scheme are not engaged in one livelihood activity (one trading activity) but undertake various trading ventures with farming as common operation as risk mitigate management strategy. The beneficiaries indicated that trading has a short gestation period and gives quick returns on investments so as to meet their credit obligations and other needs.

The trading activities undertaken by beneficiaries include:

1. Cereal trading:- Maize, Millet, Rice, Beans, Sorghum, soya beans, Groundnuts and bambara beans. 2. Fresh and smoked fish. 3. Food selling.

4.5 Group Information

All fifty respondents implying 100% of the beneficiaries have indicated that their Credit Associations (CA) membership falls within twenty to thirty six individual with the total membership of beneficiaries Credit Solidarity Association (CSA) falling within One to Six members and that group meetings are made compulsory. These modalities have had impacted positively to the success of the credit scheme and this results confirm the CwE scheme policy of the NRBL (NRBL, 2011).

4.6.0 Availability and accessibility of CwE (Timeliness and Adequacy)

Table 4.4: Availability and accessibility of CwE Scheme

	Frequency	Percentage (%)
Availability of Cwe Scheme	Yes: 50	100
	No: 0	0
Accessibility of CwE Scheme	Yes: 28	56
	No: 22	44

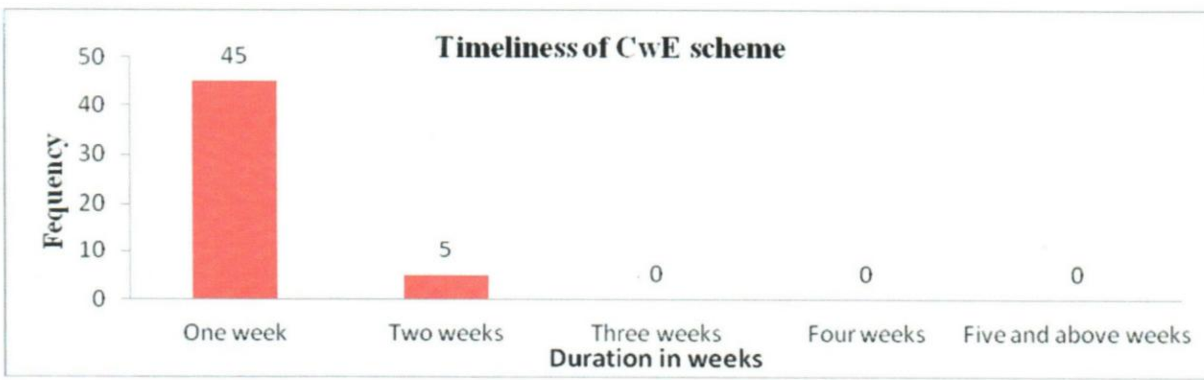
Source: Field survey, 2011

The results from the study as shown from table 4.4 establish that all beneficiaries of the CwE scheme are aware of the existence of the scheme thus 100% of beneficiaries said yes the CwE scheme is readily available.

Twenty - eight of the respondents representing 56% of the beneficiaries indicated that the CwE scheme is accessible, attributing to the fact that at the end of a successful cycle credit is made accessible to them within one week based on their own group assessment of individual request. Whilst twenty – two of the respondents constituting 44% of the beneficiaries stated that the credit scheme is not readily accessible as first cycle consist of averagely six weeks training before credit is either given or otherwise, and again the credit scheme is business selective/ sensitive as only short gestation and quick turnover of investments are key under the credit scheme business target.

4.6.1 Timeliness of CwE scheme

Figure 4.3: Timeliness of CwE scheme



Source: Field Surey, 2011

From figure 4.3 above, forty – five respondents representing 90% of the beneficiaries indicated that the CwE scheme is timely as they are given the next set of credit within a week upon successful end of cycle. Whilst five respondents constituting 10% of the beneficiaries pointed out that they are given the next credit within two weeks upon an end of a pervious cycle, this delay according to the beneficiaries could result from a collective group decision to use one week to re - organized themselves by way of planning their activities for the next cycle.

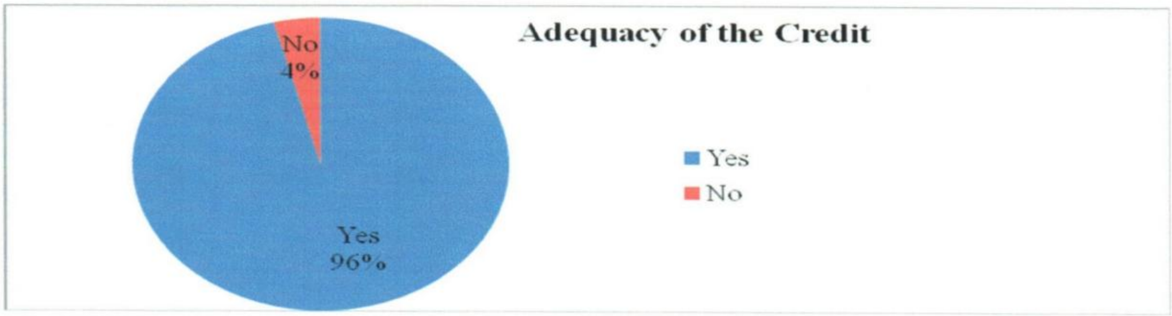
Table 4.5: Timeliness of CwE scheme and its effect on beneficiaries

Effect on Beneficiaries	Frequency	Percentage (%)
1. Credit comes on time which adds to operational income to increase working capital	50	100
2. Credit is often sometime available when some trading commodities have their prices high thus off harvesting season periods.	50	100
3. Credit opportunity sometimes comes at times that some businesses do not need much working capital	50	100

Source: Field Survey, 2011.

4.6.2 Adequacy of Credit

Figure 4.4: Adequacy of Credit



Source: NRBL, 2008 – 2010

Beneficiaries of the CwE scheme received credit amount ranging between Fifty Ghana cedis and Three Thousand Ghana cedis seeing an increase over cycles and over the years. From appendix II, the returns of respondent groups indicates an inceased of GHs 17,320.00 representing 48.42% in total credit disbusred from 2008 to 2009 and a futher increased of GHs 38,850.00 representing 73.18% from 2009 to 2010.

From the results of the study, forty – eight respondents representing 96% of the beneficiaries indicated that the credit amounts received had been adequate for their businesses whilst two respondents constituting 4% stated that credit amounts received are not adequate attributing to the facts that members influences, some of their business ventures demands extended time period to generate better returns and the scheme policies (compulsory weekly repayment) affacts their loan amounts.

4.7 Use of Credit

From the group returns as shown in appendix iv, all fifty respondents constituting 100% of the beneficiaris confirmed that the loan facilities received over the years (2008 to 2010 under study) were put into their main purposes of request thus trading in various cereals (miaze, millet, rice, beans, sorghum,soya beans and groundnuts), fresh and smoked fish, food selling and farming.

The compulsory modalities of the CwE scheme operations (meetings, savings and repayments for instance) coupled with good training and understanding of the scheme policies as well as request business / purpose profitability, and benefits for fullfiling credit obligations accounts for the adheredness of request to purposes stated.

4.8 CwE scheme repayment

Results from the study records all fifty respondents respresenting 100% of the beneficiaries indicating that sixteen weeks (four months) repayment duration is given per loan cycle were all repayments are made compulsory on weekly bases. Yet again all fifty respondents (100% of the beneficiaries) had indicated that they had made full repayments in all loan cycles from 2008 to 2010 recording 100% recovery rate as shown in appendix III.

According to the beneficiaries, the 100% recovery rate can be attributed to the following resasons:

1. Good CwE scheme modalities:- village based banking services delivery, training and educational services, compulsory regular meetings, savings, and repayments.
2. Made enough profits from their businesses
3. Fullfilment of credit obligations made for future chances of benefit
4. To aviod having any problem with the bank
5. To aviod disgrace
6. Savings made on regular basis

4.9 Interest Rate

All beneficiaries respondents were able to articulate the amount espected to be paid as interest on a given amount per loan cycle. The study results revealed that the NRBL CwE scheme operates with an interest rate of 11% per cycle which implies a yearly interest rate of 33%. It is also made clear by beneficiaries that no amount is paid or charged besides the interest component, thus no banking charges (processing fees) taken from credit disbursed.

The CwE scheme respondents' group financial analysis as shown in appendix II obtained from NRBL indicates that the interest rate is charged on a straight line method bases.

Twenty six respondents representing 52% of the beneficiaries considered the interest rate to be moderate whilst twenty four respondents constituting 48% of the beneficiaries considered the interest rate to be high.

4.10 Savings

From the NRBL and beneficiaries of the CwE scheme, savings are made on individual basis but paid into the group account at the bank level. Savings before first cycle credit delivery is made complusory and savings operations are expected to continue (deposits and withdrawals). The savings amount made are not fixed but left opened to respondents chioce and ability but regular savings (deposits) are encouraged. Interest is earned on the savings made following the NRBL operating rule for interest earned on savings account.

The study also revealed that forty six respondents representing 92% of the beneficiaries had no bank account before credit programme whilst four respondents constituting 8% of the beneficiaries own and opereted a bank account.

This situation existed because beneficiaries had the perception that the bank was meant for a certain 'class' of individuals, institutions or groups besides their indaquate working capital and profit margins. Currently under the CwE scheme all fifty respondents representing 100% of the beneficiaries own and operate a bank account as a result of the CwE scheme compulsory savings requirement and savings education, increased working capital and profit margins.

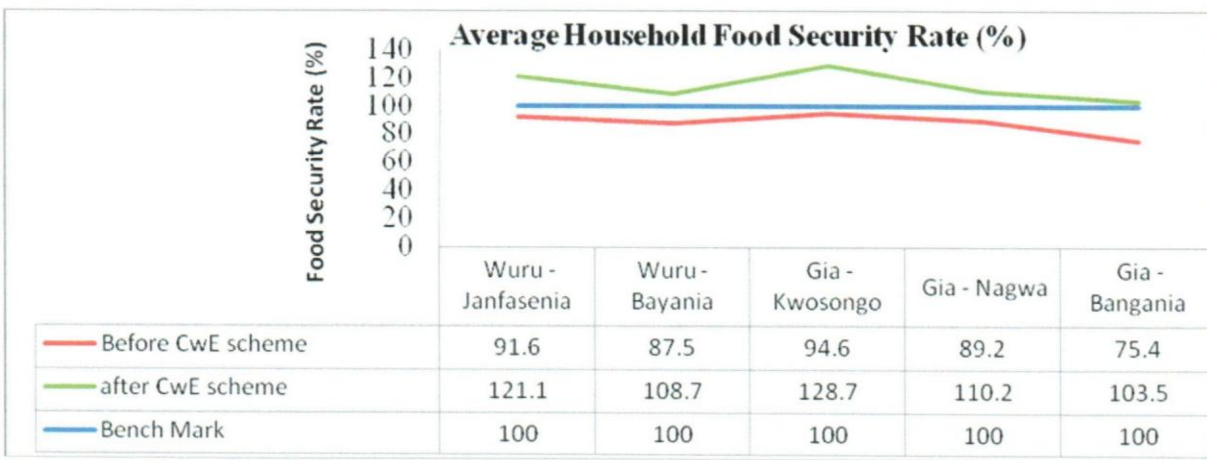
4.11: Effect of CwE scheme on beneficiaries household food security

Table 4.6: Average communities Household Food Security Rate (%)

Community	Average Household Food Security Rate (%)		Bench mark
	Before	After	
1. Wuru - Janfasenia	91.6	121.1	100
2. Wuru - Bayania	87.5	108.7	100
3. Gia - Kwosongo	94.6	128.7	100
4. Gia - Nagwa	89.2	110.2	100
5. Gia - Bangania	75.4	103.5	100

Source: Field Survey, 2011

Figure 4.5: Average Communities Houshold Food Security Rate (%)



Source: Field Survey, 2011

The assessment of the effect of CwE scheme on beneficiaries household food security presented on table 4.6 indicates that all households in the five communities namely Wuru – Janfasenia, Wuru – Bayania, Gia – Kwosongo, Gia – Nagwa and Gia – Bangania before the introduction of CwE scheme have their food security rates to be 91.6%, 87.5%, 94.6%, 89.2% and 75.4% respectively were food insecured as all the average communities household food security rates were below the bench mark of 100%. Whilst after the introduction of the CwE scheme, their average household food security rates of 121.1%, 108.7%,128.7%,110.2% and 103.9% respectiviely are all above the bench mark of 100%. This explains that the beneficiaries are food secured and live above the $ 1.00 per day. This is also comfirmed as food insecurity is defined as the consumption of less than 80% of the required calorie intake for a moderately active adult life (FAO/WHO/UNU, 1995). This clearly indicates that the CwE scheme had a positive effect on the beneficiaries food security.

Farming and market purchase are main sources through which food is acquired by households. Food shortages are experienced by households mostly during the lean season, where buying / purchase of food is done as a food shortage coping strategy. Both the husband and wife are responsible for the provision of household food. This according to Rukuni, 2002 inceases the household availability and access to adequate food at all times which promote household food security.

The beneficiaries indicated that a balance between food availability and access to sufficient food result in the consumption of stable foods including Tz (prepared from maize, millet, guinea corn), rice, beans, groundnuts, potato, yam and cassava. The average household food availability and the apparent consumption of stable food by beneficiaries revealed that households of beneficiaries of the CwE scheme are food secured.

4.12 Effect of CwE scheme on Beneficiary Household Livelihood

Table 4.7 PPI Score of beneficiaries

Community	Average Beneficiaries PPI Score	
	Before	**After**
1. Wuru – Janfasenia	27	47
2. Wuru – Bayania	25	41
3. Gia – Kwosongo	29	52
4. Gia – Nagwa	24	39
5. Gia – Bangania	22	32

Source: Field Survey, 2011

Poverty reduction, thus poverty level is a key criterion in the assessment of livelihoods as various measures can be used to develop an absolute 'poverty line' measure based on income or consumption levels (Ravallion 1992; Baulch 1996). This study tried to assess the effect of CwE scheme on beneficiary household lilvehood before and after the introduction of CwE scheme by adopting PPI^{TM} for Ghana (GLSS, 2005/2006). Results from the study revealed that the average beneficiary PPI score before the introduction of CwE scheme is given as 25.4%, this gives an expression under category livelihoods according to Ghana PPI^{TM} of 52.9% of the beneficiaries living totally below the national poverty line with only a minority of 47.1% living totally above the national poverty line. The results also shows that the average beneficiary PPI score after the introduction of the CwE scheme is 42.2%. This from the category livelihoods according to Ghana PPI^{TM} indicates an expression of 82.2% of the beneficiaries to be totally above the national poverty line whilst 17.8% of the beneficiaries live totally below the national poverty line. This results reveals that majority (82.2%) of the CwE scheme beneficiaries form part of the

1% population in the Upper East region who are not poor as established by the GLSS, 2005/2006 report.

From table 4.7 above Wuru – Janfasenia beneficiaries had an average household PPI scores of 27% and 47% before and after the introduction of CwE scheme respectively which means that 47.1% and 89.0% of its beneficiaries live totally above the national poverty line with 52.9% and 11.0% living totally below the national poverty line before and after the introduction of the CwE scheme respectively.

Wuru – Bangania beneficiaries had an average household PPI scores of 25% and 41% which are interpreted as 47.1% and 82.2% of beneficiaries live totally above the national poverty line with 52.9% and 17.8% living totally below the national poverty line before and after the introduction of CwE scheme respectively.

Beneficiaries from Gia – Kwosongo had an average benficiary household PPI scores of 29% and 52% which are construed as having 47.1% and 91.0% of the beneficiaries live totally above the national poverty whilst 52.9% and 9.0% of the beneficiaries live totaly below the national poverty line before and after the introduction of CwE scheme respectively.

Gia – Nagwa community had an average household PPI scores of 24% and 39% which implies that 31.3% and 78.6% of the beneficiaries households live above the national poverty line whilst 68.7% and 21.4% live below the national poverty line before and after the introduction of CwE scheme respectively.

The results also indicates that Gia – Bangania had an average beneficiaries household PPI scores of 22% and 32% which means that 31.3% and 60.0% of the beneficiaries households live totally above the national poverty line whilst 68.7% and 40.0% of its beneficiaries living totally abelow the national poverty line before and after the introduction of CwE scheme respectively.

CHAPTER FIVE

MAJOR FINDINGS, CONCLUSION, SUGGESTIONS AND RECOMMENDATIONS

5.1 Major Findings

The results from the study indicates that fifty beneficiaries were involved in the study which 100% are female and aged above 18 years. 76% of beneficiaries have an average household size above four. 42% of beneficiaries had no formal education whilst majority of 58% have had some form of formal education. 100% of beneficiaries are enaged in trading as main occupation with farming as a common activity. No beneficiary is enaged in a single sole livelihood activity. 100% of beneficiaries have their Credit and Savings Associations (CSAs) membership falling within 20 – 36 individuals and Solidarity Groups (SGs) membership between 1 – 6 with group meeting being compulsory. All the beneficiaries representing 100% agreed that CwE scheme is available with majority of 56% indicating the scheme is readly accessible whilst 44% disagree to the readly accessibility of the scheme. 90% of beneficiaries have had it that credit cycle timely delivery is within one week whilst 10% stated two weeks. 96% of beneficiaries stated that amount received is adquate with only 4% of them saying amounts received are not adequate (given reasons of members influence in determining loans sizes, scheme policies of compulsory weekly repayment). The results shown in appendix II indicated that a total increase in credit amount disbursed by GHs 17,320.00 from 2008 to 2009 representing 48.42%, and a further increase of GHs 38,850.00 from 2009 to 2010 representing 73.18%. 100% of the beneficiries confirmed putting the credit received over 2008 to 2010 into the main purpose of request as indicated in appendix IV. This is attributed to the firm scheme pratical operational policies. All the beneficiaries stated that repayment of credit is on weekly basis with 16 weeks making up a credit cycle. A major findings is the 100% recovery rate indicated by all beneficiaries as in appendix III. 11% interest rate per credit cycle and 33% per year is known by all beneficiaries. 52% of beneficiaries considered the interest rate to be moderate with 48% considering it to be high. 92% of beneficiaries have had no bank account before the introduction of the scheme whilst with the scheme 100% of beneficiaries own and operates bank account. Savings are made on individual basis and paid into a single group account at the bank level, savings before first cycle is made compulsory and encouraged thereafter.

A major finding of the study have it that all households in the five communities namely Wuru-Janfasenia, Wuru – Bayania, Gia – Kwosongo, Gia – Nagwa and Gia – Bangania before the introduction of CwE scheme have their food security rates to be 91.6%, 87.5%, 94.6%, 89.2% and 75.4% are food insecured as all the average communities household food security rates are below the bench mark of 100% respectively. Whilst being food secured after the introduction of the CwE scheme as all their average communities household food security rates of 121.1%, 108.7%,128.7%, 110.2% and 103.9% are all above the bench mark of 100%. Beneficiaries balance between food availability and access to sufficient food resulting in the apparent consumption of stable food (like Tz, maize, millet, rice, potato, beans, groundnuts,guinea corn, yam amd cassava) makes them food secured.

Another major finding of the study indicates 52.9% of beneficiaries live totally below the poverty line with a minority of 47.1% living totally above the poverty line given the average beneficiaries PPI score of 25.4% before the introduction of the CwE scheme. Whislt having 82.2% of the beneficiaries living totally above the poverty line with only 17.8% living totally below it given an average beneficiaries PPI score of 42.2% after the introduction of CwE scheme.

5.2 Conclusion

It can be concluded from the study that the CwE scheme is operated within the boundries of credit policies and lending provisions enshrined under the mandated banking regulations of the Naara Rural Bank Limited, as all beneficiaries are adults and fall within the active working group. The CwE scheme has some notable effects on beneficiary household livelihood and food security, among which include:

The study had established that beneficiaries under the CwE scheme are food secured, as a balance between food availability and access to sufficient food results in the apparent consumption of stable food and beneficiaries average household food security rates are above the benchmark. The Cwe scheme has a positive effect on beneficiary household livelihood as majority of the beneficiaries live totally above the national poverty line.

The presence and operation of the CwE scheme at the doorsteps of beneficiaries and the delivery based on the group system (social capital / mutual guarantee) with compulsory group meetings, repayments and savings window being the heart of the scheme proves that the scheme is readily available and accessible.

It is also evident that the CwE scheme is sustainable due to its 100% recovery and for the fact that most beneficiaries are engaged in more than a single livelihood activity as risk mitigation strategy. The educational sections of the scheme has a positive effect on benficiary livelihood activities and food security as beneficiaries capacities and potentials are built and unvealed.

It is known that beneficiaries under the scheme put the credit into the rightful purpose of request. This can be attributed to the firm CwE scheme operational policies. It is also established that the

CwE scheme operates with savings window for which interest is earned on deposits made. Beneficiaries of the scheme are said to have full knowledge about the interest rate and the expected repayments of credit over cycles.

From the results of the study timeliness and adequacy of credit amounts needs not to stagnant when benficiaries have the capacities for higher amounts. The study had underscored beneficiaries rising in credit amounts over cycles whilst showing concerns about interest rate, timeliness of credit delivery / disbursement and repayment duration possing as challenges to CwE scheme.

5.3 Suggestions and Recommendations

The study had recorded the following suggestions towards the improvement of the CwE Scheme:

There is the need for prompt and timely delivery of credit and educational facilities to ensure timely business plans obligations by beneficiaries.

Adequate credit delivery is one measure that can lead to the improvement of the scheme. The group having the mandate of determining beneficiaries credit amounts is encouraged to be adhered to in strenghtening the scheme. Reducing the interest rate will futher help better the lifes of the beneficiaries and make greater impact. The educational component of the scheme should be intensified in order to improve the scheme and futher better the lifes of beneficiaries. The CwE scheme is encourage to upscale to cover if not all communities but most communities to improve the lifes of the poeple, this call for more capital investment into the scheme. It is therefore suggested that there is the need for the bank to source more funds for the running of the scheme.

Again it is with hope that Governmantal and Non Governmantal Organizations (NGOs) would help make resources (logistics and funds) available for the improvement of the scheme.

More human resource and logistics should be allocated for the scheme due to its intensive working nature in order to help maintain the scheme's underlying operational principles, whilst intensifying human resource training for quality service delivery.

From the study the following recommendations are made:

It is recommended that interest rate should be reduced and reducing balance method applied to help reach out to more people to deepen the effect of the Scheme. Timely and adequate credit delivery should be ensured to promote effective and efficient credit use.

It is recommended that sufficient resources should be allocated for the CwE scheme to maintain its basic operational principles. The scheme should be upscaled to cover more communities to help improve more household livelihood and food security of the populate.

It is with hope that the principles of the CwE scheme would be adopted with more innovative approach (e.g extension of weekly repayment to compulsory monthly repayment) to cover other schemes and livelihood activities.

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APPENDIX I

EFFECT OF THE CREDIT WITH EDUCATION (CwE) SCHEME ON BENEFICIARY HOUSEHOLD LIVELIHOOD. A CASE STUDY IN THE NAARA RURAL BANK LIMITED (NRBL).

A. QUESTIONNAIRE FOR BENEFICIARY

NAME OF COMMUNITY.. DATE OF INTERVIEW. ....

PERSONAL INFORMATION OF RESPONDENT:

A.1. Name of respondent……………………………………………………………..............

A.2. Age of respondent………………...

A.**3.** Sex of respondent. 1). Male 2). Female

A.4. Marital status 1). Single 2) Married 3) Widowed.

A.5. Name of house………………………………………………………………………..

A.6. Name of Household head……………………………………………………………….

A.7. What is your household size?

1) One 2) Two 3) Three 4) Four 5) Five 6) Six 7) Seven and Above

A.**8.** Are you engaged in one livelihood activity? 1). Yes 2). No

A.9. What is your main occupation?

1). Life stock production (specify)……………… 2). Crop production (specify)…………

3). Trading (specify)……………………….. 4). Others (specify)……………………

A.10. Educational status:

1). No formal education 2). Primary education 3). J.S.S./middle School

4). Secondary/ Vocational 5). Post secondary 6). Tertiary 7). Others (specify)….....

A.11. Ethnicity:

1). Kasena 2). Nankana 3. Others (specify)……………………..

B. GROUP INFORMATION:

B.10. Name of group (Credit Association)……………………………………………………..

B.11. What is the total number of your group (C.A) members? ………………………………..

B.12. What is the total membership of your CSA? ------ 1). One to Six 2). Seven and above

B.13. What is your position in the group?

1). Chairperson 2). Treasurer 3).Secretary 4). Member

B.14. Are group meeting made? 1). compulsory 2). Voluntary

C. AVAILABILITY AND ACCESSIBILITY OF CwE *(TIMELINESS AND ADEQUACY)*

C.15. Is the CwE Scheme readily available? 1). Yes 2).No

C.16. Is the CwE accessible? 1) Yes 2) No

C.17. For how long have you benefited from the scheme? 1). First year (first to third cycle) 2). Second year (Fourth to Seventh cycle) 3). Third & above years (Eighth and above cycles)

C.18. How much cash have you received as per credit cycle? …………………………….......

C.19. Is the amount adequate for the purpose of which you joined the credit scheme?

1) Yes 2). No

C.20. Give reasons for your answer……………………………………………………….........

…………………………………………………………………………………………......…

……………………………………………………………………………………………..

C.21. How long does it take to apply and get credit?
1) 1 week 2) 2weeks 3) 3weeks 4) 4weeks 5) 5weeks and above

C.22. What time period are you given to make repayment of the credit?
1) 1 month 2) 2months 3) 3months 4) 4 months 5) 5months and above

C.23. How do you make the repayment of the credit given to you?
1). Daily repayment 2.) Weekly repayment 3).Monthly repayment
4).Quarterly repayment 5). At the end duration

D. USE OF CREDIT WITH EDUCATION (CwE).

D.24. TABLE 1.

Year.	amount received (GHs)	activity undertaken	amount used for each activity(GHs)
2008	1 2 3		
2009	1 2 3		
2010	1 2 3		

D.25. What did you borrow the money to do?
(If different from activities listed in table 1, explain why the change in activity).
…………………………………………………………………………………………………
……………………………………………………………………………………

E. REPAYMENT STRATEGY:

E.26. TABLE 2.

YEAR	HAVE YOU REPAID ALL?		GIVE REASONS.
2008	YES.	NO.	
2009	YES.	NO.	
2010	YES.	NO.	

E.27. What is the source of income for the repayment of the loan/credit?
1). Used money earned from activity for which credit was given.
2). Used money earned from activity for which credit was not given.
3). Others (specify)

F. INTEREST RATE:

F.28. TABLE 3. How much were you suppose to pay for the loans for the following years and how much did you / were you really able to pay?

YEAR	Amount requested (GHs)	Amount given as credit (GHs)	Expected amount to be paid (GHs).	Actual amount paid (GHs)
2008				
2009				
2010				

G. SAVINGS.

G.29. Does your group operate a bank account? 1) YES. 2) NO.

G.30. Did you do any savings before receiving the credit facility? 1) YES. 2) NO.

G.31. *The savings made, is it? 1). Compulsory 2). Voluntary*

G.32. Do you save as a group or individual? 1). Group 2). Individual

1. If group how much per member and how often do you save? ....

2. If individual how much and how often do you save? ....

G.33. Do you earn interest on the savings you make? 1). Yes 2). No

G.34. TABLE 4. Do you operate a bank account before and after receiving credit?

BEFORE RECEIVING CREDIT.		AFTER RECEIVING CREDIT.	
YES	NO.	YES	NO.

G.35. How often do you save? ....

H.36. EFFECT OF CREDIT WITH EDUCATION SCHEME ON BENEFICIARY HOUSEHOLD LIVELIHOOD USING PROGRESS OUT OF POVERTY INDEX FOR GHANA

Indicator	Value	Point	Score after	Score before
1. How many members does the House have?	A. Seven or more	0		
	B. Six	6		
	C. Five	8		
	D. Four	11		
	E. Three	15		
	F. Two	23		
	G. One	31		
2. Are all children ages 5 to 12 in School?	A. No	0		
	B. Yes, or no children ages 5 to 12	4		
3. What is the highest grade Completed by the female head/spouse?	A. No female Head/spouse	0		
	B. None or Pre-school	4		
	C. Primary or middle	7		
	D. Any JSS, SSS, S, L, U, OR higher	10		
4. Is the Main Job of the male head/spouse in agriculture?	A. Male head/ spouse	0		
	B. Yes, main job is in agriculture	8		
	C. No, main job is not in agriculture	10		
	D. No, male head/ spouse	10		

5. What is the Main construction material used for the roof?	A. Palm leaves/raffia/thatch, wood, bamboo, mud bricks/earth, or other	0
	B.Corrugated iron sheets, cement/concrete, Asbestos /slate, or roofing tiles	3
6. What is the main source of Lighting for the dwelling?	A. Not electricity (mains)	0
	B. Electricity mains)	5
7. What is the main Source of Drinking Water for the household?	A. Borehole, well (with pump or not, protected or not), or other	0
	B. River/ stream, rain water/spring, or dugout/pond/lake/dam	5
	C. Indoor plumbing, inside standpipe, sachet/bottled water, Standpipe/tap (public or private outside), pipe in neighbours, Water truck/tanker, or water vendor	7
8. Does any house member own a working stove (kerosene, electric, or gas)?	A. No	0
	B. Yes	10
9. Does any household member own a working iron (box or electric)	A. No	0
	B. Yes	6
10. Does any household Member own a working radio, radio cassette, record player, or 3- in – 1 radio system?	A. None	0
	B. Only radio	2
	C. Radio cassette but no record player nor 3-in-1(regardless of radio)	6
	D. Record player but no 3-in-1 radio (regardless of radio or cassette)	9
	E. 3-in-1 radio system (regardless of any others	14

I.37. EFFECT OF THE CREDIT WITH EDUCATION SCHEME ON FOOD SECURITY.

I.1. How is food acquired by household?
1). Farming 2). Market purchase 3). Through food gifts 4). Other specify ....

I.2. Food commonly consumed by households (please mark all kinds consumed).
1). Tz 2). Rice 3). Yam/ cassava 4). Porridge 5). Beans 6). Others specify --------

I.3. Does household experience food shortage during the year?
1). Yes 2). No (If **Yes** answer Question **I.4**).

I.4. What is the seasonal period during which storage is experienced?
1). Major season 2). Lean season

I.5. Household coping strategies for food shortages.
1). Buy food 2). Rely on wild food 3). Reduce the number of meals served each day
4). others specify -----------------------------

I.6. Who is responsible for obtaining / provision of household food?

1). Husband 2). Wife 3). Both husband and Wife 4). Children

J.38 TABLE 6. HOUSEHOLD FOOD SECURITY WITH CREDIT WITH EDUCATION SCHEME.

SERIAL NUMBERS (names of HH members)		**AGE**		**SEX**			
				MALE(M)		FEMALE (F)	
		Before	**After**	**Before**	**After**	**Before**	**After**
1							
2							
3							
4							
5							

K.39. TABLE 7. OUTPUT OF THE HOUSEHOLD FOOD SECURITY

Plot	Crop	Total quantity harvested		Quantity normally sold		Quantity given to friends and relatives.		Quantity consumed.		Quantity used for other purposes.	
		Before	After	Before	After	Before	After	Before	After	Before	After

L. IMPROVEMENT OF THE CREDIT SCHEME

Problems which necessitated the use of the credit facility.

1--------------2…………….3………………4…………………..

L.40. What problems prompted you to go in for the credit facility?

1…………….2…………….3………………4…………………

L.41. Which problems have been solved through the use of the credit facility?

1…………….2……………...3……………..4…………………

L.42. How will you rate the micro-credit scheme of which you form part?

1.) Excellent. 2.) Good. 3.) Poor. 4.) Very poor.

L.43. Are you satisfied with the credit you enjoy? 1. Yes. 2. No.

L.44. Why are you not satisfied with the credit scheme?

1. Credit given is too small.
2. Timing of micro-credit not good.
3. Interest rate too high.
4. Problems in group.
5. Others (specify).

L.45. What do you think should be done to improve the "CwE" scheme?
1……………….2……..……..3………..……..4……………

APPENDIX II
NAARA RURAL BANK LIMITED
ANALYSIS OF RESEARCH GROUPS UNDER CREDIT WITH EDUCATION FROM 2008 TO 2010

GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2008						
GROUP NAME	**Amount disbursed**	**№ of cycles**	**Int. (33%)**	**Total**	**Amount Recovered**	**Recovery Rate (%)**
1. WEWOZEM CA	9440	3	755.2	**10195.2**	10195.2	100
2. NIMOROLAMA CA	2850	3	228	**3078**	3078	100
3. WEWUWOLI CA	12700	3	1016	**13716**	13716	100
4. WEWUJA CA	7700	3	616	**8316**	8316	100
5. WEJEGADAM CA	3080	3	246.4	**3326.4**	3326.4	100
Total	**35770**		**2861.6**	**38631.6**	**38631.6**	**100**
GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2009						
GROUP NAME	**Amount disbursed**	**№ of cycles**	**Int. (33%)**	**Total**	**Amount Recovered**	**Recovery Rate (%)**
1. WEWOZEM CA	16850	3	1731.4	**18581.4**	18581.4	100
2. NIMOROLAMA CA	4410	3	456.7	**4866.7**	4866.7	100
3. WEWUWOLI CA	19920	3	2031.3	**21951.3**	21951.3	100
4. WEWUJA CA	7890	3	795	**8685**	8685	100
5. WEJEGADAM CA	4020	3	420.9	**4440.9**	4440.9	100
Total	**53090**		**5435.3**	**58525.3**	**58525.3**	**100**
GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2010						
GROUP NAME	**Amount disbursed**	**№ of cycles**	**Int. (33%)**	**Total**	**Amount Recovered**	**Recovery Rate (%)**
1. WEWOZEM CA	24460	3	2690.6	**27150.6**	27150.6	100
2. NIMOROLAMA CA	9890	3	1087.9	**10977.9**	10977.9	100
3. WEWUWOLI CA	39720	3	4369.2	**44089.2**	44089.2	100
4. WEWUJA CA	9580	3	1053.8	**10633.8**	10633.8	100
5. WEJEGADAM CA	8290	3	911.9	**9201.9**	9201.9	100
Total	**91940**		**10113.4**	**102053.4**	**102053.4**	**100**

Source: NRBL, 2011

NAARA RURAL BANK LIMITED - PAGA

ANALYSIS OF CREDIT WITH EDUCATION RETURNS from 2008 to 2010

DETAIL GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2008

	FIRST CYCLE						SECOND CYCLE						THIRD CYCLE							
NAME	isb.	Principal	Int.	Total	Amt Paid	Rec. Rate (%)	Date Disb.	Principal	Int.	Total	AmT Paid	Rec. Rate (%)	Date Disb.	Principal	Int.	Total	Amt Paid	ReC. Rate (%)	Total prin.	Total Int.
1. WEWOZEM CA	/2008	2000	160	2160	2160	100	7/16/2008	2540	203.2	2743.2	2743.2	100	11/19/2008	4900	392	5292	5292	100	9440	755.2
2. NIMOROLAMA (	/2008	850	68	918	918	100	7/16/2008	900	72	972	972	100	11/19/2008	1100	88	1188	1188	100	2850	228
3. WEWUWOLI CA	/2008	3820	305.6	4125.6	4125.6	100	7/10/2008	4090	327.2	4417.2	4417.2	100	11/13/2008	4790	383.2	5173.2	5173.2	100	12700	1016
4. WEWUJA CA	/2008	1460	116.8	1576.8	1576.8	100	7/10/2008	2320	185.6	2505.6	2505.6	100	11/13/2008	3920	313.6	4233.6	4233.6	100	7700	616
5. WEJEGADAM C/	/2008	1030	82.4	1112.4	1112.4	100	7/18/2008	820	65.6	885.6	885.6	100	11/21/2008	1230	98.4	1328.4	1328.4	100	3080	246.4
TOTAL		9160	732.8	9892.8	9892.8	100		10670	853.6	11523.6	11523.6	100		15940	1275.2	17215.2	17215.2	100	35770	2861.6

DETAIL GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2009

	FIRST CYCLE						SECOND CYCLE						THIRD CYCLE							
NAME	isb.	Principal	Int.	Total	Amt Paid	Rec. Rate (%)	Date Disb	Principal	Int.	Total	AmT Paid	Rec. Rate (%)	Date Disb	Principal	Int.	Total	Amt Paid	ReC. Rate (%)	Total Prin	Total Int.
1. WEWOZEM CA	/2009	4070	325.6	4395.6	4395.6	100	8/6/2009	4480	492.8	4972.8	4972.8	100	12/3/2009	8300	913	9213	9213	100	16850	1731.4
2. NIMOROLAMA (	/2009	930	74.4	1004.4	1004.4	100	8/6/2009	1430	157.3	1587.3	1587.3	100	12/3/2009	2050	225	2275	2275	100	4410	456.7
3. WEWUWOLI CA	/2009	5330	426.4	5756.4	5756.4	100	7/24/2009	5120	563.2	5683.2	5683.2	100	11/30/2009	9470	1041.7	10511.7	10511.7	100	19920	2031.3
4. WEWUJA CA	/2009	2430	194.4	2624.4	2624.4	100	7/23/2009	2090	229.9	2319.9	2319.9	100	11/30/2009	3370	370.7	3740.7	3740.7	100	7890	795
5. WEJEGADAM CA	/2009	710	56.8	766.8	766.8	100	7/23/2009	740	81.4	821.4	821.4	100	11/30/2009	2570	282.7	2852.7	2852.7	100	4020	420.9
TOTAL		13470	1077.6	14547.6	14547.6	100		13860	1524.6	15384.6	15384.6	100		25760	2833.1	28593.1	28593.1	100	53090	5435.3

DETAIL GROUP LEVEL RETURN AS AT 31ST DECEMBER, 2010

	FIRST CYCLE						SECOND CYCLE						THIRD CYCLE							
NAME	sb.	Principal	Int.	Total	Amt Paid	Rec. Rate (%)	Date Disb	Principal	Int.	Total	AmT Paid	Rec. Rate (%)	Date Disb	Principal	Int.	Total	Amt Paid	ReC. Rate (%)	Total Prin	Total Int.
1. WEWOZEM CA	4/15/2010	6730	740.3	7470.3	7470.3	100	8/11/2010	6880	756.8	7636.8	7636.8	100	12/15/2010	10850	1193.5	12043.5	12043.5	100	24460	2690.6
2. NIMOROLAMA CA	4/15/2010	2110	232.1	2342.1	2342.1	100	8/11/2010	3360	369.6	3729.6	3729.6	100	12/21/2010	4420	486.2	4906.2	4906.2	100	9890	1087.9
3. WEWUWOLI CA	4/9/2010	10740	1181.4	11921.4	11921.4	100	8/13/2010	11280	1240.8	12520.8	12520.8	100	12/9/2010	17700	1947	19647	19647	100	39720	4369.2
4. WEWUJA CA	4/9/2010	2360	259.6	2619.6	2619.6	100	8/16/2010	2660	292.6	2952.6	2952.6	100	12/13/2010	4560	501.6	5061.6	5061.6	100	9580	1053.8
5. WEJEGADAM CA	4/9/2010	2400	264	2664	2664	100	8/13/2010	2330	256.3	2586.3	2586.3	100	12/13/2010	3560	391.6	3951.6	3951.6	100	8290	911.9
TOTAL		24340	2677.4	27017.4	27017.4	100		26510	2916.1	29426.1	29426.1	100		41090	4519.9	45609.9	45609.9	100	91940	10113.4

APPENDIX IV

Note on Consumer Units:

AGE	MALE	FEMALE	AGE	MALE	FEMALE	AGE	MALE	FEMALE
0 yr	0.3 C.u	0.3 C.u	8-10 yrs	0.7 C.u	0.7 C.u	30-39 yrs	1.0 C.u	0.8 C.u
1 yr	0.4 C.u	0.4 C.u	11-16 yrs	0.8 C.u	0.7 C.u	40-49 yrs	0.9 C.u	0.7 C.u
2 – 4 yrs	0.5 C.u	0.5 C.u	17-19 yrs	0.9 C.u	0.7 C.u	60 yrs +	0.7 C.u	0.6 C.u
5 – 7 yrs	0.6 C.u	0.6 C.u	20-29 yrs	1.0 C.u	0.8 C.u			

Source: Report No. 38. African Studies Centre. The Netherland 1991.

Data to calculate food security rate:

Food Requirement: One (1) Consumer Unit requires three (3) bags of food per year.

APPENDIX V

Data to calculate food security rate:

Food Requirement: One (1) Consumer Unit requires three (3) bags of food per year.

Food Production: transferred to bags of food (of 100kg)

One (1) bag of Cereal	=	1.0 bag of food.
One (1) bag of Groundnuts	=	1.6 bags * *
One (1) bag of	=	1.0 bag * *
One (1) bag of Soya bean	=	1.2 bags * *
100kg of Cassava	=	0.5 bag * *
100kg of Yam	=	0.4 bag * *

$$\text{Household Food Security Rate} = \frac{\text{Bags of food consumed}}{\text{Bags of food required}} \times 100.$$

Source: Ministry of Food and Agriculture – Tolon-Kumbungu District, Programme on Designing Sustainable Farming System February 2000.

APPENDIX VI

Category Likelihood according to Ghana PPI TM Score

National Poverty Line			National Food Poverty Line		150% of the National Poverty Line	
PPI Score	Total Below the National Poverty Line (%)	Total Above the National Poverty Line (%)	Total Below the National Food Poverty Line (%)	Total Above the National Food Poverty Line (%)	Total Below the 150% of the National Poverty Line (%)	Total Above the 150% of the National Poverty Line (%)
0 - 4	40.3	59.7	40.3	59.7	40.3	59.7
5 - 9.	100	0	85.9	14.1	100	0
10 - 14.	88.1	11.9	77.9	22.1	91.8	8.2
15 - 19	78.5	21.5	64.1	35.9	95.1	4.9
20 - 24	68.7	31.3	46.3	53.7	84.1	15.9
25 - 29	52.9	47.1	37.4	62.6	80.7	19.3
30 - 34	40	60	21.8	78.2	65.9	34.1
35 - 39	21.4	78.6	9.9	90.1	54.4	45.6
40 - 44	17.8	82.2	8.1	91.9	48.4	51.6
45 - 49	11	89	4.9	95.1	31.1	68.9
50 -54	9	91	2.7	97.3	29.1	70.9
55 - 59	2	98	1.1	98.9	14.7	85.3
60 - 64	1.8	98.2	0.3	99.7	6.2	93.8
65 - 69	1.2	98.8	0	100	4.2	95.8
70 - 74	0	100	0	100	3.1	96.9
75 - 79	0	100	0	100	4.2	95.8
80 - 84	0	100	0	100	0	100
85 - 89	0	100	0	100	0	100
90 - 94	0	100	0	100	0	100
95 - 100	0	100	0	100	0	100

Source: Microfinance Risk Management ,L.L.C. Based on the 2005/2006 GLSS

APPENDIX VII

THE HOUSEHOLD FOOD SECURITY RATES BEFORE AND AFTER CwE SCHEME IS CALCULATED AS FOLLOWS:

$$\text{Household Food Security Rate} = \frac{\text{Bags of food consumed}}{\text{Bags of food required}} \times 100$$

For Example:

A household in Wuru with household members:

Before CwE Scheme			**After CwE Scheme**		
Age	Sex	Consumer unit (C.u)	Age	Sex	Consumer unit (C.u)
50	M	0.9	55	M	0.7
43	F	0.7	48	F	0.7
15	M	0.8	20	M	1.0
11	M	0.8	16	M	0.8
8	M	0.7	12	M	0.8
2	F	0.5	7	F	0.6
		4.4			**4.6**

Where one (1) consumer unit requires three (3) bags of food per year.

Therefore 4.4 and 4.6 consumer units will require = ?

$\frac{4.4C.u \times 3}{1\ C.u}$ bags of food per year and $\frac{4.6C.u \times 3}{1C.u}$ bags of food per year respectively

= **13.2 Bags of food** and = **13.8 Bags of food respectively.**

This indicates that the bags of food required by the household before and after CwE scheme per year are 13.2 and 13.8 bags of food respectively.

The bags of food consumed are calculated from the output of the household food security before and after CwE scheme.

The household crops production	Quantity consumed		Bags of food Equivalence	
	Before	**After**	**Before**	**After**
Rice	2bags	3½ bags	2	3.5
Maize	3½ bags	4bags	3.5	4
Beans	1bag	1.67bags	1.2	2
Groundnut	2bags	2bags	3.2	3.2
Millet	3bags	4bags	3	4
			12.9	**16.7**

This gives bags of food consumed per year by the household before and after CwE scheme to be 12.9 and 16.7 respectively.

Therefore the household food security rates before and after CwE scheme are:

Before

$$\frac{12.9}{13.2} \times 100 = \mathbf{97.7}$$

After

$$\frac{16.7}{13.8} \times 100 = \mathbf{121}$$

The average household food security rates before and after CwE scheme is given as:

(For Example the Wuru – Janfasenia area)

$$\frac{\text{The individual household food security rates}}{\text{The total number of beneficiary households interviewed}}$$

Before

$$\frac{\mathbf{97.7} + 98.1 + 96.5 + 95.1 + 118 + 119.5 + 94.2 + 97.6 + 99.3}{10} = \mathbf{91.6}$$

After

$$\frac{121 + 131.2 + 124.8 + 114 + 112.2 + 124.6 + 122.4 + 120 + 118 + 123.2}{10} = \mathbf{121.1}$$

Where the households in this community are considered on the average as being food insecure as its food security rate is below 100 before CwE scheme and being food secured after CwE scheme.

APPENDIX VIII

Calculation of average household PPI score is given as:

(Considering Wuru – Janfasenia for example)

A beneficiary household score of the ten PPI indicator questions are shown below

Questions	1	2	3	4	5	6	7	8	9	10	Total score
Before	6	0	7	8	0	0	0	0	6	2	**29**
After	6	4	7	8	3	5	0	10	6	9	**58**

The total PPI score before and after introduction of the CwE scheme of the beneficiary household are interpreted by reading the ranges these scores fall under the PPI score category likelihood according to the Ghana PPI™ Score.

Before CwE scheme, PPI score of 29 falls within the range of 25 – 29 which is expressed under the National poverty line as follows:

That beneficiary household lives 52.9% totally below the National Poverty line before the introduction of the CwE scheme. Whilst PPI score of 58 after the introduction of the CwE scheme indicates that beneficiary household lives 98.0% totally above the National Poverty line.

The Average PPI score of the Community for example Wuru – Janfasenia is given as:

Total individual PPI scores of beneficiaries households before and after

Total number of beneficiary household per community

$$\text{Before CwE scheme} = \frac{29 + 27 + 30 + 27 + 26 + 25 + 31 + 25 + 25 + 25}{10} = \mathbf{\underline{27}}$$

$$\text{After CwE scheme} = \frac{58 + 30 + 32 + 41 + 46 + 52 + 57 + 45 + 59 + 50}{10} = \mathbf{\underline{47}}$$

Average PPI score for the entire beneficiary communities before and after the introduction of CwE scheme is shown below:

$$= \frac{\text{total sum of all average communities household PPI score}}{\text{Total number of communities}}$$

$$\textbf{Before CwE scheme} = \frac{\mathbf{27} + 25 + 29 + 24 + 22}{5} = \mathbf{\underline{25.4}}$$

$$\text{After CwE scheme} = \frac{\mathbf{47} + 41 + 52 + 39 + 32}{5} = \mathbf{\underline{42.2}}$$