Rural Development and Sustainable Livelihoods: A New Perspective on Rural-Based Food Processing in North Ghana

Rabia’tul Adawiah Binte Sazali*

Abstract

Rural areas cover a greater portion of Ghana’s land area that provides home for the majority of Ghanaians. The three northern regions of Upper East (UER), Upper West (UWR) and Northern (NR) are the poorest. The impressive economic growth and reductions in poverty Ghana has experienced over the past 30 years have failed to extend north, and while there are various ongoing rural development projects in these three most deprived regions, there has been little in the way of an approach examining the contribution of rural-based food processing to sustaining livelihoods there. These development gaps may negligently dismiss any chances of achieving success in sustainable livelihood programs in these regions adversely affected by environmental uncertainties and socio-economic problems. This paper investigates the use of a modified sustainable livelihoods (SL) model to incorporate rural-based food processing as an entry point for development projects to attain sustainable rural livelihoods in northern Ghana. It is recognized that rural-based food processing as a function of development intervention, if sustained, can contribute to the overall improvement of rural livelihoods and subsequently to development of the north.

Keywords: Rural Development, North Ghana, Rural-Based Food Processing, Sustainable Livelihoods

I. Introduction

Recent concerns about the level of poverty in rural areas have generated a considerable body of research. Globally, poverty remains a significant issue despite the rapid rate of urbanisation. According to IFAD (2011) the population of the developing world is still more rural-than urban-based. Some 3.1 billion people, or about 55 percentage

* Researcher, The Chamirisa Institute of Partnership Studies, Duksung Women's University, 419 Ssang-moon-dong, Dobong-gu, Seoul 132-714, Korea; E-mail: rabiasazali1807@duksung.ac.kr; Tel: +82-2-901-8161; Fax: +82-2-901-8525.
of the total population, live in rural areas. Rural areas are defined by Avila et al. (2005: 2) as those that comprise human settlements of less than 10,000 people, and they largely feature farms, forests, mountains and/or desert. They also describe rural people as farmers, nomads, livestock rearers or fishermen. The areas are involved mainly with agriculture-related activities such as crop/livestock production as well as food processing, marketing? and non-food services. Poverty is commonly linked with the rural population because they are largely deprived of both basic and economic livelihood opportunities.

Rural areas cover a greater portion of Ghana’s land area that provides home for majority of Ghanaians. Since the mid-1980s, Ghana has shown impressive development and growth, placing the country as one of the top performers in Africa. In 2011, Ghana received middle-income status after showing robust growth over three decades. This impressive economic growth and rapid decrease in poverty levels, however, did not extend to the arid northern regions and they continue to be affected by widespread poverty.

Overall, Ghana has shown tremendous results in terms of poverty eradication, with figures showing a fall from 51.7 percentage in 1991/92 to 28.5 percentage in 2005/6 (Ghana Living Standards Surveys, GLSS). Poverty in the northern regions of UER, UWR and NR, however, did not follow suit, remaining at between 55-88 percentage. While parts of the south are also poor, the north comprises the biggest poverty-hit area as it struggles with socio-economic challenges and stunted economic growth. The main livelihood classification for rural people in the northern regions is semi-subsistence agriculture, “food crop farming,” while a small percentage is involved in non-farming activities. The people living in the three northern regions are extremely poor and rely mostly on agriculture for their livelihoods. Despite their situation they contribute significantly to Ghana’s labour force. While their skills base is limited they are the leading producers of groundnut, maize, millet and sorghum among others, and produce more than half of the country’s total food needs.

The primary purpose of this research is to understand how the three deprived northern regions could achieve sustainable livelihoods, which are vital for rural development. In order to determine this, this research posed a question: What is an effective sustainable livelihood paradigm to use when developing the rural northern regions of Ghana? To answer this question, the following sub-questions were examined: 1) What assets do the rural poor in northern Ghana hold, what are the main activities they are engaged in, and what are their current livelihood strategies? 2) What markets should be important for the rural majority? 3) To what extent can rural-based food processing be used to improve and sustain the livelihoods of the rural people in northern Ghana?

This study utilizes basic research methods for the findings and analysis. The research plans are conducted using qualitative approaches through secondary sources and a conceptual framework. The secondary sources are grounded on books, journal articles and reports. The assessment of the study will then be done simultaneously with the application of the author’s adapted model. There are limitations to this methodology. A comprehensive study will require empirical field research to assess fully the prospective efficacy and limitations of this study. However, to illustrate the studies, a case study of the rural people in northern region of Ghana will be used instead.

The spine of this study is founded on the SL approach. This conceptual framework serves as a guide to assess the study of rural-based food processing as an entry point for
supporting rural livelihoods. What makes this study unique is the accent on rural-based food processing—an area of development projects that has received little attention.

This study presents current research that can better develop, target and implement rural-based food processing as an alternative intervention aimed particularly at the most deprived parts of northern Ghana in order to: 1) sustain food security 2) generate more income and 3) build resilience to external shocks. Following the Sustainable Livelihoods (SL) framework, this study managed to identify areas in which SL could, with some modification, contribute to poverty eradication, placing focus on rural people and their livelihoods. The modified SL approach, using rural-based food processing as an entry point, is imperative for the inclusive development of these areas and their people and consequently contributing to the eradication of poverty in northern Ghana.

The structure of this paper will be detailed in the following sequence: Part 2 investigates the evolving rural development paradigms and the significant linkage to the new approach of ‘sustainable livelihood.’ Part 3 covers the adapted SL model using rural-based food processing as an entry point. Part 4 examines the impact of the adapted SL model on the livelihoods of rural people in northern Ghana. Part 5 brings concluding remarks and policy recommendations.

II. Rural Development Paradigms

1. Rural Development: A Timeline

In the landmark study of development approaches, Lorenzo (2011) defines the term development in a broader sense—“development” is a multi-dimensional concept in its nature, because any improvement of complex systems, as indeed actual socio-economic systems are, can occur in different parts or ways, at different speeds and be driven by different forces. According to Nyerere (1982: 7), rural development is one way of approaching development. Recent concerns about world hunger and the fight against poverty have generated a considerable body of research and have played a significant role in the concept of rural development.

Country reports show that rural development in the developing world since the mid-1960s have one common thread—the number of people who are in absolute poverty has increased immensely since the 1970s. Nyerere (1982: 1-2) suggested that in the face of this situation, there is a general recognition that “something must be done.” To Buller and Wright (1990: 2-5), rural development is seen to be a more comprehensive version of development—“an ongoing and essentially interventionist process of qualitative, quantitative and/or distributional change leading to some degree of betterment for groups of people.” A similar definition given by Francis, David and Adejuwon (2012: 48-51) is that development benefits rural populations where development is understood to be the sustained improvement of the population’s standards of living or welfare. The definition of rural development is constantly shifting due to changes in the perceived goals of development. Nyerere (1982: 2) states that the rural development approach can otherwise be known as the “basic needs approach.” It is more holistic and dynamic where it is observed to be an aspiration of local people living in rural areas to take on the challenge and improve their well-being and their environment. Buller and Wright later on expanded
on the notion of development, saying it should not only involve improvement but also robust gains in the capabilities of people to control and sustain these conditions.

There have been major changes in the views of rural development over the last half-century or so and new ideas are emerging (Ellis and Biggs, 2001; Carney, 1999). Figure 1 shows a timeline of rural development evolving in terms of theories, themes and policy. It is important to note that the purpose of the timeline is to have a clear understanding of the transformation of ideas—success or failures—that influence the growth of rural development. The main themes during the 1950s to 1960s mentioned by Ellis and Biggs (2001: 440-442) are modernisation and the dual economy, where ‘modern’ agriculture (emphasizing small-farm growth) is seen to be the engine of growth and development. Carney (1999) states that during the 1950s-1960s, donor attention was focused on increasing the production of staple crops through investment in agricultural research and related services. This brought about the ‘Green Revolution,’ which was highly successful, though its benefits tended to be skewed more towards richer farmers and favourable environments.

In the 1970s, thoughts on rural development shifted a little towards state intervention due to the limited changes it brought farmers during the 1950s-1960s. The realization in the 1960s that mechanical technology for farming was more efficient continued in the 1970s but it was done through an integrated rural development (IRD) approach. The IRD approach, also known as “area development schemes,” required the coordinating of different agencies under a single management system of essential human capital components such as population, health and education to get rural development moving. The changes in the ideas behind rural development had been synonymous with agricultural development, increasing agricultural production and reinforcing industrialization. Despite its strong points, the IRD approach ignores the high costs of implementing these changes, the budget constraints of countries, and the impact of poor coordination between agencies, organisations and departments.

Carney (1999) argued that the weaknesses of the IRD approach were over-ambitouslyness and complexity. Targeting increased agriculture production places small crop producers at a disadvantage because they usually receive less than half the world-market value for their exports, and the benefits would be attained by the richer farmers. At the end of the 1970s, the IRD approach was seen as a failure and disregarded by many development agencies. In the late 1970s and 1980s, Helmsing (2001: 2) agreed that there was considerable scepticism that emerged about the effectiveness of conventional development policy instruments, and some regional development analysts were looking for alternatives to the dominant regional development paradigm of the day.

Moving into the 1980s-1990s, there was a paradigm shift. In the 1980s, it was market liberalisation–reform of the agricultural sector. The idea was oriented towards efficiency of enterprises, liberalisation and privatisation. As seen from the timeline of the development approach towards rural areas, the deviation from agriculture is minimal. The noticeable change can be seen in the late 1980s where the ‘bottom-up’ approach (by means of participation, process and empowerment) was applied instead of the traditional ‘top-down’ approach of modernisation, industrialisation and IRD. The striking feature of this approach is the empowerment of rural dwellers to have control over their priorities in order to bring about change. Other features include the acknowledgement of indigenous technical knowledge (ITK) and the beginning of an ‘actor-oriented’ standpoint when
developing rural policies, which include participation from the actors themselves. For the late 1980s to early 1990s, Wiggins (2006: 11) states there was a renewed interest in inputs, marketing and farmer organisation. The response of the private sector for the supply chains often failed for rural areas. After the recognised failure of the previous paradigm came the emergence of sustainable development. The concept of ‘sustainability’ was first introduced by the Brundland Commission on Environment and Development (WCED). Rural development practice has manifested into sustainable livelihoods as an integrating framework as Carney (1999) and Ellis and Biggs (2001) mention in their articles, a ‘bottom-up’ approach focusing on the participation of rural actors. The 1992 United Nations Conference on Environment and Development (UNCED) broadened the concept of sustainable livelihoods as a means to eradicate poverty.

**Figure 1: Rural Development Ideas Timeline**

<table>
<thead>
<tr>
<th>Period</th>
<th>Paradigms, Themes, Ideas, Approaches and Objectives in Rural Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s-1960s</td>
<td>◦ Modernisation ◦ Dual economy model ◦ ‘Backward’ agriculture</td>
</tr>
<tr>
<td></td>
<td>◦ Community development ◦ Lazy peasants</td>
</tr>
<tr>
<td>1960s-1970s</td>
<td>◦ Transformation approach ◦ Technology transfer ◦ Mechanisation ◦ Agricultural extension</td>
</tr>
<tr>
<td></td>
<td>◦ Growth role of agriculture ◦ Green revolution (start) ◦ Rational peasants</td>
</tr>
<tr>
<td>1970s-1980s</td>
<td>◦ Redistribution with growth ◦ Basic needs ◦ Integrated rural development (IRD) ◦ State agricultural policies</td>
</tr>
<tr>
<td></td>
<td>◦ State-led credit ◦ Urban bias ◦ Induced innovation ◦ Green revolution (cont.) ◦ Rural growth linkages</td>
</tr>
<tr>
<td>1980s-1990s</td>
<td>◦ Structural adjustment ◦ Free markets ◦ ‘getting prices right’ ◦ Retreat of the state ◦ Rise of NGOs ◦ Rapid rural appraisal (RRA) ◦ Farming systems research (FSR)</td>
</tr>
<tr>
<td></td>
<td>◦ Food security and famine analysis ◦ RD as process and not product ◦ Women in dev. (WID) ◦ Poverty alleviation</td>
</tr>
<tr>
<td>1990s-2000s</td>
<td>◦ Microcredit ◦ Participatory rural appraisal (PRA) ◦ Actor-oriented RD ◦ Stakeholder analysis</td>
</tr>
<tr>
<td></td>
<td>◦ Rural safety nets ◦ Gender and devt (GAD) ◦ Environment and sustainability ◦ Poverty reduction</td>
</tr>
<tr>
<td>2000s</td>
<td>◦ Sustainable livelihoods ◦ Good governance ◦ Decentralisation ◦ Critique of participation</td>
</tr>
<tr>
<td></td>
<td>◦ Sector-wide approaches ◦ Social protection ◦ Poverty eradication</td>
</tr>
</tbody>
</table>

*Source: Adapted from Ellis and Biggs 2001.*
Rural development is not simply concerned with ‘new things’ being added to established situations but rather newly emerging and historically rooted realities that are currently reappearing as rural development experiences avant la lettre (van Der Ploeg et al., 2000). As is evident in Figure 1 and Figure 2, the goal of promoting rural development, particularly in developing countries, has been closely associated with the continuous dynamic evolution of development models and approaches over the last 50 years, such as community development, small farm development, IRD, market liberalisation, participatory development, human development, sustainable livelihoods, poverty reduction strategies, food security programmes, sustainable agriculture and rural development (SARD) and, since the year 2000, the Millenium Development Goals (MDGs) (Avila et al., 2005: 2).

Figure 1: Dominant and Sequential Themes in Rural Development

![Figure 1: Dominant and Sequential Themes in Rural Development](source: Ellis and Biggs 2001)

2. Sustainable Livelihoods—A New Approach?

Referring to Figure 1, there was a paradigm shift in the late 1990’s-a major switch from top-down to a bottom-up approach. The instrument behind the bottom-up
approach detaches itself from the conventional economic theories of growth and agricultural intensification for growth. The thinking on rural development is constantly progressing based on past evaluations and lessons from rural projects and programmes, and there is a surge in interest focusing on the poor in rural areas.

The livelihoods approaches are an attempt to address the problems of defusing (weakening? severing?) the connection between rural life and agriculture. It looks at a wider representation of the rural population. A noticeable feature of this new approach is the focus on the “non-sector.” Unlike previous traditional approaches to develop rural areas that targeted certain sectors, the livelihoods approach begins by understanding the portfolio of livelihood strategies of the individuals, households or villages of the rural space collected at a local level. Van Der Ploeg et al. (2000: 398-340), in their article, suggest that a new model of rural development that emerges slowly but persistently in both policy and practice should be followed by a paradigm shift in associated theory. They suggest that there is a need for a new rural development paradigm that can help to clarify how new resource bases are created, how the irrelevant is turned into the valued, and how, after combining with other resources, the newly emerging whole orientates to new needs, perspectives and interests.

An anticipative development paradigm came to light in the mid 1980’s, where there was burgeoning literature on the concept of “sustainable livelihoods” (SL). This concept goes beyond conventional definitions and approaches to poverty eradication. One of the first advocates of SL is Robert Chambers, who argues that the way development professionals conceptualise development and poverty is very different from how poor people themselves view it. Chambers developed the idea of “sustainability and livelihoods” with the intention of enhancing the efficiency of development cooperation. His concepts constitute the basics for the SL approach, as it was developed by the British Department for International Development (DfID). Starting from 1997, DfID integrated the SL approach in its program for development cooperation (Kolliar and Gamper, 2002). The SL approach was intellectualized after the Brundtland Commission Report (1987) put forward the concept of sustainable development. The definition of sustainable development is:

“... development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of ‘needs,’ in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs.” (WCED 1987a, 43)

However, recent literature has adopted a more concise definition of livelihoods.

*A livelihood comprises the capabilities, assets, (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the*
next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term. (Chambers and Conway 1992, 5)

According to Adato and Meinzen-Dick (2002: 2-5), the concept of “livelihoods” has become increasingly popular in development thinking as a way of conceptualizing the economic activities of the poor. Scoones (1998) states that the concept of ‘sustainable rural livelihoods’ is becoming increasingly central to the debate about rural development, poverty reduction and environmental management.

The increasing popularity amongst development actors for the use of livelihoods approaches can be explained by the strengths and objectives of the approach. The SL approach is more dynamic and holistic—it covers a broad range of strategies and places emphasis on both the social and economic aspects of rural life. Carney (1999) elaborates further on the key strengths of SL. Firstly, SL projects represent what is known about rural life and poverty and are therefore able to better target interventions. Next, it recognises the importance of multi-actors involved in the development process (from the private sector to national ministries, community-based organisations to decentralized governments) to form a wider range of partners. It is also known to place great emphasis on the importance of macro-level policy and institutions to the livelihood options of the rural communities. Lastly, it has a multi-faceted view of sustainability—the concept of sustainability goes beyond tangible assets such as natural assets. Sustainability in this context refers to the reduced vulnerability of rural communities to the overall sustainability of their livelihoods.

The ‘livelihoods approaches’ to rural poverty alleviation is quite new and has much appeal. However, there have been concerns voiced. Many academics have contemplated whether the SL approach is just another version of IRD as they are similar on many levels. Advocates of the SL approach argued that while it may be constructed based on the strengths of IRD it did not follow in its footsteps. SL focuses on agricultural production, income diversification and infrastructure. The other concern of the livelihoods approach is that it may be unrealistic and impractical. It thrives on the holistic approach and dynamism but overlooks the process from analysis to action. Rural dynamics differ for each location, therefore the approach has to be area-specific.

The challenge then is how to develop rural development tools to fit the existing set of objectives. Krantz (2001: 4-6) questions the SL approach on the selective process—how to identify the poor that you are trying to help and the way resources and other livelihood opportunities are distributed locally is often influenced by informal structures of social dominance and power within the communities themselves. The next concern is that livelihood approaches may experience structural problems by trying to match the development proposal of rural people (surpassing sectors) to the conditions and objectives of the donor countries who usually lean towards certain sectors. Critics have expressed cynical views on the idea of livelihoods as many welcome the detachment from agriculture, but those backing the livelihood approaches believe agriculture will remain the backbone of rural areas. The support, however, will be better managed and assist only those who wish to diversify. Moreover, SL is rooted in multiple entry points of support instead of the traditional sector-targeted approach. Carney (1999) points out that this new approach
is built upon the lessons of past rural development ideas and findings of numerous studies, the validity of the approach will only be compelling when proven a success on the practical level.

The spine of this study is founded on the SL approach. This conceptual framework serves as a guide to assess the study of rural-based food processing as an entry point for support of rural livelihoods. What makes this study unique is the accent on rural-based food processing, which is an area of development that has received little attention. The importance of food processing in the rural areas is ancillary to the main livelihood strategy for most of the rural poor people—agriculture.

There have been an increasing number of development organizations, such as DfID, IFAD and CARE, and United Nations Development Programme (UNDP), that rely on the SL conceptual framework for livelihood analysis, though the approach for each of the agencies differs slightly. According to the International Food and Agricultural Development (IFAD), the SL framework places people, particularly the rural poor, at the centre of a web of inter-related influences that affect how they create a livelihood for themselves and their households. People are the main concern, rather than the resources they use or their governments. It is primarily a conceptual framework for analyzing causes of poverty, peoples access to resources and their diverse livelihood activities, and relationships between relevant factors at micro, intermediate, and macro levels. It is also a framework for assessing and prioritizing interventions. (Adato and Meinzen-Dick 2002). Differing in focus, UNDP employs an asset-based approach—the promotion of people’s access to and sustainable use of assets upon which they rely as central to poverty reduction. However, a strong feature of the SL framework is that it is able to recognize major constraints and opportunities faced by poor people, as to how they define them, and then aids them to address the constraints or to create opportunities. An important factor to note is that the SL model is not a comprehensive guide to approaching poverty in rural areas. It forms a means of thought and analysis, therefore depending on the situation, and it needs to be appropriate and adapted accordingly.

The SL conceptual framework is illustrated in Figure 3. It presents the main components of the SL approach and how they are connected. It serves as a guide and not a representation of reality. Figure 3 is also an adapted model to represent rural-based food processing as an entry point of intervention in the SL framework. As mentioned earlier, this is an alternative path to think about the livelihoods of poor rural people and observe the factors that have major impacts on their livelihoods, the main interactions between the components and the significance in a specific setting.

### 2.1 Rural-based Food Processing with SL Approach

The SL framework is holistic and dynamic, where attention is paid to various factors and processes which either constrain or enhance poor people’s ability to make a living in an economically, ecologically, and socially sustainable manner (Krantz, 2001: 6).

The framework first recognizes the vulnerability context within which people’s livelihoods are affected and have limited or no control over. These are negative circumstances which impact people’s options to pursue livelihoods; however, it can also offer positive opportunities. This vulnerability context is important when people have food
processing as a livelihood option. The vulnerability settings are explained in detail below:

**Figure 2: Rural–based Food Processing with SL Framework**

![Figure 2: Rural–based Food Processing with SL Framework](image)

*Source: Adapted from DfID 2001.*

**Table**

<table>
<thead>
<tr>
<th>Trends</th>
<th>Shocks</th>
<th>Seasonality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population trends, resources, national/international economic trends such as prices, governance or technological trends.</td>
<td>Changes in human, crop/livestock health, natural shocks, economic shocks or conflict.</td>
<td>Changes in prices, agricultural production, health or employment opportunities</td>
</tr>
</tbody>
</table>

The next component of the framework is the core of the livelihoods framework that people operate within the vulnerability context. Five different types of capital are identified in this framework:

- **Human capital** encompasses good health, skills, knowledge and ability to labour that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.
- **Natural capital** refers to land and produce, water and aquatic resources, environmental services, forests and biodiversity.
- **Social capital** refers to networks and connections that encourages trust and mutual support, leadership, collective representation, access to opportunities and participation in decision-making.
- **Physical capital** refers to infrastructure such as transportation, roads, buildings,
sanitation, tools and technology

- **Financial capital** refers to savings, credit (formal and informal), pensions, remittances and wages.

Following the assets base in the framework, the policies, institutions and processes (PIPs) play an influential role in determining people’s livelihood strategies as it covers the social, economic and political aspects within which people pursue their livelihood strategies. PIPs include the following interactions (Cleary et al., 2003):

- **Social relations**: the way in which gender, ethnicity, culture, history, religion and kinship affect the livelihoods of different groups with a community
- **Social and political organization**: decision-making processes, civic bodies, social rules and norms, democracy, leadership, power and authority, rent-seeking behaviour
- **Governance**: the form and quality of government systems including structure, power, efficiency and effectiveness, rights and representation
- **Service delivery**: the effectiveness and responsiveness of state and private sector agencies engaged in delivery of services such as education, health, water and sanitation
- **Resource access institutions**: the social norms, customs and behaviours that define people’s access to resources
- **Policy and policy processes**: the processes by which policy and legislation is determined and implemented and their effects on people’s livelihoods

Institutions encompass organizations (public and private) that set and implement policy and legislation, deliver services, purchase and trade. Processes, on the other hand, are important to every aspect of livelihoods as they determine the way which structures and people operate and interact (DFID, 1999). Processes include policy making, legislation and institutions. The combination of vulnerability within the livelihood assets under the influence of structures and processes has an impact on the livelihood strategies of the people. In the case of rural-based food processing, the focus would be on the option of an alternative livelihood strategy to generate income, ensure food security and develop resilience towards external shocks.

### III. Adapted SL Model and its Impact on the Livelihoods

The adapted SL model for this analysis is not all-inclusive and systematic to a point where it can evaluate the full impact of rural-based food processing, because it requires considerations of other factors (direct or indirect) that influence the process to achieving livelihood outcomes—a true representation of the milieu of rural dynamics. It is important to note that rural-based food processing is presented as an ancillary tool and makes up only a part of rural livelihoods. Rural-based food processing may not be the ideal entry point for the SL approach. However, it delivers three significant outcomes—food security, higher income and resilience. It also leads to diversification of livelihood opportunities and meets the objectives of rural development. A better assessment of the potential impacts of rural-based food processing is illustrated by Figure 4.
1. Food Security and Income Generation

Food insecurity “occurs when food systems are stressed so that food is not accessible, available, and of sufficient quality” (Beaumier and Ford, 2006: 196). The arid regions of UER, UWR and NR are plagued by food insecurity, with high rates of between 10-30 percent (Biederlack and Rivers, 2009: 13). Most farmers in the arid north are smallholders and often casualties of food insecurity. The seasonal pattern of dry spells and peak-season floods define the period for the lack of food provisioning for households in the north—the time between stock exhaustion and the next harvest. Months of food insecurity plague households that depend on production primarily for home consumption due to a lack of access to markets. Many ponder the paradox: Why is the breadbasket of Ghana (the north) more insecure than the south? And how are they supposed to survive?

The ultimate solution to combating hunger and food insecurity at the national, as well as the global, level is to provide undernourished people with opportunities to earn adequate income and to ensure an abundant supply of food from either domestic production or imports, or both (FAO, 2002G). Rural-based food processing provides a list of strategies that smallholders or households can adopt in order to survive during periods of food insecurity.
The major food crops grown in the northern region of Ghana are generally comprised of cereals and starches such as rice, millet, sorghum, cassava, yams, plaintains and cocoyam (taro). Traditional cereal foods form a major diet for Africans. Culture plays an important role in Ghana as it influences the population’s eating habits. The types of food that rural people eat depend on tradition, availability and affordability. As a result, there is a wide variety of traditional foods in north Ghana. Cassava, however, is the main crop for many rural households and processing is needed for daily consumption. Traditional food processing is an important activity in the informal sector of the economy in north Ghana. Rural women play a key role in ensuring household food security through the development of indigenous knowledge and skills in response to persistent food crises. Yet there is little acknowledgement of this indigenous knowledge and know-how of the rural women with relation to food processing.

While traditional forms of food processing in rural households are not exempt to risks, there are major obstacles for households in undertaking processing activities, such as a lack of proper processing equipment. Tools that are purchased are simple, hence the processes are very labour intensive, tiring and time consuming. Many simple methods have been devised based on local resources to extend the storage life of roots and tubers. One common practice is for fresh or precooked roots or tubers to be peeled, cut into chips and spread out on a clean surface to dry in the sun. Drying takes more than a week depending on the weather. Due to the dynamics of rural households, larger scale processing is almost impossible as it requires huge amounts of investment. The same is true for semi-mechanized processing due to the costs and lack of knowledge about technology. In northern Ghana, the off-farm activities or opportunities are usually related to farm produce such as food processing of cassava, cereals and legumes into gari, pito brewing and dawadawa. This relationship exists because of the high costs of obtaining the raw materials, hence food processing will only be undertaken by farming households. Traditionally, the bulk of cassava products are processed by women at village level, working independently or organized into informal groups or cooperatives.

A few crops, including cassava and some types of beans, also contain poisons or anti-nutritional components, which must be removed by processing to make the food safe to eat. Rural women have developed an empirical knowledge of the physical and chemical characteristics and the functional properties of the cassava starch (Diop, 1998). The roots and leaves of the cassava contain amounts of toxic cyanide that is harmful to humans and animals, hence the cassava roots need to be processed to reduce the toxic levels of cyanide and increase the flavour. Despite the importance of traditional food processing in rural households in terms of food security and livelihood strategy, the risks of such processing cannot be ignored. Without proper processing, as much as 50 to 60 percent of fresh food can be lost between harvest and consumption (Fellow, 2004). The other purpose of processing cassava roots into a wide range of products is to control deterioration as it is a highly perishable root that can only be stored for three days before it rots. Therefore when food is being processed it is better to get rid of the dangerous toxins on the leaves and skin while at the same time transforming it into a variety of different foods such as gari or chips. However, much of the food processed by traditional methods is poor, lacking nutritional value and often has fungal or bacterial contamination. Proper processing facilities would ensure the rural population gets access
to healthy food. With increased access to quality foods, the health and nutrition level of rural people would improve significantly. Food processing is able to maintain the health of the family throughout the year by increasing food security.

Teaching rural households about processing technologies will also address the problem of post-harvest losses. These losses in the north are not just a loss of agricultural produce but also a matter of life and death for many rural households. Many lose their crops, markets and the only form of livelihood they have. At the height of the harvest, farmers lose more than half of their crops due to a lack of processing and storage facilities. The quality of crops deteriorates quickly after harvesting if not stored in a proper facility.

There is an urgent need to recognise the importance of food processing for the vulnerable population in the north, especially the involvement of rural women and their key role in ensuring food security for households. Income generation is a precursor to improving and sustaining livelihoods. The typical structure of rural families in north Ghana consists of a combination of several livelihood activities aiming just to make ends meet. While subsistence farming as a livelihood strategy is the norm, there are also ad-hoc jobs (such as mining or quarrying) and micro-enterprises. Migration to the south in search of occasional paid jobs during lean seasons in agriculture is another alternative for many. Diversification into other forms of non-agricultural activities is a critical livelihood strategy for rural households. Due to the extreme weather in the north (months of dry weather and floods), smallholders typically suffer from the unpredictable climate.

Women pursue a variety of income-generating activities during the slower periods of crop harvesting. These include traditional activities that are time consuming, require low-capital input and are labour-intensive, namely home-based food processing, basket-weaving or pitoh-brewing (non-Muslims only). The income generated from such activities may be small but it contributes a significant amount to households. For many women in rural areas, food security is as important as cash income, as some enterprises actually pay in the form of food, either by buying food for each member of the group, or paying the members with a portion of the food produced. In the same vein, assisting these women in setting up a proper food processing facility will enable them to fully utilise the available resources and generate more income for their households.

2. Resilience to External Shocks

Based on the SL framework, being resilient to external shocks includes the ability to cope with, and recover from, shocks and stress, to maintain or enhance one’s capabilities and assets while not undermining the natural resource base. The SL framework coined this rationale as ‘climate change adaptation’. Unlike the urbanized areas of southern Ghana, the deprived regions in the north are made up of mostly of rural populations that depend on agricultural activities for their livelihoods. These sectors also include fisheries, forests and livestock. Crop cultivation is usually done from April to October (during the rainy season), with dry spells dominating the rest of the year. This climate pattern corresponds to food availability for the vulnerable population in northern Ghana. Natural disasters have a direct impact on access to food. They also disrupt the livelihoods of rural people—decreasing their income and eroding their savings. Long months of
drought will also bring the same negative consequences. Thus rural people need alternative livelihood strategies in order to adapt to the weather conditions. According to Al-Hassan and Poulton (2009: 4), households take measures to reduce their vulnerability and exposure to risk by diversifying their income sources. Rural households need coping strategies when they get hit by these unpredictable shocks.

Rural-based food processing efforts will support the poor with diversified foods featuring long shelf lives to ensure availability during these periods. With proper storage systems, farmers and producers need not worry about having ruined crops or meat for processing. Proper processing systems will allow year-round production, ensuring continuing employment and food availability for the rural poor. Food production systems are able to absorb the impact of, and recover from, unpredictable shocks, and at the same time safeguard sustainable gains for the rural poor.

IV. Conclusion and Policy Recommendations

Without active involvement and contributions from international organisations and NGOs, rural development efforts will struggle to succeed. To find an effective way of ensuring the sustainability of development projects, policy makers should note that interventions must focus on several aspects of agriculture, the existing rural livelihoods and what is essential for the development of rural areas. Strategies that include rural-based food processing to aid sustainable livelihoods as a significant alternative for rural development and alleviation of poverty are greatly needed.

The Ghanaian government, international organisations and NGOs have yet to fully acknowledge the potential of this intervention in promoting sustainable livelihoods and rural development, not to mention the creation of more employment opportunities, paving the way to access markets and leading to the establishment of rural industries, improved health, and more resilience to shocks and thereby enriching the quality of the rural lives. In order to match any development objectives, policy needs to be explicit, thorough and have an understanding of the complexity of the target audience, i.e. rural poor in northern Ghana, and how the vulnerability of a community can ultimately affect the entire nation. It is a harsh reality that northern Ghana, despite being the breadbasket of the nation, is still far behind the south in terms of development.

Rural-based food processing is extremely important to address food availability for rural people during lean seasons. It will also help enhance food production and can assist in providing an alternative way to generate income. It also gradually paves the way to better infrastructure and market access. The challenge to the government, public and private sector, and for civil society as a whole, is to guarantee the ongoing support of the development programs/policies until it is established successfully. Successful projects will demonstrate that rural development can be achieved through food security, income generation and resilience. A well-thought out intervention will focus on the requirements of the rural poor and follow through according to the responsiveness of policies needed. Though this paper is limited by the lack of empirical evidence, the discussed concepts and SL model suggests there can be a positive outcome provided everything is in place.
Aside from drawing up development policies, appropriate actions to ensure continuing support for food processing programs will require (1) proper delivery of support to gain confidence and trust of the local people, especially rural women; (2) good management skills of the staff involved in the development project; (3) developing a rapport and links to receive input from the private sector; (4) evaluating any potential extension for infrastructure; and (5) providing continuous training to locals in the skills required for food processing (equipment, safety, packaging, inventory, storage). Policymakers on the national level would also need to look at a broader picture to support and develop other programmes for rural development to achieve food security, income generation and resilience among the rural poor. The rural-based food processing model covers problems that include but go beyond those of just production and access to food. As the projects progress they require efforts from the government and other organizations (public/private) in relation to agriculture, health and sanitation. With those objectives in place, a concerted effort by the government and other sectors is needed for community-driven development funds for related activities aimed at rural development. Producer organisers have to be explicit with the processes and contract the necessary skilled staff to deliver the technology transfer for projects. Such development projects incurs high costs but if the ultimate goal is to achieve sustainability and improvement in the rural livelihoods, this validates the argument of sustainable livelihoods framework for promoting a bottom-up approach, empowering the rural population to take charge of their livelihoods from their perspective.

References


