

# Food Security and Livelihoods Implications for Households left behind in the Northern Savanna Agro-ecological Zone in Ghana

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## Abstract

*There has been improvement in national food security in Ghana in recent times but there are also remarkable regional differences, with residents of the Northern Savanna Agro-ecological Zone being at the bottom. Some long term male migrants from Upper West Region leave their households behind; remit them cash, foodstuffs and other items in attempt to improve their living conditions. This has become one of the important household livelihood strategies in the migration discourse; but does this improve the food security in the households left behind? This study sought to compare the food security situation between migrant and non-migrant households. The research objectives were to identify and assess the strategies that households use to address food non-availability; and to analyse the implications of these strategies. The study was based on sustainable livelihoods framework, and it used semi-structured instrument administered through interview to collect primary data from 380 rural farming households selected through multi-stage sampling technique. Statistical Product for Service Solutions (SPSS) software and descriptive statistics were used to process and analyse the data respectively. The findings show that the main strategies for addressing food insecurity are reduction in number of meals, spending savings and consumption of less balanced meals. These have serious implications on the household capacity for sustainable livelihood to facilitate exit from poverty owing to less nutrition and impaired health status, children's absenteeism from school, reduction in assets, etc. On the basis of this, the paper suggests economic empowerment of rural farming households to enable them cater for their food needs as well as create wealth and thereby build their resilience against shocks.*

**Keywords:** *household, consumption, food security, migration, poverty, sustainable livelihoods.*

## Introduction

There is evidence that migration generally affects both places of origin and destination. Most of the literature in this field deal with issues related to destination but effects of this human movement on communities of origin is gaining place of pride in the migration discourse in recent times. Of particular interest are the influences of this social and economic phenomenon on households at the place of origin. It has been observed that male out-migration could lead to acute reduction in labour supply and higher dependency ratio

in the sending localities. For instance, some studies have shown that family members left behind suffer loss of farm labour and this is usually addressed by increasing the workload of existing members (Agyei, 2012, Mendola, 2006).

The results of various studies on relationship between availability of male labour and farm wages indicate that shortage of male labour force could lead to upward rise in farm wages in the communities of origin. This situation could push farming households left behind towards food shortage (Mendola, 2006). Thus, the decline in male labour supply could bring about reduction in farm size (in spite of increased workload). Eventually, this leads to a decline in output which negatively affects the household food basket.

The increased workload and food shortage at the household level on children of school going-age could result in absenteeism from school and poor learning outcomes. Thus, the situation could jeopardize education of the children in food insecure households owing to either their increased involvement in the household's own farming activities or economic activities outside as a means of coping with household food insecurity.

There are studies which report that wives left behind have been very productive, and contribute significantly to the sustenance of their households (Meillassoux, 1981). One of such studies was conducted among Tswana society in Botswana which indicates that, absence of husbands or male household members does not necessarily disadvantage the female headed households (Izzard, 1985). It was revealed that, whether migrant household experiences hardships or not is determined by the type of income-earning activities that the household (at origin) engages in and ability of the migrant member to contribute to their welfare by way of remittances or living arrangements made prior to their departure. Such living arrangements include child fostering in the extended family, existing investment to generate income, stock of food, etc.

Such arrangements for child care would necessarily ensure that the migrant makes the family at the origin part of his or her scheme of things. Thus, this and other assistance needed by migrants ensure that a systematic link exists between migrants and their families at the point of origin (Campbell, 2008 and Manuh, 2001).

Some studies have observed that both household and community experience some adverse effects when young men migrate (Cheney and Lewis, 1980). Thus, although migration is often adopted to address economic difficulties, it can also increase vulnerability, i.e. food insecurity (Awumbila, 2015). This is the case where household becomes too dependent on migration and its products (remittances), but either migration opportunities themselves or the cash flows they generate are no longer reliable (Waddington, 2003).

On the contrary, other authors have argued that migratory outcome depends on livelihood activities that the household left behind undertakes as well as the propensity of the migrant to contribute in terms of remittances (whether migration is risk sharing mechanism). Thus, migration of any member of the household can either enhance or undermine the welfare of the other members whether they move or stay in-situ (Izzard, 1985).

Whereas increased household vulnerability owing to out-migration of key member (husband) abounds in the literature (Mendola, 2006; McVoy, 2008; and de Haan 2000), few studies in this area have been conducted in Ghana (Agyei, 2012, Appiah, 2003). This

paper, based on empirical study on welfare impacts of rural farming households in the migration-sending communities, is to help fill this void.

## **Problem Statement**

Studies indicate that out-migration of husbands in rural farming households generally reduces farm labour and output owing to limited use of modern technology. In spite of the increased workload experienced by wives and children left behind, the households are unable to maintain or augment the level of production, and this adversely affects their ability to meet their food needs. Absence of alternative livelihood options, low income and farm output result in household food insecurity. In such a circumstance, wives are compelled to make hard choices in the short term in order to cope with this vulnerability. Some of the strategies used by a household to address food shortage could deplete its productive assets and thereby exacerbate the vulnerability faced. This study was intended to assess the coping strategies employed to achieve household food security and their consequences on their livelihoods. The research objectives were as follows:

1. To identify short term measures that households use to address food non-availability;
2. To assess the coping strategies of households to address food insecurity; and
3. To analyse the implications of the coping strategies for household food security on livelihoods.

## ***Food Security***

While famine or hunger refers to effects of inaccessibility to food stock, food security is simply about availability of food (Ayalew, 2006). This means that food security is attained when an individual or household has the appropriate quantity of food to provide the energy required to ensure healthy, active and productive lives (Sahn, 1989). So, food security includes both physical and economic access to food that meets dietary needs and preferences throughout the year (Wabiyaa Akuyo, 2017).

Conventionally, availability of and access to adequate food within a household are considered to be pre-eminent among the fundamental human needs with hierarchy of concerns highlighted by Maslow. According to Maslow, “lower order needs (physiological and safety) are dominant until satisfied, whereupon the higher order needs come into operation... If you are starving, your needs for self-esteem or status will be unimportant; only food matters” (Handy, 1985:30).

Much of the literature on food security sides with this logic and the need to satisfy food needs before and in preference to all other needs (food first approach). Thus, human needs pertaining to food are prioritized in the allocation of household resources. For instance, Hopkins (1986) argues that “food security stands as a fundamental need, basic to all human needs and organisation of social life. Access to necessary nutrients is fundamental, not only to life per se, but also to a stable and enduring social order” (p4).

The basis of the ‘food first’ approach has been contested in contemporary times as having a narrow focus. Those who share this view contend that, food security issues constitute only

one of the many issues confronted in life. Therefore, it ought to be considered in the broader concept of livelihood security (Corbett, 1988; Davis 1992). In view of this, the proponents of this school of thought maintain that the pre-eminence given to food security strategies of the poor should be reviewed and interpreted in the complex and dynamic livelihood strategies. For instance, Chambers (1981:1) defines sustainable livelihoods as “.. adequate stocks and flows of food and cash to meet basic needs. Security is but secure ownership of, or access to, resources and income earning activities, including reserves and assets to offset risk, ease shock and meet contingencies. Sustainable refers to the maintenance or enhancement of resource productivity on long term basis”.

In the sustainable livelihood framework, attainment of food security constitutes just a subset of human needs. In fact, it is seen as one among a whole range of factors that account for why poor households take decisions and spread risks, and how they balance the various competing needs in order to survive in both short and long term (Maxwell and Smith *et al.* undated). Subsequently, it is argued that focusing on the broader goal of livelihood security rather than just food security is a better option. This is because achievement of livelihood security encapsulates food security as well. Adoption of sustainable livelihood approach (SLA) ensures that coping strategies do not deplete assets to the extent of impairing future livelihoods of an individual or household. For instance, Maxwell (1990: 22) argues that “food security will be achieved when equitable growth ensures that the poor and vulnerable have sustainable livelihoods”.

Another dimension to analysis on food security is the use of natural resources during food insecure period. Prioritising efforts to address short term food needs may push concerns for the environment to the background, and thereby undermine its capacity to sustain life. Thus, livelihoods approach ensures that food security is not achieved at the expense of the environment. Thus, food should not be considered as a unique and objectively defined need at any particular point in time, independent of other needs (Maxwell and Smith *et al.* undated). This is simply because of the fact that human’s needs are multifaceted.

It is proposed that distinction should be made between “coping strategy” (short term response to an immediate access to food) and “adaptation strategy” (permanent change in the options through which food is acquired, irrespective of whether it is famine period or not). The relevance of the distinction is that, it would enable poor households alter their attitudes towards food in order, to preserve their asset base and thereby protect their livelihoods (Davis, 1988 in Maxwell 1991).

### ***Sustainable Livelihood Approach (SLA)***

This study was based on the SLA whose central theme is extent to which people build their livelihoods in terms of assets that they possess and deploy within a broader socio-economic context. Livelihood simply means the “diverse ways that people make a living and build their worlds” (Whitehead, 2002). According to Rakodi (2002), it is postulated in this framework that, livelihood comprised assets, access to these (mediated by vulnerability context as well as institutions, policies, processes and culture) and strategies, which together determine the outcome (level of living gained).

In this framework, assets are defined as resource endowments and capabilities that people

require to sustain their livelihoods and enhance their welfare (Moser and Dani, 2008). In the development discourse assets generally include human, social, physical, natural and financial resources. Natural capital includes stocks of natural resources such as location, drainage, land, climate, vegetation, wildlife, etc., which are useful for livelihood activities. Financial capital comprises productive resources such as credit, savings and insurance required for the generation of goods and services, which are prerequisite for the pursuit of a meaningful livelihood strategy. Human capital comprises the skills, knowledge, abilities and health of people which facilitate different livelihood options. Social capital on the other hand, includes social relations, networks, affiliations, associations, etc., which people use in their attempt to make a living. Finally, physical capital includes infrastructural facilities, housing, equipment and technologies which facilitate economic activities and generation of income. Any meaningful livelihood pursuit requires a combination of these capitals to ensure a desirable outcome.

Households with more assets are likely to have greater livelihood options with which they can pursue and overcome poverty. Whereas natural capital such as land is important for meaningful rural livelihoods, human capital constitutes a key factor that facilitates the pursuit of different livelihood options. Where financial resources are lacking, social capital can provide the basis for a range of livelihood opportunities and safety valves (Agyei, 2012).

Livelihood assets are considered to be critical because they constitute the basis for determining a person or household's ability to pursue livelihood activities. The asset base is influenced by the vulnerability context which includes various sources of insecurity to which individuals and their households as well as their assets are vulnerable to. Vulnerability refers to a situation where one lives at the margin or on the edge; and therefore, could be pushed into worse conditions by unfavourable change in circumstances (Ellis, 2003). For instance, absence of husband or non-availability of labour for farm activities could lower farm output and thereby lead to deterioration in living conditions of the household. Thus, vulnerability serves as the external environment within which people live and seek their livelihoods either at the sending or receiving area. Vulnerability context includes shocks, trends and seasonality that households and individuals face in pursuit of their livelihoods. It must be noted that assets can be created or destroyed as a result of shocks, trends and seasonality in the vulnerability context that households face (Owusu and Agyei, 2008).

Access to and use of assets in every society is influenced by policies, organisations, culture and relationships between individuals and organisations at various levels i.e. national, regional, district and locality (traditional area). These are primarily laws, regulations, norms, belief systems and incentives that can have positive or adverse effect on livelihoods of migrants and by extension, the sending households. Culture (beliefs, norms, language and aspirations of individuals or social groups) tends to influence the search for livelihoods of people with different socio-cultural backgrounds (Tanle, 2015). This is due to the fact that, these variables affect individual's perception, attitude and behaviour in the quest for survival.

Whether a person achieves his or her desired livelihood objectives would largely depend on the ability to adapt to the prevailing conditions in the locality. It should be noted that, understanding of policies, institutional structures and processes provides the link between

the micro (individual, household and community) and macro (private, enterprise, and government) levels power relations (Cahn, 2002). This facilitates identification of barriers and social processes that could impact on livelihood sustainability.

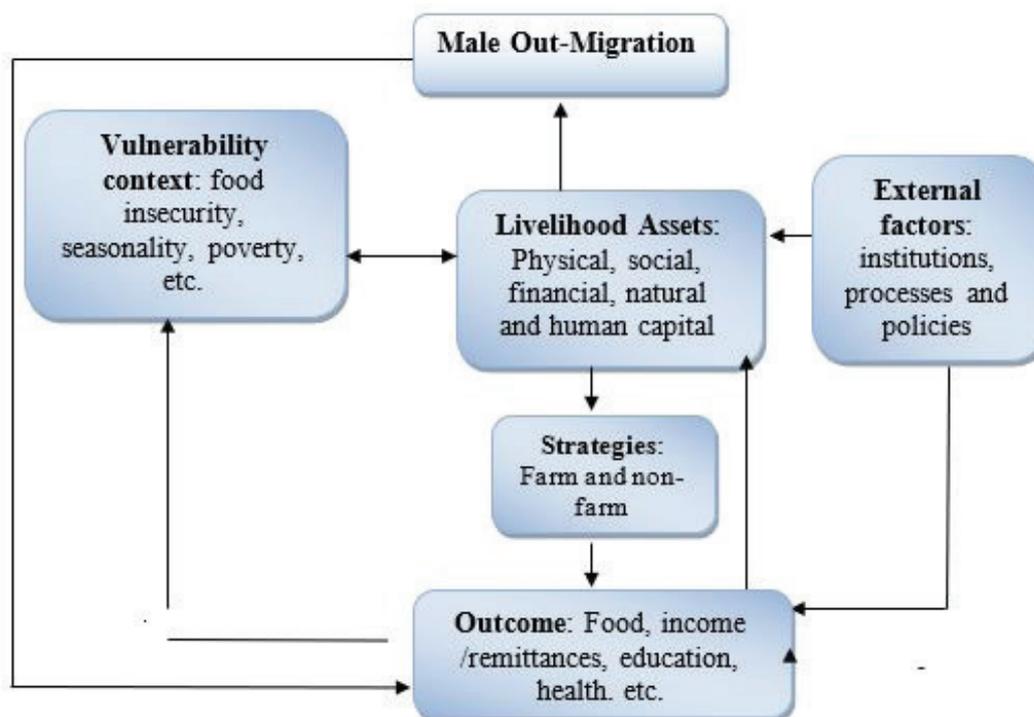


Fig. 1: Male Out-migration, Food Insecurity and Livelihoods Framework

Source: Adapted from DfID (1999).

The livelihood strategies to which people adopt is the vehicle to propel them towards attainment of their desirable outcomes. Generally, livelihood strategies are based on options available and which would result in the best outcome given access to resources. However, the rate of success depends on several factors including assets at the disposal of households, institutional structures or processes that could impact on them, degree of vulnerability they can cope with and the type of migration undertaken. Migration plays a central role in the livelihoods of households left behind because of its connections to human capital (migrants move with their long period of experience, skills, education and health status).

According to (Rakodi, 2002), livelihood outcomes are defined in terms of greater or less well-being. Figure 1 presents the various aspects of the sustainable livelihoods framework and their interconnectedness. Following from this, the coping strategies adopted to address household food insecurity could have serious ramifications on assets and the well-being of rural farming households. This is because individuals or households' direct access to and use of assets are critical to the pursuit of agricultural livelihood (strategy) and its outcome, whether desirable or not. However, it is important to note that coping strategies employed to deal with food shortages are to a large extent influenced by processes, policies, institutions and the vulnerability context that one is confronted with. It is within this

broad framework of livelihoods that, coping strategies for food security and livelihoods occurring in the Northern Savanna Agro-ecological Zone in Ghana is analysed.

## Research Methods

The study adopted concurrent control design for studying migration outcomes (Awumbila, *et al*, 2014, Agyei, 2018). In concurrent control design, the research subjects (respondents) are compared with another group with similar background characteristics but who have not been subjected to treatment. In view of the fact that, this study adopted a one-time data collection period, concurrent control design was deemed appropriate. Subsequently, the situation of migrant-sending households was compared to their counterparts in non-migrant households in the selected communities (Agyei, 2016).

The study employed quantitative data obtained through fieldwork. A semi-structured instrument was administered through personal interview. A multi-stage sampling technique was adopted for the selection of 500 households but 380 representing 76 percent actually participated in the survey. The sample size was determined on the basis of the rule of thumb (Fitz-Gibbon & Morris., 1987). The sample size was considered to contain adequate observations needed to ensure rigorous statistical analysis and inferences. The households were classified on the basis of the migratory status of the husband. Thus, a migrant household was one in which the husband was living in another district or region for livelihood purpose for at least two years (while the remaining household members were left behind).

The choice of household as research focus was based on its relevance as a key social and economic unit. Also, the household is best suited to provide valuable insights into investigation on food security which constitutes key issue pertaining to its living conditions (Corberrt, 1988). In most African societies husbands deal with decisions pertaining to production, investment and intra-household resource allocation, while wives are entrusted with issues bordering food gathering, preparation and consumption (Apusigah, 2009; Agyei, 2012; 2016). In this study, the unit of inquiry was the wife of the household head and the migrant husband was defined as one who has embarked on internal migration for livelihood purposes for a period not less than two years.

The primary data gathered were processed using Epi-data software, and later exported to the Statistical Product and Services Solutions (SPSS) Version 16 for the relevant statistical analysis. The unit of analysis was the household since decisions about production, investment and consumption in farming households in northern Ghana, are taken at the household level (Songsore, 2001).

## Findings and Discussion

### *Household Characteristics*

The 380 wives in the study were aged between 19 and 70 years with an average of 43 years. Concerning their educational attainment, majority of the wives in the selected households had no education (over 63%). It was found that one out of every four wives in the selected households had formal education. With respect to primary occupation, majority of them

were engaged in farming (89.0%). In addition, they undertook trading, agro-processing (Shea butter), brewing of local beer (pito), food vending and charcoal burning. A high proportion of the selected wives (73%) indicated that they engaged in more than one livelihood activities.

The sizes of the selected households ranged from two to 13 persons with an average of 5.3 persons. This was slightly lower than 5.5 persons recorded by Ghana Living Standards Survey Round6 (GLSS6) for the Upper West Region (GSS, 2014). The economically active members (both male and female) in the selected households ranged from one to eight with an average of 3.5 persons. When the economically active members were disaggregated on the basis of gender, it emerged that relatively high percentage of the respondent households (70.0%) had economically active males. This implies that in the absence of the head of households, there were economically active males.

Analysis of the duration of migration (husbands) revealed that it was between two and over 20 years. It emerged that four out of every five out-migrants had been away for 2 – 10 years. While 12.7 per cent of them had spent 11 – 20 years in migration, the remaining 7.3 per cent had been away for over 20 years. It also found that they make periodic return to their places of origin. The study revealed that three out of every four migrant husbands had at least returned once within six months prior to this study.

### ***Farm Production and Food Availability***

The study sought the views of the respondents on their sources of food for consumption and their respective contributions. It was found that the main sources of food for household consumption included own farm production and food remittances. It emerged that on average, households' own farm production formed the main source of food supply for consumption, accounting for 29.2 percent. On the other hand, food remittance provided 25.5 percent of household food basket (higher in migrant households than their counterparts).

In terms of household type, migrant households obtained an average of 30.4 percent of the food supply from their own farms compared to 28.1 percent for their non-migrant counterparts. In the case of food remittances, it was 19.3 and 15.1 percent for migrant and non-migrant households respectively. This means that the remaining proportion (45.3%) was met from other sources.

In terms of adequacy of food for consumption throughout the year, majority of households (62.1%) had need. This means that just 37.9 percent of the respondent-households experienced food security. In terms of disaggregation of the households which were food secured by type, it was 45.0 and 31.5 percent for non-migrant and migrant households respectively. On the other hand, 55.0 and 68.5 percent of the respective non-migrant and migrant households had food insecurity in the year prior to the study.

### ***Strategies Adopted for Household Food Provision***

The study sought to find out various means that households in the study used to meet their food security needs. Considering the fact that, food obtained from own farm and remittances formed 54.7 percent of their household food. How did the households cater for the shortage encountered? The strategies indicated by the respondents included reduction

in number of meals, spending savings and consumption of less balanced meals (see Table 1).

Table 1: Approaches used to meet food requirements by Household Type.

Strategy for meeting food needs	Household Type		
	Migrant	Non-migrant	All
Reduction in number of meals	62%	57%	<b>59%</b>
Spent savings/capital	53%	42%	<b>47%</b>
Consumed less balanced meals	24%	35%	<b>30%</b>
Sold livestock	43%	17%	<b>29%</b>
Worked for food	25%	19%	<b>22%</b>
Gathered wild fruits	31%	15%	<b>23%</b>
Borrowed money to procure food	18%	15%	<b>14%</b>
Sending children to relatives	10%	8%	<b>8.9%</b>
Borrowed foodstuffs	12%	5%	<b>8.4%</b>
n	<b>180</b>	<b>200</b>	<b>380</b>

Source: Household Survey

Analysis of the strategies employed by the households to address household food shortages shows a clear distinction between the two types of households. The critical situation of the migrant households compared to non-migrant households can be based on the relatively high percentage of the former that applied strategies like borrowing food, adult working for food, selling of livestock/other assets, spending savings or capital, gathering wild food, etc. However, relatively higher percentage of non-migrant households indicated that they consumed less balanced meal and reduced their meal sizes (see Table 1).

Table 1 shows that with exception of the consumption of less balanced meal, relatively high percentages of the households left behind than non-migrant households used these approaches (mentioned above) to meet their food needs. The other approaches included children working for either income or food and sending children to live with relatives in order to survive the hungry period. These mechanisms were employed by households left behind rather than non-migrant households (see Table 1). It emerged that that these strategies employed as a last resort constitute desperate attempt to overcome difficulties.

### ***Implications of Approaches Used***

The implications of the strategies used to meet household food needs can be classified into three main categories namely, those impinging on financial resources (borrowing money/food, selling of livestock/other assets, spending savings or capital); health and productivity (reduction in number of meals, consumption of less balanced meals and relocation of children); and gathering wild fruits. All the approaches had potential to undermine household livelihoods. For instance, gathering of wild fruits which is based on natural environment, could threaten sustainability of livelihoods of the households.

Consumption of less balanced meal and reduced meal sizes could adversely affect the health of household members and productivity. This is because inadequate food intake and consumption of unbalanced meals will undermine the health of the people. Poor or ill-health conditions will reduce time available for productive activities. For instance, the need for another household member to care for the sick and diversion of limited financial resources to settle healthcare bills constitute leakage to the household livelihood assets and thereby jeopardize their potential to create wealth to facilitate attainment of better standards of living. This is because resilience to vulnerability depends on its access and control over resources.

Severe hunger can also lead to absenteeism among school-age children and result in poor learning outcomes. For example, children could temporarily withdraw from school during the hunger (food scarcity) period if they cannot effectively cope with learning on empty stomach. This would be detrimental to their health and academic performance. In addition, if a household chooses to relocate or send children of school going age to live with relatives in a different community as a means of coping with hunger, the degree of punctuality at school will be tampered with. Though such a coping strategy would, in the interim relieve the household from hunger this would be at the expense of human resource development, which is critical to boosting the capacity of the households to exit poverty in the long term. Thus, such children will be out of school for some time if the hunger period occurs within the school term. In northern Ghana, the hunger season is usually from April to August (likely to fall within the third term in an academic year) – Quaye, 2008.

The sale of assets (livestock) and spending capital or savings are likely to have serious negative repercussions on household livelihoods (“conversion of endowments into food for survival” Derverux, 2001:249). This is because spending of capital undermines the capacity of an enterprise to generate goods and services (Maxwell, 1990). Even consumption of all farm output during the food scarcity period will deprive the household of seeds considered as productive resource for the next farming season. Thus, employing these approaches without recourse to their long term implications is likely to reduce their capacities to generate income and thereby provide for the sustenance of their members.

## **Conclusions and Recommendations**

Livelihoods are invariably intertwined with the asset base from which they are derived and to which they contribute. In view of this, there is the need for policies to strengthen asset base of poor people and expand their opportunities to accumulate, consolidate their assets in a sustainable way and thereby participate as fully entitled citizens in the development process.

Development process of change combines economic growth with improvement in social wellbeing. The extent to which people participate in, and benefit from it (development process) invariably depends on not only initial asset endowment but also whether they are able to add or how much they take away from it.

Food insecurity is poverty issue, therefore, this paper calls for mechanisms to tackle this menace head-on. It is suggested that, provision of and improvement in access to irrigation facilities in the Northern Savanna Agro-ecological Zone where rainfall variability

constitutes a serious constraint to food crop production is critical to improvement in wellbeing. This will help to facilitate cultivation of crops particularly, vegetables during the long dry season and boost their livelihoods.

Farmers in this Agro-ecological Zone should also be sensitised to embark on crop diversification. Thus, they should consider growing crops which have high potential rather than local staples as they can sell their output and use the revenue to procure food from the market. For instance, cultivation of trees of economic importance such as mango will go a long way to check land degradation (by serving as wind break, reduce erosion and improve soil fertility); address their food needs and generate income.

There is the need to expand the number of communities and schools benefiting from the School Feeding Programme in areas prone to food insecurity. This will ensure that severe food shortage does not adversely affect school attendance and undermine quality human resource development. It is also important to sensitise parents on adverse effects of absenteeism of children from school as it has debilitating effect on their overall development.

Finally, the study advocates effective sensitisation on the use of environmental resources in the Northern Savanna Agro-ecological Zone owing to susceptibility to land degradation and impair its capacity to facilitate livelihoods. Thus, in order to protect and preserve the capacity of the environment to sustain livelihoods, there is the need to create alternative livelihood options.

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