

Linking Food Security Governance and Changing Food Security Priorities: A Case Study
of the Northern Region of Ghana

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This thesis titled
Linking Food Security Governance and Changing Food Security Priorities: A Case Study
of the Northern Region of Ghana

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Abstract

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The policy and governance dimensions of food security is of growing interest among geographers, yet there is a need for more empirical research in this area that moves beyond polemical arguments. The objective of this study is to understand the local food security governance framework in northern Ghana and examine the agency of and interaction among major actors (state-NGO). This study employs qualitative analysis in the form of semi-structured interviews. Using modified grounded theory, interview transcripts were analyzed to explain how these governance relationships have affected the (evolution of) food security priorities in northern Ghana over time. The results revealed that while the government institutions know and decide the broad direction of food security priorities of northern Ghana, NGOs provide the funds and the technical capacity to address the food security needs and implement interventions in complex local contexts. Ultimately, this study suggests that food security governance in northern Ghana has benefited greatly from the cordial relationships between NGOs and government institutions with clear definition of governance rules, obligations, and responsibilities.

Dedication

To Alhaji Alhassan Mohammed.

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Chapter 1: Introduction

Background

Despite the many stated commitments to achieving global food security, there remains highly unequal distribution and access to adequate nutrition around the world. Available statistics show that most food insecure individuals live in developing countries on the continent of Asia and Africa (FAO, 2020). According to the World Health Organization (WHO), 514 million and 256 million people are food insecure in Asia and Africa respectively (WHO, 2018). The Latin America and Caribbean region follow with 42.5 million. The global pattern of food security raises important questions about how different priorities for food security have emerged in different countries and regions. Most importantly, recent increases in the number of food insecure people suggests the need to reassess food security priorities, how they are set and by whom. The Food and Agriculture Organization (FAO) and World Food Program (WFP) of the United Nations agree that food security programs and policies must be designed to suit the food security needs of developing nations (FAO, 2019; WFP, 2020). Food security interventions at the local level, sub-national food security governance (FSG) is important in shaping the extent to which food security needs are met.

Food is essential. Therefore, its scarcity or abundance gives power to those who control it and the means (resources) for its production, access, distribution, and utilization (Page, 2013). Food security is an important policy objective in every nation around the world. Food security is a global challenge; however, its intensity and dynamics differ according to location, hence calls for local governance that is well adapted to local

conditions. In fact, some have argued that food security is becoming the core of governance decision-making systems (Margulis, 2010).

The FAO defines FSG as “the formal and informal rules and processes through which interest are articulated, and discussions relevant to food security in a country are made, implemented and enforced on behalf of members of a society” (FAO, 2011). Technically, the term Global Food Security Governance (GFSG) refers to a network of all the mechanisms which include but are not limited to institutions, governments, NGOs, civil society organizations and other stakeholders (actors), that frame policies, programs, taking into consideration their power relations and coordination of actions to improve overall food security around the world (Sonnino et al, 2014; Heucher, 2019). The pillars of GFSG framework rest on the institutional capacity (information and monitoring), interest articulation and most importantly the engagement of actors to implement and enforce (legal) food security programs and policies (de Araujo et al., 2020).

The term Global Food Security Governance (GFSG) has existed since the Second World War. The establishment of GFSG has long been recognized by researchers and policy makers as a collective action paramount to achieving global food security, particularly following crises such as the 2007-08 world food crisis during which the number of hungry people around the world spiked to more than 1 billion (Clapp & Cohen, 2009; Margulis, 2013). This was partly influenced by the recognition of the impact FSG will have on the allocation of resources and the interaction of institutions.

The international commitment to GFSG is evident by the formation of the UN’s Committee on World Food Security as well as the April 2008-High Level Task Force

(HLTF) on the global food security crisis, which led to the drafting of the Comprehensive Framework for Action. Also, the Tokyo Statement on Global Food Security gave birth to the 2008 Group of 8 (G8) L'Aquila food security initiative. The Rome 2009 World Summit on Food security led to the establishment of the Global Agriculture and Food Security Program (GAFSP) trust fund. Moreover, agricultural production has been supported by the 2012 New Alliance for Food Security and Nutrition programs.

According to the FAO, effective “coordination, coherence and complementarity of the actions of organizations working for sustainable food security and nutrition are necessary to find appropriate solutions and give significant support to the benefits of global food security” (FAO, 2020). The comprehensive literature review of Candel (2014) on FSG shows that such a strong global institutional framework has contributed to progress toward achieving food security around the globe. More empirical information is needed about how sub-national food security governance has evolved and how this has shaped priorities.

Problem Statement

Ghana, an agriculture-dependent nation in the West African subregion ranks 77th out of 113 countries in the Global Food Security Index. Approximately 1.2 million and 2 million Ghanaians are food insecure and vulnerable to food insecurity respectively (MoFA, 2019; Aurino et al, 2020). Researchers and policymakers realize the important role food security governance play in formulating policies and programs to champion and ensure the right to food and food security for all. Certainly, such a task requires the collaboration and commitment of multi stakeholders and actors with diverse but

interrelated priorities. This kind of multi stakeholder engagement relies on strong institutional frameworks and building of local capacities (Werge et al., 2013; Kita, 2017: Werge et al., 2013).

Northern Ghana captures one's attention as compared to other parts of the country due to the scale, magnitude and quantitative evidence of food insecurity and malnutrition in the area. Most of the current food security governance literature concentrates on the global, continental, and subregional levels. However, there is a need to look into how food security priorities are shaped by national policies and actors at the local level. To appreciate how food security governance determines the kind of food security priorities at a local level (northern Ghana), in-depth qualitative research is required. The aim of this study is to explore how specific forms of local food security governance may drive certain food security priorities with concentration on northern Ghana.

Chapter 2: Literature Review

This chapter reviews the contemporary literature on FSG and how it has evolved in relation to wider governance changes in Africa and Ghana. Additionally, the review will explore institutional configurations and governance arrangements for food security in northern Ghana. Finally, the review will examine literature on competing food security priorities as well as the power and politics of food security governance in northern Ghana.

Historical Overview of FSG

The establishment of the G77, a group of developing countries in 1964 served a changing point in food security governance. This group saw the need for stakeholder cooperation and coordination towards food security outcomes (Margulis, 2010). Clapp and Cohen (2014) also determined that the outbreak of the 1972-1974 global food crisis sparked the interest of the contemporary intellectual and stakeholder discussions on food security governance. This crisis, according to Margulis (2010), gave birth to a lot of global initiatives and institutions towards FSG. The reaction of the developed world to the crisis led to the formation of the Consultative Group on International Agricultural Research (CGIAR) in 1971 (World Bank, 1971). The crisis also called for 1974 World Food Conference, where the term “food security governance” was coined and given meaning. Duggan and Naarajarvi (2015) assert that the international fund for agricultural development as well as the World Food program was formed in 1977 (Duggan & Naarajarvi, 2015). In 2011, a workshop held in Rome by FAO on the topic, “Good Food Security Governance: The crucial premise to the Twin Track Approach” reinforced the

crucial role of food security governance in achieving food security outcomes (Duggan & Naarajarvi, 2015).

The history of food security governance has been marked by institutional and policy innovation (Heucher, 2019). Available literature describes the food security governance system as highly fragmented and characterized by regional complexes (McKeon, 2014; Petrikova, 2019). Battersby and Watson (2018) argue that incoherent authority for food security is spread out among several stakeholders and actors, each with its own objectives and policy preferences which sometimes contradict and overlap one another.

Early food security governance was dominated by international financial institutions in the 1980s. Prominently the International Monetary Fund (IMF) and World Bank. Even though food security was not a core issue to the World Trade Organization and the World Bank, these institutions held FSG in the wake of the 2007/2008 world food price crisis. The priorities of food security governance were food production and reserves. However, Amartya Sen (1981) proved that despite the boost in food production realized by Green Revolution technologies during the 1960s and 1970s in Asia and Latin America, food access remained a fundamental challenge and the primary food security challenge for the poorest in society.

The UN's Food Security Commission is charged with the responsibility of worldwide governance of food security. It seeks to build national systems while facilitating regional coordination. Today, decision making powers in global food security governance, have moved to the G20. Therefore, in order to realize local food security

actors and stakeholders are required. According to John Shaw and the UN's sub-committee on nutrition (SCN), an estimated 49 international institutions are dealing with food and nutrition security (Shaw, 2007; SCN 1995) in addition to NGO's and CSO's.

International NGOs and the United Nations have been criticized for establishing food security governance frameworks on paper without translating such frameworks into action (Duncan, 2015; Margulis & Duncan, 2016). Current FSG frameworks are shaped by past conditions, practices and understanding of how best to improve food security. According to Margulis and Duncan (2016), some of the contemporary features of LFSG include: 1. LFSG is normatively oriented towards progressively achieving food security at the local level. 2. LFSG is not the responsibility of any single local institution but in fact is a composite of formal organizations and other local forums 3. LFSG is experiencing an unprecedented period of opening rulemaking to non-state actors, including the private sector, civil society, and new social movement (each with differentiated sources of power and authority). 4. LFSG was framed significant to national, regional, and particularly local agency owing to the 2007/2008 food prices crisis (Mayes & Kirwan, 2013; Margulis & Duncan, 2016).

de Araújo et al., (2020) studied food security governance at the local level using Brazil as a case study. The mandate, programs and plans of the central government is decentralized to local institutions. The study organizes the framework of food security governance into four different levels. First is the policy and legal framework which includes the visions, goals and priorities, cross cutting strategies, laws, programs, and actions. Second, the coordination and coherence between policies, intra and inter

agencies and multiple actors involved. Third is the implementation and enforcement which considers institutional capacity, rules and responsibilities, service delivery, accountability, and recourse mechanisms. Last, information, monitoring and evaluation of assessment, data management, progress of activities, achievement, and impacts (de Araújo et al., 2020).

Laura and Scott (2016) who address the complexities in South Africa's governance arrangement for the future food system assert that different actors in South Africa's local food security system have multiple perspectives, plans, strategies, and programs. The authors raise concerns on the efficacy of local modes and strategies of governance. The study concludes by suggesting a flexible interaction among different stakeholders of food security governance (Laura and Scott 2016).

FSG as a Determinant of Food Security Priorities

Food security has been defined at the World Food Summit in 1996 as a condition “when all people at all times have access to sufficient, safe and nutritious food to maintain a healthy and active life” (FAO, 1996). According to Clay (2002) with time, this definition has been refined to be “a state in which the entire society has perpetual, physical and economical access to nutritious foods, which are culturally acceptable, sufficient to meet dietary needs and reflecting personal preferences, for a healthy and productive life” (p 144). The UN World Food Council (1966) also sees food security as a policy that allows a country to achieve the highest level of agricultural self-sufficiency through integrated efforts to increase the production of necessary food, improve the

quality of food supply and consumption, and eliminate problem of hunger and malnutrition.

Food Security Governance has been defined as a formal and informal processes, rules, and interactions between public and private entities through which interests are articulated and food security discussions relevant to a country are made, implemented, and enforced on behalf of members of the society with the ultimate aim of the realization of food availability, access, utilization, and sustainability over time (FAO, 2010: Candel, 2014). These definitions speak to the disparity in the food security needs of different societies. The FSG framework in each jurisdiction focuses on the priorities that are of utmost importance to the local area.

With Brazil as a case study, Araújo et al., (2020) empirically examined the FSG at the local level. The research posits that the political administration of Brazil promotes local level FSG. The study notes that local regions battle with extreme poverty, harsh climatic conditions, and infrastructural deficit. Araújo et al., (2020) noted that FSG in such areas focus on sustainable food production and consumption processes. Examining the roles of national and county governance towards the realization of food security in Kenya, Wafula and Odula (2018) admits that well-structured FSG system will not entirely solve food insecurity but will lead to better food security outcomes. Haberli and Smith (2014) believes local stakeholders should properly govern agricultural foreign direct investment to regulate investment in food security and evenly distribute responsibilities and obligations between local access and the investors. In summary, there

are suggestive evidence of food security priorities in a local jurisdiction being driven by local food security governance system.

Food Security Priorities

As postulated by Moorsom et al., (2020), many African countries are subjected to competing priorities and visions deemed necessary for addressing the challenge of food security. While some priorities interrelate, others conflict (Melnikov et al., 2018). Considerable research demonstrates several broad categories of approaches to achieving food security, which I summarize here as: conventional intensive agriculture-focused approaches, sustainable and agro-ecological agriculture-focused approaches, and livelihood diversification-focused approaches (Azechum, 2017; Moorsom et al., 2020). In this section, I explore these categories in order to set a foundation for categorizing food security priorities in northern Ghana.

Conventional intensification and commercialization which boosts production has been a widely pursued food security priority (Clay, 2002; Moorsom et al., 2020). Conventional intensification is associated with the adoption of conventional inputs (pesticides, fertilizers, high yielding seed varieties, irrigation systems, etc.) diffused through Green Revolution programs of the 1960s-1980s in many developing countries, and more recently calls for an African Green Revolution advocated by well-funded international organizations such as the Alliance for a Green Revolution in Africa (AGRA) (Holt-Giménez, 2008; Diao et al., 2008). Many other literatures argue that the agricultural production together with product processing are the basis of support for food security. Conventional intensification has led to an emphasis on commercially viable

monocultures which will emphasize greater agricultural productivity, opportunities for developing food processing and wider food value chains, and market engagement by smallholders generally. Conventional intensification emphasizes technology transfer, including novel technologies such as genetically modified crops. Given that these alternative approaches have different histories, the terms that people use to classify them overlap. Conventional intensification incorporates aquaculture, crop diversification, integrated nutrient management, fertilizer application, integrated pest management, livestock integration into crop systems, permanent soil cover, water harvesting in dryland areas (irrigation) and technology harnessing (Garibaldi et al., 2017; Moorsom et al., 2020).

The second category focuses on sustainable and agro-ecological approaches to agriculture. Sustainable agriculture is based on the premise that the conventional intensification of agriculture has widespread environmental impacts. Therefore, these interventions are concerned with developing agricultural systems that protect the ecosystems while balancing food production, food system diversity, and socio-economic equity. According to Moosom et al., (2020) and Garibaldi et al., (2019) some of the sustainable agricultural practices may incorporate elements of agroforestry, agro-ecological agriculture, conservation agriculture, biological pest control, and precision agriculture. Agroecological farming is known to be knowledge, management, and labor-intensive and aims to regenerate long-term agroecosystem properties by incorporating functional biodiversity, leading to sustainable, resilient systems.

Another food security priority has been livelihood diversification for the most vulnerable to food insecurity. Livelihood diversification implies a process of dynamic change and constant adaptation (Ellis, 2000). Livelihood diversification includes both on and off-farm activities which are undertaken to generate additional income from the major agricultural activities via the production of subsidiary agricultural and non-agricultural goods and services, the sale of wage labor, or self-employment in small firms, and other strategies undertaken to minimize risk. Livelihood diversification advocates critique the singular focus on agriculture and food production. They take seriously Sen's argument that inadequate access is the fundamental obstacle to food security, particularly those whose market-based access is fragile.

Overall, many studies suggest that major challenge FSG face is the overlap of priorities among stakeholders/actors (Heucher, 2019; Candel, 2014). This is to say that the scopes of food security governance stakeholders overlap (Faude, 2014; Heucher, 2019). Margulis (2013) draws on the regime complex concept to point out the overlap between WTO and WFP on rules for food aid around the world. Margulis (2013) found that a particular institutional configurations and governance arrangements shape the emergence of priorities at the sub-national level. Therefore, it becomes necessary to find out how these governance arrangements has shaped local food security priorities.

Power and Politics of FSG: Government versus NGOs

The food security governance framework around the world is characterized by multi-stakeholder engagement with different priorities in food security policy and programming (Nyantakyi-Frimpong, 2013). Nesadurai (2013) agrees that multi

stakeholder governance requires a great deal of internal accommodation and trade of responsibilities and obligations. Officially, there are more than 4,463 registered NGOs in Ghana, majority of which operate in the water and sanitation, education and training, health, agriculture and food security, and energy sectors (USAID, 2010). As argued by Kita (2017), for a developing country like Ghana, capacity shortfalls and inadequate state funding have shifted the locus to NGOs and civil society organizations (CSO). The Ghana Coalition of NGOs in Nutrition and Food Security as well as international NGOs concentrate on humanitarian response and there have been questions on the effectiveness of interventions and their level of accountability is questionable (Cheema, Mehmood, & Imran, 2016; Espia & Fernandez, 2015; Izumi & Shaw, 2012a,b; Jones et al., 2016; Tierney, 2012; Kita 2017).

Most early studies have investigated various aspects of food security in Northern Ghana. Alhassan (2015), for instance, did a situational analysis of food security in one of the five regions that make up northern Ghana, the Upper East region. Alhassan (2015) found that NGOs influence is widely felt in the region as compared to the central political government institutions. Avea et al. (2016) looked at the contribution of NGOs and agencies to food security in northern Ghana and noted that almost every food security program is either partially or fully championed by either one NGO or the other. It is therefore necessary to find out the relationship between NGOs and government institutions in northern Ghana and who wields power and control of food security priorities.

Wafula and Odula (2018) agree food security of a country is impacted by national or local food organizations, and institutions but criticizes the extent to which FSG has been monopolized by the global donor community, questioning their accountability. According to Wafula and Odula (2018), improved food security has characterized countries whose national government made plans for County level food security governors. Wafula and Odula (2018) outlines reasons that food security should be thought of as a public good hence the responsibility to the government. According to the district (County) level has the administrative capacity while the national level government have a technical capacity.

The systematic review on food security governance conducted by Candel (2014) revealed gaps in the field of research. Candel (2014) highlighted the need for studies on food security governance and sub-national and local level. Pèrez-Escamilla et al., (2017) has criticized the prescriptive nature of the literature on food security governance hence the need for an empirical study.

Purpose of the Study and Research Questions

The proposed research hypothesizes that a particular governance configuration results in certain priorities for food security. The purpose of the research is to understand the food security priorities among these actors in northern Ghana. Specifically, this thesis addresses and seeks to answer the following questions:

1. What is the current food security governance relationship between actors in northern Ghana?

2. How do these institutions interact and where is power and influence on food security governance concentrated?
3. How have these governance relationships among actors affected the (evolution of) food security priorities for northern Ghana over time?

Apart from the relevant information this study will produce; generally, research on food security governance and priorities is needed to constantly inform and educate both policy makers and the public. This research answers the call by Nyantakyi et al. (2017) for an increase of attention in addressing the gap in literature on food security governance at the sub-national level. Smucker et al. (2020) also calls for further studies to evaluate the changing dynamics among multiple levels of governance. Moreover, Candel (2014) suggests the need for studies to be conducted on food security governance at sub-national and local levels. Pèrez-Escamilla et al., (2017) proposes that such studies should be empirical and not prescriptive. Finally, research on food security governance in West Africa is still a virgin territory and important knowledge gaps remain.

Chapter 3: Methodology

This chapter describes the methodological approach used to conduct this research, including the methods for data collection and data analysis. It begins with the sampling of organizations and respondents. The next section looks at how the interviews were conducted, followed by the recruitment method, inclusion criteria and the general characteristics of participants used for this study. Finally, the chapter discusses the coding and analytical approach and the area under used for the study.

Qualitative methods were suitable for this study because the research seeks to understand local food security governance from the perspectives of the stakeholders involved (Winchester, 2000). The primary data for this study was gathered using a semi-structured interview as described in the previous chapter. Bryman (2008) defines semi-structured interviews as “a context in which the interviewer has a series of questions that are in general form of an interview schedule structured but can vary the sequence of questions. The questions are frequently somewhat more general in their frame of reference from that typically found in a structured interview schedule. Also, the interviewer usually has some latitude to ask further questions in response to what is usually seen as significant replies.” Semi-structured interviews enable researchers to explore meanings and contexts that cannot be addressed with quantitative methods to be filled (Dunn, 2010). The qualitative data collected from the interviews were audio-visually recorded, transcribed and summarized, which were combined to form the discussions related to the interviews. In analyzing the data to answer the three major research questions, other themes were formed that helped to further our understanding on

the subject matter. These themes are poverty and food security; accountability and transparency; public sector management and governance; and the broad theme of food security governance.

Sampling of Organizations and Respondents

Stratified and purposive sampling techniques were employed. Stratified sampling was used to select five local food security focused non-governmental organizations (NGOs) based on relevance and recent food security programming and activities in northern Ghana. Three main national/state institutions; northern region sector of Ministry of Food and Agriculture (MoFA), Planting for Food and Jobs (PFJ) regional directorate, and the Savannah Accelerated Development (SADA) directorate were included based on merit. Interview participants were purposefully selected from these organizations and institutions. Two (2) Key members (senior leadership) were selected from the Ministry of Food and Agriculture (MoFA), the regional Planting for Foods and Jobs, (PFJ), the regional directorate of the Savannah Accelerated Development Authority (SADA) and the Coalition of NGOs in Nutrition and Food Security (CONFEC) for their first-hand knowledge on food security governance in northern Ghana. Each of the five initially selected participants were emailed (see appendix D) to willingly forward a recruitment email to two other people to be interviewed. These informants were selected for their specialized knowledge and unique perspectives on food security governance issues in northern Ghana. The interview with initial selected participants was flexible and allowed participants to suggest other prospective resourceful stakeholders to be interviewed.

Key Informants Interviews

The interviews were semi-structured allowing a free flow of ideas and information among acquaintances, allowing a free flow of ideas and information. A short interview guide informed by the study questions was prepared. To ensure a representative sample, care was taken to ensure the selection of informants with various points of view on food security governance to ensure divergent interest and perceptions. Questions were framed carefully, sequentially, and spontaneously, with probes for information. Notes were taken whilst audio visually recording. Interviews were conducted via Zoom, Teams and Skype to ensure the safety of the respondents and the researcher during the Covid-19 pandemic. Participants were neither rewarded in kind or cash for participating. Key informant interviews allowed for flexibility to explore new ideas and issues. Semi-structured individual interviews for participants, which lasted between 45 to 90 minutes. The objectives of the interviews were conducted to capture stakeholders' experiences of food security governance for the time they have worked with their respective organizations.

Recruitment Methods/Procedure of Participants

Participants were recruited from state government institutions such as the ministry of Food and Agriculture (MoFA) food banks, non-governmental organizations (NGOs) and civil society organizations (CSOs). Each participant was provided with a consent form (see appendix B) sent via email (see appendix C) in English and was informed that they could withdraw from the study at any point. The participants were contacted and recruited by a phone call (see appendix D) and recruitment email (see appendix E). A

stratified and snowball sampling technique was utilized to obtain the proposed sample size of twenty (20) participants. To this end, the researcher established relationships and partnerships between stakeholders. Drawing on community and professional partnerships, the data collection was designed and carried out in collaboration with those who work most closely with the subject under study. The goal was to obtain enough participants to attain theoretical saturation, that is, to reach the point where additional interviews would not generate new insights and would be rendered redundant, but where interpretations of the data met the need for theoretical expectations (Zhang & Creswell, 2013).

Inclusion Criteria

The selection of the participants was made through purposeful strategies and the recruitment of participants continued until saturation was achieved; the selected participants were those who were best able to provide information to answer the research questions and enhance the understanding of the phenomenon under study. The participants were considered suitable for interview if the following inclusion criteria were satisfied: (i) they work for an institution or organizations that undertake a food security related program. This was to make sure a respondent is well versed in the field of local food security governance (ii) they have had hands-on experienced in food security programming in the last year; and (iii) they were able to recall and articulate conscious experiences of food insecurity in the English language. This is because it was expensive to recruit local translators.

Participants

The total sample for this study was 20 participants. All participants are English speakers who have their bachelor's degree, master's degree, and doctorate degree. Table 1.1 below shows the percentage of participants and the brackets.

Table 1

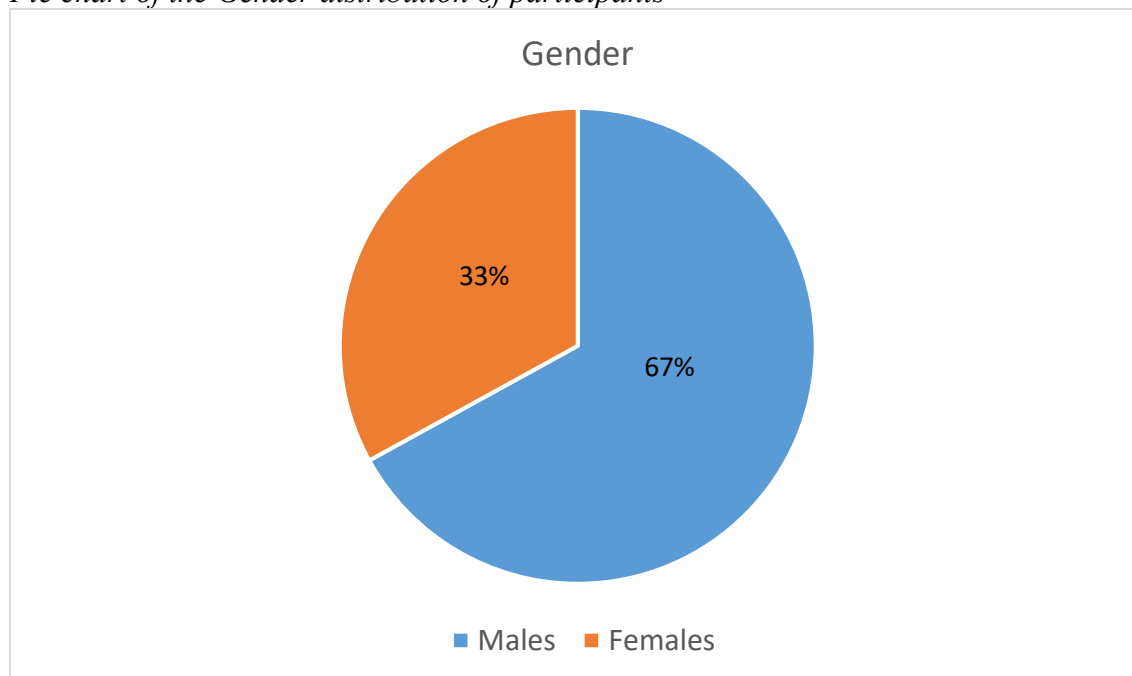
Percentage of Participants and their Age brackets

Ages	Percentages
25-29 years	8%
30-34 years	16%
35-39 years	15%
40- 44 years	19%
45 years and above	42%

Most of the participants were between the age brackets 45 years and above which shows that most of them are quadragenarians who have spent most of their years working in the field of food security. Next, we will look at the distribution of gender of the participants. Majority of the participants identified as males. Figure 1.1 below depicts the gender distribution of participants.

Figure 1

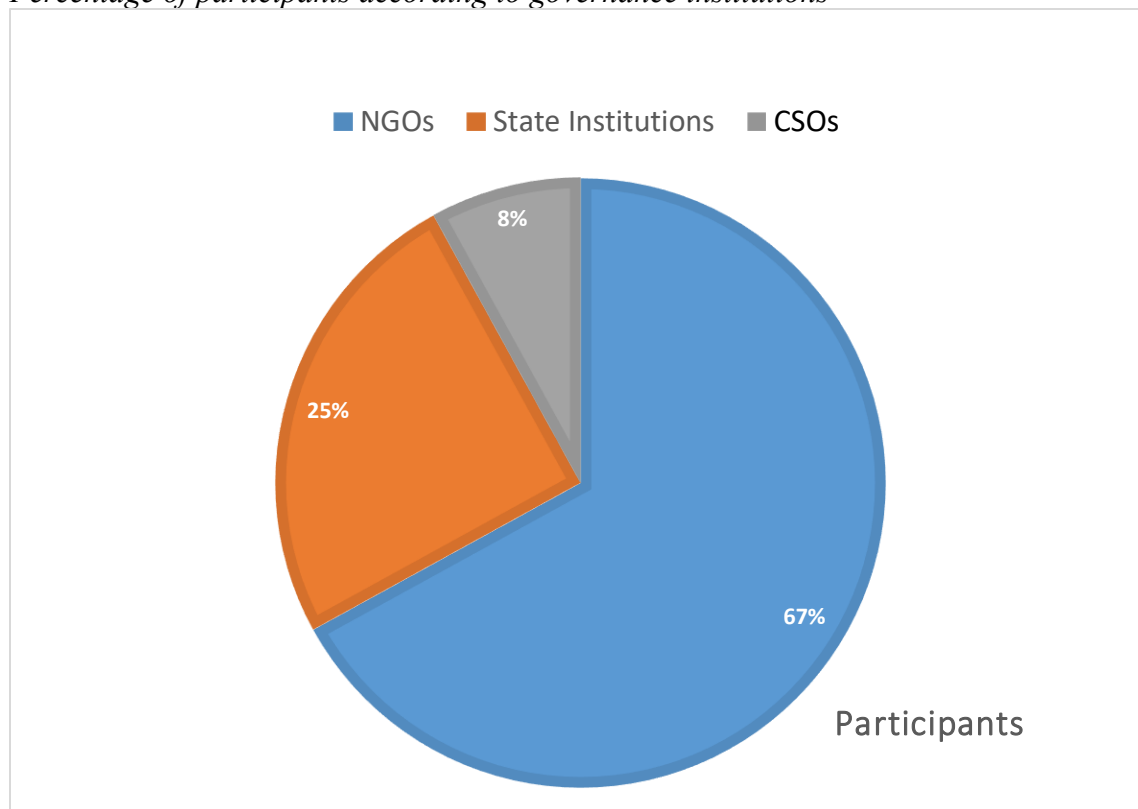
Pie chart of the Gender distribution of participants



Also, participants either worked with/for an NGO/CSO, or any of the state institutions. The distribution of participants according to NGOs, state institutions and civil society organizations. Figure 3 below shows the distribution of participants according to the governance institutions.

Figure 2

Percentage of participants according to governance institutions



Coding and Analytical Approach

Recordings were transcribed in Microsoft Word. The transcribed interviews were transferred into NVIVO for advance levels of coding. Meaning context was used as the unit of analysis for coding and description. The data were coded for meaning rather than sentence by sentence or paragraph by paragraph (Braun & Clarke, 2006; Bryman, 2016). The thematic analysis used in this research was guided by the thematic analysis developed by Braun & Clarke (2006). I undertook the following five iterative steps. First, to become familiar with the data sets; Second, initial codes were generated; Third, I

read through each transcript to be immersed in the data. Fourth, themes were reviewed. Fifth, themes were defined and named to produce the report. Thick, rich descriptions were obtained by presenting the participants' voices under each theme and by providing a detailed description of each theme. The data analysis was guided by themes from the research objectives, interview protocols, and theoretical approaches from the literature reviewed (Hay, 2016).

The Study Area

The study is concerned with food security governance in northern Ghana, which comprises of five administrative regions (Savannah, Northeast, Upper East, Upper West, and Northern regions). At the time of the design of this study, there were sixteen administrative regions of Ghana (previously ten regions), and these three selected regions were collectively referred to in this study as the northern sector of the country. This area accounts for 41% of the total land mass of the country. As at the last general housing and population census in 2010, the three regions had a total population of 4,228,116, representing 17.1% of Ghana's total population. The average population growth of the region is 2.0%, lower than the national population growth rate of 2.5% (GSS, 2012). Using these data, the expected population of the region by 2030 is 7,061,974. The map of Ghana showing the study area and selected districts is shown in Fig. 1.3.

Figure 3

The map of Ghana showing the study area (Antwi et al., 2014)



Unlike in the southern and middle parts of Ghana, the northern part experiences a unimodal rainfall. The rainfall in the regions ranges between 916 and 1169 mm. The soil pH is within 4.5–6.8 with about 0.5–2.5% organic matter (MoFA, 2013). Agriculture is the main economic activity, employing 71.9% of the economically active group; the three northern regions have the highest proportion of agricultural households and are far above the national average of 45.8% (GSS 2012). The region produces a wide range of food crops, notably maize, rice, millet, groundnut, sorghum, and yam.

The region is more exposed to climate change risks than other regions of Ghana (Antwi et al., 2014). Evidence suggests that there are increasing periodic floods, droughts and windstorms that continue to destroy properties and lives in the region. Nkegbe and Kuunibe (2014) noted that the physical and economic vulnerability of the northern part makes households in the area more negatively affected by climate change. The region is located farther from the pole, which means that the region is naturally warmer than the southern parts. The implications are long dry season associated with difficulty in food and water access (Osarfo et al. 2016).

Chapter 4: Findings

Introduction

This Chapter presents an analysis and interpretation of the data gathered from the respondents in this study. The main findings of the interviews are discussed within the three broader research questions that highlight the main themes of this study.

Key Findings

Food Security Governance Relationship between the Government and NGOs in Northern Ghana

Respondents revealed that Ghana practices a unilateral system of political administration. However, owing to the decentralized system in Ghana, ministries and departments at central/national level devolve their functions and resources to established local authorities. This implies that the headquarters of the major government authorities are represented at the District, Municipal and the Metropolitan level. According to the northern regional director of MoFA, *“this has made it possible to have local offices of ministries at the local level in northern Ghana”*. The District/Municipal/Metropolitan offices implement the policies and programs of the central government at the local level.

The study revealed that all local NGOs concerned with food security and nutrition fall under a common umbrella known as the Ghana Coalition of NGOs in Nutrition and Food Security (CONFSEC). CONFSEC is an active forum for coordinating and sharing of information. *“Our coalition provides a strong civil society platform for scaling up nutrition and food security interventions across the nation through broad based participatory approach.”* said, the chairman of CONFSEC.

The semi-structured interviews revealed that, state institutions and NGOs have formed symbiotic relationships in northern Ghana. “*The relationship between the local government and NGOs is very good. Government provides space for NGOs to voice out their views and also undertake their programs without interference*, said, an NGO officer. NGOs’ legitimacy largely relies on government. This is to say that, for any NGO to operate in any part of Ghana, they need approval from government. In implementing food security programs and projects, NGOs often seek technical support from relevant state departments and authorities, thereby promoting collaboration and coproduction of interventions.

Alongside these formal non-governmental organizations, customary chieftaincy is another pivotal formal non-governmental form of authority that interacts with the state. The administrative system recognizes the authority of the traditional authorities in matters relating to food security. In the words of one respondent: “*chiefs are custodians of the lands in northern Ghana; therefore, it is customary to involve a local chief in every food security initiative and program.*” For example, for the land authorities to register a land lease, it must be signed by a chief. Agricultural land is considered a valuable asset and a major input for food production in northern Ghana. However, the power to lease or sell land rest in the arms of the custodians of the land which are more often the chief of the community. In certain instances, state lands originally belonged to the chiefs. The Lands Commission is the government institution that takes charge of lands that has been acquired by the government. Chiefs therefore has the overall control over who owns what land in northern Ghana.

Food Security Priorities in Northern Ghana

Food security can be addressed in different ways: from food access, food production and supply, to environmental sustainability-focused approaches. It was identified from the interviews that the various actors (NGOs and state authorities) in northern Ghana, are either involved in agriculture intensification, sustainable agriculture, and/or livelihood diversification programs. These priorities are championed through policies, programs and projects. The interviews revealed that the food security governance system in northern Ghana is interactive, collaborative and enables a diversity of institutions pursuing all three of the major pathways to improved food security identified above, in which no particular approach appears to be dominant.

To begin, the major food security priority in northern Ghana as revealed through the interviews is intensive agriculture. For over a decade, the growing of crops the rearing of farm animals for both human consumption and sales has been the priority. This is evident in several of the food security programs implemented in northern Ghana.

First, the “Planting for Food and Jobs” program. The municipal director of MoFA stated that, *‘when statistics showed a decline in agricultural production, the central government introduced the program, “Planting for Food and Jobs (PFJ)”* The program had five implementation modules. (a) Promotes Food Security Crops, namely: maize, rice, sorghum and soybean and vegetable crops. This has over the years been expanded to include groundnut, cabbage, carrots, cucumber, lettuce, cassava, cowpea, plantain, and Orange Flesh Sweet Potato. The other four Modules are: Planting for Export and Rural Development (PERD). (b) Rearing for Food and Jobs (RFJ); Greenhouse Villages;

Agricultural Mechanization Service Centers (AMSECs). The program implementation ministry, the Ministry of Food and Agriculture seeks to maximize the usage of improved seeds and fertilizers by farmers; (c) Resource Extension officers to reach out to farmers; Organize field crop demonstrations to showcase newly improved crop varieties for farmers' adoptability; (d) Provide marketing infrastructure for farm produce; (e) Provide incentive packages to attract the youth into farming. In the words of one respondent. "The Bawjiase and Akumadan Greenhouse Villages for example train students to acquire knowledge in modern farming and vegetable cultivation under the greenhouse technology".

Secondly, irrigation has emerged as a major component of an agricultural intensification-focused food security agenda. The climate of northern Ghana previously allowed for farming only in the wet season. Therefore, irrigation and mechanization make it possible to farm all year. As asserted by one respondent, "*the government's "One Village, One Dam" is not doing bad*". Another reiterated, "*you know the dry season is very severe in our farming communities, but the government dams are helping*". A chief executive officer said, "*now, our people don't have to farm only in the rainy season because there are dams for irrigation*". The "One Village, One Dam" is one of the political flagship policies under the Ministry of Special Initiatives which was to improve irrigation for agricultural production in all seasons in northern Ghana.

Respondents emphasized the significance of the establishment of a separate government agency in northern Ghana, the "Northern Development Authority (NDA)". Among the mandates of NDA is to green northern Ghana, which experts have warned is

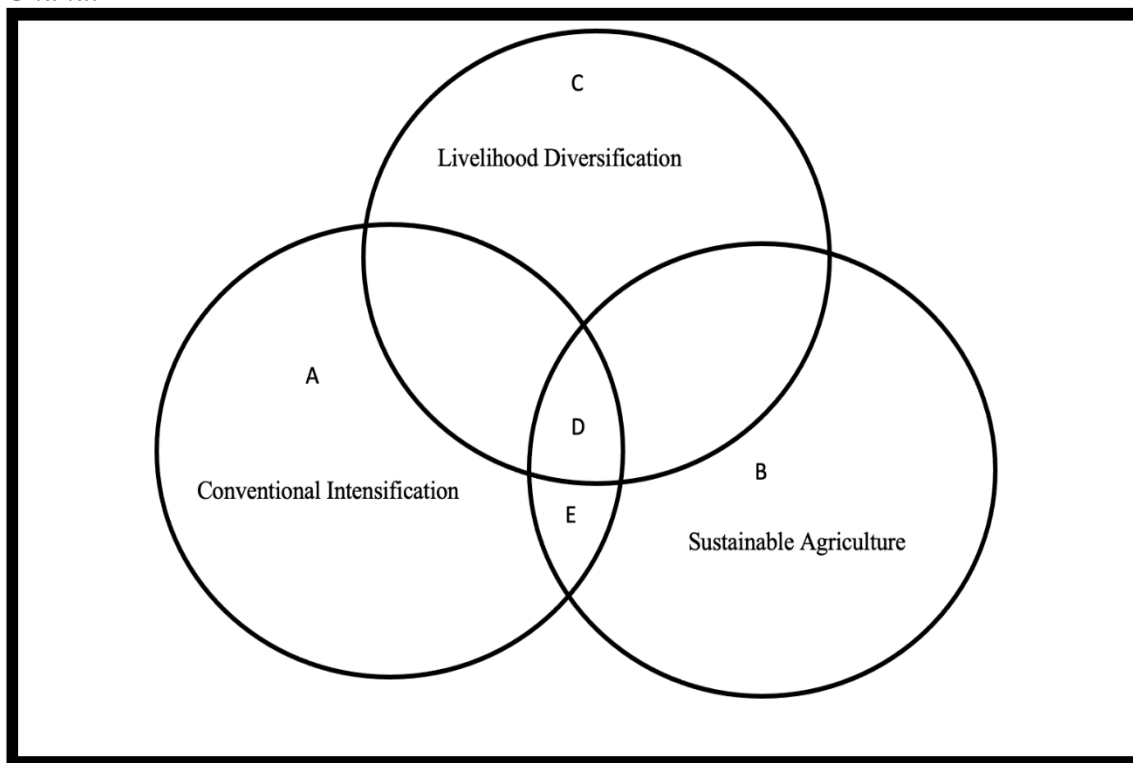
at risk for desertification in the next decade. The above policies and programs clearly show the priority to intensify agriculture in northern Ghana.

Another food security priority on northern Ghana as revealed in the interviews has been to encourage livelihood diversification. This is evident by the “Livelihood Empowerment Against Poverty (LEAP)” program. LEAP is a cash transfer program for extremely poor and vulnerable households with “orphaned and vulnerable children (OVC) or persons with severe disability without any productive capacity and elderly persons who are 65 years and above” (LEAP, 2010).

There are various actors, institutions and authorities involved in the local food security governance system in northern Ghana. The study identified the key ones. Figure 4 below depicts the institutions and authorities in the LFSG system in northern Ghana.

Figure 4

Institutions and Authorities in the Local Food Security Governance system in northern Ghana.



A	D
Irrigation Development Authority	Ministry of Food and Agriculture (MoFA)
Water Resources Commission	Forestry Commission
	Food and Drugs Authority (FDA)
C	Ghana Coalition of NGOs in Nutrition and Food Security
Ministry of Gender, Children and Social Protection	Rural Development Youth Association
Ministry of Water Resources, Works and Housing	Ghana National Association of Poultry Farmers
Northern Development Authority (NDA);	Ministry of Special Initiative
Livelihood Empowerment Against Poverty (LEAP) Secretariat	Food and Agriculture Organization (FAO)
	United States Agency for International Development's (USAID)
E	Plan International
Peasant Farmers Association of Ghana	
Lands Commission	
Grains and Legumes Development Board	
Planting for Food and Jobs Secretariat (PFJ);	
World Food Program (WFP)	

The Venn diagram (Figure 4) above is a graphical representation of the FSG institutions/authorities in northern Ghana and the food security priorities pursued. The main food security priorities as represented by A, B and C are conventional

intensification, sustainable agriculture, and livelihood diversification respectively. “A” represent institutions/actors that that privatize conventional intensification only. Actors/institutions/authorities that prioritize livelihood diversification only are represented by “C”. In the same way “B” represents sustainable intensification. Some actors pursue all the three priorities. This is represented by “D”.

Interactions Between FSG Actors, Where Power and Influence is Concentrated?

All managers of state institutions indicated that there are measures to ensure that food security institutions are carrying out their roles and responsibilities. These, according to them, revolve around the Annual and Quarter Performance Plan, from which, targets are set at the beginning of the year for each state institution. A quarterly reporting system is a mandatory part of the monitoring and accounting process. Regarding food security issues, local institutions work to provide these reports which are then forwarded to the head office of the sector Ministry housed in the nation’s capital, Accra.

What is interesting about this process is that local offices in northern Ghana have no control, and very little input into these processes which revolve around these targets that pre-determine the kinds of actions that they are required to engage in. To reiterate, one of the government institutions manager’s response, “things are not flexible enough and do not provide enough variation to the optimum solution. almost all the big decisions come from Accra”. Accra is the capital of Ghana, where all headquarters of government agencies, ministries, and the seat of the three arms of government are located. Transparency within the food security governance realm, according to the managers

interviewed, is focused on the budgeting process. Local managers of state institutions work with the head office in Accra who together plan around the provisions in the budget. Resources are then allocated around the needs of communities within the parameters of the annual and quarterly plans. Opportunities for dialogue towards improved performance are present at this level, with record keeping being a priority as part of complying with the contents of the performance plans.

It was noted that whilst resources are available, they may not be available at the time that they are needed. According to one respondent, “that one (unavailability of funds) is normal, it happens every year and to every state office, no office gets their money in time, and you will not be given the budget you present”. As a result, they have had to find innovative solutions to this dilemma through the reorganization of the ways in which they plan and implement. This kind of planning and foresight needs to be encouraged amongst managers. Managers indicated that the delay in funds impacts adversely on some key performance areas. This needs to be addressed by the Ministry of Finance who need to reassess the urgency of the work of the food security institutions and prioritize their budget allocations. These challenges, combined with the preoccupation with targets set out in the performance plan, as opposed to the needs of the communities, provides a further challenge in state institution’s ability to respond to the needs of communities. This deepens government’s reliance on NGO as co-funders of food security initiatives.

It was discovered from the interviews that most local-based resilience and food insecurity reduction programs have been introduced or championed by NGO networks

which is embedded in the broader national framework. However, NGO operations are multifaceted and multilevel. At local level, they provide capacity-building support to council technical staff. Some NGOs provide direct financial support to state institutions to implement food security programs. They also play prominent roles in development and funding of national instruments such as policies and plans, carry out advocacy work, and participate in coordination structures.

How Food Security Governance Relationships among Actors Have Affected the (Evolution Of) Food Security Priorities for Northern Ghana over Time

All managers indicated that, whilst each food security governance actor in northern Ghana is pursuing a specific food security priority, the goal is to address food insecurity. It was noted in the interviews that, food security priorities have been modified and refined over time. The collaboration with international food security organizations has reduced the burden on state institution and local NGOs.

According to the respondents from MoFA, “agriculture is the backbone of the economy of Ghana”. The ministry (MoFA) for instance was created as a lead agency and focal point of the Government of Ghana responsible for developing and executing policies and strategies for the agriculture sector within the context of a coordinated national socio-economic growth and development agenda”. Other state institutions share in this vision with the goal of achieving food security.

Respondents mentioned key food security priorities that has been the focus of food security governance in northern Ghana. This includes nutrition focused programs, strengthening of local food systems, capacity strengthening, as well as policy making.

These programs are mostly pioneered by international organizations in collaboration with the local institutions. In the words of a respondent, “the people from WFP have been coming here, their ideas are very great, and it has been helpful; They tell us what they want us to do, and we tell them how the local people will want it done”. “We have a very good relationship with them”.

Respondents emphasized on how intensive agriculture has been prioritized. It was noted in the interviews that, Ghana is a focus country for the United States Agency for International Development’s (USAID) “Feed the Future” initiative. This initiative is contributing to the local commitment to food security, building on a common purpose and the food security governance priorities shared among actors. In northern Ghana, the “Feed the Future” initiative focuses mainly on soyabean, maize and rice production. The initiative reinforces the MoFA’s food security priority of improving the resilience of vulnerable households in northern Ghana. The program also improves the sustainable management of marine fisheries – an important source of protein for poor families, in the north, where dried fish is a critical part of the diet. Feed the Future supports research into better crop yielding seed varieties, increases farmers’ access to credit and inputs, improves critical irrigation infrastructure, links farmers to markets, and works to support stronger policies to encourage private sector investment. A new agroforestry project in northern Ghana will focus on improving natural resources, including tree-crops that provide income to women and are an important source of food and nutrition to families during the lean months leading up to the first harvest of the year. An emphasis on climate-smart agriculture across Feed the Future projects reduces the vulnerability and

risk to farmers, increases soil fertility, reduces production costs, and increases yields. All local government institution heads interviewed reiterated that these activities are aligned with the central Government of Ghana's priority of poverty reduction, food security, sustainable management, and conservation for northern Ghana.

The past decade has seen the reduction of hunger and malnutrition, increase school enrolment, attendance and retention, and boost in domestic food production in deprived communities of northern Ghana (Antwi et al., 2014). The interviews made it clear that, this is as a result of the implementation of the Ghana School Feeding Program (GSFP), a collaborative initiative of the local Ministry of Gender, Children and Social Protection (MGCSP) and the comprehensive Africa Agricultural Development Program (CAADP). This initiative is also in line with the United Nations (UN) Sustainable Development Goals (MDGs) on hunger, poverty and malnutrition.

In the end, respondents made several suggestions on how food security governance can be improved. Respondents called for a local food security policy to better guide their actions around food insecurity. "You see, unity is strength" one manager proclaimed, it is important for stakeholders of food security to be affiliated to a common body so that issues of compliance can be addressed. Also, to maintain food security standards, Stakeholders need to engage in more effective planning. Moreover, one suggestion that run through all the interviews was that the beneficiary base of the local community needs to be identified for effective food security programs and projects. Again, food security stakeholders need to adopt a hybrid (a mixture of traditional and modern) governance principles as the driving force behind food security interventions

and activities. To add to the above, local involvement will ensure the sustainability of food security projects. Reports and accounts of food security governance must focus on actual impact in the lives of the local people than just statistical reports. These suggestions must be considered as part of a way forward towards improved interaction among actors and stakeholders within the food security governance system in northern Ghana.

Chapter 5: Discussions and Conclusion

Introduction

This chapter reviews and concludes the study. First, a brief review of the research is presented. In this part, all issues such as the research objectives, the framework and research methodology are briefly discussed. Secondly, a summary of the main findings of the research is presented. Next, the significance of this research in the immediate context of northern Ghana and in the field of local food security governance is examined. Finally, recommendations for further research ends this chapter.

The scope of the following conclusions is not limited to the context and historical characteristics of northern Ghana. Thus, applied to other situations, these conclusions may yield correct assumptions. These conclusions are relevant to the developing field of local food security governance.

Overview of the Study

This study analyzed how local food security governance stakeholders (actors and institutions) shape the priorities for food security in northern Ghana. In doing so the study has analyzed the perspectives of representatives and members both NGOs and government institutions who have been actively engaged in the local food security governance in northern Ghana. The literature review concentrated on the competing and consequently the dominant food security priorities. Finally, available literature on the power and politics of between local NGOs and government institutions within the realm of local food security governance was reviewed. The findings were discussed under selected components and analyzed in relation to the literature to give an overall account

of how the governance arrangement, relationship and interactions between NGOs and government institutions in northern Ghana has shaped the priorities of food security based on the responses from the selected respondents.

Summary of Findings

The findings showed that government institutions are dominant and powerful in the setting of food security agenda and priorities in northern Ghana. The interviews revealed that the central government has a well-structured national food security plan which is to be implemented at the local level. Therefore, the various subnational government institutions see to the implementation of these policies.

However, the findings revealed that government institutions depend on NGOs for financial support. It was emphasized that NGOs are financially stronger than local government authorities, which creates a co-dependence between government and NGOs. In northern Ghana, there is no central pot of funding for food security programs. Instead, food security programs in northern Ghana are funded by NGOs. Local government authorities have a hard time implementing government programs if NGO funding priorities for food security depart from that of government. Indeed, local government institutions are often forced to write proposals to NGOs to secure funding for their food security programs, thereby adopting the funding NGO's framing and priorities. This hinders the ability of government institutions to effectively deliver and administer their food security agenda. Broadly, there are frequent calls for sufficient allocation of resources from different levels of government to improve food security outcomes. The findings also revealed that governance arrangements often fail to address food security

given that more resources are spent on shaping their architectural features as opposed to proper consideration for sustained resources for their effective implementation.

Unlike findings presented by Espia and Fernandez (2015) showing that NGOs are considered outsiders by local communities, respondents in this research suggest that most communities in northern Ghana consider NGOs to be closer to them than government. Their involvement in both humanitarian and livelihood enhancement and diversification activities make their presence in northern Ghana's communities conspicuous. Moreover, as argued by Izumi and Shaw (2012a, b), the proximity of NGOs to communities makes them better placed to understand the needs at the local level and bridge the gap between policy and practice.

Another sentiment that was echoed by most of the interview participants is the political will, leadership, and prioritization (Candel, 2014) of local government authorities. Many participants echoed similar sentiments, pointing towards lack of coordination and leadership as impediments to sustained food security interventions.

A Symbiotic Relationship Between Government and NGOs

The decentralized political landscape and administrative system in Ghana favors local governance of food security. Ghana is addressing food security through interventions of the state, non-governmental organization, and civil society organization. About 72 percent of respondents see the Ghana Coalition of NGOs in food security and nutrition as the prime organizational vehicle for strengthening local food security governance in northern Ghana. These officials who participated in the study view NGOs as parallel to local food security government authorities. The respondents pointed out that

the government collaborates with NGOs. This suggests that relationship of the government with NGOs is mediated by political powers and the local government authorities dominate. The accountability factor remains solely in the hands of the government in contrast to a partnership with any NGO where both partners are accountable for each other. Further to that, given the mindset of government officials about NGOs, it may be inferred that the government doesn't want to be influenced by the NGOs in policy related matters. In such a situation NGOs follow a conscious policy to maintain non-adversarial relations with the government. There is acknowledgment among this stratum of local government officials who participated in the study about NGOs' work at grassroots level, mobilization of communities for food security programs, imparting resilient and sustainable means. They view these approaches as means to achieving progressive local food security in their communities. Thus, they are optimistic in working closely with the Coalition of NGOs.

There has been a Paradigm Shift in Food Security Priorities Due to Government NGO Relationships

The findings indicated that food security priorities in northern Ghana have changed over time due to the governance arrangements. The introduction of the central government's flagship program, "Planting for Food and Jobs (PFJ)" saw the commercialization and intensification of agriculture in Ghana and the entire country at large. Again, the findings revealed that, in 2011, Ghana introduced the Biosafety Act to legally introduce Genetically Modified Organisms (GMOs) into the country. This Act allowed farmers to use GMOs in their crop production process. Moreover, for the

purposes agricultural intensification, the findings revealed that northern Ghana has benefited from the “One Village, One Dam” policy. This policy aimed at agricultural irrigation and mechanization exclusively for the people in northern Ghana. Another, government policy, “One District, One Factory” has attracted foreign direct investment in plantation. Northern Ghana has been the hub of livestock production following a conscious food security priority to boost meat production. The study however revealed that, current priorities of food security governance as propagated by NGOs and foreign donors focus on “access” and “resilient” policies.

A Framework for Food Security Governance Is Needed to Strengthen New and Existing Governance Arrangements

Participants raised concerns that local food security in northern Ghana is being addressed in silos and there is a lack of communication and a coordinated approach. Little is known about appropriate forms of local food security governance arrangements that are realistic and fit community needs and priorities (Candel, 2014). As the local government institutions and actors look to develop coordinated approaches, a framework for food security governance is needed to strengthen new and existing local food security governance arrangements. It was also revealed that top-down decision-making, limited capacity, funding, and absence of strategic vision has been hampering local food security governance arrangements in northern Ghana. This aligns with the literature stating that governance institutions need to form new governance arrangements that more appropriately targets local priorities of food security (Termeer et al., 2015).

Significance of the Study

The main objective of this research is to explore how specific forms of local food security governance drive certain food security priorities. The findings from northern Ghana add modestly to the body of knowledge of literature on local and subnational food security governance. Simple facts such as knowing the stakeholders and actors of local food security governance in northern Ghana can be the basis for more assertive policy actions supporting local food security programs and policies. Understanding local priorities for food security in northern Ghana would be an effective way to help policy makers and central government in legislation and budgeting. A research on subnational food security governance at this time is essential as the world is still recovering from a global pandemic which have had severe adverse impact on local food security.

Moreover, there remains limited research on local and subnational food security governance (Thompson et al., 2018). This study is amongst the first to focus on how the governance relationship among local food security actors shape priorities for food security in northern Ghana (Chircop et al., 2015; Bryson et al., 2006). It is acknowledged that this study is not representative of all local food security governance arrangements. Nevertheless, these findings raise important considerations for future multi-stakeholder collaborative initiatives and programs for promoting more equitable and dignified food security.

Recommendations and Reflections for Future Research

There are several aspects that can be improved to make future research on this topic. The present study was conducted in northern Ghana and the respondents were

focused among food security governance actors located in this area. The focus on the organizations/actors in northern Ghana might not represent every local food security governance system. Moreover, the local community members for whom most of the food security programs and activities are meant for were not interviewed. This research only interviewed individuals who occupy offices in organizations and institutions within the realm of food security governance. It would have been fair to have interviewed community members whom the priorities of food security governance and decisions directly affect. Again, different geographical locations may have different food security priorities and hence different food security plans and programs and the complexity of the application process may be different. Therefore, such a study may result in a difference outcome.

Conclusion

Local food security governance is evolving with a growing and diversifying number of stakeholders, organizations, institutions, actors and priorities. A collaborative, multi-stakeholder priority to strengthen capacity and respond more efficaciously to local food security needs is paramount. (Duncan and Claeys, 2018). Addressing food security from the grassroots (local level) is widely considered as the best means of eradicating hunger and food insecurity across the globe (Sturtevant, 2006; Edge and McAllister, 2009; Masuda et al., 2008). However, different geographical locations have diverse priorities may require different food security programs as well as governance approaches. Tensions across actors and authorities due to conflicting governance priorities, policies,

and programs could also be addressed through effective communication and collaborations among actors. (Levkoe, 2014).

It is hoped that this study has given a clearer view on the competing priorities of local food security governance in northern Ghana. Specifically, it is hoped that the current study has given a clear view of the actors, priorities of local food security governance in northern Ghana. With this knowledge, policy makers, actors and stakeholders of food subnational food security governance can develop more effective and attractive programs to help the improve the state of local food security in northern Ghana, Africa and other part of the world. Furthermore, the priorities set by the actors, will also help address local food security needs.

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Appendix A: Interview Protocol**Start time:****Interviewer:****Interviewee:****End time.****Medium:****Notes to interviewee:**

Hi, I appreciate your effort for making time out of your busy schedules to meet with me today. I would like to learn more about the different roles of different organizations working on food security and how they work together and how they pursue similar and/or different agendas in the northern region of Ghana. I believe your input will be valuable to this research.

I am going to ask you about your experiences, based on your work within this organization and other organizations you have exposure to, and I look forward to learning about your

Involvement in your organization in the northern region of Ghana.

If you have any questions throughout or need clarification, please let me know. Did you have a look at the consent form I sent you by email? I can resend if you did not receive it. As you read in the consent form, you are free to stop the interview at any time and refuse to answer any question you wish. Do you have any questions?

Confidentiality of responses is guaranteed

Approximate length of interview: 30-45 minutes

Project Objectives:

This research seeks to understand how food security institutions interact and collaborate and which priorities have emerged for food security interventions in northern Ghana over time. This project starts from the assumption that food security is a broad umbrella that includes many kinds of activities from livelihood resilience to food access for the vulnerable people to transfer of agricultural technology.

Are we ready to start?

[Start the recorder]

Questions

- a. Can you please describe to me, your role in this institution?

Probe: How long have you been part of this organization/institution?

Food security can be addressed in many ways: From access, supply/production to agricultural technology transfer

b. Please tell me what your organization does in the food security domain/realm.

Probe: What are the main activities.

Note to self: [seed distribution, emergency food relief, long term livelihood resilience?]

c. So does all your funding come from (*adapt question to suit the respondent*)

d. Characteristics of Organization

e. What is the focus of your institution's food security programming and interventions? How has those evolved over time? And why?

Probe: Can you give examples of the kinds of projects that are being implemented/implementing that represents the priority you just talked about (discuss in detail).

	Size	Service Area	Specialization / Mode of operation	Location	Years of operation	Type
Categories	0-5 6-10		<i>Note to self</i> :(write down common			

			ones that may be mentioned)			
--	--	--	-----------------------------	--	--	--

- f. How have these priorities changed over the years, and what causes these changes?
- g. If you were to highlight the big success of your institution in food security, what will they be? Probe: how did you know there were successful?
- h. Can we discuss challenges too?
- i. Who are your major institutional partners?

Probes: Can you tell me the difference between your organization/institution and theirs? How do your organization interact/collaborate with them? How does the food security agenda/priorities of your institution complement/conflict that of your partners? How do you think this interaction/relationship be improved or how can synergy be created for institutions to reinforce each other?

- j. How would you characterize the relationship between different institutions that work in the food security realm?

Probes: Are there structures. If yes, what are these structures? Who set the priorities? Government, bigger NGO's?

- k. What are the food security priority that are not being met broadly? Probe: What do you think is missing?

Thank you so much for your thoughtful responses. I really enjoyed learning more about food security governance in northern Ghana, and hearing about your personal experiences with your institution. This concludes our interview. If you think of anything else, you would like to share with me please contact me via fa145119@ohio.edu or 740 589 0800.

Appendix B: Recruitment Email

Hello,

My name is Frederick Kwaku Adjapong and I am a student from the department of Geography at Ohio University. I am writing to invite you to participate in my research study about food security governance in northern Ghana. The study has been assigned the IRB number **(20-E-466)**. You are eligible to be in this study because you [insert description]. I obtained your contact information from [describe source].

If you decide to participate in this study, you will be asked to participate in a 15-minute interview via Zoom/Teams/Skype to share your thoughts on food security governance in northern Ghana. I would like to audio/video record your response and the information shall be used only for the research purpose."

Remember, this is completely voluntary. You can choose to be in the study or not. If you would like to participate or have any questions about the study, please email me via fa145119@ohio.edu or contact me at +1 (740) 589 0800. Thank you very much.

Sincerely,

Frederick

Appendix C: Snowball Recruitment Handout

Dear [name],

Thank you for your interest in the study on food security governance and priorities in northern Ghana, which has been assigned the IRB number **(20-E-466)**. I am writing to ask whether you would be willing to read the enclosed consent form (*consent form attached*) and decide if you will be interested in sharing your thoughts on food security governance in northern Ghana.

Please be reminded that, this is completely voluntary, and you are under no obligation to participate in this study. If you need more time to decide if you would like to participate, you may also call or email me with your decision. If you have any more questions about this process or if you need to contact me about participation, I may be reached at fa145119@ohio.edu or (740) 589 0800.

Thank you for your time and consideration.

Sincerely,

Frederick.

Appendix D: Ohio University Online Consent Form

Title of Research:

Food security governance and priorities among key actors in northern region of Ghana:
Food security and environmental sustainability nexus.

Researcher: Frederick Kwaku Adjapong

IRB number: **(20-E-466)**

You are being asked by an Ohio University researcher to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks of the research project. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to participate in this study. You may print a copy of this document to take with you.

Summary of Study

Food security governance in northern Ghana is characterized by government-NGO interactions. These actors have different but interrelated priorities of food security

policy and programming at the local level. Key among the priorities is the focus on agroecology, ecological intensification, and diversified farming as a sustainable alternative to conventional intensification of agriculture. This research uses semi-structured interviews to explore the food security governance framework in northern Ghana, the agency and interaction between major actors (state-NGO). This research seeks to also explain how these governance relationships have affected the (evolution of) food security priorities in northern Ghana over time. The research concludes by giving a better understanding of food security governance and priorities in northern Ghana, adding to existing knowledge, and essential for development assessment as well as food security policy making.

Explanation of Study

This research seeks to understand the food security priorities among these actors, and how the current governance relationships are furthering environmental sustainability concerns in northern Ghana. If you agree to participate, you will be asked to partake in an online interview via Zoom/Skype/Teams. You should not participate in this study if have some reasons not to. Your participation in the study will last at most 30 minutes.

Risks and Discomforts

No risks or discomforts are anticipated from your participation in this interview

Benefits

This research will provide planners at both the national and regional levels with a new approach of working towards achieving food security in northern Ghana, whilst ensuring the environment is sustained. The document review will address a gap in literature for a better understanding of the critical priorities of food security governance in northern Ghana.

You will have the opportunity to contribute to the advancement in knowledge on food security governance, improvement in wellbeing and the quality of life. Individuals are not compensated for participating in this study. **You may not benefit personally from participation in this research.**

Confidentiality and Records

Recording will be done via Teams or Zoom and will be stored on the personal computer (which is password secured) of the researcher. No personal information will be collected other than basic demographic descriptors. All data will remain anonymous, and no names will be associated with any data resulting from this study. Only the researcher will have access to them (data) and will be destroyed a month after the research. The on Teams or Zoom recorded interview will not save IP address or other identifying information. Recordings and codes shall be deleted no later than August 2022.

Basic demographic descriptors shall closely be protected so no one will be able to connect responses and any other information that identifies participants. Directly identifying information (e.g., names, addresses) will be safeguarded and maintained under controlled conditions. Participants will not be identified in any publication from

this study. There will be no identifying data that will be discussed about the participants in reporting the results.

Future Use Statement

Data collected as part of this research will not contain identifiers and will not be used for future research studies.

Contact Information

If you have any questions regarding this study, please contact the investigator [*Frederick Kwaku Adjapong, fa145119@ohio.edu , +1 740 589 0800*] or advisor [*Dr. Thomas Smucker, smucker@ohio.edu, (740)593-1152*].

If you have any questions regarding your rights as a research participant, please contact Dr. Chris Hayhow, Director of Research Compliance, Ohio University, (740)593-0664 or hayhow@ohio.edu.

By agreeing to participate in this study, you are agreeing that:

- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered.
- you have been informed of potential risks and they have been explained to your satisfaction.
- you understand Ohio University has no funds set aside for any injuries you

might receive as a result of participating in this study.

- you are 18 years of age or older.
- your participation in this research is completely voluntary.
- you may leave the study at any time; if you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled.

Appendix E: Phone Call Recruitment Material

Researcher: Good afternoon, may I please speak with [*name*]?

[If the Person is unavailable]

Researcher: Thank you, goodbye.

[If the person is available: Researcher shall confirm that the correct person is speaking.]

Researcher: This is Frederick Kwaku Adjapong calling from the Ohio University (Athens). I am, a researcher working on food security governance and priorities in northern Ghana. Is this a good time for you to speak?

[If the Person says “No” or “I’m not sure”]

Researcher: Okay. Can I schedule another time to talk?

[If the person is not sure or seems hesitant]

Researcher: Thank you for your time. Goodbye.

[If the Person says “Yes”]

Researcher: Great. I wanted to let you know about a new study on food security governance and priorities in northern Ghana. Would you like to hear more about this study?

[If the Person says “No” or “I’m not sure”]

Researcher: No problem. Thank you for your time.

[If the Person says “Yes”]

Researcher: As you know, food security governance in northern Ghana is characterized by government-NGO interactions. These actors have different but interrelated priorities of food security policy and programming at the local level. Key among the priorities is

the focus on agroecology, ecological intensification, and diversified farming as a sustainable alternative to conventional intensification of agriculture. This research uses semi-structured interviews to explore the food security governance framework in northern Ghana, the agency and interaction between major actors (state-NGO). This research seeks to also explain how these governance relationships have affected the (evolution of) food security priorities in northern Ghana over time. The research concludes by giving a better understanding of food security governance and priorities in northern Ghana, adding to existing knowledge, and essential for development assessment as well as food security policy making.

I am happy to send you a consent form to look over if you would like to know details about this research study. The consent form is a document that tells you what your rights are as a participant, what the study is about, and the risks and benefits of participating. The study has been assigned with the IRB number **(20-E-466)**.

[If the Person is interested in receiving a copy of the consent form]

Researcher: Does email work for you?

[If the Person says "Yes"]

Researcher: May I please have your email address?

Researcher: Thanks, I got that. I will email you a copy of the consent form. Please feel free to look it over and discuss with friends and family. You can contact me with any questions too. I will check back in with you in a few days as well.

Researcher: Do you have any questions for me at this time?

[Researcher will be ready to answer any questions the participant may have]

Researcher: It was nice speaking with you, and we will be in touch.



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