UNIVERSITY FOR DEVELOPMENT STUDIES

PROSPECTS AND CHALLENGES OF THE SHEA INDUSTRY IN THE NORTHERN REGION OF GHANA

B Y

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DECLARATION

Student

I hereby declare that this 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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I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

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ABSTRACT

Recently, the shea nut/butter has emerged as a promising economic commodity and has gained international recognition because of its curative properties. It is the potential of the industry that has informed this research. The study basically sought to find out the performance of the shea industry, prospects and challenges in the midst of Government intervention in the industry, the opportunities for further developing the shea tree as a cultivar, appraise the opportunities and potentials for further development for export, and the role of government. The case study approach was adopted using purposive, snowball and random sampling procedures in selecting three districts; Gushegu, East Gonja and Central Gonja; 3 communities from each and 30 respondents from each community, made up of shea pickers and processors, 8 processing groups and 2 marketing companies. Data were analysed using descriptive statistics. The research revealed that cutting down of shea trees to plant exotic mangoes and biofuel is going on, lack of effective government policy frame work document, using of the traditional methods for processing is tedious and time consuming, there is income and employment potentials in the shea products against the background of increasing international demand for shea nuts and butter and also for private sector involvement. The introduction of improved processing equipment and technologies as well as the use of Motor King Bicycles for transporting the nuts from the bush is adding to the high prospects of reducing the unpicked nut each year meet the increasing demand. The study recommends public education on the protection and cultivation of shea trees, good practice on handling shea and its products. Government intervention in the shea industry is being sought to avert the exploitation of rural women and their households, and to support them to get buyers both locally and internationally.

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DEDICATION

This thesis is dedicated to my wife, Madam Dery Nakpele Bridget, and my children; Bakari Braimah Simon, Bakari Boresa Gilbert and Bakari Kanyiti Gordon and above all, the Almighty God for His grace and inspiration.

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ACRONYMS

ARSO	African Organisation of Standardisation
BAF	Business Assistance Fund
BUSAC	Business Sector Advocacy Challenge
CBRs	Cocoa Butter Replacers
CBIs	Cocoa Butter Improvers
CBEs	Cocoa Butter Equivalents
COCOBOD	Ghana Cocoa Board
CRIG	Cocoa Research Institute of Ghana
CSIR	Centre for Scientific and Industrial Research
DADU	District Agriculture Development Unit
EDP	Entrepreneurship Development Programme
EDIF	Export Development and Investment Fund
EU	European Union
FGD	Focus Group Discussion
FRI	Food Research Institute
GCMB	Ghana Cocoa Marketing Board
GNA	Ghana News Agency
GDP	Gross Domestic Product
GEPC	Ghana Export Promotion Council
GEPA	Ghana Export Promotion Authority
GDS	German Development Services
GSS	Ghana Statistical Service
IFAD	International Fund for Agricultural Development
ISSER	Institute of Statistical Social and Economic Research
Kg	Kilogram
LBAs	Local Buying Agents

MOTI	Ministry of Trade and Industry
MOFA	Ministry of Food and Agriculture
MT/t	Metric Tonne/tonne
NBSSI	National Board for Small Scale Industries
NGOs	Non-governmental Organisations
RMSEs	Rural Micro and Small Enterprises
RCC	Regional Coordination Council
REP	Regional Economic Planning
SBLs	Small Business Loan Scheme
SADA	Savannah Accelerated Development Authority
SARI	Savannah Agriculture Research Institute
SMEs	Small and Medium Enterprise
SNV	Stichting Nederlandse Vrijwillgers (Foundation of Netherlands Volunteers)
SOEs	State Owned Enterprises
SPSS	Statistical Package for Social Sciences
SWOT	Strength Weakness Opportunities and Threats
UK	United Kingdom
USA	United States of America
USAID	United States Agency for International Development
US	United States
UNDP	United Nations Development Programme
WATH	West Africa Trade Hub

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

There are several rural enterprises with high potentials or prospects for improvements to medium or large scale industries in many rural economies of the world. Among these industries is the shea industry. The industry comprises the shea picking enterprise, nuts selling enterprise, butter production or shea processing enterprise and the butter marketing enterprise.

Considerable literatures exist on the ecology of the shea tree including its yield, especially by Coull, 1928; Hill, 1930; and Dalzeil, 1937. According to these authors, the trees are ravaged by annual bush-fires that usually burn the undergrowth and cause stunted growth of the trees in the wild. Under these conditions, the trees attain heights of only 6.1 meters and girths of about 61cm. However, under protected conditions (e.g. on cultivated lands and on the fringes of settlements) the trees can reach heights of about 15 meters and girths of 175cm. The trees grow slowly from seeds, taking about 30 years to reach maturity (Dalziel, 1937), but limiting or stressful conditions such as bush-fires and harsh weather can reduce this. The shea can only be propagated by seed.

The shea has great, untapped capacity for producing copious amounts of sap that can constitute an important source of raw material for the gum and rubber industry. The trees begin to bear fruits at maturity and start flowering by early November, with picking or gathering lasting from April to August. When the shea fruits ripen, they fall under their own weight to the ground and are gathered by hand. The fruit, which is green in color, has a fleshy edible pulp, which contains 0.7-1.3g of protein and 41.2g of carbohydrate and is very sweet (Horizon Solution, 2008).

In most parts of West Africa, destruction of the shea tree is prohibited because the nut provides a valuable source of food, medicine, and income for the rural population. Yidana, (2011) says "Shea's importance cannot be over emphasised. It is just as much if not significant culturally as it does nutritionally, economically and environmentally". (Yidana, 2011) In fact, shea butter is sometimes referred to as "women's gold" in Africa, because so many women are employed in its production. The demand for shea butter is rising because western countries are beginning to recognize the considerable health, beauteous nature and other benefits of shea butter, something Africans have known many years ago. Shea butter has been used to help heal burns, sores, scars, dermatitis, psoriasis, dandruff and stretch marks (Vuillet, 1911; Bonkoungou, 1987). It helps to diminish wrinkles by moisturizing the skin, promoting cell renewal, increasing circulation and contains cinnamic acid that helps protect the skin from harmful ultraviolet rays (Merchant 1998).

In Ghana, shea trees are particularly abundant in the Upper East, Upper West and Northern Regions. In these regions, shea butter constitutes a key source of income for many indigenous households and is particularly essential for women, who are often more deprived, marginalized and resource-poor (Apusigah, 2004; Awumbila, 2001), suffering from severe forms of poverty and experience the lowest standards of living (Dittoh, 2008; GLSS, 2006).

Shea butter processing is a traditional occupation of the women of Northern Ghana. Nationwide, over 800,000 women depend on incomes from the sales of shea butter and other shea-related products as a means of their livelihoods (GLSS, 2006). Even more importantly, the very nature of shea butter production contributes to strengthening social interactions and group cohesion as no one woman can undertake the activity single-handedly as a commercial entity.

In recent time, the benefits of and interest in shea butter production has been enhanced both at the local and international levels due to growing demand and use of the product. Specifically there has been a growing interest and market in using shea butter in adding value to cosmetic products such as soap, creams and shampoos. These initiatives are helping to propel shea butter processing into a highly competitive industry with a large market potential and output. The viability of the expanding shea butter industry is enhanced through the commitment of funds and technical support by financial institutions; investments banks, commercial banks, agricultural banks and special programmes such as the non-traditional exports component of the Export Promotion Council (GEPC) and EDIF to the industry (Abrefa-Gyan, 2007). Non-governmental organizations (NGOs) and the donor community are collaborating in supporting community-based groups to improve their activities in the shea industry, seek and expand markets and improve their earnings (Ayeertey et al., 2008). Much effort is made at the introduction of mechanised methods of shea butter extraction to improve the quality of shea butter produced.

The traditional shea butter extraction technique is time consuming, physically exhausting and requires large quantities of fuel wood and water; resources that are often scarce in the regions where the butter is produced. General, it is inefficient in terms of the amount of fat extracted. It is estimated that from collection of the shea fruits through to the production of the final product of 1kg of shea butter takes one person 20-30 hours and 8.5-10.0kg of fuel wood (Niess, 1988).

Dagomba women of Ghana were among the first to initiate the mechanisation of shea butter extraction. They adapted corn mills for grinding roasted shea nuts, kneading machine, grinders, a hydraulic hand press, solar dryers (locally made wooden drying machines), a heater and mixer

(Wallace-Bruce, 1995). An added advantage associated with using solar dryers is that they check the activity of *Aspergillus fungi and Euphenestia caufella* larvae, even during long-term storage.

Shea nuts and its related products are characterised by low productivity and low quality, resulting in poor marketability (Aculey, 2007). The problem of low productivity begins from collection of nuts from the wild. Holtzman (2004) argues that nearly 48% of shea nut remains uncollected. According to Hall et al., (1996) describe the processing procedures and found that some of the processes of shea butter extraction are unhygienic. Aculey (2007) stated that the butter produce may have muddy-brown to greenish-grey colour, strong smell and taste. According to Holtzman (2004), the shea butter processing industry is the least developed industry in the producing countries hence the challenge of insufficient modern technologies.

1.2 Problem Statement

In the Northern Region of Ghana women pick shea fruits from their husbands' plots or family land. In polygamous marriages, the oldest wife regulates the activity and she is responsible for allocating farmlands of the husband among her colleagues (Grigsby and Force, 1993). Fallow or abandoned plots are destined for the wives of the previous owners, but uncultivated plots are open to all the women. Unlike Northern Ghana, in Northern Burkina Faso, the right for picking shea fruit on land is acquired through previously cultivated plots by relatives inclination or spontaneously clearing of a piece of land, but also by requesting uncultivated plots from the village Chief. In Mali, everyone in the village is allowed to collect from crop fields, regardless of who owns them (Gakou et al., 1994). Pickers wake up early in the morning and trek up to 15km to pick the fruits and then carry the harvest in head pans of 20-25kg (sometimes over

40kg) on their heads back to the community. Hazards in shea fruits picking include scorpion stings and snakesbite, especially beyond cultivated areas (Schreckenberg, 1996).

Instead of processing into butter for high value export, nearly 82.5% of shea is exported as kernels (Holtzman, 2004). Low marketability of shea butter and low prices of shea kernels result in low incomes and therefore increase poverty among rural actors in the shea value chain becoming a cyclical phenomenon. Actors are not able to invest or attract funding to improve the industry. These challenges of the industry make it unattractive to the young girls, therefore endangering the growth, maintenance and sustenance of the industry, and contributing to the problem of migration of the Northern girls to urban centres in the southern part of the country in serch for no-existent jobs. The dominance of the shea industry by women as reported by Hall et al. (1996) also poses some challenges for the industry. Traditionally women in northern Ghana do not wield authority over resources. They are generally not household heads. This implies that their ability to invest into the development of the industry is limited.

Due to the importance of the shea industry, attempts have been made to incorporate appropriate technologies into the processing stages, to improve quality, quantity, efficiency and reduce drudgery involved. According to Hall et al. (1996) manual labour, animal transport and motor bikes have been employed in shea production and processing. Some NGOs have advanced loans to sheanut pickers and processors to enable them improve upon their productivity. For instance, under the Oxfam sheanut loan scheme in northern Ghana, loans are advanced to shea processing women groups (Puganosa and Amuah, 1991). Other NGOs and shea marketing companies have also supported the groups in terms of finance, training and linkage to external markets. These

interventions have led to some improved quality and hence marketability of shea products in Northern Ghana. In some cases it has maximised extraction efficiency rates of up to 85 % (Salunkhe et al., 1992) with about 60% as the minimum. Annual exports of shea kernels are still high but shea butter exports have also increased from 12,561.37mt (US$19,010,304) in 2009 to 32,782.61mt (US$24, 764,995) in 2010 representing an increase of 61.7% (GEPC, 2011). There are a number of merits associated with using these interventions, for example, the use of solar dryers checks the activities of fungi during long-term storage (Ayeh, 1991).

Despite these interventions and improvements some sheanut remain unsold during years of bumper harvest, leading to low prices and hence low incomes of sheanut farmers and processors. The capacity and motivation to increase production of shea products is therefore lacking. Overall potential of the shea industry as a source of employment, poverty reduction, propelling growth in northern Ghana as well as a source of foreign exchange for the country is therefore not fully realised. As a result the study is aimed at investigating the prospects and Challenges of shea nuts pickers and shea butter processors in the shea industry of Northern Region of Ghana and also looking at the opportunities, performances, policy interventions as well as finding out new methods of nuts collection and finally making recommendations for policy consideration. The problem is thus stated: *The shea industry, a vibrant and promising one in Northern Ghana is assumes to have a lot of prospects but face challenges which when addressed could lead to increased production, better quality and more income for the rural poor, moving the industry from a small rural enterprise to a medium and possibly a large scale industry to reduce poverty and improve standards of living. These challenges need to be identified and understood as the first step to finding lasting solutions to improving the industry.*

1.3 Main Research Question

The main research question of this study is: What is the performance of the shea industry; prospects and challenges in the midst of Government intervention in the industry in Northern Ghana?

1.3.1 Specific Research Questions

The following specific research questions are to help address the main questions;

1. What are the performances of shea industry in Northern Ghana?
2. What are the opportunities for the development of the shea industry?
3. What were the previous policy interventions and success of these interventions in the shea industry?
4. What are the new methods of shea nuts collection?
5. What are the current challenges in the collection processing and marketing of the shea industry?
6. What are the stake holders and government doing to promote the shea industry?

1.4 Main Objective

The main objective of the study is to assess the opportunities and challenges of the shea industry as a rural enterprise in Northern Region of Ghana with the view to suggesting improvement to the industry and recommendations for policy consideration.

1.4.1 Specific Objectives

The main objective is broken down into specific objective as to;

1. Assess the performance of the shea industry in Northern Region
2. Identify opportunities of shea industry in Northern Region for further development

3. Study previous policy intervention in the shea sector

4. Analyse new methods of shea nut collection

6. Make appropriate recommendations to stake holders, NGOs and governmental agencies.

1.5 Justification of the Study

Northern Ghana is virtually lacking economic opportunities as compared to the south, but it is potentially rich in agriculture especially in Shea, the "Gold of the North". Rural enterprises like the shea sector provide a comparative advantage for the north to develop into a competitive one. This will provide employment opportunities for many, especially the young women who throng to the south as *kayayee* for their livelihood. There are NGOs and various groups who have engaged their members in the production of shea butter, soap, pomade, hair cream among others.

The findings from this research could help improve the shea industry to bring into the country more foreign exchange as the shea is an export commodity with potentials for the country, which will reduce Ghana's over dependence on cocoa. Statistics from GEPC show that. In 2000 the export value for shea nuts was $4,674,272 and in 2009 the value was $26,853,367. The difference between the nuts from 2000 to 2009 is $22,179,095 meaning the demand for shea nuts is on the increase. Likewise in 2000 the value of shea butter exported was $829,744 and in 2009 the value was $19,010,304 resulting in a difference of $18,180,560. Asante-Dartey et al., (2009) found that since 1997 there has been an exponential increase in shea butter exports from virtually zero in the early nineties to over 2,500mt by the end of 2002.

In addition, the results of this study may be considered as very useful to government agencies such as Ghana Export Promotion Council, Ministry of Trade & Industry to be in a good position to advice government on institutional policies which may result in administrative and institutional reforms for improvement of the industry. This would certainly lead to an increase in the promotion of shea butter and shea products by the concerned agencies.

1.6 Scope of the Study

The study is aimed at investigating the prospect/opportunities and challenges of the shea industry in relation to shea picking, shea processing marketing of shea nut and butter as a trade under rural enterprises. It discusses and analyses the system of picking the processing into butter as well as marketing in the industry within the last three years from 2008 to 2010. This period is considered because it is of a major concern to the Savannah Accelerated Development Authority (SADA), increased attention on the industry and therefore availability of data.

This study is limited to three (3) districts in the Northern Region - Gusheigu District, Central Gonja District, East Gonja District and selected shea butter processors in Tamale Metropolis - for a comparative case study. Most importantly, output levels of sheanuts and butter production are investigated. These areas were chosen because of accessibility, proximity and appropriate representation of both rural and urban lives of the Northern Region. There is also an even distribution of shea extractors, processors and marketers all over these places.

In order to get a general overview of the shea industry, NGOs and marketing companies were included in the study. They operate across many districts and therefore provided information across the entire area of their operations, which, in some cases span across the three northern

regions regarded as the shea producing area in Ghana. This provided a fair view of the shea industry in general rather than just the three districts and the Metropolis. More so, to acquire an understanding of the prospects and challenges of the pickers and processors in the shea industry, major issues such as production, productivity, waste, efficiency, pricing and promotion of shea in the selected Districts were discussed. It involved comparison of data on these features of the shea industry over time and among the selected Districts.

1.7 Organisation of the Study

The study preferably was organized into five chapters. Chapter one spelled out the background to the study, statement of the problem, objectives of the study, research questions, justification of the study, the scope and organization of the study. Chapter Two dealt with literature review. Issues discussed in the literature includes; (i) the meaning and nature of Small and Medium Enterprise (SMEs). (ii) Functions and usefulness of rural enterprise. These were considered since the shea industry is typically a rural enterprise. (iii) The production of shea from picking stage to the final stage and uses of shea in various industries in Ghana and beyond was considered. Chapter Three reported on the methodology of the study, giving a clear explanation of how it was conducted: the study area, study population, sampling procedure and sample size, sources of data, instruments of data collection, data processing and analysis.

Chapter Four discussed results of the study and used to communicate findings of the research by providing detailed qualitative and quantitative analysis of the results. Chapter Five, which is the final chapter, provided a summary of findings, conclusions and relevant recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 DEFINITION OF SMALL AND MEDIUM SCALE ENTERPRISES

The definition of Small and Medium-Scale Enterprises (SMEs) sector and its categorization have not been precisely agreed upon. According to Cortes, Mariluz and Ishaq (1987:14) neither the technical literature nor broader studies of the political economy of small enterprises provide clear and consistent definitions of the boundaries of the sector. As a result some countries have developed different definitions even within the same country.

The European Community (1995) introduced a new series of definitions of the Small and Medium Enterprise (SME) also reported by Dalitso and Quartey (2000). The sector comprises:

1. Micro enterprises - from 0 to 9 employees.
2. Small enterprises - from 10 to 99 employees.
3. Medium enterprises from 100 to 499 employees.

The National Board for Small Scale Industries (NBSSI), an apex body established by Act 434 of 1981 for promoting small scale industries considers small enterprises as those which have 29 or less employees and enterprises whose capital investment requirements do not exceed the cedi equivalent of $100,000 (Boachie-Mensah and Marfo-Yiadom, 2005). The classification of a company depends on the size or the number of employees. Elaian (1996) classifies enterprise as:

1. Micro (up to 5 persons)
2. Small (6-30 persons)
3. Medium (31 - 100 persons)

4. Big (101-500 persons)

5. Africa giant (more than 500 persons)

In the same vain, the United States Government broadly defines a small business as "one which is independently owned and operated and which is not dominant in its field of operation" (D'Amboise and Muldowney, 1988). More especially small business has been defined as having fewer than 500 employees and sales of less than $ 20 million.

It needs to be emphasized that small business management is different from larger organisations, because of social structures and relationships, and the levels of resources available. In America, Small enterprise revival began in the 1960s from which period creation of new jobs had shifted from the country's largest organizations to small-and -medium-size firms. The total workforce grew from 71 million in 1965 to 106 million in 1985, suggesting an increase of 50 percent, or 35 million new jobs. Yet at the same time, the "Fortune 500" representing the largest businesses was actually shedding jobs. An estimated loss of 5 million permanent jobs was recorded in 1985. Much of the growth in employment has come from new enterprises with an estimated 600,000 new businesses being started every year during the boom era of the 1980s (Stokes, 1995). The revival of the small enterprise in the UK has been equally impressive. Between the late 1970s and 1980s, there was a substantial rise in the total number of firms in the UK. The number of small enterprises jumped from 1,791 million in the late 1970s to 2,888 million in the 1980s which was an increase of 61 percent in the decade. Because of the growth in total numbers of small businesses, their share of employment increased greatly. Whereas larger firms decreased

their employment share from 42.8 percent to 32.8 percent in 1991, small firms increased from 39 percent of the workforce in 1979 to 50.4 percent of total employment by 1991(Stokes, 1995). The Ghanaian experience of the small enterprise revival has not been as impressive as that of the developed economies. The development of the sector has been quite bumpy as the history suggests (Boachie-Mensah and Marfi-Yiadom, 2005).

According to WAD (2002) there are three types of 'entrepreneurial models' that can be distinguished as;

Pre-entrepreneurial Activities; Traditionally designated as (small crafting, petty trading, etc.), and which depend on people that have limited knowledge of the basic principles that guide any business activity and lack basic assets, essentially working capital, to develop their own small business ventures. Pre-entrepreneurial activities are mostly self-employed initiatives. Benefits may be partially reinvested in the activity but they are mainly used as incremental income. Typically, these activities are mainly undertaken by women, who have limited time and assets to engage in full-time entrepreneurial activities.

Microenterprises; defined as semi-structured activities, including limited fixed assets (first or second-hand equipment), possibly a physical location for instance, a small milling workshop and as observing some basic management principles.

Small Enterprise; these are structured businesses that usually have a well-defined market niche and physical location, an acceptable turnover, some business skills, regular access to market-based (fee-based) business advisory services, and a number of part- or full-time employees. They

may also have legal status and a bank account. Accounting principles and financial rules (write-offs) may also be applied with regard to fixed assets such as machines, vehicles, etc.

These categories are not 'closed', but represent stages of development through which any small business is likely to graduate from the informal stage (pre-entrepreneurial) to the formal or semiformal stage (IFAD, 2002).

2.2 Development of Small and Medium Enterprises in Ghana

Recognizing the role of the small enterprise sector in the industrial development of the country, the government of Ghana in the first republic created the Ministry of Rural Industries in 1965 to take over from the Industrial Development Corporation. After the change of government in 1966, the Ministry of Rural Industries was merged with the Ministry of Industries. Again, State Owned Enterprises (SOEs) were established to lead the industrialization process. However, the operations of these SOEs were limited to the provision of ancillary services and to operations which involved heavy capital outlay including water, electricity and telecommunication. During the second republic, another attempt was made by the then Government to develop small-scale industries by establishing the Ghanaian Enterprises Development Commission per NRDC330 of 1975 to provide financial assistance to small businesses. Originally established to be leaders in the nation's industrialization process, the SOEs had been performing poorly resulting in considerable losses. For instance, at Wenchi producers of canned tomatoes were operating at 15 percent capacity utilization leading to persistent losses (ISSER, 1991). As the losses of those SOEs mounted and their burden on the national budget increased towards the end of 1980, the Government began to reconsider its position, hence the policy to let SOEs go private.

The privatization policy, therefore, led to sharp division of attention and interest from the public sector to the private sector. As the Government's attention began to focus on the industrial development of the nation and the important role small-scale industries should play in the process, the putting in place of a single dynamic integrated organization, adequately capitalized and capable of responding to the needs of the small enterprise sector, became very crucial. Thus, the legislation of 1981 for the establishment of National Board for Small Scale Industries (NBSSSI) under the Act of parliament was a further realization of the role of the small-scale industry sector in the socio-economic development of the country. The NBSSI was thus established as a lead organization for the promotion of small-scale industries through the setting up of the Entrepreneurship Development Programme (EDP) and the Business Advisory Centers (BACs) (Boachie-Mensah and Marfi-Yiadom, 2005).

In view of the fact that access to credit had been a major constraint to the growth and development of micro and small enterprises in the country, the NBSSI set up the Investment and Credit Department unit to help ease the financial constraints facing the sector. This idea started as far back as 1970, when the Ghana Government Small Business Loan Scheme (SBLS) was established (Boachie-Mensah and Marfi-Yiadom, 2005). Under this scheme a total amount of it 11.5 million cedis (GH¢1,150) was provided by the government to the erstwhile office incharge. However, the scheme failed to achieve its desired target since attention was later shifted to only businesses in the manufacturing sector of the economy (Daily Graphic, 1987).

In recent time, the financing role has been taken up vigorously by the NBSSI with the obvious support from the Ghana Government and other non-governmental organizations (NGOs), like

Friedrich Ebert Foundation (FES), German Development Services (GDS), and some local promotional institutions in the small-scale sector.

The Government put in place some support measures, such as the Business Assistance Fund (BAF). It was established with an initial amount of 10 billion cedis (GH¢ 1million) At the end of 1996, five hundred and fifty-two (552) firms had benefited from this Government of Ghana credit line with a total of 8.56 billion cedis (GH¢ 8.56million) being disbursed at the end of the said period, thus leaving 01.44 billion (GH¢ 0.144 million) to be disbursed in 1997. However, at the beginning of 1997, the Fund had already been over-subscribed and the Government decided to replace the BAF with the Export Development and Investment Fund (EDE). It targeted industries in the textile, wood and wood processing, food and food processing, and packaging sectors (Boachie-Mensah and Marfi-Yiadom, 2005). It is noted that, in the field of the small-scale enterprise suggest that, notwithstanding the problems militating against the sector, it contributes greatly to the development of the economy. The contributions are in the form of creating employment, income, skills development, management training, capacity for self sustaining growth and market development. In the Northern Region of Ghana, the shea industry has given employment to many individuals as well as groups such as; Sekaf Ghana, Pungsunt Women Group, Tuntieya Women Group, Christian Mothers Association just to mention a few.

Steel (1977) in one of his earliest studies on small-scale enterprises in Ghana found that the small-scale enterprise sector had the potential for promoting economic growth and for absorbing surplus labour. Page and Steel (1984), concluded that small-scale enterprises make significant contribution to income and employment and have the potential for self-sustaining growth.

According to Thormi and Yankson (1985) small-scale enterprise in Ghana do not offer much scope for substantial permanent wage employment; but they play a crucial role in training future entrepreneurs and in providing opportunities for employment, in almost all sectors of the Ghanaian economy. Usually the small businesses in retail, wholesale, services sector have a smaller number of employees, compared to small firms involved in manufacturing. Businesses and enterprises development, cannot be mentioned without the brain behind them; the entrepreneur who think beyond the ordinary, risk taker. There is no single definition and no one profile that can represent today's entrepreneur. An overview of the history of entrepreneurship only serves to illustrate how research is providing an increasingly sharper focus on the subject.

2.3 Entrepreneurs among Small and Medium Enterprises

The word *entrepreneur* is derived from French, literally meaning "*between-taker"* or *"go-between"*. The earliest use of the term expressed this sense of the "middleman" who directed resources provided by others (Boachie-Mensah and Marfi-Yiadom (2005). An entrepreneur is a person who has strong beliefs about an opportunity and is willing to accept a high level of personal, professional or financial risk to pursue that opportunity. Entrepreneur often undertake and operate new enterprises or ventures and assume accountability for the inherent risks. In the context of the creation of for-profit enterprises, entrepreneur is often synonymous with founder (http://www.managementupdate.info/02/03/2012). In the middle ages, an entrepreneur was seen as someone who managed larger projects on behalf of a landowner or the church, such as the building of a cathedral or castle. In the seventeenth century, the concept was extended to include some element of risk and profit. Entrepreneurs were those who contracted with the state to perform certain duties, such as the collection of revenues or the operation of banking and trading

services. As the price was fixed, the entrepreneur could make profit (or loss) from their performance of the contract (Stokes, 1995).

Linking entrepreneurs' work to the shea industry; before then the individuals used to extract shea butter for local consumption, today there are many shea butter processing/extraction centres where individuals come together to extract shea butter in larger quantities for commercial purposes not only in the local market but for exports. It is the individual who brings the idea of formation of these associations, sponsor it alone until the centre is flourishing for them to make profit. To find more market for the product the association decides to add value to shea butter by making black soap, body cream or lotion, lip balm and the like where there is no ready market but has to manufacture the products and then look for market which is risky.

2.4 Small-scale Rural Enterprise and the Rural Economy

The promotion of MSE clusters may benefit the rural economy by creating new sources of economic growth and helping to improve local living conditions. Economic liberalization in the rural areas has created new market opportunities, especially in terms of agricultural processing and marketing, and the provision of services to rural households. It has also brought out special challenges for women and other disadvantaged groups. Business investments linked to processing and marketing activities are crucial for increasing the value of agricultural production. Small entrepreneurial activities in rural areas may also contribute to improving rural livelihoods by facilitating household access to basic social and non-agricultural services: input trading and marketing, transport, repair and assistance activities such as electricity, private water access, agricultural equipment, black smithery, brick manufacturing, small business centres, rural

telephone services, small bakeries, etc. Rural populations frequently have no access to some of these services owing to the shortage of commercial intermediaries interested in investing in rural areas. In most cases, rural community demand is largely unsatisfied (IFAD, 2002).

2.5 Rural Enterprises and their Characteristics

Rural enterprises have limited resources such as labour, skills, and capital, which make it difficult for them to meet the standards required for local, regional, or global markets. This lack of resources also prevents rural enterprises from expanding and excludes them from higher-value markets as suppliers to larger firms or as direct suppliers to markets. Resources for improving malfunctioning markets where the extremely poor operate are also limited.

The transaction costs of working with rural enterprises are high because of their small size, scattered nature and remoteness. These high costs are often a result of the time required to ensure that standards are met (e.g. negotiating with many individual enterprises, collecting produce from dispersed or remote collection points). Many small rural enterprises have to carry these costs themselves because of their isolation. Rural enterprises face business risks like other firms. The risks often stem from power imbalances versus larger firms and buyers that can influence terms and conditions and standard requirements. Outsourcing to small rural enterprises may bring about exploitative conditions (Dalitso and Quartey, 2000).

SMEs in Ghana can be categorised into urban and rural enterprises. The former can be sub-divided into ‘organised’ and ‘unorganised’ enterprises. The organised ones tend to have paid

employees with a registered office whereas the unorganised category is mainly made up of artisans who work in open spaces, temporary wooden structures, or at home and employ little or in some cases no salaried workers (Dalitso and Quartey,2000).

Rural enterprises have limited access to timely and accurate market information, and weak transport and communications infrastructure. This makes it very difficult for rural enterprises to participate in higher value markets (Dalitso and Quartey, 2000).

Most rural enterprises are micro, small or medium sized business. They are the diversification into market oriented activities, where income generating activities are being increasingly viewed as a path to improving both livelihoods and food security (SARD, 2007). The issue is not whether to participate in the market economy but how to do so in a manner which provides for sustainable and equitable income growth and decent work. Taking many forms including cooperatives, enterprise development is an appealing alternative for stakeholders in rural development, particularly as it contributes to equity through local economic growth.

In developing countries, Rural Micro & Small Enterprises (RMSEs) may be seen as small-scale activities that start up as individual or collective businesses strongly linked to agriculture. Such activities usually draw on limited assets, and have little or no business management capacity/access to business support services (financial and non-financial) and markets. Such businesses generate income and profit, and create employment (SARD, 2007).

2.6 Prospects of Rural Enterprise

There are so many prospects of rural enterprise but some of them vary with countries, cities/towns and communities. Most of them cut across all areas depending on specific trade. This could foster partnerships and networking between all stakeholders including entrepreneurs, cooperatives, service providers, training institutions and governments to develop and promote rural enterprise. There are prospects of fostering linkages between rural and urban businesses and farmers, including producer organizations and cooperatives, to ensure that rural enterprises are able to access a range of goods and services in a competitive market.

In addition, they could establish entrepreneurial networks to encourage transparent, competitive exchange between enterprises, intermediaries and other players along the value chain. Encourage public-private partnerships to address resource constraints and tap into a wide range of expertise. They could promote interdisciplinary approach to enterprise development to address the social, economic, cultural and environmental aspects of livelihoods.

Rural enterprise could develop exit strategies to phase out incentives and subsidies once they have become viable and competitive. Encourage scaling up of successful enterprises by securing the demand for the product or service and fostering the sustainable provision of support services.

They could promote macro-economic policy to stabilize currency fluctuations, keep inflation to a minimum, manages the public deficit, and promote positive real interest rates to create an environment that is conducive to ongoing enterprise development (Dalitso and Quartey, 2000).

2.7 Challenges of Rural Enterprise

Rural enterprises such as the various entrepreneurs in the shea industry face some challenges. Some are being addressed by the stakeholders and by Government while some are unattended to. These challenges include:

- Development of new economic policies without consultation with the businesses people. This happens resulting in the destruction of small businesses and dampens the spirits of small businesses people.
- The local government sometimes do not inform and consult businesses adequately about new rules and regulations and might not pro-actively support private businesses.
- Inadequate capital to start-up business; capital is limited to the owners' savings, plough back of profits and the amount he or she can borrow. However most rural enterprise owners have limited funds and find it difficult to borrow when due to low savings and lack of collateral security to support their request for loan.
- Politicization of central government's support to the private sector. This excludes the small SME in the rural areas nut benefit people who are not entrepreneurs at all.
- Problem with continue existence; an unforeseen accident or illness may cripple the business at an important stage in its development. The death of business owners results in the collapse of the business especially with the sole proprietorship.
- Lack of some important infrastructure, including banks, continuous potable water, roads, railways, ferries, transport, also impact negatively on the businesses, which in turn limits operations in some manner (Parker et al, 1995).
- In the Ghana, banks do not pay sufficient attention to the development of SMEs. The role Governments should play in this is also lacking.

There is a great need for improving different aspects of financial services for SMEs such as seed money, leasing, venture capital, and investment funding. There is a lack of long term loans and interest rates are still high (Mensah, 2004).

2.8 Ghana's Shea Industry

According to Kletter (2002) the main participants in the shea industry in Ghana fall into four major categories. These are shea nut pickers, first line traders who buy directly from pickers, shea butter processors and exporters. In recent time, Lovett (2004) indicate that the role played by NGOs in their quest to develop the industry has gained considerable level of importance. He further described an extended value chain of the shea industry as village pickers and post-harvest processors of dry kernel; local buying agents **(LBAs);** rural or urban traditional butter processors and large-scale exporters of shea kernel. Other players in the value chain include large-scale processors of shea butter based 'in-country' and small-scale entrepreneurs formulating cosmetics based on shea butter in Africa. The nuts as well as the butter are then exported to United States, European Union, India and Japan.

In Ghana shea is in the wild and little effort has been made to cultivate it. The production of shea therefore begins with harvesting of the fresh shea fruit from the wild and goes through various stages until the processed nut is produced (McMillan, 1986). Though it is generally stressed that the traditional labour-intensive processing of shea nut for the extraction of shea butter is a task performed mainly by women, there have been reported cases of men's involvement in the industry (Hall et al., 1996). Shea nuts are harvested from April to September, depending on the latitude of the location. In Ghana women pick fruits from their husbands' plots, with the oldest

wife regulating the picking in polygamous marriages. Fallow plots are for the wives of the previous owners, whilst uncultivated plots are open to all women.

Shea pickers wake up early in the morning and trek some number of kilometers, pick and carry loads of fresh shea fruits back in head pans of 20-25 kg (Schreckenberg, 1996). The harvest season coincides with the planting of the main crops therefore causes shortage of labour. Several strategies have, however, been developed to deal with this problem. Among many of the ethnic groups, fruits are piled or buried in shallow pits for processing later (Hall et el., 1996). Dangers associated with picking shea fruits from the wild, especially beyond cultivated areas, according to (Schreckenberg, 1996) include scorpion and snake bites, in some cases the women are raped and sometimes victims of hunting traps. This inevitably affects shea output and may therefore be one of the reasons why a high quantity of shea remains uncollected in the wild annually.

Holtzman (2004) reports that nearly half (48%) of the shea fruit in the major producing countries remains uncollected or under-utilised. Again, the development and full commercialization of the industry may be hindered as it is viewed traditionally as belonging to women. Sheanut processing is described by Hall et al., (1996) as involving depulping of fresh nuts; boiling of nuts; drying and dehusking; winnowing and drying of nuts to obtain shea kernels which are then sold, stored or further processed immediately to shea butter. All these processes are manual and vary among different ethnic groups. Dehusking, for instance, is done variously by trampling, pounding in a mortar or cracking between two stones.

2.9 Shea Butter Extraction

Traditionally, the extraction of shea butter has been done at the village level for sale on the local market. In recent years, the dried kernels have been exported to processing countries in Europe, Japan, and India where shea butter is extracted in large-scale industrial plants (Lovett, 2004). Traditional extraction is usually done by boiling water and skimming off the released oil while commercial one is conducted by pressing or solvent extraction with further refining and deodorizing of shea butter (Alander, 2004). With the increased interest in naturally derived products, organic shea butter production is preferred and thus efforts have been made to industrially produce shea butter by following the traditional extraction methods. The shea butter obtained from the traditional extraction procedure not including a refining stage is called “unrefined shea butter” (Seung, 2011).

Shea butter is extracted from dried shea kernels. Once shea fruit fall from the trees, the fruit are collected by African women from the ground and the pulp is removed by fermentation or manual peeling (Chalfin 2004; Moharram *et al,* 2006). The nuts are processed according to one of the three distinct traditional procedures (Lovett, 2004). In West Africa, the nuts can be boiled or roasted, while in East Africa the nuts are simply sun-dried.

In the West African boiling method, the nuts are boiled to kill the embryo and thus prevent germination of the seeds. This method has the additional advantage of inactivating the lipases that are responsible for hydrolytic degradation of shea butter. However, boiling can cause high peroxide values since the high temperature and water can accelerate oxidation (Lovett, 2004; Masters *et al.,* 2004; Bail *et al.,* 2009). After boiling, the nuts are dried in the sun, though sun-

drying of shea nuts during the rainy season can lead to contamination and thus affect the quality of the final products (Moharram *et al.*, 2006). The dry nuts are cracked to remove the shells and the kernels are further dried by roasting or sun-drying (Lovett, 2004; Moharram *et al.*, 2006).

In the West African oven method, the nuts are roasted or smoked in ovens and the dried nuts that still have husks are stored (Lovett, 2004). This procedure has the disadvantage that roasting or smoking in the oven can cause high amounts of polycyclic aromatic hydrocarbons (PAHs) known to be carcinogenic (Lovett, 2004). While the West African methods include a heating stage, boiling or roasting before or while drying, the East African method involves no heating step. Instead, the nuts are directly sun-dried, de-husked, and sun-dried again (Lovett, 2004).

The dried kernels are stored with occasional re-drying. Since the nuts are not subjected to high temperatures, in this method, there is less chance of deactivating lipases, which is usually linked with high levels of free fatty acids (FFAs) (Lovett, 2004). In this case, sun-drying should be avoided during rains to prevent microbial deterioration of the nuts and kernels. The dried kernels are then subjected to pounding or wet milling to make a paste which is then emulsified by kneading and hand beating (Moharram *et al.*, 2006). The paste is then boiled to separate the fat from the shea nut cake and the resultant butter is scooped up, filtered through a filter cloth and placed in a cool place to solidify.

In Ghana, after collection of the nuts from the wild, they are par-boiled, dried, unshelled and the nuts are allowed to dry, bagged and stored if not intended for processing immediately. If the nuts should be processed into butter; the dried kernels are subjected to pounding in motor/ raised

platform or the use of crusher. The crushed nuts are then roasted milled using the grinding mill; hitherto it used to be done manually on stone. The paste is then emulsified by kneading by hand beating, in recent times others use machines for kneading. The paste is then boiled to separate the fat from the nut cake and the resultant butter is scooped up, filtered into descent basin/container to cool and later gentle stirring is done until it solidifies. The processes are shown in figure 2.1

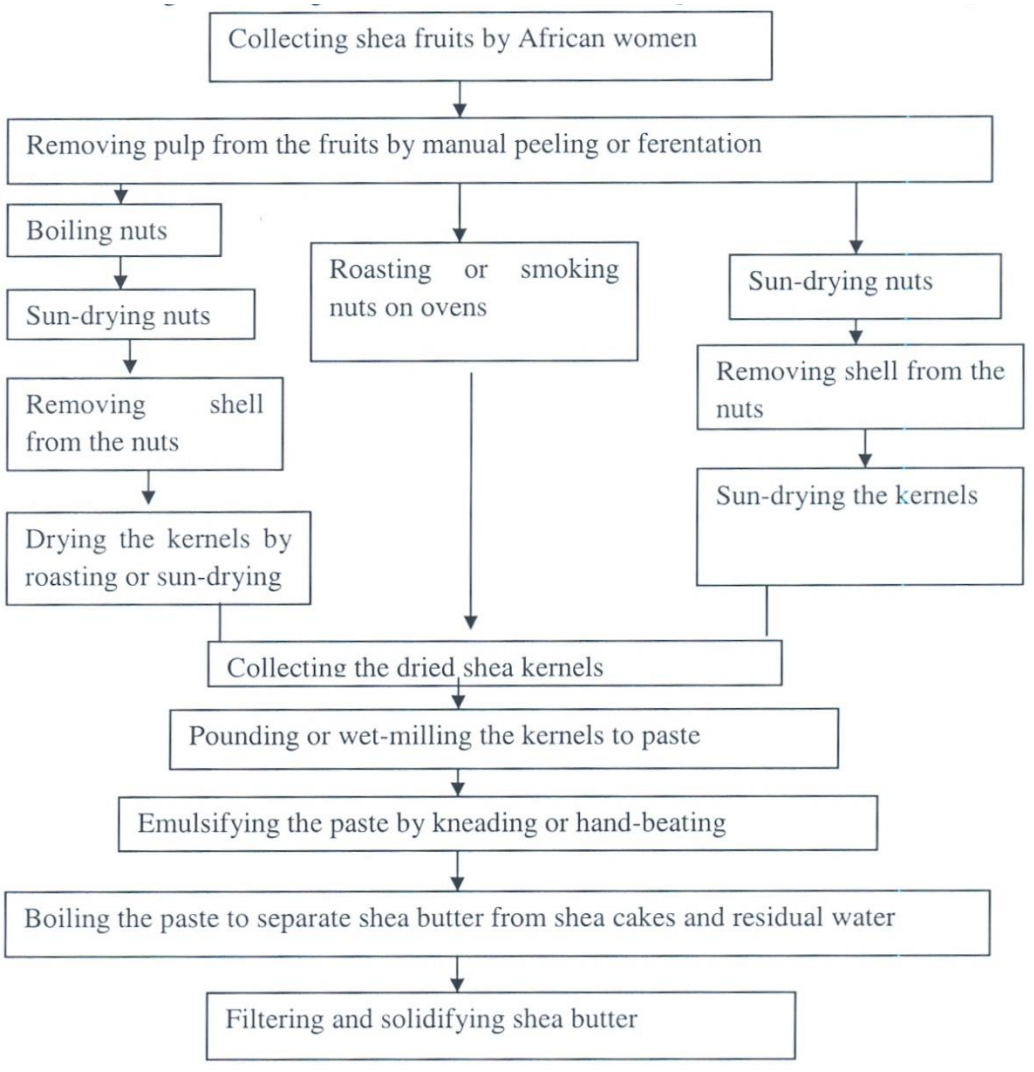


Figure 2.1 Steps in Shea Butter process.
Source: Field work (2011)

2.10 Types of Shea Butter Processing Technology

In West Africa, shea production and the process of extraction fall into 3 main categories: traditional, semi-mechanized and fully mechanized industrial systems (Addaquay, 2004). These categories are thus discussed.

2.10.1 Traditional Manual System of Production

Addaquay (2004) states that rural-based women using manual traditional methods extract about 60% of all the crude butter produced in West Africa at an extraction rate of about 20 percent, Addaquay 2004, further stressed that the traditional method predominates. This could be due to lack of funds to procure appropriate simple tools to facilitate and expand the production of shea butter. Hall et al. (1996) estimated that the production of lkg of shea butter takes one person 2030 hours, from collection to final product. It is also estimated that 8.5-10.0kg of fuel-wood is needed to produce 1kg of shea butter. Extraction rates are also low at about 25 - 60% (Hall et al., 1996). Below is a flow diagram depicting the traditional shea butter processing stages described by Addaquay (2004) is shown in figure 2.2

In the traditional processing method all the stages are carried out manually and very dregious. The traditional processes described in figure 2.2 involve rather many stages. Further studies are therefore required to determine whether these stages can be reduced.

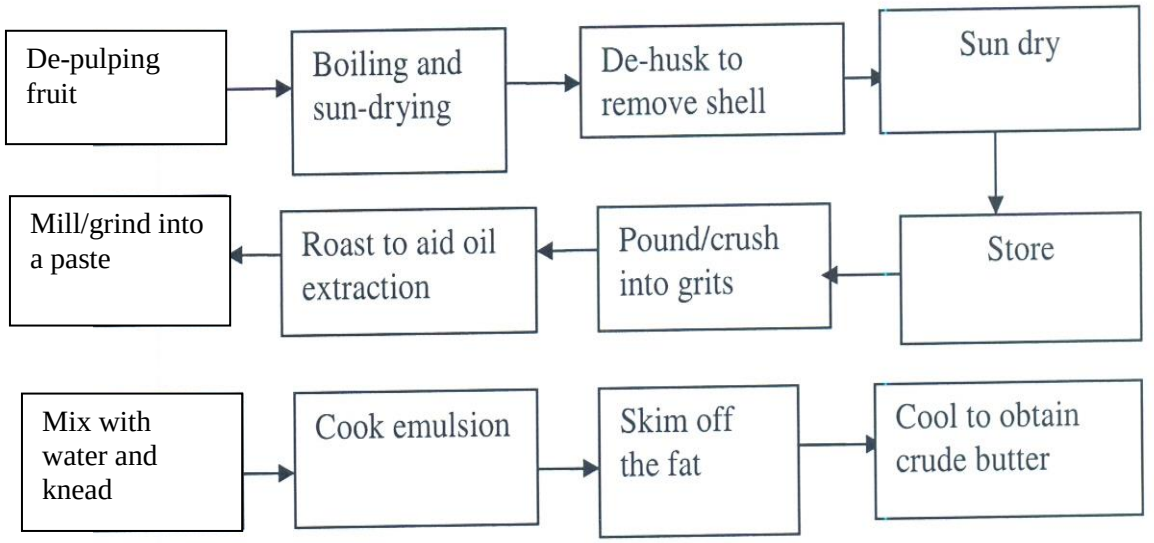


Figure 2.2 Traditional Butter Processing Stages Source: Addaquay (2004)

2.10.2 Semi-Mechanized System of Production

Attempts have been made to introduce new technologies into the gathering, storage and processing of shea nuts into butter (Wallace-Bruce, 1995). These technologies involve the use of nut crushing and kneading machines. According to Addaquay (2004), such technology advancement has led to an improvement in the extraction rate from 20 percent to 35-40 percent. This system is referred to as the semi-mechanised system (Addaquay, 2004). There is still a lot of manual activity. The processing goes through all the stages in the traditional method except that machine does the crushing and kneading. The semi-mechanised system could be very suitable for developing country like Ghana.

2.10.3 Fully Mechanized System of Production

In view of Addaquay (2004) mechanized processing in West Africa yields 30-40% of shea butter from raw nuts, but more efficient, fully mechanized systems achieve extraction rates of between

42% and 50%. This is relatively higher, compared with 25%-40% of extraction rates of the traditional and semi-mechanized systems. Addaquay (2004) again stated that, most of the West African plants produce less than 25% of their installed capacity and operates only six months in a year in order to offset the high cost of storing shea nuts throughout the year. A further research must however be carried out to find out economic approach for storing shea nuts in West Africa to enable processing plants function all year round. Besides, studies into crude shea butter storage possibilities cold reduce the high cost of storing shea nuts in Ghana.

According to Addaquay (2004) in Ghana there are five shea butter processing plants producing at industrial level with a combined capacity of 100,000 tons. The total utilization capacity of all the five plants is 19 percent, with the highest being 50 percent by Juaben Oil Mills. Compared with the potential of the country to produce about 200,000 tons of shea butter per annum, the quantity indicated above is very low. In Addaquay's view, donor support could help processors to upgrade and expand their operations. Without doubt, donor support comes with stringent conditionality that may not satisfy Ghana's priorities hence the need for a substantial and sustainable domestic financial investment in the shea industry (Sekaf, 2009).

The dominance of the shea processing industry by the traditional methods is an indication of an industry which is poorly developed (Holtzman, 2004). In Ghana all the three main categories are practiced but the majority are still using the traditional method in some cases traditional and semi-mechanised methods are combined.

2.11 Quality Standards in the Shea Industry

Attempts are being made at the international and national levels to establish quality standards for shea butter. This is aimed at ensuring that shea kernel and butter produced in Africa meet the requirements of international buyers. This initiative is championed mainly by the West Africa Trade Hub (WATH), which works through members in the various producer countries in West Africa to ensure the production and export of quality shea products to the US market in particular (Holtzman, 2004). The African Organisation for Standardisation (ARSO) also encourages shea producing countries to establish standards for the production of shea (Agbanelo, 2006). ARSO aims at facilitating intra-African and global trade by promoting quality through coordination and harmonization of standards and conformity assessment in Africa.

Efforts are also being made to establish quality standards for shea products at the regional level by attempts in member countries, including Ghana, to set local standards for shea producers. Two standards - GS238 and GS824 - have been drafted and are being discussed to be used to regulate the production of shea butter and sheanut respectively. GS238 is 'Specification for Shea Butter (Unrefined) whilst GS824 is called Specifications for Sheanuts (Prudence, 2006). Among other things, the standards specify the content, packaging, hygiene, colour, odour, taste and texture of the products, quality characteristics, classifications, uses and contaminants. Sampling methods and tests on products have also been clearly spelt out (Prudence, 2006).

2.12 Marketing of Ghana's Shea Products

The local and international shea markets are two very different buyers with the international market having strict specifications while the local markets do not. These two markets are

beginning to conflict with each other as demand for shea butter increases on the international market. As the international market demand increases, the price of nuts and butter in the local market increases at the same time. The high demands have made local shea butter and nuts less affordable on the local market creating a difficult situation for local consumers and producers.

The local shea market exists because of the women of Ghana. There are men who trade in nuts and work in processing but women are the primary pickers, processors and sellers of shea butter in the local marketplace. The majority of shea butter consumption in Ghana is in the raw form for cooking and skin care. Some local shea butter is processed to make soaps that are sold in the market as well. The processors sell directly to the end consumer in the local market. Very little is packaged, labeled or certified before sale and it is sold in small balls or bowls in major markets throughout the country especially in the Northern regions.

The world's biggest international markets for shea butter are in Europe and North America (GEPA, 2011). Shea is used primarily for skin care cosmetics and for medicinal and cooking products (Senyo, 2010). The industry is extremely competitive and is dominated by about six large international companies; L'Oreal, L' Occitane, Aarhus Karlshamns, KM group (Loders-Crokland), Feeds, Fats and Fertilizers and Pure Company. Supply to the major companies on the international market is typically done by another organization in Ghana that buys nuts and processes butter to the specifications of the buyer abroad. These contracts are very big and have extremely strict quality requirements. Communities in Ghana generally supply the nuts to local buyers who in turn supply the international companies with bulked shea nuts or butter. There are also certain organizations buying shea butter from individual communities but standard quality is

a challenge. Increasingly due to corporate responsibility, certain companies like Savannah Fruits Company, although relatively small, have been working to attain quality commercial production while supporting rural women groups (Peace Corpse Ghana, 2008).

The number one concern for international buyers is "perceived quality" before price. For edible products the major market is in Europe and India and the butter extraction and refining is done there. The major cosmetic and soap industry is in the United States and is known as the most lucrative global shea butter market (GEPA, 2011). The majority of shea butter consumed internationally is mixed into a finished product containing a percentage of shea butter. The finished products in North America tend to have high tech containers and expensive marketing campaigns behind them and are high end products. Less than ten percent is used by the final consumer in its raw form. Shea grows in 20 countries in the world, all of which are in Africa. The Export season is from August to April each year. It is estimated that 150,000 - 200,000 tonnes of nuts are exported each year from West Africa, 50,000 tonnes (approx. 33%) coming from Ghana alone. The nuts are shipped out of West Africa mainly from ports in Dakar, Senegal, Lome, Togo and Tema, Ghana (Peace Corpse Ghana, 2008).

2.13 Characteristics of the International Market

Shea market is quickly expanding, with companies that use shea butter such as L'Occitane, L'Oreal and The Body Shop, demand rising. The Body Shop UK alone purchases annually 220 MT, from a cooperative in Northern Ghana. Burkina Faso and Mali together shipped over 100,000 tons of dried kernels and there is other figure that shows 150,000 tons of Shea kernels are exported with a market value of around US$ 30 million (UNDP, 2010).

According to another study conducted by USAID and WATH, it is estimated that total production of Shea has reached approximately 2.5 million MT, and internally in Africa it is estimated that at least 150,000 tons are consumed. Only about 1/3 of the nuts that are available in Africa are harvested for various reasons including infrastructure and access, so there is room for growth. However, most recent reports state that total exports in 2007 were about 350,000 MT from 8 countries, with 10 percent directed to the cosmetic industry (GEPA, 2010).

It is estimated that pharmaceuticals and cosmetic consumed an estimate 2000-8000 tons of Shea butter each year, but this figure is rising because of the demand in new emerging markets. The cosmetics industry alone makes up 10 percent of Shea butter industry, and the therapeutic benefits from Shea are becoming much more known (UNDP, 2010). According to Holtzman, 2004 the domestic market for shea butter is constituted by a number of large urban areas in West Africa as the centres of effective demand. Again, he added that there are secondary cities represent important demand poles for significant quantities of shea butter.

The major US importers of bulk shea indicate that demand for shea butter by manufacturers will continue to increase as mass awareness of shea butter drives consumer demand for products that include shea (Stathacos, 2004). Four major players control the refining of shea in the world market. They are, in order of capacity, Aarhus United in Denmark, Fuji Oil in Japan, Karlsham AB in Sweden and Loders Croklaan in Holland (Addaquay, 2004). Shea is currently classified as a non-traditional export commodity. The GEPC has monitored annual exports ranging between 32,000 and 45,000mt of dry shea kernel mainly traded by Kassardjian and Olam for processing by Aarhus United in Denmark, Karlsham in Sweden, Loders Crocklaan in Holland or Fuji Oils in

Japan since 1997 (GEPC, 2010). This period has also seen an exponential increase in shea butter exports from virtually zero in the early nineties to over 32,782,61kgs by the end of 2010. Much of the increase in production can be linked to in-country mechanical processing for refining abroad. Women groups are also known to process a significant proportion (Asante-Dartey et al., 2009). Hall et al. (1996) opins that those on the export market prices are dependent on the output of cocoa because buyers use it mainly as cocoa butter replacers (CBRs). This implies that in years of poor cocoa harvest a good price is offered for shea products and the opposite is true.

2.14 Contribution of Shea Industry to Ghana's Economy

The shea industry is very important to the national economy; it contributes tremendously to foreign exchange, food security, employment generation and poverty alleviation.

2.14.1 Foreign Exchange Generation

Currently, shea is classified as a non-traditional export commodity and is monitored by the Ghana Export Promotion Council (GEPC) now Ghana Export Promotion Authority (GEPA). The table 2.1 shows the crude shea butter and shea nuts exports from 2000 to 2010. From table 2.1 there have been increases of shea nut from 2000 - 2010, from a quantity of 35,983.10 mt to 41,219.24 mt differences of 5,236.14 mt. Then from 2001 to 2002 there have been a decreased of 18,654.50 mt, in 2003 there was a significant increased of 39,370.4 mt. The quantity of shea nuts fell drastically in 2004 to 5,548.44 mt and shoot up to 165,508.33 mt and 140,757.25 mt in 2005 and 2006 respectively. From 2007 it dropped to 57,165.81 mt these shows that the export market for shea nuts is not stable it dwingles from year to year. The shea nuts experienced negative growth in those years because major exporters of nuts viz; Ghana National Procurement Agency,

Aarhus Company Ltd. and Barryfausn Company Limited did not export the product during the years that the quantities and prices have fallen (GEPA, 2011).

Table 2.1 Shea Nuts and Shea Butter Exports from Ghana 2000 - 2010

YEAR	SHEA NUTS		SHEA BUTTER	
	QTY (MT)	VALUE: US $	QTY: (MT)	VALUE: US $
2000	35,983.10	4,674,271	1,041.05	
2001	46,281.40	6,654,411	1,679.74	1,131,347
2002	27,626.50	6,125,464	2,539.89	2,584,282
2003	66,996.90	16,746,386	1,559.70	1,567,430
2004	5,548.44	2,463,114	552.90	457,314
2005	165,508.33	28,968,495	648.09	940,514
2006	104,757.25	27,248,779	579.85	894,317
2007	57,165.81	27,008,556	10,295.53	7,659,888
2008	55,488.20	24,939,825	4,013.12	6,487,683
2009	67,826.34	26,853,367	12,561.37	19,010,304
2010	41,219.24	13,791,267	32,782.62	24,764,995

Source: GEPA; 2011

Shea nuts experienced negative growth in those years because major exporters of nuts viz; Ghana National Procurement Agency, Aarhus Company Ltd. and Barryfausn Company Limited did not export the product during the years that the quantities and prices have fallen (GEPA, 2011). Shea butter export on the other hand is not completely different from shea nut, quantities and prices of butter fluctuates from the preceding years; from 2000 to 2002 there have been an increased in quantities and prices of shea butter, then dropped from 2003 to 2006 and an increased in 2007. In

2008 it dropped, and from 2009 to 2010 there was a significant increased. This indicates that there is good market for shea buter in the export market as indicated in the table 2.1.

2.14.2 Employment Generation

TechnoServe Ghana (2004) states that about 3,000 households in northern Ghana are engaged in the shea industry; it is estimated that the average household size is 13 persons and that these households produce and market 4 million USD worth of shea butter annually. On the other hand it is stated that about 39,000 rural poor processed and sold 34.2 billion cedis (GH¢3,420,000.00) worth of shea butter in 1999 (GSS 2004). In addition to this there are an estimated 200,000 fragmented sellers of shea products (TechnoServe, 2004). In 2010, a USAID Trade Hub study showed that for every $1,000 sales of shea in villages about $1,580 additional income enters the local communities and created many jobs (Ghanaian Times, 2011).

2.14.3 Provision of Food Security

Hall et al. (1996) opined that the harvest season coincides with the early wet season, when the edible fruit pulp which is very nutritious, forms a welcome addition to the diet. Kletter (2002) mentioned that, picking of shea coincides with the hunger period in Northern Ghana. About 70,000 mt of shea is consumed in Ghana annually (Lovett, 2004). This consists of use of shea for different purposes including use as edible oil. However, the most important role played by shea in northern Ghana is the fact that shea nuts picked by farmers are mainly sold to raise funds for the purchase of food. Pickers sell the commodity immediately to purchase much needed food. This, however, gives buyers more bargaining power, leaving pickers as price-takers.

2.14.4 Poverty Alleviation and Women Empowerment

Literature on the shea industry stress that the industry is dominated by women (Hall et al., 1996). NGOs that engage in the shea industry, for instance, do so because of the potential of the industry to, among other things, reduce poverty levels among women, in particular. Techno Serve (2004) argues that all artisanal shea butter producers are women, who spend their incomes to provide food, health care, and shelter for their families Most of the 3,000 households engaged in the shea industry are among the poor hence relying on the industry for their livelihood.

As a rural industry shea contribute considerably to the annual income of the rural communities of West African. According to Krugg, quoted in Spore (1991) "The shea tree provides more than half the income of village women in sheanut growing areas in Mali". "If you touch shea, you touch every household in Northern Ghana; it brings income and food to everyone; that is why it is the only tree that has traditional penalty in Northern Ghana" (Jeremiah, 2008).

By the income these women derive from the sale of shea butter or nuts they are empowered financially and socially in that they are able to meet some of their needs and contribute to the solution of problems in the household. They are then involved in decision making at the house hold level at least and they are able to invest in their income generated activities.

2.15 Prospects of Ghana's Shea Industry

Some local producers are already processing, blending and packaging shea in skin creams and soaps in urban shops. Addaquay (2004) reports that crude shea butter, processed in the region, is sold as food oil, healthcare and also as skin cream. It is further estimated by Addaquay (2004)

that the leading West African shea-producing countries consume about 30,000 tons of shea butter domestically. Breakdowns by type of utilization (food oil, retailed personal care products in urban markets, skin care products in production zones) are not currently available (Holtzman, 2004). The shea is also counted as a medicinal tree species in Ghana. The bark is used in various mixtures for the treatment of common illnesses such as stomach ache. It is also used as an eye lotion and facilitates delivery (Bennette-Lartey and Asare, 2000). It is also used in the treatment of abdominal pains, muscular aches and rheumatism.

For many years SEKAF has been trying to obtain good quality shea butter through bulk buying from shea butter processors, in order to improve upon the consistency of butter quality, the company established a shea butter village equipped with improved shea butter processing methods, facilities such as drying and sorting platforms, equipment, raw shea nuts, transportation and packaging facilities that would not have been easily accessible to the local shea butter groups. The company entered into contract financing agreement with groups of women who process butter, using the facilities and sell the butter to the company. The equipment and cash input cost after each processing cycle is subtracted from final butter output of each processing group and the remaining money is given to groups to share among members. The company also provides training to empower them to produce the quantity and quality spelt out (Senyo, 2010).

High demand for shea; there is high demand for shea both in the local and international. At the local level shea butter is use for soap, body lotion and in the kitchen and at the international scene it is use in the cosmetic and confectionery industry.

Availability of machines; most of the shea butter extractors in recent time use machines in the processing of shea butter, gone were the days when extraction of butter was done 100% manually. For now there are driers to help dry the nuts, crushers for crushing, millers for milling and kneaders for kneading. Shebu Industries in Savelugu has a machine for extracting larger quantities of shea butter for export. There is another factory in Buipe which was commissioned to commence etraction of shea butter in 2012 (GNA, 2010).

Rising prices in the international market: Shea is currently classified as a non-traditional export commodity. The GEPA has monitored annual exports of shea ranging between 32,000 and 45,000 mt of dry shea mainly traded by Kassardjian and Olam for processing by Aarhus United in Denmark, Karlsham in Sweden, Loders Crocklaan in Holland or Fuji Oils in Japan since 1997 (GEPA, 2010). From 2009 to 2010 both exports of shea nuts and shea butter has increase considerably. There is an increase in the local consumption of shea due to good value addition to the product as a result of improve methods of extraction of the butter. On the part of value addition, most companies; Sekaf in Tamale, Ele Agbe Ltd in Accra and associations; Sangnarigu Women Group, Taimako, Gudanda Women Assocition all in Tamale use shea butter to make soap and body cream for the local market which consumption has increased in most homes. These have contributed to rising prices.

Empowering of rural households; during the peak almost all the women and children sometimes men in the communities engage in picking of shea nuts. After the processing of the nuts, some are consumed, stored and sold later to take care of their social and personal.

The shea industry creates employment for people; Hitheto, the shea industry used to be for women but now both sexes are in the industry. For example, Sekaf Company is owned by a man, men and women have been employed to work and earn some money at the end of the month. Ghana Nuts also employs a number of staff. Those who load and off - load earn some income. TechnoServe Ghana (2004) states that about 3,000 household in Northern Ghana are engaged in the shea industry; it is estimated that the average household size is 13 persons and that these households produce and market 4 million USD worth of shea butter annually.

As indicated earlier, demand and popularity of shea, especially in the international arena, continues to improve. For Ghana to take advantage of this the industry needs to be developed to produce to meet required standards and quantities. As indicated by Lovett (2004) NGOs have identified the shea industry's importance and are attempting to improve it through assistance to traditional processors.

2.16 Challenges of the Shea Industry in Ghana

As much as about half of shea harvest is left uncollected in the wild annually (Holtzman, 2004). Production processing is also not adequate in the shea industry. Again, it is argued that trade networks for shea in West Africa are dominated by a lack of information and standards in terms of market demand and quality-price structure (Lovett, 2004). This typically leaves the women as price-takers and prevents shea kernels or butter being traded as a true commodity.

Organisation of the shea industry at a local, national and international level is generally weak with few, if any, fully functional associations. The provision of focal points for information flow

and options for bargaining on the international trading arena are therefore lacking. Other challenges are high costs of transport, limited reliability and lack of appropriate containers, poor roads and corrupt customs procedures for export. There is also significant quality variation resulting from traditional extraction (Lovett, 2004).

Despite the fact that shea extraction is only a simple modification of palm kernel extraction, few mechanical shea butter extraction plants exist in Ghana. Majority of the extraction is done overseas. The lack of access to affordable capital and business skills in Africa is well known and few options to improve shea butter production are possible without links to and support from international non-governmental organizations (NGOs) operating in the shea zone (Lovett, 2004). Challenges of the shea industry as discussed above are indications that the industry requires attention if its potentials are to be realised. The challenges range from industry specific issues such as low investment, lack of productive machinery, lack of standardised processing and products among others and general challenges such as transportation difficulties.

2.17 Institutional Arrangements, Government Policies and Programmes in the Shea Industry in Ghana

The Cocoa Research Institute of Ghana (CRIG) under the control of COCOBOD currently has the mandate to conduct research into the production of shea nuts. The CRIG's activities in this direction have been ongoing since the early 1970s with a field station near Bole on the western edge of the Northern Region. Other national institutes that have been involved in research into shea include the Food Research Institute (FRI), Savannah Agricultural Research Institute (SARI) of CSIR and the University for Development Studies (Asante-Dartey et al., 2009).

It can be said, for now, that the level of interest and commitment by the Government of Ghana in the shea industry is insignificant. This is especially so with the processing and marketing of the commodity. The capital intensity of productive machinery required in the industry and the role played by the industry in the lives of the poor in producing areas requires Government intervention.

The Vice President John Dramani Mahama in a speech read for him at a stakeholders' forum in Tamale in August, 2010 said that the shea industry is an attractive business earning about 30 million dollars of foreign exchange for the national economy. The sector has the potential of tripling the amount when the industry is fully developed. He also said the business engages more than 900,000 women in the three Northern Regions, who collect over 130,000 tonnes of dry nuts annually (GNA, 2010). He also said, the industry benefits close to two million poor people, about 95 per cent of whom are rural households, adding that, the government was aware of the challenges that limit the full exploitation of the potential of the sector. He said the government, through COCOBOD, had supported the cocoa, coffee and shea nut farmers to provide protective clothing such as Wellington boots and hand gloves to improve picking. Government will continue to do this through the Savannah Accelerated Development Authority (SADA) and the Northern Rural Growth Programme," he added. (GNA, 2010).

The Vice President in another forum reiterated the government support for the shea industry, saying the task of the sheaboard was enormous, and therefore, needed varied consultations that would make it viable to cater for the effective trade needs of the industry (www.ghanaian-chronicle.com: 14/12/2011).

Government intend to form a shea board and it would among other responsibilities, take care of the occupational welfare of the shea nut pickers, increase local processing, and regulate prices of the commodity on the domestic market. The annual collection rate of shea is about only 40 percent and that with the inauguration of the board, it would encourage more people, as they would be spared the danger of reptiles they encounter in their picking activity. In addition he called for an elaborate educational campaign against the felling of Shea trees and other economic trees in the Northern Regions of the country (www.ghanaian-chronicle.com: 14/12/2011).

A wide range of NGOs have shown interest in promoting shea butter production and marketing in Ghana. Their support to shea processors includes linkages to markets, assistance with obtaining technology and training in business skills (Asante-Dartey et al., 2009). The G.C.M.B had monopoly of sheanut purchases from 1976 to 1992.

The role played by NGOs is commendable and is done in their effort to alleviate poverty among processors who are mainly women. It is however worth noting that their level of achievement in developing the industry depends on major Government policies and programmes, as that will pave the way and indicate the general direction as well as give a platform for others to follow.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

This chapter discussed the study area and methodology used in the study. It provides a clear explanation of how this study was conducted. It described the study area, study population, sampling procedure and sample size, sources of data, instruments of data collection, field work, data processing and analysis. Panneerselvam (2004:2) defines research methodology as 'a system of models, procedures and techniques used to find the results of a research problem.'

3.1 THE STUDY AREA

The research is aimed at obtaining an understanding of quality production of shea, marketing of shea products and its challenges and opportunities in Northern Region. In order to achieve this, Central Gonja, East Gonja, Gushegu Districts and Tamale Metropolitan of the Northern Region were selected to study as a representative sample of the Region. The choice of the three Districts and Tamale Metropolis was due to their proximity, accessibility and appropriate representation of both rural and urban Northern Region. Most importantly there is almost an even distribution of shea processors and marketers all over these districts.

3.1.1 The Northern Region

The Northern Region, which occupies an area of about 70,383 square kilometres, is the largest region in Ghana in terms of land area. It shares boundaries with the Upper East and Upper West Regions to the north, the Brong Ahafo and the, Volta Regions to the south, and two neighbouring countries, the Republic of Togo to the east, and La Cote d' Ivoire to the west. This is indicated in figure 3.1

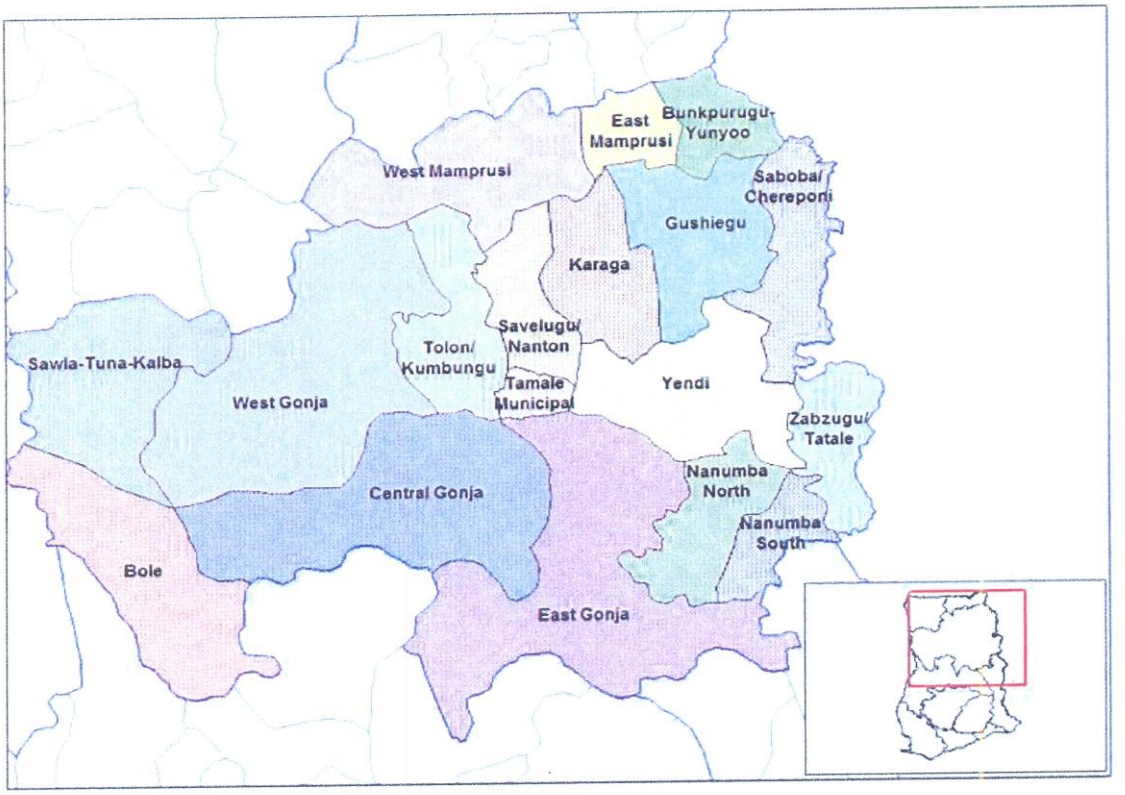


Figure 3.1 Map of Northern Region Showing Study Area
Source: RCC-Tamale, March, 2010

The region has a total population of 2,468,557 according to 2010 census results, 1,210,702 male and 1,257,855 female (GSS, 2011). The land is mostly low lying except Gambaga escarpment in the north-eastern corner and hills along the western corridor. The region is drained by the Black and white Volta and their tributaries, Rivers Nasia and Daka. The main vegetation is classified as vast areas of grassland, interspersed with the guinea savannah woodland, characterised by drought-resistant trees such as the acacia, baobab, shea nut, dawadawa, mango and neem.

The Region had 13 districts until 2004 when five new districts were created to bring the total number to 18 districts in the region. The last five are; Bunkprugu-Yunyoo, Central Gonja, East

Mamprusi, Nanumba South and Sawla-Tuna-Kalba Districts. Later in 2008 Chereponi and Kpandai were created making a total of twenty (20) Districts including one Metropolis and 3 Municipalities. Currently there are some other proposed districts to be created namely; Tatale, Daboya, Sang, Sangnarigu and Kabore/Kpasenkpe. Each Municipal/District Assembly is headed by a Chief Executive who administers the district. The districts are autonomous with regards to planning and budgeting of projects. The main administrative structure at the regional level is the Regional Co-ordinating Council (RCC), headed by the Regional Minister. Other members of the RCC include representatives from each District Assembly, regional heads of decentralized ministries, and representatives of the Regional House of Chiefs. The Regional Coordinating Director acts as the secretary to the Council (RCC-Tamale, 2010).

Agriculture, hunting, and forestry are the main economic activities in the region. Together, they account for the employment of 71.2 per cent of the economically active population, aged 15 and 45 years. About 7.0% of the economically active people in the region are unemployed. The private informal sector absorbed 83.4 per cent of the economically active population. An additional 11.5 per cent are in the private formal sector leaving the public sector with only 4.3 per cent. The majority 251,221 i.e. 40% of none economically active are homemakers and just under a quarter (24.4%) are students. Those who are not working because of old age constitute 14.8 per cent, 2.2% due to disability, 1.2% are pensioners who are on retirement, while 16.9 per cent are classified as others (http://www.modernghana.com 25/11/2011).

3.1.2 Profile of Central Gonja District

Central Gonja District was carved out of the West Gonja District in 2004. It is therefore one of the newly created districts, with Buipe as its capital. The district is located at the southern end of the Northern Region of Ghana as indicated in figure 3.1. It shares boundaries in the north with the Tamale metropolis, the Kintampo North District of the Brong-Ahafo Region in the south, East Gonja District to the East and the West Gonja District to the West. It covers a total land area of 8,353 square kilometres, representing 12% of the total landmass of the Northern Region. The area has drainage pattern with two main river systems, the White and Black Volta (Health Insurance Office, Buipe, 2011).

The district has about 69,665 people according to 2000 population census (GSS, 2001) but the recent population projection is 86,298. The population is not evenly distributed according to the projection and has large concentration of people in a few large settlements such as Buipe (8,347), Yapei (4,044) and Mpaha (4,126). The population density of the district is 8.3 persons per sq. km which is below the regional density of 25.9 persons per sq. Km. The district population growth rate of 3.1% is higher than the national of 2.8%.

The Central Gonja District is predominantly agricultural with about 80% of the District's economically active population (18-54years) involved in various farming activities. Major food crops cultivated include yam, maize, cassava, sorghum, groundnuts, rice, millet, cowpea, bambara beans and soyabeans. It must be stressed that several farmers do mix cropping (District Assembly, Buipe, 2011). The district has a great potential to develop irrigation, which will create employment for the youth. Currently, there are three (3) irrigation projects at Buipe, Yapei and

Wambong. Construction work on these projects is at an advance stage. The District Assembly in collaboration with District Agriculture Development Unit (DADU) is in the process of developing some water bodies for irrigation fanning in other communities. Basically, the available area of employment is the agriculture sector. Though some people have some engaged themselves in buying and selling this is rather on a small scale especially in the business of shea nut and shea butter processing, fish mongering, charcoal burning and selling, trading in cattle and the like. The establishment of the Youth Employment Policy by the Ministry of Manpower Youth and Employment would go a long way to solve some of the unemployment issues in the district (ghanadistrict.com).

3.1.3 Profile of Tamale Metropolis

The Tamale Metropolis is located in the Northern Region with its capital at Tamale. It lies between latitude 9° 16' and 9° 34' North and longitudes 0° 36' and 0° 57' West. It shares common boundaries with Savelugu/Nanton District to the north, Tolon/Kumbungu District to the west, Central Gonja District to the south-west, East Gonja District to the south and Yendi District to the east. The Tamale Metropolis occupies approximately 750 square kilometres land which is 1.3% of the total area of the Northern Region as shown in figure 3.1 (TMA, 2011). The Tamale Metropolitan Assembly is located approximately 180 metres above sea level. The topography is generally rolling with some shallow valleys which serve as stream courses. There are some isolated hills but these do not inhibit physical development, the Metropolis is poorly endowed with water bodies.

Tamale Metropolis lies within the Guinea Savanna belt of Northern Ghana. Apart from the preserved natural colonies of vegetation at fetish groves, forest reserves and community

woodlots, the whole Metropolis exhibits tall grass interspersed with drought resistant trees such as neem, sheanut, dawadawa and mahogany. During the rains the Metropolis becomes green making the vegetation more luxuriant. In the dry season, water becomes scarce as a result of poor vegetation cover, serious run-off, evapo-transpiration and leaching. The grasses dry up and the accompanying bush fires destroy the soil nutrients and expose the soils to serious erosion. There is one major natural forest reserve in the Metropolis located at *Sinsab-gi-gbini.*

Apart from the Tamale Metropolis where there is ethnic diversity, almost all people in the surrounding villages are Dagombas. Even in the Metropolis, the Dagombas constitute about 80% of the total population. The 2000 Population Census gave the population of the Tamale Metropolis as 293,881, made up of 146,979 male and 146,902 female. This figure shows an increase of 75% over the 1984 population of 167,778 and represents an intercensal growth rate of 3.5%. This is far higher than the national and regional rates of 2.7% and 2.8% respectively (Regional Economic Planning Tamale, 2010).

Farmers in the Metropolis and rural Tamale in particular are small scale holder subsistence food producers with meager income earning opportunities due to a combination of low productivity, lack of off-farm employment and vulnerability to natural calamities such as unreliable rainfall and bush fires. Many communities in rural Tamale are inaccessible during the rainy season. As a result farmers find it difficult to transport their farm produce to the marketing centres hence only small head-loads of foodstuffs are taken to markets. Another area of concern is the lack of storage facilities to cope with the brisk commercial activities going on in the metropolis.

The Industrial Sector is an important growth sector in the Northern Region and has the potential to contribute efficiently to the economic development and growth of the Tamale Metropolitant area and for that matter the region. The main industrial activities in the district include agro-processing activities such as rice milling, vegetable oil extraction, cotton ginning and textile or smock making. There are other small-scale industries involved in shea butter production in groups and individuals, extraction of groundnuts oil, vehicle and motor repairs, pre-fabrication of spare parts, manufacturing of farm implements, cloth and leather works, pottery and carpentry. (www.ghanadistricts.com).

3.1.4 Profile of East Gonja District

East Gonja District has its capital in Salaga as indicated in figure 3.1 and is located at the Southeastern section of the Northern Region of Ghana. The district lies between latitude 8°N and 9.29°N and longitude 0.29°E and 1.26°W. It shares boundaries with Yendi and Tamale Metropolis to the North, Central Gonja District to the West, Nanumba-North and Nanumba-South Districts to the East, and Dambia District in the Volta Region and Yejie District in Brong Ahafo to the South (East Gonja District Assembly, 2010).

The total land area of the district is 10,787 square kilometres occupying about 15.3% of the landmass of the Northern Region. The district is the largest in terms of land area (size) among the districts of the Northern Region. The East Gonja District is the second largest district in the Northern Region.

The natural vegetation in the district is the Guinea Savannah Woodland, which has evolved from climatic conditions and modified substantially by human activities. The tree cover consists of semi-deciduous trees such as oil palm; raffia palm; Acacia; Shea-nut; Dawadawa trees among others. In addition, tall grasses that characterized savannah areas extensively spread throughout the district. A large number of both plant and animal species inhabit the natural environment (Regional Economic Planning, Tamale, 2010).

The 2000 Population and Housing Census put the population of the East Gonja District at 174,500 and it is estimated at 197,932. The population trend is shown in the table 3.1. The district's share of the total population of the Northern Region is 9.67%, second after the Tamale Metropolis. The total population of the Northern Region stood at 1,820,806 (as at 2000). Population growth rate is lower than both the regional and national averages of 2.9% and 2.5% respectively. This shows significant reduction as compared with the growth rate for the 19701984 Censual periods was 3.9%.

Table 3.1 Population Trend

Year	1960	1970	1984	2000	2006 (Estimate)
Region	531,573	727,618	1,164,583	1,820,806	**2,168,860**
District	**54,503**	**73,029**	**126,335**	**174,500**	**197,932**

Source: Census Reports, GSS (2000)

The Volta Lake and some of its tributaries that drain the district, offer a good potential for fisheries development. Potential also exists for the development of small dam sites for irrigation purpose particularly at Lamassa. Currently, little use is made of the water stored in the Volta Lake.

The presence of deep fertile soils in some areas can promote afforestation and woodlot production. The district has lots different type of trees, some of them are; dawadawa and shea trees. Most of the women in this district depend on the sale of shea nuts/butter to supplement their living. The transportation network in the district is somehow better as compared with the road network of some districts in the Northern Region. With regular maintenance of the existing roads and a little improvement of the farm roads, the difficulty in transporting farm produce to the marketing centres is improved (District Assembly,Salaga,2010).

3.1.5 Profile of Gushegu District

Gushegu District has its District capital in Gushegu and is located in the north eastern corridor of Northern Region. The district was carved out of the then Eastern Dagomba District in 1988. It is bordered by six (6) districts in the region, namely; Savelugu/Nanton and Karaga districts to the west, Saboba and Chereponi Districts to the east, East Mamprusi to the north, and Yendi to the South as shown in figure 3.1. The total land area of the district is approximately 5,796 square kilometres. It has a population density of 22 persons per square kilometres. The district has 270 communities, with the capital located in Gushegu, which is about 114 km from the Northern Regional Capital, Tamale (Regional Economic Planning; Tamale, 2010).

The analysis of the demography situation in Gushegu District was made on the basis of population and housing census (PHC) in 2000 published by Ghana Statistical Service. When Gushegu and Karaga Districts were together as one district; in fact data on those two districts were added up. According to population census results, the two districts together have 125,430 inhabitants distributed in 469 communities. However, an evaluation of Gushegu population is

made on the basis of those data; which is estimated at 78,224 inhabitants. The male population is 38,330 and the female population is 39,894 with a population growth rate of 3%.The ethnic composition of the population is about eighty percent (80%) Dagomba and about twenty percent (20%) Konkomba and other ethnic groups who are mostly settler farmers found in the northeastern portion of the district. The district has 346 settlements. These are more scattered and relatively smaller. About thirty percent (30%) of the population reside in settlements that can be classified as towns. These are Gushegu and Kpatinga, with population of 13,693 and 3855 respectively. This means about seventy percent (70%) of the population is rural.

The analysis of population distribution by age shows that Gushegu district is mainly composed of infants. The share of less than 15 years Children, an age group dominated by boys represents the most important part of dependent population of 55% (R E P; Tamale, 2010).

To a greater extent, agriculture in the district is predominantly small holder, subsistence and rain-fed. Although the annual rainfall ranges between 950-1300 (sufficient), the erratic nature of the pattern does not augur well for good yields. The main market centre in the district is Guhsegu, which attract traders from far and near including Tamale, Yendi and Bolgatanga. A variety of goods are sold and bought in these markets including industrial and imported goods like clothing, utensil, bicycles, motor bike parts etc. The district markets are important centres for agricultural produce such as groundnuts, shea nuts/butter, maize, yams and beans. (www.ghanadistricts.com).

3.2 The Study Population

The study population was made up of people in the shea business: especially shea pickers, shea butter extractors, in the three Districts and three communities each in Northern Region where shea is produced.

3.3 Sampling Procedure and Size

Choosing the appropriate sample depends on the kind of data analysis the researcher plans on. Again, the accuracy of the sample depends largely on the researcher's purpose and the populations' characteristics (Neuman, 2003). Statistical equations are used to arrive at an appropriate sample size. One principle in sampling size is that the smaller the population, the bigger the sampling ratio as an appropriate sample. Larger population permit smaller sampling ratio for equally good samples. This is because as the population size grows the returns in accuracy for sample size shrinks. 'For small populations (under 1000), a researcher needs a larger sample ratio (about 30% or 300) to achieve a high degree of accuracy. For a population of 10,000, smaller sampling ratio of about 10% or 1000 is needed to ensure accuracy (Neuman, 200:232). Practical limitations like cost also play a role in choosing a sample size. Generally, the larger the sample size, the smaller the sampling error. Also, the greater the homogeneity (the less the diversity) in a sample, the smaller it's sampling error. However, Peil et al. (1982) point out that if a group is truly homogeneous, a larger sample is unnecessary (one or two people can provide as much information as 500) or as Miller (1991) puts it there is no need interviewing a larger number of people saying the same thing.

There are several sampling procedures but having considered them purposive sampling, random sampling and snowball sampling were suitable for this study. In purposive sampling as the name implies, the researcher, adhering to the objectives of the study, selects respondents who can answer the research questions. Purposive sampling, also known as judgmental sampling is a technique that requires the investigator to use his/her judgment and prior knowledge to select the area and people for the sample who and where would be best to serve the purpose of the study.

Snowballing is a method of expanding the sample by asking one informant or participant to recommend others for interviewing (Ahuja, 2007; Crabtree and Miller, 1992). Greig and Taylor (1999) and Ahuja (2007), call those through whom entry is gained gatekeepers and those persons who volunteer assistance key actors or key insiders. Neumann (2000:352) qualifies a gatekeeper as "someone with the formal or informal authority to control access to a site," a person from whom permission is required. Guest and Namey (2005) argue that using this sampling technique allow participants or informants with whom contact has already been made, use their social networks to refer the researcher to other people who could potentially participate in or contribute to the study. The technique is often used to find and recruit "hidden populations," that is, groups not easily accessible to researchers through other sampling strategies (Mack et al., 2005:15-16).

In this study three districts were chosen purposefully because of their involvement in the shea business; lots of shea nuts pickers and butter processors are found in the selected districts and also because of proximity, financial and logistic constraints. Gender was also considered in selecting the sample since it became clear that the shea industry especially processing and picking are generally female dominated with only a few men doing marketing. The districts are

East Gonja, Gusheigu and Central Gonja all in the Northern Region. After studying the 3 Districts, three communities were chosen from each of the districts. This was done purposively also due to their high involvement in shea nuts picking and shea butter extraction in the Districts. Snow ball sampling was used to select the individual respondents of the shea nuts pickers. To do this shea nut shells were located in the communities and the house in which the first heap of shells is found becomes the point of enquiry. In mates of the house introduce the first picker and she was interviewed. She then introduced the next and it went on until the 30th person was interviewed. This was repeated in each of the communities selected as samples. Table 3.2 shows the districts, communities and numbers of respondents interviewed. A sample of two hundred and seventy (270) respondents was selected.

Radom sampling procedure was used in selecting shea butter extractors from each of the selected communities. Lists of all the shea butter extractors in various communities were obtained with the help of key informants in the communities. From the list random selection of processors were done to obtain the specific number targeted and this was done in all the communities in the Districts. The results are indicated in table 3.2.

Selection of respondents from members within groups/associations and marketing companies (table 3.3) was done in the Tamale Metropolis where majority of them are. Purposive procedure was used as listed because the research had previous working relations with them.

Table 3.2 Districts, Communities and Number of respondents sampled

District	Communities	Shea butter processors	Shea nuts Pickers		Total
		Female	Female	Male	
Gushegu	Kpisinga	20	6	4	30
	Kpatili	20	10	0	30
	Gushegu	20	10	0	30
	Sub-total	**60**	**26**	**4**	**90**
Central Gonja	Buipe	20	10	0	30
	Chama	20	10	0	30
	Sankpala	20	10	0	30
	Sub-total	**60**	**30**	**0**	**90**
East Gonja	Sisipe	20	10	0	30
	Kalande	20	10	0	30
	Masaka	20	10	0	30
	Sub-total	**60**	**30**	**0**	**90**
Total	9	**180**	**86**	**4**	**270**

Source: Author Construct.

Table 3.3 Associations and companies sampled for the study

NO.	Associations/Company	No of questionnaire	Communities
1.	Sekaf	1	Kasuligu
2.	Christians Mothers Association	1	Vittin
3.	Christians Mothers Association	1	Komboyili
4.	(Tuntieya women group)	1	Vittin
5.	Pagsung shea butter processing centre	1	Sagnarigu
6.	Gubdanda Women Ass.	1	(Gubdanda)
7.	Jakarayily Women Group	1	Jakarayili
8.	Tiehisuma	1	Gurugu
9.	**Sekaf (marketing Company)**	**1**	**Industrial area**
10.	**Savannah Fruits Company**	**1**	**Jakarayili**
Total		**10**	**10**

Source: Author Construct.

Table 3.3 shows the associations and marketing companies in the Northern Regional capital that provided information. The first 8 are the shea butter production groupings while the last 2 are the shea marketing companies giving a total of 10.

3.4 Types and sources of data

Both primary and secondary sources were consulted for the collection of both qualitative and quantitative data to enable the researcher address the research questions. According to Leedy (1997:101), a primary data is *"data that lie closest to the source of the Ultimate Truth underlying a phenomenon."* Beyond the region of primary data lies the region of secondary data. The primary data refers to data collected expressly for specific purpose. The main sources of primary data were at the community level surveys and were done though focus group discussions and interviews. The people who constitute the primary source of data in this study were the shea nut pickers, shea processors/shea butter extractors as well as buying companies and NGOs.

Mixed-methods studies were used; quantitative and qualitative data were collected from sources such as shea butter groups/associations and shea nut pickers. Qualitative Research is collecting, analyzing, and interpreting data by observing what people do and say. Whereas, quantitative research refers to counts and measures of things, qualitative research refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things (Creswell, 1994). Other existing relevant documents found on the internet, newspapers, policy documents on shea butter/nuts in Ghana, academic journals and research reports, occasional papers and speeches on shea butter/nuts issues were reviewed.

3.5 Tools of data collection

Questionnaires, checklists and observations were the main instruments used in the study to get data from the respondents.

3.5.1 Questionnaire

Questionnaire is a formal set of questions that are framed and written down for the respondents to provide answers to. As a tool for data collection, the questionnaire is an efficient tool for collecting statistically quantifiable information (Twumasi; 1986). It also consists of well-formulated questions to probe and obtain responses from respondents (Twumasi, 2001; Karma, 1999; Panneerselvam, 2007). It can be divided into structured and semi-structured questionnaires. While structured questionnaires provide predetermined closed-ended questions with option for respondents to choose from, in semi-structured questionnaires, both open-ended and closed-ended questions are used and respondents are at liberty to give unrestricted answers (Karma, 1999; Twumasi, 2001). Interview is a conversation carried out with the definite aim of obtaining certain information. It is designed to gather valid and reliable information through the responses of the interviewee to planned sequence of questions (Osuala, 2005).

Both structured and semi-structured question were used in the questionnaire for this research to ascertain respondents' views on opportunities and challenges of shea butter production. The structured questions were used to solicit information from both traditional methods of production and modern methods of shea butter production. The opportunities and challenges of shea industry in Northern Ghana were observed during this process.

3.5.2 Pre-testing of questionnaire

Pre-test is a trial test of a specific aspect of the study such as method of data collection or data collection instrument - interview schedule, mailed questionnaire or measurement scale. An instrument of data collection is designed with reference to the data requirements of the study. But it cannot be perfected purely on the basis of a critical scrutiny by the designer and other researchers. It should be empirically tested. As emphatically pointed by Goode and Hatt (1989), "no amount of thinking, no matter how logical the mind or brilliant the insight, is likely to take the place of careful empirical checking". Hence pre-testing of a draft instrument is indispensable. Pre-testing means trial administration of the instrument to a sample of respondents before finalising it. Pre-testing has several purposes:

1. to test whether the instrument would elicit responses required to achieve the research objectives,
2. to test whether the content of the instrument is relevant and adequate,
3. to test whether wording of questions is clear and suited to the understanding of the respondents,
4. to test the other qualitative aspects of the instrument like question structure and question sequence and
5. to develop appropriate procedure for administering the instrument with reference to field conditions.(www.globusz.com/ebooks, 2011).

The questionnaire for this study was pre-tested to reduce the state of ambiguities and unanswered questions as indicated by Ahuja (2007). Research assistants were selected from each District of

study and trained in the use of the prepared questionnaire. The selection was done based on their ability to read and write English and ability to translate the questionnaire to the local language and vice-versa. Pre-testing the questionnaire was part of the training process for data collection. As part of the training each research assistants administered two of the questionnaires as pre-test. After the pre-test there findings were discussed with the research assistants to find out questions that gets similar responses or otherwise and suggestions, comments and opinions given by the pre-testing team were incorporated which enhanced efficiency. In addition, there were insufficient spaces for providing answers to some of the open-ended questions.

3.5.3 Checklist

A well-structured checklist was prepared and used for the focus group discussions (FGD) in the three districts and Tamale Metropolis. Checklist is a simple device that consists of a prepared list of items pertinent to an object or a particular task. The use of a checklist ensures a more complete consideration of all aspects of the object, act or task. Checklists contain terms, which the respondent understands, and which more briefly and succinctly express his views than answers to open-ended question (Patton, 2003).

3.6 Data Collection

After the instruments were designed they were used to collect data for the study. The questionnaires were used for interviews of respondents while the checklist was used for the focus group discussions.

3.6.1 Focus Group Discussions

Focus Group Discussions (FGD) is a deep interaction with people of a homogenous group of between 6 and 12 persons, which enable the researcher to obtain information in a particular area of interest that would be difficult if not impossible to obtain using other methodological procedures (Krueger, 1988; Kumekpor, 1996). It is a method in which one or two researchers and limited participants meet as a group to discuss a given research topic. It allows the researcher greater insights into why people think or hold certain opinions (Krueger, 1988:18).

For this study a checklist was prepared and used for one focus group discussion in each of the districts apart from Tamale Metropolis. In Gushegu District, FGD was done in Kpisinga where 13 people, 3 men and 10 women participated. For East Gonja District, it was done at Sisipe with 12 women and in Central Gonja District, Chama was used for the FGD, 15 people were present all women. The researcher led the discussion through an interpreter in Kpisinga in the Gushegu District but at Sisipe and Chama the researcher could speak the language. The reason for FGD is to find out from each district how quality shea butter is extracted.

3.6.2 Questionnaire Administration

Questionnaires were administered to individual shea nuts pickers and shea butter extractors in the three districts and some identified shea marketers and associations/groups in Tamale Metropolis. Questionnaire was set to cover 7 sections labelled **A** to **G.** Section A was designed to gather general information, Section **B** for socio-demographic data, C for performance of shea industry, D for challenges in the shea industry, E for prospects of the industry, F for marketing of shea and the last section G was designed to find out intervention either from the Government or

NGOs. In each the districts research assistants were recruited who helped in data collecting and in Tamale Metropolis it was by the researcher alone.

A separate questionnaire was prepared and used for associations and marketing companies that covered general information of the companies, shea nut supply, the performance of shea butter extractors, prospects of shea butter extraction, marketing of shea butter, challenges of shea processing and marketing and intervention from any quarters.

3.6.3 Key Informant Interest

Useful information was gathered from the key informants on the subject under studied on individual bases through visits and discussions. After each level/step analyses was made in consultation with the informants for better performance in the next level of the study until I got all the information needed for my work.

3.7 Data Processing and Analysis

For this research, both descriptive and inferential statistical tools and techniques were used to analyse the data. Kumar (2003) asserts that after data is collected, proper tools and techniques should be used for classification and analysis. According to Osuala (2005) descriptive tools and techniques of research are that which specify the nature of given phenomena; be they simple or complex, but, the need for systematic ways of telling what a situation is means that the situation is no longer simple (Kumar, 2003).

Data collected was managed and analysed in other to give a good reflection of the work done. The data was thoroughly edited after entering to eliminate errors in order to ensure accuracy. Coding was done manually for all respondents by grouping and compiling the questionnaires. Statistical Package for Social Science (SPSS) was used. The SPSS is computer software for data processing and transformation as well as for purposes of data analyses. The spread sheet for the data was designed, followed by coding and inputting the data from the survey questionnaires; and running the analysis of the data. The latter includes data exploration to detect possible data problems resulting from either recording or inputting errors. Eventually a final output is generated in the form of percentages, tables and graphs for further descriptive and inferential analysis. For the purposes of determining inter-relationships, cross tabulations remains the basis of most of the explanations of social phenomena. Besides, qualitative data were analysed using descriptive statistics.

Percentages, graphs, chart and cross tabulation were used to present the data to make the results clear and accurate for understanding and correct interpretation of the information on the study.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

This chapter is divided into five sections. The first part dealt with the demographic characteristics of respondents of the study area. The rest of the sections discussed the four objectives of the study. The second part deals with the performance of Shea industry in Northern Ghana. The third part sought to find out the opportunities of shea industry for further development and the policy intervention in the Shea sector. The fourth section covered the current challenges in the industry and the way forward in promoting new methods of shea nut collection. Views of shea nut pickers, shea butter processors/extractors, as well as shea butter associated groups and marketing companies were sought.

4.1 SOCIO- DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The socio-demographic characteristics captured here are gender, age, education, marital status, religious affiliation and ethnic background of respondents.

4.1.1 Gender in the Shea Picking and Processing

The gender distribution of the research work reveals 95.6% women dominance in shea nut picking and 4.4% men involvement. However, the Shea butter processors records 100% females as shown on Table 4.1 as confirmed by Hall et al, 1996. Gender plays a vital role in the Shea nut industry and communities in Northern Ghana. The rationale for female domination is that often, men are seen as family heads and are the sole providers of food stuff whilst women are house wives and are responsible for turning farm products into consumables. Many of these marginalized rural women are engaged in farming related activities that earned them some

amount of income to support their husbands in running of social and family affairs. They use their extra time in picking and processing shea to get income which is normally used to supplement household feeding, school fees and providing clothing for them and their children that agrees with Spare, 1991.

Table 4.1 Gender response rate for both Shea nut pickers and Shea butter processors in the study area

Gender Distribution of Pickers and Processors.			
District	**Shea nut Pickers**		**Shea butter Processors**
	Female	Male	Female
Gushegu	26	4	60
East Gonja	30	0	60
Central Gonja	30	0	60
Total	86	4	180
Percent	95.6%	4.4%	100%

Source: Field Survey, August 2011.

4.1.2 Age and Education of Respondents

The analysis of age and education, Table 4.2, shows that there was no respondent less than 20 years because of massive migration of the youth to the southern part of Ghana in search of jobs. The highest age group had the least number of 2 respondents since the job is quite difficult and the most aged do not have that strength. About 34 of the respondents representing 37.8% within the age group 31- 40 recorded the highest figure since these are married women who could hardly leave their husbands and they are also economically active The highest level of education obtained is, Middle School Leaving Certificate with only one person followed by 6 persons with

JHS, 13 persons with primary and 19 persons with Islamic education. The rest, 56.7% had no formal education. This is an indication that illiteracy rate in these districts is quite high.

Table 4.2 Age and Education distribution of Shea nut Pickers

Age	Education					Total	Percent
	No Formal	Primary	JHS	Middle	Islamic		
21-30	5	5	4	-	3	**17**	**18.9**
31-40	24	3	-	1	7	**35**	**38.9**
41-50	19	1	2	-	4	**26**	**28.9**
51-60	1	4	-	-	5	**10**	**11.1**
60+	2	-	-	-	-	**2**	**2.2**
Total	**51**	**13**	**6**	**1**	**19**	**90**	**100.0**
Percent	**56.7**	**14.4**	**6.7**	**1.1**	**21.1**	**100.0**	

Source: Field survey, August 2011

The critical value was determine using the degree of freedom (5-1) (5-1) = 16. With an alpha level of 0.05, the chi-square table indicated 26.296 as the critical value **(See Appendix A).** Since the observe value of the test statistics is greater than the chi- square, we can conclude that age and education are not relevant for shea nut pickers.

The case of shea nut processors is slightly different. Table 4.3 shows that out of 180 female respondents selected 141of them representing 78.3% had no formal education with about 32.8% of the respondents in this category falling within the age range of 31-40 years, whiles 18.9% were below 30 years. It is sad to note that 51.7% of the productive age groups of the butter

processors have no formal education. Among the processors the few educated respondents have higher education than the shea nut pickers.

Table 4.3 Age and Education distribution of Butter Extractors

Age	Education							
	NFE*	Primary	JHS	Middle	Islamic	SHS	**Total**	**Percent**
21- 30	23	6	5	-	-	-	**34**	**18.9**
31- 40	48	6	2	-	1	2	**59**	**32.8**
41- 50	42	7	-	2	3	-	**54**	**30.0**
51- 60	23	1	-	1	2	-	**27**	**15.0**
60+	5	-		-	1	-	**6**	**3.3**
TOTAL	**141**	**20**	**7**	**3**	**7**	**2**	**180**	**100.0**
Percent	**78.3**	**11.1**	**3.9**	**1.7**	**3.9**	**1.1**	**100.0**	

Source: Field survey, August 2011 *NFE: No formal Education

4.1.3 Marital Status of Shea Nut Pickers

Figure 4.1 shows that 82 shea nut pickers representing 91.1% were married, 5 of them were widows whilst 1.1% were divorce and 2.2% were not yet married. It is not strange that most of the women were married since they all fall within the marriageable age group. The few widows were the very old ones.

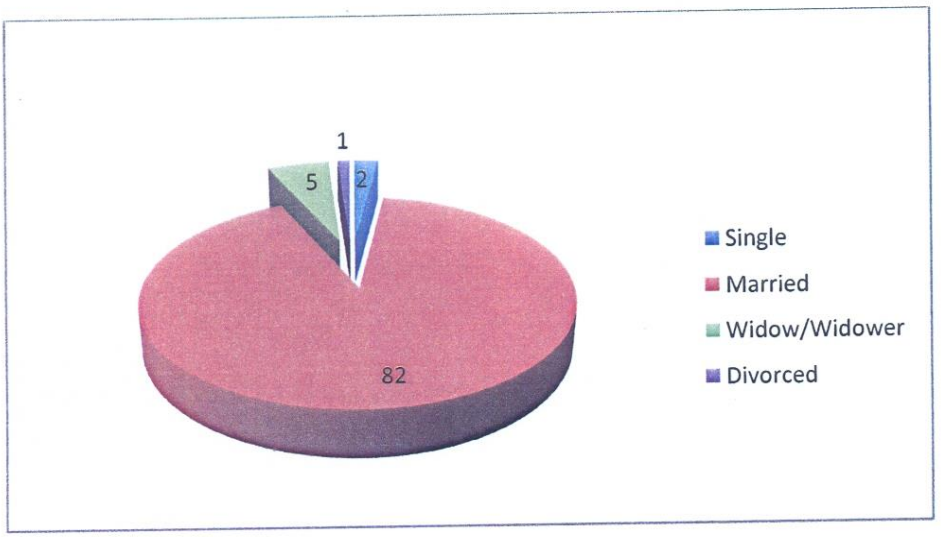


Figure 4.1 Marital Status of Respondents

Source: Field Survey, August 2011

4.1.4 Religious Affiliation

Table 4.4 Religious Affiliation of Shea Nut Pickers and Butter Processors

Religious Affiliation	Shea nut Pickers		Shea butter Processors	
	Frequency	Percent	Frequency	Percent
Traditional	1	1.1	3	1.7
Christian	23	25.6	28	15.5
Islam	66	73.3	149	82.8
Total	90	100.0	180	100.0

Source: Field Survey, August 2011.

The population of the study area is Islam dominated therefore it is not surprising that about 73.3% and 82.8% of the shea nut pickers and processors respectively were Muslims **(Table4.4).** Twenty three (23) of the respondents representing 25.6% were Christians for pickers whilst 15.5% of the sample size constitutes the processors. One shea nut picker representing 1.1%

belonged to African Traditional Religion as well as 1.7% processors. It is surprising that less than 2% of the respondent were traditionalist given the fact that there are many traditionalists in the study area. It could be that there are Muslims who practice traditional religion. According to the respondents religion has not effect on shea nut picking or processing.

4.1.5 Ethnicity of Respondents

The Northern Region has diverse multi-cultural ethnic groups but the Dagombas appear to be the most dominant tribe in terms of population in the region (PHC, 2010), very closely followed by the Gonjas. It is therefore not surprising when the ethnic distribution of the research work is in line with the 2010 population and housing census results. It is also possible that, most Dagombas might have migrated to Gonja land in search for fertile lands for farming.

Table 4.5 shows that 47.8% and 62.8% of the picker and processors respectively are Dagombas by tribe whilst 43.3% and 35.0% respectively are Gonjas. The Bonu and the Dagabas who were not resident in the region in the past are currently residing there hence a significant 3.3% and 5.6% respectively of pickers and 2.2% of Dagabas being engage in processing shea nut.

Table 4.5 Ethnic distribution of Respondents

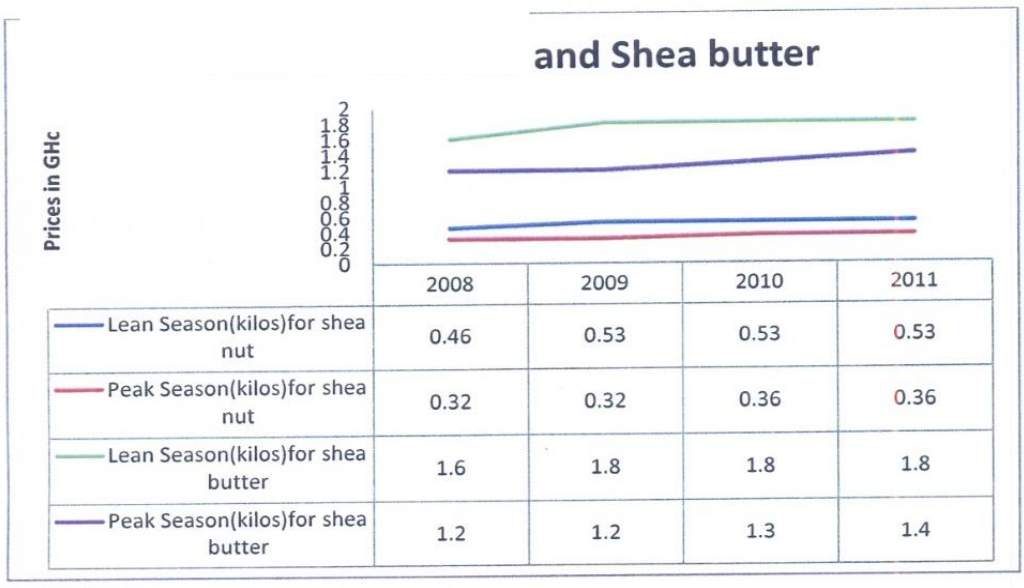
Ethnicity	Pickers		Processors	
	Frequency	Percent	Frequency	Percent
Dagomba	43	47.8	113	62.8
Gonja	39	43.3	63	35.0
Bonu	3	3.3	-	-
Dagaba	5	5.6	4	2.2
Total	90	100.0	180	100.0

Source: Field Survey, August 2011.

4.2 Performance of Shea Industries in Northern Ghana

During the peak of shea nut picking in Northern Region, there is usually a massive search for shea fruits in many rural communities mainly by children and women for direct or indirect consumption. The men harvest the shea fruits to consume the pulp on their farms; this expression goes to support (Metter, 2002). However, in recent time shea products have become indispensable in international trade with demand for shea nut and butter increasing internationally as agrees with (GEPA, 2010).

4.2.1 Analysis of Prices of shea nut and butter



	2008	2009	2010	2011
Lean Season(kilos)for shea nut	0.46	0.53	0.53	0.53
Peak Season(kilos)for shea nut	0.32	0.32	0.36	0.36
Lean Season(kilos)for shea butter	1.6	1.8	1.8	1.8
Peak Season(kilos)for shea butter	1.2	1.2	1.3	1.4

Figure 4.2 Shea price from 2008-2011.

Source: Field Survey, August 2011.

Figure 4.2 indicates the prices of shea nut and shea butter both lean and peak season in the communities that where selected for the study. **Lean season** is the period that the products are scarce where as **peak season** refers to the period when there is a glut or harvesting period. Prices

of shea nuts and shea butter flatuates a focus group brainstorm session with shea butter extractors and nut pickers enabled them to give fair idea of the cost per kilogram of shea nut and butter an average buying and selling prices in the lean and peak season. A critical analysis of the cost and selling prices showed that from the peak to the lean season profits are made even though some prices appear constant, note should be made that the prices are farm gate prices. In the peak season shea butter extractors are able to purchase enough of shea nuts for processing during the lean season. Same applies to those who trade in shea nuts they also purchase enough and store the peak season and re-sell for profit in the lean season. The pickers who are able to store their products also make profit in the lean season. About the constant prices at the peak and lean season respondents said they sell at the farm gate prices they don't exceed a certain price limit that is why figure 4.2 prices are seen as they appeared.

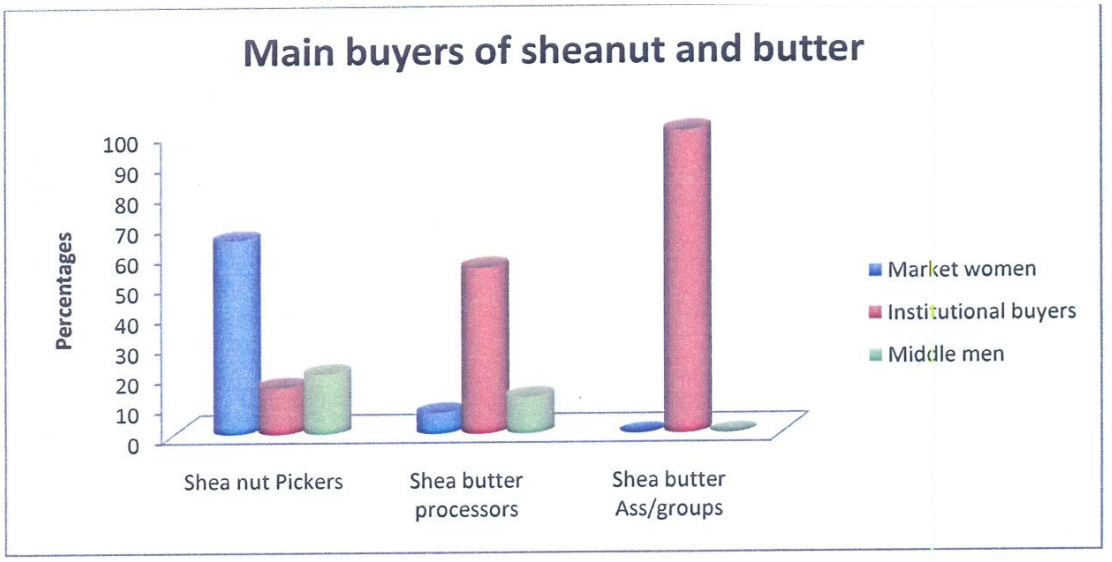
Currently a price of US$300 is received per tonne of raw shea-nut while a tonne of shea butter receives some US$10,000 (SEKAF, 2010). Prices fluctuate depending on market conditions. Unlike Cocoa which is traded on the futures market at the international level and guarantees prices for cocoa farmers, the market of shea nut and butter are not regulated in anyway according to officials in the shea marketing companies, SEKEF and Savanna Fruit Company. The development of the domestic industry can play a leading role in guaranteeing prices for farmers and providing competition for international demand.

4.2.2 Sales of Shea Nut and Butter in the Northern Region

The rural population of Ghana has limited opportunities for employment besides engaging in subsistence agricultural activities. The shea tree brings income and food to everyone; that is why

it is the only tree that has traditional penalty in Northern Ghana" (Jeremiah 2008). Figure 4.3 shows main buyers of shea nut and butter in the study area.

Figure 4.3 reveals that 64.4% of the shea nut pickers sell their nuts mainly to market women whilst 15.6% and 20.0% sell to institutional buyers and middle men respectively. The institutional buyers are those who hired middlemen to go into the market centres and communities to purchase shea butter or shea nuts from individuals and or groups. The middlemen are contracted to do purchasing for an individual or an institution whereas the market women purchase to retrade for profit.



Source: Field Survey, August 2011.

The situation is not the same for shea butter processors where 82.8% of Shea butter is sold to institutional buyers whilst only 18.3 and 10.6% are attributed to middle men and market women respectively. The butter producers make higher significant gains than the pickers because of their

ability to diversify *market fraught* by penetrating through the sales market to sell directly to institutional buyers. Weighing fraught, payment and its related activities are limited in the shea butter market than the shea nut market. The sales benefit led to the formation of shea butter associations and groups. These groups sell almost all their product to institutional buyers as evident in figure 4.3.

The institutional buyers' activities are lower in the shea nut market but are at maximum at shea butter market and declines to the shea butter group market. Though the institutional buyers recorded a lower figure in the shea nut market, it has the opportunity for job creation for individuals. Sub-contracting arrangements exist in the form of providing resources including capital to agents, who are usually known as middle men and some market women to buy these products from the hinterlands for onwards selling to the institutions. This is the reason for the high record of sales of nuts to market women as they lack information in terms of market demand and quality-price structure, as indicated by (Lovett, 2004). In the case of shea butter, the produce is sold directly to the institutions hence no or little middle men arrangements. Though there is a significant gain of middle men participation in the shea butter market, the reason of these gains is attributed to the institutional buyers sub-contracting policy of job creation.

4.2.3 Ghana's Export of Shea Nut and Shea Butter

Ghana Export Promotion Council (GEPC), a national export trade support institution that facilitates the development and promotion of Ghanaian exports, has been monitoring the exports of shea nut and butter. Figure 4 shows the unit prices of shea nuts and shea butter from 2000 to 2010. The prices of both shea nuts and shea butter have experienced fluctuations over the past

ten years on the international market. Though, the volumes and quantities of shea nuts exported were higher than shea butter since 2000 to 2010, the unit price of the nuts experienced slight increase from 2000 to 2004 then dropped in 2005 at 0.18 cent per kilo. Then from 2006 to 2008 prices shoot up dropped to 0.4 cent per kilo in 2009 and went up by 0.33 cent per kilo in 2010.

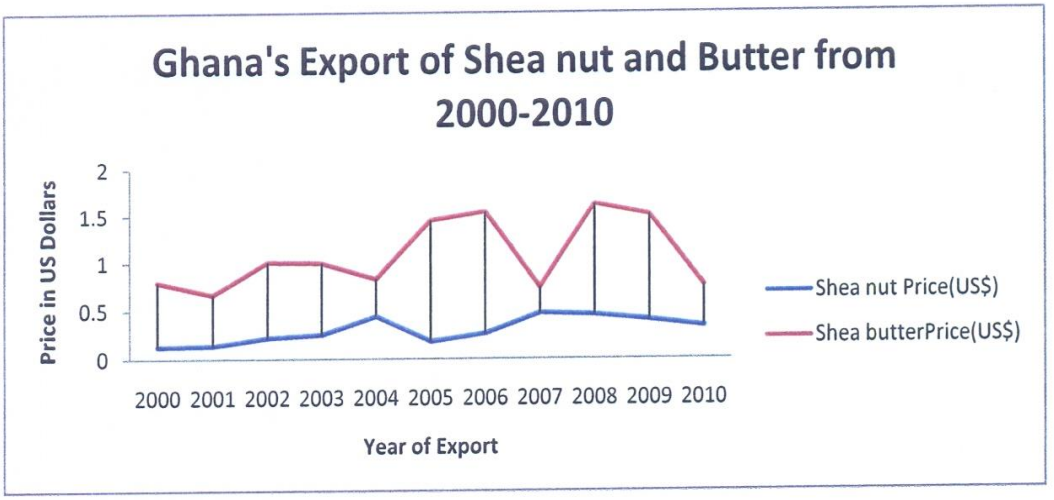


Figure 4.4 Unit Prices of Shea nut and Shea Butter in the international market.
Source: GEPC, August 2011.

Though the butter market also experience fluctuations in price movement, the decline was better comparative to the shea nut market. The unit price of the butter in 2000 was 0.8 cent per kilo of butter then rose from 2001 to 2003 dropped at 0.83 cent per kilo in 2004. From 2005 to 2006 prices went up 1.45 dollar and 1.54 dollars per kilo respectively then fell drastically in 2007 to 0.74 cent per kilo of butter. In 2008 to 2009 prices picked then dropped in 2010 at 0.76 cent per kilo as indicated in figure 4.4. The fluctuations in demand and prices shea butter and shea nuts depends on the output of cocoa demand in the international market as indicated by Hall et al., 1996.

Besides, the figures that GEPA have are the quantities of nuts/butter shipped through the harbour of Tema. There are no numbers or quantities of nuts/butter traded over the land boarders to Togo, Benin, Burkina Faso and Cote D'Ivoire. This is because Burkina Faso is landlocked, especially with nuts that may be coming from Burkina Faso over land to harbour from where nuts are shipped. So the data from GEPA might not be the true representative of the quantities of nuts/butter exported from Ghana but that is the official figures for the country we are working with. GEPA could play a more crucial role in mobilising people who want to share their knowledge and experience with others in order to increase the export shea from Ghana.

4.3 Opportunities of shea industry in Northern Region for further development

Table 4.6 Prediction of prospects for the shea nut Picking.

Age of Respondents								
	20-40		**41-60**		**60+**		**Total**	**%**
Bright future of shea industry	61		24		2		**87**	**96.7**
No good future for the shea indutry	1		2		-		**3**	**3.3**
Total	**62**		**26**		**2**		**90**	**100.**
Possible reasons								
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Income is use for social issues	29	80.5	47	96.0	2	100.0	**78**	**89.7**
Income generated is use for business	5	13.9	1	2.0	-	-	**6**	**6.9**
Self employment	1	2.8	-		-	-	**1**	**1.1**
Ready market	1	2.8	1	2.0	-	-	**2**	**2.3**
Total	**36**	**100.0**	**49**	**100.0**	**2**	**100.0**	**87**	**100.0**

Source: Field Survey August 2011

The respondents made predictions about the future of the shea business. Table 4.7 shows that 96.7% of the shea nut pickers are of the view that there is a positive growth in the shea business because consumption is increasing as confirmed (Lovett, 2004), income is also increasing hence there is a good future for the industry in other words it helps reduce poverty as stated by TechnoServe Ghana (2004) where as 3.3% think otherwise.

Also 89.7% of the shea nut pickers argue that the incomes they generated from the shea business are used to solve social problems as confirmed (TechnoServe, 2004). However, over 54% of these respondents are within the age group of 41-60. Only 2.8% of them attributed the positive growth to self reliance (self employ) and availability of ready market. These groups are within the between the ages of 20 to 40years. In a comparative analysis, respondents' views on the prospect on both shea nut and butter market are shown in figure 4.5. Most of the respondents in both shea nut and shea butter business are optimistic that the business is prosperous while 4% think differently.

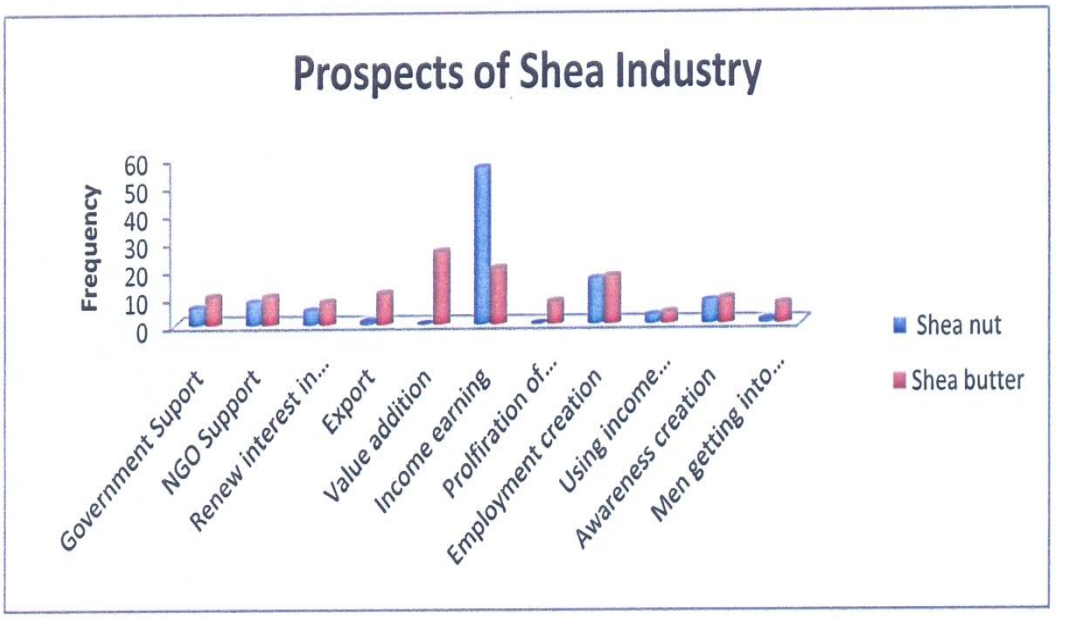


Figure 4.5 Prospects of the Shea industry.
Source: Field work, 2011

Respondents are of the view that the shea industry has lots of prospects both shea nut pickers and butter extractors (figure 4.5). 54% of shea nut pickers are of the view that they get income from the proceed of the business to support their children education and other family related issues confirmed by Spare, 1991 where 15.4% of shea butter extractors have the view. 13.1% of shea butter extractors use the profit made from butter to start or support other businesses where as 15% of nuts pickers are of the same view. With value addition, 20% of shea butter extractors are of the view that value is being added to the butter for instance shea butter soap/lotion, body and hair cream as confirmed (Addaquay, 2004) shea nuts pickers feel there is no value is added to shea nuts.

Also, respondents mentioned exporting of the products as indicated by Lovett, 2004 is a plus of making the commodities known at the international scene.5.8% nut pickers are of the opinion that the Government is in support of the business where as 7.7% of butter extractors are of the same opinion, the reasons are that the Government is putting up shea processing factory in Buipe (GNA, 2010) and its their belief that they will be able to meet better market soon with concern of the Government.

Note: As at the time I was finalizing this work news came out that the shea butter factory at Buipe in Central Gonja of Northern Region was inaugurated by Vice President Hon. John Mahama Dramani (ghanaweb:11/06/2012).

4.3.1 Shea's Huge Derived Demand Potentials

Besides job creation, there are several other opportunities the research work reveals in the industry. Shea's usefulness cuts across diverse industries worldwide, including the detergents,

catering, and pharmaceuticals industry. In Ghana, shea butter is used as cooking lard, as a water proofing wax, for hairdressing, for candle-making and as an ingredient of medicinal pomade as indicated (Lovett, 2004).

The institutional buyers said that, the main industrial use of shea butter outside Ghana is in cosmetics, such as moisturizer creams and emulsion, and hair conditioners for dry and brittle hair. In the confectionary industry, shea butter is also used as an ingredient in chocolate fillings. It is used by soap makers, typically in small amounts, because of its property of leaving a small amount of oil in the soap. Shea butter is used as a base for medicinal ointments, and has been claimed to have anti-inflammatory properties, hence its use in the treatment of fading scars, eczema, bums, rashes as also found by Yidana (2009). These uses have created a huge market for the shea industry and Ghana as one of the leading exporters, a very good opportunity to raise foreign exchange base.

4.4 SWOT analysis of the Shea Industry in Northern Region

A SWOT analysis was prepared following extensive research, benchmarking and consultation undertaken during the early stages of the field work. This SWOT analysis then served as the basis for the development of the framework itself. The key activities and related priority actions proposed are specifically designed to protect the strengths identified in Shea industry at the study area, counteract the weaknesses, capitalise on opportunities presented, and minimise the impact of threats.

Table 4.7 SWOT Analysis of the Shea Industry

Strengths	Weaknesses	Opportunities	Threats
❖ Shea trees do not require much water to grow as soon as they are up to a year old, and can thus be easily grown on plantations. ❖ Shea and its products provide an *organic* source of food, medicine and cosmetic products, and are increasingly preferred on the international market to many similar products. ❖ The shea industry mainly exists in the poorest parts of Ghana where poverty prevalence is on average, 70.2% of the population (GSS, 2005/06). The shea industry thus	❖ Information on the shea industry is very limited to research institutions and shea dealers. The reason for this rest on the absence of interest by state agencies to support the growth of the industry. ❖ TThe maturation period for shea is too long i.e. between six and ten years as a against three to five years for cocoa and mango. ❖ Shea trees will only do better on averagely moist soils and as such developing shea plantations ought to be selective of soil type.	❖ On the average, various researches have shown that Shea plants can be cultivated to mature and fruit between six and ten years; there are efforts through cutting to reduce the shea gestation and maturation periods much further. ❖ In Ghana today shea receives immense value addition with major shea mills in Juaben, Tema, Savelugu and many more springing up. ❖ Shea oils constitute a major source of raw material for many industries - such as food,	❖ The small-scale women are gradually losing out of the shea industry. The shea industry is being transformed from a small-principally women actors to one for big investment injection, as being pursued by large-scale foreign companies with considerable sophistication. ❖ The World Trade Organization limits the amount of vegetable oil that can be put on the international by a single country. The export market for direct shea oils is thus limited

has the propensity to benefit its occurring areas more. + There is some considerable applied scientific research outcomes and ongoing research on shea propagation and growth to draw from, for the advancement of the shea industry.		pharmaceutical, Beverage, rubber + The existing Cocoa Research Institute of Ghana (CRIG) in Bole and its research findings are enough bases for further in-depth shea research, taking departure from what has already been done.	There is more research in other African countries on the shea industry than Ghana. Therefore the overall knowledge of the shea industry tends to be limited as compared with other countries.

Source: Author's analysis of field data, August 2011

The SWOT Analysis of the Shea Industry in Table 4.7 is meant to reinforce what is possible to avoid and what is not, regarding the promotion of the shea industry with the view to advising policy formulation towards the shea industry. The SWOT analysis is to further process and validate information data from the questionnaire interview.

4.5 Policy Interventions in the Shea Sector

As part of effort by the Government to promote the growth of the shea industry, local and international experts in the shea industry met at Accra in April, 2011. They discussed ways of enhancing the sustainable development of the industry. The theme was; 'Shea 2011 sustainable solutions'. More than 300 producers, exporters and private businessmen in the shea industry from 30 countries in Africa, Asia, Europe and USA attended the Conference and shared ideas as

to best practices to promote the growth of the industry (Ghanaian Times, 2011). In addition, Government has inaugurated the National Steering Committee on shea nut with the task to formulate programmes and strategies for growing and sustaining the industry. The Steering Committee is also to promote regular advocacy of the National Shea Policy to enable stakeholders to be knowledgeable, interested and deeply involved in revamping the industry. The Committee will have its main office in Tamale and is chaired Dr. Yaw Ampomah, who is Deputy Chief Executive of COCOBOD.

The Vice President during the inauguration said government would not allow unlicensed companies to operate in the industry and called on the COCOBOD to regularise the activities of all corporate entities involved in the business and ensure effective quality control measures. Government had fixed the floor price for shea nut purchases at the farm gate at GI-10 32.00 per bag of 80 kilogrammes, stressing that buyers are not expected to pay any amount below the fixed floor price (http://www.ghananewsagency.org. 18/02/2012).

Government is expected to establish three shea nut processing factories in the three Northern Regions by 2012 to make use of the abundant raw material in those areas. “Already the construction of the one in the Northern Region, located in Buipe will be completed by the 7th of February 2012, while the next two will be located in vantage areas of the Upper East and Upper West Regions.”(http://vibeghana. com/2011/12/13/)

This research work found that there is enough production of shea butter in Northern Region without sufficient market and some community members are destroying the shea trees for charcoal and through bush fires. It also found that shea nut picking and shea butter processing had become very common business in the rural communities and therefore if much attention is

given to it, it would help the Ghana Poverty Reduction Strategy (GPRS) to achieve its objectives. The Body Shop Company in Tamale, Ghana is operating in about 51 communities through groups with a membership of about 930 women engaged in shea butter extraction for export. The Business Sector Advocacy Challenged (BUSAC) Fund is supporting to undertake its advocacy programme on the development of the shea industry.

4.6 Current Challenges in the Shea Industry

The shea industry is not without challenges. There were challenges in the past that have been overcome but some are still outstanding and there are new challenges that have arisen as a result of the development of the industry. Some of the challenges are peculiar to shea nut picking while some are to shea processing.

4.6.1 Challenges of Shea Picking

This study found that the absence of guaranteed prices for the nuts, suspected under invoicing by some firms that buy from the women who are engaged in picking the nuts, also neglect of the shea industry by Cocoa Board as it does very little compared to what it does for the Cocoa industry in keeping is alive, are some of the challenges confronting the shea industry.

The study found that a more critical issue that stand to greatly determine future output of shea nut is the practice of cutting down the shea trees for firewood and for charcoal by the people in the communities. About 25.6% of the respondents (both shea nut pickers and processors) consider this unfortunate behaviour as a treat that could jeopardise the future of the industry hence the need for urgent measures to stem the practice. This confirms the finding by Yidana (2011) on the future of the shea industry. See also Box 1.

Table 4.8 Challenges Facing the Shea Industry

Some challenges	Frequency	Percent
Under invoicing by company buying agents	23	8.5
Neglect of the sector by CocoBoard	71	26.3
Destroying shea trees for mango and biofuel cultivation	17	6.3
Carrying nuts for long distances	19	7.0
Cutting shea trees for charcoal and firewood	69	25.6
Absence of guaranteed prices	22	8.2
Snake bites	49	18.1
Total	**270**	**100.0**

Source: Field Survey, August 2011.

Another problem bedeviling the sector is the absence of guaranteed prices for the nuts with about 8.2% of the respondents endorsing it. Unfortunately in the shea nut sale at the village level there is not much bargaining to arrive at an agreed price.

Box 1

A woman in Gushegu township said:

"Some of our husbands hide to kill the shea trees because they say we are becoming financial empowered through the income we get from shea and they are not happy about that development. They think that women should be poor so that they depend on the men and in so doing the men will continue to have full control over us".

As a result buyers come with their prices and the pickers have no option but to accept the price offered. If this continues the expected reduction of poverty in the rural households will not be achieved. 8.5% of the respondents suspects that there is under invoicing by some agents of firms that buy from the women engaged in picking the nuts. Though they do not have evidence they think that the prices offered them by the agents are not the prices at which the companies asked them to buy. The pickers do not have any way of checking on this and need help in this respect.

The COCOBOD is the state mandated body responsible for shea. Unfortunately it seems the board has neglected the industry. The board does all in it power in keeping the cocoa sector alive but almost nothing for the shea sector. This is why 23.6% of the respondents (both shea nut pickers and processors) were of the view that neglect of the sector by Cocobod is the second most important challenge of the sector that needs immediate attention.

In recent time in Northern Region, as a way of reducing poverty mango and boifuel plantations are encouraged. In doing this all trees on the land for the plantation are cut down to make way for the plantation. Several shea trees have been uprooted to make room for the new crops. So 6.3% of the respondents see this new economic development as a treat to the shea industry since a productive sector of the shea trees are sometimes cut off to give way for the mango and biofuel plantation. During the focus group discussions it came out that the destruction of economic trees like shea for the cultivation of biofuel/ jetropha and organic mangoes deny the women of their source of livelihood, it is an upfront to the shea sector, especially considering the long period it takes for a shea tree to bear fruits after planting. A study by Action Aid Ghana has revealed that 7 out of 10 baskets of charcoal come from shea tree and another report shows that large track of land in the Yendi Municipality on which shea trees abound were being cleared for development

of Jetropha plantations (Daily Graphic, 2010). The activities of hunters and honey tappers were not left out. It takes between 12 and 15 years for the trees to begin bearing fruits. However, the Council for Scientific and Industrial Research recently came up with varieties that cut down on the gestation period to between six and 10 years (CSIR 2010).

There are risks associated with shea nut picking for which 18.1% of the pickers say causes danger to their lives. They usually encounter snakes bites when picking the nuts as also confirmed by Schrechenbery (1996). This has been and still is a challenge. There is also the need to develop strategies for picking nuts that will eliminate or reduce this risk. About 7.0% of the respondents' concern is carrying nuts from long distances to their residence or assembly points contributing to the reason why most of the nuts are left uncollected as found by Holtzman (2004). In general, the women lack proper implements, machines and attire to enhance their work and protect them from the wild biodiversity in which they pick the nuts.

As it stands now, there is poor market for the butter, lack of good management of the shea trees and low level of awareness of the importance of the shea nut industry and as such more rural women are losing their livelihold. Though the prospects are bright, the challenges facing the industry are enormous.

During the focus group discussios the following were agreed on which were confirmed by the individual interviews with the questionnaire. It was the concession of the stakeholders in shea industry that;

- Shea nuts picking from the bush is time consuming, labour intensive and painstaking especially covering long distances.
- There was low volume of nuts collection and poor quality due to lack of support.

- Non-availability of machines and equipment that will make the collection of nuts and processing easier and faster is a hindrance to development of the industry. If these are provided it will reduce the tedious manual collection and processing and ensure large volume production that will meet the market demands.
- There is a lack of the interest by buyers and end users of the product to invest into the promotion of the shea nut business sector indicating low patronage.
- Lack of basic health facilities and potable water has adverse effect on the health and mortality level of those in the shea industry.
- Difficulties in sourcing for external markets at prices that will be more attractive and serve as incentive to those in the shea business, that is by giving low pricing of the commodity by the buyers is one of the challenges that need attention.
- Many fruit are left in the bush and one reason is the lack of shea nut processing industries within the communities to utilize large quantity of nuts as confirmed by (Holtzman, 2004).
- The rural folks are of the opinion that several researches have been done without communities feeling the impact of the findings or interventions.

4.6.2 Challenges of Shea Marketing

Among the challenges to the shea industry are marketing. This has been calved out because it seems to be a very important challenge. These challenges to shea marketing were captured based on the information generated from data gathered through the responses to the questionnaire and are shown in Table 4.9. Three major challenges are clearly outstanding in the table. These are low patronage of the commodity 40%, low and unstable commodity price 23.1% and poor

quality of the shea nut because of poor handling process 12.1% low patronage in respect of the butter because most firm buyers complain of poor quality of the butter produced in the rural communities where the traditional and indigenous methods of production are used.

Table 4.9 Constraints in shea marketing.

Challenges	Frequency	Percentage
Poor Quality	33	12.06
Transportation Problem	22	8.17
Discrepancies from Buyers	29	10.80
Poor Packaging System	12	4.28
Low/unstable Price	62	23.07
Low Patronage	94	34.96
Low Production Capacity	2	0.78
Human activities affecting Shea trees	14	5.10
Total	**270**	**100.00**

Source: Field Survey, August 2011.

Another challenge that came up during the focus group discussions is that human activities interfere with shea industry. These include hunting, farming, honey collection and charcoal production. At the commencement of the dry season and towards the end, hunters and herdsmen burn grasslands and forests to find their prey more easily and to encourage the growth of tender new grass. This tradition is responsible for the death and distortion of shea saplings. The activities of the farmers, while digging or weeding, they uproot saplings from the soil there by killing the young plants that would have grown to productive trees. Farmers also use fire to kill

mature trees to relieve pressure on crops competing with shea trees. Charcoal production simply removes mature trees. Central Gonja is among the most damaged areas due to its proximity to Southern Ghana and charcoal dealers' preference for shea trees high quality charcoal. Honey collection inflicts little damage to shea trees except when the tree contains hives that are 3-4m above the ground. Such trees are typically cut down to reach the hive. Honey located lower on the tree trunk is harvested without felling the tree, though considerable injury is inflicted on the tree as a hole is bored into the trunk of the tree to get easy asses the bee hives.

4.6.3 Customary Laws for Shea Trees in the Study Area

Despite the communities claim that there is strict observance of shea customary law, which forbids the killing or cutting of shea trees at all times except with the permission of the priest responsible for the trees, there is enormous evidence that economic pressures are contributing to changing social and traditional laws. There are fewer adherences to the decisions made by a community's traditional leaders and the laws protecting shea trees are not adhered to especially in dense shea stand areas.

Box 2

A woman in Gushegu said:

As for me the shea trees do not reducing in number, for the more the trees die the more the nuts germinate to become trees or to replace the dead ones. So I do not agree to the reduction of the shea trees in our community and in Ghana as a whole.

4.7 Suggestion for Improving the Shea Industry

Several suggestions were made by the respondents and during the focus group discussions as to how the industry could be developed to make it a good source of employment, income, poverty reduction and improved livelihood. These include:

1. Government and/or NGOs should give financial support to actors in shea industry especially and nut pickers. Financial support they said will help the processors to buy more nuts to store and extract butter during the lean season. Shea nuts pickers also need financial support to buy motor king tricycle to transport nuts home to prevent nut unpicked in the bush as suggested by Holtzman (2004) in by the NGOs in recent time.
2. To train both nut pickers and shea butter extractors to come out with quality products for the market to increase interest and consumption.
3. Formation of shea board to take over all issues related to the development of the industry as the COCOBOD is not doing well.
4. A strong shea union should be formed to help control prices, monitor quality, good packaging, hygienic processing places, adulteration of produce, and to make more profit,
5. Ghanaians should be educated on benefits of consuming and using shea and its products a
6. Encourage adding value to shea nut rather than selling the raw nuts.

4.7.1 Suggestion for Improving Shea Marketing

The respondents gave varied suggestions for improving shea marketing. About 41.9% of them think processing quality shea nut is a guarantee for quality butter production which will attract good market while 19.1% of the respondents think that, government intervention into the shea market can improve the situation (Table 4.10).

Table 4.10 Suggestion Made by Respondents for Improving Shea Marketing

Age of Respondents					
Opinion	**20-40**	**41-60**	**60+**	**Total**	**%**
Process quality shea nut	28	13	3	**44**	**41.9**
Formation of union	7	5	1	**13**	**12.4**
Government intervention	9	11	-	**20**	**19.1**
Avoiding Middle men	2	1	-	**3**	**2.9**
Good storage facility	4	3	-	**7**	**6.7**
Advertising	1	4	-	**5**	**4.8**
Encourage domestic use	4	1	1	**6**	**5.7**
Good prices for butter	-	2	-	**2**	**1.9**
Improving rural roads	2	-	-	**2**	**1.9**
In service training for processors	1	-	-	**1**	**0.9**
Opening market centers in rural communities	2	-	-	**2**	**1.9**
Total	**60**	**40**	**5**	**105**	**100.0**

Source: Field Survey, August 2011

4.7.2 Improving Shea Business Strategies

Most of the marginalise rural poor were of the view that there was no business in the past, shea products was mainly use for domestic purposes suggesting that the success of shea industry could be attributed to the interventions by some nongovernmental organisations (NGO) and the government encouraging non-farm business to reduce credit risk in agricultural financing. The people in the study area unveil this information during the focus group discussions. They are of the opinion that if they are introduced to new ways of doing business and strategies they could improve their lot. For this reason best practices are to be sought and introduced or up-scales.

4.8 Best Practice for Processing Quality Shea Kernel

During the focus group discussions, the participants outlined the processes they go through in shea processing to butter. Below is a summary of the circle for quality shea production.

(i) de-pulp after harvesting

(ii) par-boil immediately for 45 minutes in boiling water,

(iii) dry nuts on clean floor and remove shell when kernels rattle in the shell

(iv) winnow to remove broken shells and dry kernel on a clean platform

(v) pick out bad kernels and test for dryness by pressing between your fingers if it is dried

(vi) store dried kernels in jute sacks on pallets. This is produced pictorially by Sekaf Ghana Ltd. (2010) as shown by Figure 4.6

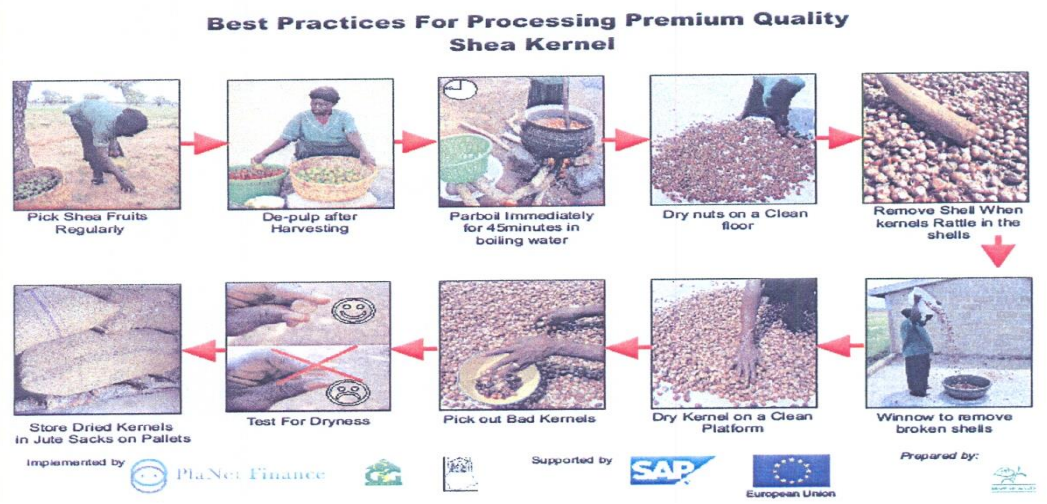


Figure 4.6 Circle of quality Shea nut production for processing
Source: Sekaf Ghana Ltd, Tamale 2010.

During the focus group discussion, the groups revealed the stages involved in processing quality hand crafted shea butter. The process is shown as:

(i) Wash kernel in clean water, sieve and dry kernels on a clean floor for 30 minutes.

(ii) Sort out black, germinated and all bad kernels, crush the good kernels and roast crushed kernels on fire for about 45minutes.

(iii) Mill the roasted kernels into fine paste when cooled down and knead paste to aerate the fat when the paste cools down completely.

(iv) Add water to separate the fat from cake when fully aerated and boil the fat to complete separation.

(v) Transfer oil into another clean pot and allow dehydration on a gentle fire.

(vi) Filter the oil and allow for cooling down and solidifying.

(vii) Package butter into an air-tight container and store butter away from water and sunlight.

Figure 4.7: Circle of quality Shea Butter Production
Source: Sekaf Ghana Ltd, Tamale 2010.

These processes are not different for the current methods except that they are done by modern equipments. If the processors in the rural area have the technologies used in the modern forms they will be able to produce to meet the international standard for which they can enter the export market.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of findings and conclusions drawn from the discussions in chapter four. It also provides recommendations to help improve the shea industry.

5.1 SUMMARY

Shea nut, *Butryospermum paradoxum* grows in the wild large commercial quantities across the northern Ghana. In recent times interest in the shea has increased because the oil produced from nuts is used for industrial application food, cosmetics, pharmaceutical and traditional needs at national and international levels. Women constitute the majority in picking and procession of shea. Picking season starts at the end of dry season April/May and ends August/September. There are indications of good prospect for this industry hence this research sought to study the prospects and challenges of the industry to inform policy decisions on the industry.

The study found that a recent trend of increasing demand for industrial purposes both locally and internationally, the shea industry has predominantly been a women's industry with a small-scale character. Women pick the fruits and process into butter for sale or sell the nuts for the cash to the needs of their families. The dominant role of women in the industry is the major reason of shea contribution to poverty reduces on in Northern Region. However the price of shea nut varies considerably in the three districts of the Northern Ghana and between rural and urban areas. The prices fluctuations are a result of the lack of regulation and standard setting in the industry. Shea products are thus sold cheaply during peak seasons and only attract value for money when shea supply declines.

However the increased local and international demands for shea products require a corresponding increase in supply. Also this new trend of shea demand and the increasing sophistication it brings, has the propensity to rob the sector of the small-scale actors (the women) who engage in shea business activities to directly support their immediate family needs.

There is no specific government policy intervention in the shea industry. There are some issues of indiscriminate felling of shea trees and the production and marketing activities of the shea industry being manipulated at the expense of local actors of the industry.

Customary laws of the Shea Industry: The study found that customary laws exist to regulate the cutting down of shea tree. However people still go far into the bush to cut shea trees for charcoal and fire wood in some parts of the region. Interestingly, rituals are sometimes performed with contributions from landlords each time shea trees do not fruit adequately. The traditional pacification for high shea productivity is an indication of the reliance of the people on the shea industry.

Findings: Study revealed that the World Trade Organization (WTO) regulations and international trade protocols limits the amount of vegetable oils that can be traded on the world market (GEPA, 2010) and since the shea produces oils, the quality that can be put on the world market is usually limited. This constitutes a major challenge in the shea industry and becomes one of the most urgent reasons why the state must intervene to support and regulate the shea industry. Meanwhile Ghana's shea has a high stirring content and when fractionated, the liquid butter is an excellent raw material for vegetable oil whilst the hard part is used for cosmetics.

Production and Marketing Challenges: Theories of economics indicate that, demand and supply forces determine the value of any commodity. However, in the case of shea products, demand is considerably high but does not automatically translate into high prices for shea products. Yidana (2008) studies reveal that, in the US markets a growth in demand for shea products is 9 percent per annum whilst similar products are growing at only about 1 percent (Sekaf, 2010). The new positive trend in demand for shea is because consumers are discovering the unique qualities of shea products. The shea market is buyers market and shea producers in Ghana are price takers.

Limited Market: The market for shea products is surrounded by numerous challenging factors ranging from poor road network to little or no access to financial credit. The result of these challenges is the exploitation of shea producers in the form of dictated prices by buyers. Where pricing and quality standards are lacking, producers are exploited by market women, middle men or institutional buyers who claimed knowledge on the quality of produce.

Findings: The study reveals that the customary law of the communities endows every member with the right to collect shea fruits. The parties involved were still using the old method of picking nuts with bare hands and foot and also operating as unorganized independent groups with each group or individual household using the traditional methods of shea nuts collecting. These parties are exposed to the risk of snake bikes and other wild creatures in the bush.

Findings: In recent times, shea trees are sometimes cut down to make way for mango and biofuel plantations. These worsen the situation of shea trees under threat of extinction.

Marketing Shea Products: The study revealed that there is no government policy direction on the shea industry, to the extent that government has not considered the possibility of evaluating the industry for revenue purposes. The industry is regulated and driven by Shea Producers' Associations, institutional buyers, NGOs and market women whose activities are uncontrollable. The study realized that there is a lot to be gained if the shea industry is regulated by government institutions such as Ghana Standards Board in terms of testing and certification of shea products. This unfortunately is not the case.

5.2 CONCLUSION

In the Northern Ghana development has lagged behind for years in the history of Ghana's development. As a result, government, NGOs, as well as the civil society have made several attempts in a form of talking and walking the talk to find ways of developing the area. This is manifested through the emergence of numerous NGOs and establishment of Savannah Accelerated Development Authority (SADA) to oversee the growth and development of the North.

Despite these attempts however, they has still lags far behind as compared to Southern part of Ghana because of it limited resource endowments like cocoa, oil palm, gold among others which the other regions in Ghana possess. In recent times however, shea butter emerged as a promising economic commodity that has gained international recognition because of the products therapeutic properties and hence its high demands by the food and cosmetic industries locally and internationally. It is in the light of these potentials of the commodity that formed the basis and the interest to undertake this research. The study sought to find out the performance of the shea industry; prospects and challenges in the midst of Government intervention in the industry.

In sum, considering the performance and opportunities of the shea industry in the country is fairly satisfactory despite the challenges in the processing and marketing of the shea industry. In view of this, effective implementation of the suggestions and recommendations could lead to much improvement in the shea industry and finally lead to poverty reduction and sustainable development especially in Northern Ghana.

5.3 Recommendations from the Study

Following the findings of the present research on shea nut production in the selected Districts in Northern Region, some recommendations are made with a view to make the profession more attractive, socially and economically. In addition, the recommendations are intended to improve the shea nut quality and raise the volume of collection. All these are aimed towards guaranteeing sustainable production of shea nuts to meet both local and international demands in terms of quality and quantity. The following areas of intervention or assistance may be required:

- Public awareness campaign to effectively sensitize, mobilize and organize the shea nut producing communities into a functional and economically viable sector.
- Research on cultivation of shea trees and production of improved varieties that will have lower gestation period and high yielding potentials.
- Capacity building in terms of training and service provision to the shea nut collectors and technical assistance in terms of provision of simple, mechanized and adoptable technology that will reduce the labour intensiveness of the business and ensure standard.
- Transport to convey nuts from the bush to homes, parboiling equipment, dryers, packaging materials and storage facilities are all necessary stages that can be modernized.

- Explore partnerships with the local private sector/multinationals in nut trading, mechanical expelling (customs processing option), hostels, soap and cosmetic companies and overseas buyers, who can be encouraged to collaborate with the project as it advances, providing technical and marketing advice and feedback on products. The opportunity for a percentage of sales coming back to communities should be explored, where cause based marketing is attractive to buyer.
- Develop training materials for all stages of process and appropriate quality control procedures and implement training programme in communities in stages (market demand increases)
- Facilitate open and direct access to organized markets nationally and internationally and provide appropriate pricing of shea nut that will be profitable to those in the business.
- The Ghana Government, International Organizations, NGOs, Donor Agencies and all the stakeholders can easily achieve the above recommendations through joint and concerted effort in the shea nut business to map up a strategic plan of action that will develop the shea nut sector commercially. The current efforts by the Ghana Shea Nut/Butter Producers and Marketers Association can be supported by both public and private promoters of shea nut business for effective development in the sector.

Managerial Implications

It is hoped that the findings and conclusions drawn from the study will assist stakeholders to become more proactive in managing the shea industry and to design and develop techniques for easy and efficient means for harvesting and collecting the shea nut for processing. For increase in

productivity and better scale of shea nut collection, below is a list of suggested interventions for stakeholders:

- Develop rapid and efficient way for sorting and categorizing wholesome and damage nuts.
- Design and develop method for cleaning the nuts.
- Design and develop equipment for de-pulping the nuts.
- Develop efficient way to par- boil the nuts
- Design and develop technologies for rapid and efficient way for drying both nut and kernel in most hygienic manner.
- Design machines for cracking the nuts and separating the kernel.
- Design roasters, milling and fat extracting machines to ensure efficiency and quality.
- Design pulp homogenizers and presses to extract the pulp juice for various products including, fresh juice, syrups preserves, butters etc.
- Design machines for sorting and grading nuts and kernel according to size.

Future Prospects/ Issues for the future

Currently, a price of US$300 is received per tonne of raw shea-nut while a tonne of shea butter receives some US$10,000 (http://www.businesstimesafrica.net/btm/details.cfm). The price fluctuates depending on market conditions. Unlike Cocoa which is traded on the futures market at the international level and guarantees prices for cocoa farmers, the market of shea nut is not regulated in anyway. The researcher observed that the development of the domestic industry can

play a leading role in guaranteeing prices for farmers and providing competition for international demand. On more critical issues that stand to greatly determine future output of the nut and required an urgent measures to stem the practice of the Communities cutting down the shea trees for firewood and for charcoal.

The way forward.

The implementation of the Savannah Accelerated Development Authority (SADA) is expected to boost the shea industry. The SADA intends to nurture and grow the shea industry as part of other interventions to accelerate development of the Northern parts of the country to reduce poverty and hopes are already high for the best to be done for the industry. If indeed efforts are being made to bridge the development gap between the Northern Ghana and Southern Ghana, then the shea nut industry must be given serious consideration because it holds the key to the successes and improvement of many lives just as cocoa has done in the Southern Ghana.

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APPENDIX A

Computation of Test Statistics

The expected frequencies are calculated below;

$E_{1,1} = \frac{(18)(51)}{(90)} = 10.2$ $E_{1,2} = \frac{(18)(13)}{(90)} = 2.6$ $E_{1,3} = \frac{(18)(6)}{(90)} = 1.2$

$E_{1,4} = \frac{(18)(1)}{(90)} = 0.2$ $E_{1,5} = \frac{(18)(19)}{(90)} = 3.8$

$E_{2,1} = \frac{(34)(51)}{(90)} = 19.3$ $E_{2,2} = \frac{(34)(13)}{(90)} = 3.5$ $E_{2,3} = \frac{(34)(6)}{(90)} = 2.3$

$E_{2,4} = \frac{(34)(1)}{(90)} = 0.4$ $E_{2,5} = \frac{(34)(19)}{(90)} = 7.2$

$E_{3,1} = \frac{(26)(51)}{(90)} = 14.7$ $E_{3,2} = \frac{(26)(13)}{(90)} = 3.8$ $E_{3,3} = \frac{(26)(6)}{(90)} = 1.7$

$E_{3,4} = \frac{(26)(1)}{(90)} = 0.3$ $E_{3,5} = \frac{(26)(19)}{(90)} = 5.5$

$E_{4,1} = \frac{(10)(51)}{(90)} = 5.7$ $E_{4,2} = \frac{(10)(13)}{(90)} = 1.4$ $E_{4,3} = \frac{(10)(6)}{(90)} = 0.7$

$E_{4,4} = \frac{(10)(1)}{(90)} = 0.1$ $E_{4,5} = \frac{(10)(19)}{(90)} = 2.1$

$E_{5,1} = \frac{(2)(51)}{(90)} = 1.1$ $E_{5,2} = \frac{(2)(13)}{(90)} = 0.3$ $E_{5,3} = \frac{(2)(6)}{(90)} = 0.1$

$E_{5,4} = \frac{(2)(1)}{(90)} = 0.02$ $E_{5,5} = \frac{(2)(19)}{(90)} = 0.2$

Computation of the Test Statistics

Cells	$O_{i,j}$	$E_{i,j}$	$(O_{i,j} - E_{i,j})$	$(O_{i,j} - E_{i,j})^2$	$\frac{(O-E)^2}{E}$
$E_{1,1}$	5	10.2	-5.2	27.04	2.6510
$E_{1,2}$	5	2.6	2.4	5.76	2.2154
$E_{1,3}$	4	1.2	2.8	7.84	6.5333
$E_{1,4}$	0	0.2	-0.2	0.04	0.2000
$E_{1,5}$	3	3.8	-0.8	0.64	0.1684
$E_{2,1}$	24	19.3	4.7	22.09	1.1446
$E_{2,2}$	3	3.5	-0.5	0.25	0.0714
$E_{2,3}$	0	2.3	-2.3	5.29	2.3000
$E_{2,4}$	1	0.4	0.6	0.36	0.9000
$E_{2,5}$	7	7.2	-0.2	0.04	0.0056
$E_{3,1}$	19	14.7	4.3	18.49	1.2578
$E_{3,2}$	1	3.8	-2.8	7.84	2.0632
$E_{3,3}$	2	1.7	0.3	0.09	0.0529
$E_{3,4}$	0	0.3	-0.3	0.09	0.3000
$E_{3,5}$	4	5.5	-1.5	2.25	0.4091
$E_{4,1}$	1	5.7	-4.7	22.09	3.8754
$E_{4,2}$	4	1.4	-0.4	0.16	0.1143
$E_{4,3}$	0	0.7	-0.7	0.49	0.7000
$E_{4,4}$	0	0.1	-0.1	0.01	0.1000
$E_{4,5}$	5	2.1	2.9	8.41	4.0048
$E_{5,1}$	2	1.1	0.9	0.81	0.7364
$E_{5,2}$	0	0.3	-0.3	0.09	0.3000
$E_{5,3}$	0	0.1	-0.1	0.01	0.1000
$E_{5,4}$	0	0.02	-0.02	0.0004	0.0200
$E_{5,5}$	0	0.2	-0.2	0.04	0.2000
				$\sum_{i=1}^{5}\sum_{j=1}^{5} = \frac{(O-E)^2}{E}$	=30.4236

Source: Author construct 2011

APPENDIX B

UNIVERSITY FOR DEVELOPMENT STUDIES

CENTER FOR POST-GRADUATE & RESEARCH

Questionnaire for Shea butter Associations/Groups

QUESTIONNAIRE

Dear respondent, this is a student's research work for completion of an MPhil programme. Your responses will be treated confidentially and will remain anonymous and will only be used for academic purposes. It is believed that responses will help the researcher to draw conclusion and recommendation, there after could be used for long term improvement of the shea industry. I would therefore appreciate it if you could spare some time to answer a few questions.

Name of interviewer: .....

Name of District: .....

Name of Community:.....

Name of Association/group.....

Date of interview: .....

(A) General Information

1. Is your association registered? (a) Yes [ ] (b) No [ ]
2. How old is the association/group? .....
3. How many members do you have? Female [ ] Male [ ]
4. What do the males do in the association? .....

   .....

   .....
5. Do you have association/group accounts? (a) Yes [ ] (b) No [ ]
6. How often do you make savings into association/group accounts? (a) Weekly [ ] (b)Monthly [ ]

(c) Quarterly [ ] (d) Yearly [ ] (e) Others [ ] (specify) ……

7. Do you make payment to suppliers by cheque? (a) Yes [ ] (b) No [ ] (c) Sometimes [ ]

8. Do you receive payments from buyers by cheque? (a) Yes [ ] (b) No [ ] (c) Sometimes [ ]

9. Does the association/group need credit for its work? (a) Yes [ ] (b) No [ ]

10. Have your association/group applied for loan before? (a)Yes [ ] (b) No [ ]

11. Where did you apply to?……

12. Did you get the loan? (a)Yes [ ] (b) No [ ]

13. If no why? ……

……

14. Is there the possibility of getting credit from your bankers? (a) Yes [ ] (b) No [ ]

15. Level of education of most members? (a)No formal education [ ] (b) Primary [ ] (c) Middle [ ]

(d) JHS [ ] (e) Middle [ ] (e) Secondary/SHS [ ] (f) Tertiary [ ] (g) Islamic [ ] (h) Non formal [ ]

(i) Others[ ] (specify) …… **(you could get multiple answers)**

16. Ethnicity: ……

17. Main occupation of most members? (a) Farming [ ] (b) Petty trading [ ] (c) Weaving [ ]

(d) Artisan (specify) …… (e) Civil servant [ ] (f) Shea nut picking [ ]

(g) Shea butter extraction [ ] (h) Others [ ] (specify) ……

18. Apart from members how many people help you in shea butter extraction? ……..

(B) Shea nut supply

19. Where do you get your nuts for process from? (a) Pick as an association [ ] (b) Pick as individuals [ ] (c) Buy from the community [ ] (d) Buy from relatives [ ]

(e) Buy from market outside the community [ ] (list name(s) of the community) ……

……

20. Do you buy from a particular source(s)? (a) No [ ] (b)Yes [ ] name of source(s) ……

……

21. How do you work as a association/group?

.....

.....

.....

.....

.....

22. What quantities of nuts do you process in a week? (a) 1-5bags [ ] (b) 6-10 bags [ ]

(c) 11-15bags [ ] (d) 16-20bags [ ] (e) 21-25bags [ ] (f) 26-30bags [ ] (g) More than 30bags [ ]

(h)Others[ ](specify) .....

23. What quantities of shea butter do you produce in a week?

.....

24. What were the prices of shea nuts and shea butter in the past three years?

Year	Shea nut price GH₵/bag	Shea butter price GH₵/kg or calabash
2008		
2009		
2010		
2011		

25. How many months in the year do you process?

.....

26. What quantities of shea butter did you produce in the past three year?

(a) 2008 ..... kg/calabash

(b) 2009 .....kg/calabash

(c) 2010 ..... kg/calabash

(C) Performance of shea butter extractors

27. Is the shea butter business doing well? (a) Yes [ ] (b) No [ ]

28. Why? .....

.....

.....

29. What methods do you use for in extraction the butter? (a) Mechanical [ ] (b) Manual [ ]

(c) Both [ ] (d) Others [ ](specify) .....

30. Kindly describe the processing process **(manual).** .....

.....

.....

.....

.....

.....

31. If you use mechanical method, how did you get the equipment? (a) The association [ ]

(b)NGO [ ] (c)Government [ ] (d)Other [ ] (specify) .....

32. With the mechanical method are you able to produce large quantities of shea butter as compared to manual method? (a)Yes [ ] (b) No [ ]

33. With the mechanical method are you able to produce higher quality butter than with the manual method? (a) Yes [ ] (b) No difference [ ]

34. Can you explain your answer? .....

.....

.....

(D) Prospects of shea butter processing and marketing

35. Is the shea butter processing beneficial to your association/group? (a) Yes [ ] (b) No [ ]

36. Can you please explain your answer?.....

.....

.....

37. Are you recognised as a group/association that produce quality shea butter?(a) Yes [ ] (b) No [ ]

38. Please explain: ……

……

……

39. Are there opportunities for the shea industry? (a)Yes [ ] (b) No [ ]

40. If yes, please mentioned some of them in order of importance? (**rank them**)

1……

2……

3……

4……

5. ……

41. What do you think will be the situation of supply of butter in future? ……

……

……

42. What good things do you think will happen to the shea butter processing in the future?

……

……

……

..

43. How would you increase your business in future? ……

……

……

(E) Marketing of shea butter

44. Who fixes the prices of shea butter? ……

45. How are prices determine? ……

……

……

46. How do you price your product?……

47. Who do you sell your products to?

No.	Name of Company/individual	Where does he take the product to/Destination

48. What do your buyers use the butter for? .....

.....

49. Indicate units price of butter for the past three years?(Indicate the unit)

Year	Lowest price	Period	Highest price	Period
2008				
2009				
2010				
2011				

50. How do you determine cost of your product? .....

.....

(F) Challenges of shea processing and marketing

51. Is there reduction in the shea trees in your community? (a)Yes [ ] (b)No [ ]

52. If yes, please indicate some of the causes and possible solution

	Some causes of reduction in shea trees	What can be done to curb the causes of reduction in the trees

1		
2		
3		
4		
5		

53. Please mention some of the effects of reduction of the shea trees and solutions?

	Effects on	How can it be solved
a.	Raw material Challenges:	
b.	Production Challenges:	
c.	Marketing Challenges:	

(G) Intervention

54. Have you ever had any assistance from organisation/agencies/individuals/NGOs?

(a) Yes [ ] (b) No [ ]

55. If yes mention some of them?

	Organisation	Kind of Support
1. 2. 3. 4. 5. 6.		

56. What in your opinion can be done to produce quality shea butter?.....

.....

.....

57. In your opinion what can be done to improve marketing of shea butter? .....

.....

.....

.....

Thank you very much for your time.

academic purposes. It is believed that responses will help the researcher to draw conclusion and recommendation, there after could be used for long term improvement of the shea industry. I would therefore appreciate it if you could spare some time to answer a few questions.

Name of interviewer: .....

Name of District: .....

Name of community: .....

Name of respondent: .....

Date of interview: .....

(A) Socio- Demography Characteristics

1. Gender: Male [ ] Female [ ]
2. Age group (a) 21-30yrs [ ] (b) 31-40yrs [ ] (c) 41-50yrs [ ] (d)51-60yrs [ ] (e) 60+ yrs [ ]
3. Marital Status: (a)Single [ ] (b)Married [ ] (c)Widow/widower [ ] (d)Divorced [ ] (e)Separated {}
4. Religion (a) Traditional [ ] (b) Christian [ ] (c) Islam [ ] (d) Others[] (specify) .....
5. Level of Education:

(a) No formal education[ ] (b) Primary [ ] (c) JHS{} (d) Middle[ ] (e)Secondary/SHS[ ] (f)Tertiary [ ] (g)Islamic [ ] (h)Others[ ](specify) .....

6. Ethnicity? .....

7. Main occupation? (a)Farming [ ] (b) Petty trading [ ] (c) Artisan (specify) .....

(d)Civil servant [ ] (e) Shea nut picking [ ] (f) Shea butter extraction [ ] (g) Weaving [ ]

(h) Others [ ] (specify) ....

8. Minor occupation? (a)Farming [ ] (b) Petty trading [ ] (c) Artisan (specify).....

(d)Civil servant [ ] (e) Shea nut picking [ ] (f) Shea butter extraction [ ] (g) Weaving [ ]

(h) Others[ ] (specify).....

9. How many people (females) help you in shea nuts picking?.....

10. What is your relationship with the people who help you? (a) Daughter(s) [ ] (b) House help[ ]
(c) Relative(s) [ ] (d) Others[ ] (specify) .....

(B) General Information

11. How long have you been engaged in the shea nuts picking?

(a) Less than 5 yrs [ ]

(b) 5-10yrs [ ]

(c) 11-15yrs [ ]

(d) 16-20yrs [ ]

(e) More than 20yrs [ ]

12. Where do you pick your nuts? (a) Husband's farm [ ] (b) General field [ ] (c) Relative farm [ ] (d) Husband's farm & General field [ ] (e) Others[ ](specify) .....

.....

13. What quantities of nuts do you pick in a week? (a) One basin [ ] (b) Half a bag [ ]

(c) One bag [ ] (d) Two bags [ ] (e) Others[ ] (specify) .....

14. What period do you go for picking of nuts? (a) Dawn [ ] (b) Morning [ ] (c) Afternoon [ ]

(d) Evening [ ] (e) Others[ ] (specify) .....

15. How often do you parboil your nuts? (a) Daily [ ] (b) 2 times in a week [ ] (c) Weekly [ ]

(d) 2 times in a month [ ] (e) Monthly [ ] (f) Others[ ] (specify).....

16. What are the prices of shea nuts and shea butter in the past three years?

Year	Shea nut price GH¢kg/bowls	Shea butter price GH¢/kg or calabash
2008		
2009		
2010		
2011		

17. Do you store and sell your nuts later? Yes [ ] No [ ]
18. For how long do you store your nuts? .....
19. What are the benefits for storing? .....
.....
20. What is the name of your business? .....
21. Is the business registered? .....
22. Since when? .....
23. Do you have business Bank/Credit union account? Yes [ ] No [ ]
24. How often do you make savings into your accounts?
(a) Weekly [ ] (b) Monthly [ ] (c) Yearly [ ] (d) Others[ ] (specify) .....

25. Do you make payments to suppliers by cheque? (a)Yes [ ] (b) No [ ] (c) Sometimes [ ]
26. Do you receive payment from buyers by cheque? (a) Yes [ ] (b) No [ ] (c) Sometimes [ ]
27. Do you need credit for your business? Yes [ ] No [ ]
28. Have you applied for loan before? Yes [ ] No [ ]
29. Where did you apply to? .....
30. Did you get the loan? Yes [ ] No [ ]
31. If No, why? .....
.....
32. Is there the possibility of getting credit from your bankers? Yes [ ] No [ ]

(C) Performance of shea nuts

33. Is the shea nuts business doing well? Yes [ ] No [ ]

34. How .....

.....

.....

35. Do you use protectors during picking of shea nuts? (a) Yes [ ] (b) No [ ]

36. If yes, name the kind of protectors? .....

.....

37. How different is the use of protectors from the normal hand picking?.....

.....

.....

38. In brief how do you come out with quality nuts? .....

.....

.....

.....

(D) Challenges of shea nuts and shea nuts picking

39. Is there reduction in the shea trees in your area? Yes [ ] No [ ]

40. If yes, please indicate some of the causes and possible solution

	Some causes of reduction in shea trees	What can be done to curb the causes of reduction in the trees
1		
2		

4		
5		

41. What are the problems/challenges related to shea nuts picking? .....

.....

.....

.....

42. Please mention some of the effects in the reduction of trees in ranking order?

	Effects on	How can it be solved
A	Raw material Challenges:	
B	Production Challenges:	
C	Marketing Challenges:	

43. What are the challenges in storing of nuts? ……

……..

……

(E) Prospects of shea nuts picking

44. Is the shea nut picking beneficial you? Yes [ ] No [ ]

45. Can you please explain? ……..

……..

46. Are you recognised as an individual that produces quality shea nuts? Yes [ ] No [ ]

47. Please explain (why) ……..

……..

48. Are there prospects/opportunities for the shea industry? Yes [ ] No [ ]

49. If yes, please mention some of them in order importance? (Rank later) ……

1……

2……

3……

4……

5……

50. What do you think would be the situation of supply of shea nut in future? …….

……..

……

51. What good things do you think would happen to the shea nut processing business in the future?

……

……

52. How would you increase the supply of nuts in the future? ……

……..

……..

(F) Marketing of shea nuts

53. Who fixes the prices of shea nuts? .....

.....

54. How are prices determined?.....

.....

55. How do you sell your products?.....

56. Who do you sell your products to?

No.	Name of Company/individuals	Where does he take the products to/Destination

57. What are the units of sale of the shea nuts? **(Multiple responses allowed)** (a)Bowls [ ] (b)Bags [ ] (c) Kilos [ ] (d) Other [ ](specify) .....

58. Indicate the price of a unit of product for the past three years?

Year	Highest price	When/period	Lowest price	When/period
2008				
2009				

2010				
2011				

59. How do you determine cost of your product?.....

.....

60.In your opinion what can be done to improve the shea nuts marketing? .....

.....

.....

.....

(G) Intervention

61. Have you ever had any assistance from any organisation/agencies/NGOs?

Yes [ ] No [ ]

62. If yes, mention them and the kind of support:

Organisation	Kind of support
1. 2. 3. 4. 5. 6. 7.	

Thank you very much for your time

UNIVERSITY FOR DEVELOPMENT STUDIES

CENTER FOR POST-GRADUATE & RESEARCH

Shea Marketing Companies

QUESTIONNAIRE

Dear respondent, this is a student's research work for completion of an MPhil programme. Your responses will be treated confidentially and will remain anonymous and will only be used for academic purposes. It is believed that responses will help the researcher to draw conclusion and recommendation, there after could be used for long term improvement of the shea industry. I would therefore appreciate it if you could spare some time to answer a few questions.

Name of interviewer: .....

Name of District: .....

Name of Community:.....

Date of interview: .....

1. Name of Company? .....
2. Is the company registered? (a) Yes [ ] (b) No [ ]
3. How old is the Company in Ghana? .....
4. Since when have you been engaged in marketing of shea products? .....
5. Which of the shea product(s) do you deal in?
   (a) Shea butter [ ]
   (b) Shea nuts [ ]
   (c) Both [ ]
   (d) Others [ ] (Specify) .....
6. How many employees do you have in the Company? .....
7. Number of Female [ ] Male: [ ]
8. Do you market other commodities apart from shea? (a) Yes [ ] (b) No [ ]

9. Where do you market shea products? (a) on local market [ ] (b) on international market [ ](c) on both local and international markets [ ]

10. Is the shea products doing well in the local market? (a) Yes [ ] (b) No [ ]

11. Please explain your answer: .....

.....

.....

12. Is the shea products doing well in the international market? (a) Yes [ ] (b) No [ ]

13. Please explain: .....

.....

.....

14. Indicate, in the table below your average annual purchases local sales exports over the last three (3) years

Year	Purchase	Local Scales	Exports
	Volume (tons)	Volume (tons)	Volume(tons)
2008			
2009			
2010			

15. Indicate your major local buyers over the last three (3) years in the table below:

Year	Company	Average Purchase over last 3 years
		Volume (tons)
2008		
2009		
2010		

16. Indicate the countries and the average quantity of produce exported to each country over the last three (3) years.

Year	Country	Average Exports over last 3years
		Volume (tons)

2008		
2009		
2010		

17. Who fixes the prices of shea butter?

(a) On the local market……

(b) On the international market ……

18. What do you consider before making purchase? ……

……

……

19. Which shea product(s) sell(s) well locally?

(a) Shea nuts [ ]

(b) Shea butter [ ]

(c) Both [ ]

(d) Others [ ] (Specify) ……

20. Explain why?……

……

……

21. Which shea product(s) sell(s) well on the international market?

(a) Shea nuts [ ]

(b) Shea butter [ ]

(c) Both [ ]

(d) Others[ ] (Specify) ……

22. Please explain: ……

……

……

23. What are the difficulties in marketing of shea products?

No.	On the Local market	International market

24. What measures are required to improve the marketing of shea products?.....

.....

.....

25. What are some the problems of the shea industry?

No.	Problems	Solutions
1. 2. 3. 4. 5.		

26. Do you collaborate with any organisations/department/agencies or other stakeholders in the shea industry? (a) Yes [ ] (b) No [ ]

27. If yes indicate in the table below name of agencies and kind of collaboration?

No.	Name of Organisation/department /agencies/stakeholders	Kind of Collaboration
1. 2. 3. 4. 5.		

28. How many districts do you operate in Northern Region? .....

29. Please mention the names .....

.....

.....

.....

30. How do you see the future of the shea industry? .....

.....

31. How do you see the future of your Company in dealing shea? .....

.....

.....

32. What are the prospects/opportunities of the shea industry? .....

.....

.....

33. Indicate, in the table below prices of shea nuts for the past three years:

	Year	Peak Season (Kilos)	Lean Season (Kilos)
a	2008		
b	2009		
c	2010		
d	2011		

34. Indicate, in the table below prices of shea butter for the past three years:

	Year	Peak Season(Kilos)	Lean Season(Kilos)
a	2008		
b	2009		
c	2010		
d	2011		

35. Is the shea butter processing beneficial to you? (a) Yes [ ] (b) No [ ]

36. Can you please explain your answer?.....

.....

Thank you very much for your time.

UNIVERSITY FOR DEVELOPMENT STUDIES

CENTER FOR POST-GRADUATE & RESEARCH

Questionnaire for Shea Butter Processors

QUESTIONNAIRE

Dear respondent, this is a student's research work for completion of an MPhil programme. Your responses will be treated confidentially and will remain anonymous and will only be used for academic purposes. It is believed that responses will help the researcher to draw conclusion and recommendation, there after could be used for long term improvement of the shea industry. I would therefore appreciate it if you could spare some time to answer a few questions.

Name of interviewer: .....

Name of District: .....

Name of community: .....

Date of interview: .....

Name of respondent: .....

(C) Socio - Demography Characteristics

Gender: (a)Male {} (b) Female {}

4. Age group (a) 21-30yrs {} (b) 31-40yrs {} (c) 41-50yrs {}

(d) 51-60yrs {} (e) 60+ yrs {}

5. Marital Status: (a)Single {} (b)Married {} (c)Widow/widower {} (d)Divorced {} (e)Separated {}

4. Religion (a) Traditional {} (b) Christian {} (c) Islam {} (d) Others (specify) .....

5. Level of Education:

(b) No formal education{} (b) Primary {} (c) JHS{} (d) Middle{} (e)Secondary/SHS{} (f)Tertiary{} (g)Islamic {} (h) Non-formal education (i) Others { }(specify) .....

6. Ethnicity? .....

7. Main occupation? (a)Farming {} (b) Petty trading {} (c) Artisan (specify) .....

(d)Civil servant {} (e) Shea nut picking {} (f) Shea butter extraction {} (g) Weaving {} (h) Others (specify) ....

8. Minor occupation? (a)Farming {} (b) Petty trading {} (c) Artisan (specify).....
(d)Civil servant {} (e) Shea nut picking {} (f) Shea butter extraction {} (g) Weaving {} (h) Others (specify).....

9. How many people (females) help you in shea butter extraction?.....

10. What is your relationship with the people who help you? (a) Daughter(s) {} (b) House help{} (c) Relative(s) {} (d) Others{ } (specify) .....

(D) General information

11. Do you engage in the shea butter processing as a full time occupation?

(a) Yes {} (b) No {}

12. How long have you been engaged in the shea butter processing?

(a) Less than 5yrs { }

(b) 5-10yrs { }

(c) 11-15yrs { }

(d) 16-20 yrs { }

(f) More than 20yrs { }

13. How/Where do you get your nuts to process? (a) Pick myself {}

(b) Buy from relative {} (c) Buy from market in community {}

(d) Buy from market outside the community {} name .....

14. Do you buy from a particular source(s)? (a) Yes {} (b) No {}

15. If yes name source(s).....

.....

16. What quantities of nuts do you process in a week? (a) One basin {} (b) Half a bag {}
(c) One bag {} (d) Two bags {} (e) Others{ } (specify) .....

17. What are the prices of shea nuts and shea butter in the past three years?

Year	Shea nut price GH¢/bag	Shea butter price GH¢/kg or calabash
2008		
2009		
2010		
2011		

18. How many months in the year do you process? .....

19. What quantities of shea butter did you produce in the past three years?
(a) 2008.....
(b) 2009.....
(c) 2010.....

20. What is the name of your shea business? .....

21. Is the business registered with the Registrar General's Department? (a) Yes { } (b) No { }

22. Since when was the business registered? (year).....

23. Do you have a business Bank/Credit Union account? (a) Yes { } (b) No { }

24. How often do you make savings into your accounts?
(a) Weekly { } (b) Monthly { }(c) Yearly { }(d) Others{ } (specify) .....

25. Do you make payments to suppliers by cheque? (a)Yes { } (b) No { } (c) Sometimes { }

26. Do you receive payment from buyers by cheque? (a) Yes { } (b) No { } (c) Sometimes { }

27. Do you have males working with you? (a)Yes { }(b) No{ }

28. What do the males do in the business? .....

.....

29. Do you need credit for your business? (a) Yes { }(b) No{ }

30. Have you applied for loan before? (a) Yes { } (b) No{ }

31. Where did you apply to? .....

32. Did you get the loan? (a) Yes { } (b) No { }

33. If No, why? .....

.....

34. Is there the possibility of getting credit from your bankers? (a) Yes { } (b) No { }

(C) Performance of shea butter processing

35. Is the shea butter business doing well? (a) Yes { } (b) No{ }

36. Why do you say so? .....

.....

.....

37. What methods do you use in extracting the shea butter? (a) Mechanical method [ ]

(b) Manual method [ ] (c) Both [ ] (c) Other{ } (specify) .....

38. If you use the mechanical method, how did you get the equipment? (a) Self { } (b) NGO{}

(c) Government { } (d) Others{ } (specify) .....

39. With the mechanical method are you able to produce large quantities of shea butter as compared to manual method? (a) Yes { } (b) No { }

40. With the mechanical method are you able to produce higher quality butter than with the manual method? (a) Yes { } (b) No difference { }

41. Can you explain your answer? .....

.....

(D) Challenges of shea processing and marketing

42. Is there any reduction in the shea trees in your area? (a) Yes { } (b) No { }

43. If yes, please indicate some of the causes and possible solution

	Some causes of reduction in shea trees	What can be done to curb the causes of reduction in the trees
1		
2		
3		
4		
5		

44. Please mention some of the effects of reduction of shea trees and solutions?

	Effects on	How can it be solved
a.	Raw material Challenges:	
b.	Production Challenges:	

c.	Marketing Challenges:	

(E) Prospects of shea butter processing and marketing

45. Is shea butter processing beneficial to you? (a)Yes { } (b) No { }

46. Can you please explain your answer? .....

.....

47. Are you recognised as an individual who produces quality shea butter? (a) Yes { } (b) No { }

48. Please explain your answer above.....

.....

49. Are there some prospects/opportunities for the shea butter industry? (a) Yes { } (b) No { }

50. If yes, please mention some of them in order of importance? (ie rank them)

1.....

2.....

3.....

4.....

5.....

51. What do you think will be the situation of supply of shea butter in future? .....

.....

.....

52. What good things do you think will happen to the shea butter processing business in the future? .....

.....

.....

53. How could you increase your business in the future? ……..
……
……

(F) Marketing of shea butter

54. How do you price your products?.....
……

55. Who fixes the price of shea butter?.....
……

56. What factors influence the fixing of prices?.....
……..
……..

57. Who do you sell your products to?

	Name of Company/Individual	Where does he takes the product to/Destination

58. What do your buyers use the shea butter for?.....

59. Indicate the price of a unit of product for the past three years? (**indicate the unit**)

	Highest price	When/period	Lowest price	When/period
2008				
2009				
2010				
2011				

60. How do you determine the cost of your product?.....

.....

61. In your opinion what can be done to improve the shea butter marketing? .....

.....

.....

.....

(G) Intervention

62. Have you ever had any assistance from any organisation/individuals/NGOs?

(a)Yes { } (b) No { }

63. If yes, mention them?

Organisation	Kind of support

1. 2. 3. 4. 5.	

64. What in your opinion can be done to improve the quality of shea butter production?

.....

.....

Thank you very much for your time